Edited by
Michael Forsyth

Table of Contents

Series page

Title page

Copyright page

Preface

- Acknowledgements

Contributors

1: The past in the future

2: Architectural history and conservation

- Introduction
- The pre-history of English architectural history
- Architects, historians and popular perceptions
- Conservation and the use and abuse of architectural history
- Attending to everyone's past

3: Conservation and authenticity

4: Regeneration and the historic environment

- Introduction
- The government's view

Why the historic environment is at the heart of sustainable development
Complicating factors that make historic environment regeneration more difficult to achieve
Understanding the role of heritage in regeneration
A checklist for successful regeneration
Conclusion

5: Problems and opportunities in rural conservation

Listing
The thematic surveys
Towards an integrated approach
Farmsteads
Conclusion
Appendix: An assessment framework for farmstead buildings

6: Sustainable reuse of historic industrial sites

The considered reuse of industrial buildings

7: Realms of memory: changing perceptions of the country house

8: Conserving buildings of the Modern Movement

Utopia
How is the Modern Movement different?
Why do people consult architects?
Poor fit
The need for more space
Bad detailing
Kitchens and bathrooms
Poor energy performance
Colour
Conclusions

9: Conservation and historic designed landscapes

Background to the conservation of historic parks and gardens
Identifying and understanding historic designed landscapes
Assessment of significance and designation: the national picture
The Register of Parks and Gardens and the planning system
Local designations and conservation tools
Enabling development and historic landscapes
Historic landscapes and the reform of the designation system
Conclusion
Sources of advice and support

10: International standards and charters

11: Conservation legislation in the United Kingdom: a brief history

12: Conservation legislation in the United Kingdom: looking ahead

13: The role of the archaeologist

14: Preparing the conservation plan

- Introduction
- Commissioning a plan
- Engaging stakeholders
- Understanding the site
- Assessing significance
- Identifying management issues and vulnerability
- Setting policies
- Implementation
- Publishing the conservation plan
- Conservation statements
- Heritage impact assessment and mitigation strategies
- Conclusion
- Outline list of contents for a conservation plan
- Appendix: North Hinksey conduit house conservation statement: consultation draft, May 2002

15: Costing and contracts for historic buildings

Introduction
Risk
Complexity and quality
Approving and grant-aiding bodies
The brief and the budget
Contract documentation
Contract procurement
Contract and contractor selection
Post-contract cost monitoring and control

16: Maintenance in conservation

Introduction
Benefits of maintenance
Preventative maintenance
The legislative context
Sustainability, building conservation and policy developments
Minimal intervention
The problem with maintenance
Best practice
Best practice in organisations
Best practice and individual owners
Learning from other European nations
Maintenance inspection services in the UK
Conclusion

17: Building preservation trusts

18: Valuing our heritage

Introduction
What is heritage?
How do we value?
Market value valuation methods
Non-market value valuation methods
The heritage love factor
Other uses for valuations
Conclusion

Index

This book is part of a series on historic building conservation:

Understanding Historic Building Conservation
Edited by Michael Forsyth
9781405111720

Structures & Construction in Historic Building Conservation
Edited by Michael Forsyth
9781405111713

Materials & Skills for Historic Building Conservation
Edited by Michael Forsyth
9781405111706

Other books of interest:

Managing Built Heritage: the role of cultural significance
Derek Worthing & Stephen Bond
9781405119788

Conservation and Sustainability in Historic Cities
Dennis Rodwell
9781405126564

Building Pathology
Second Edition
David Watt
9781405161039

Architectural Conservation
Aylin Orbaşlı
9780632040254

Understanding historic building conservation

Edited by

Michael Forsyth
Department of Architecture and Civil Engineering
University of Bath

WILEY Blackwell

This edition first published 2007

© 2007 by John Wiley & Sons, Ltd

Registered office

John Wiley & Sons, Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, United Kingdom.

Editorial offices:

9600 Garsington Road, Oxford, OX4 2DQ, United Kingdom.

The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, United Kingdom.

For details of our global editorial offices, for customer services and for information about how to apply for permission to reuse the copyright material in this book please see our website at www.wiley.com/wiley-blackwell.

The right of the author to be identified as the author of this work has been asserted in accordance with the UK Copyright, Designs and Patents Act 1988.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, except as permitted by the UK Copyright, Designs and Patents Act 1988, without the prior permission of the publisher.

Designations used by companies to distinguish their products are often claimed as trademarks. All brand names and product names used in this book are trade names, service marks, trademarks or registered trademarks of their respective owners. The publisher is not associated with any product or vendor mentioned in this book.

Limit of Liability/Disclaimer of Warranty: While the publisher and author(s) have used their best efforts in preparing this book, they make no representations or warranties with respect to the accuracy or completeness of the contents of

this book and specifically disclaim any implied warranties of merchantability or fitness for a particular purpose. It is sold on the understanding that the publisher is not engaged in rendering professional services and neither the publisher nor the author shall be liable for damages arising herefrom. If professional advice or other expert assistance is required, the services of a competent professional should be sought.

ISBN: 9781405111720 Hardback

ISBN: 9781118781593 Paperback

Library of Congress Cataloging-in-Publication Data

Understanding historic building conservation / edited by Michael Forsyth.

p. cm.

Includes bibliographical references and index.

ISBN-13: 978-1-4051-1172-0 (vol. 1 : pbk. : alk. paper)

ISBN-10: 1-4051-1172-0 (vol. 1 : pbk. : alk. paper)

ISBN-13: 978-1-4051-1170-6 (vol. 2 : pbk. : alk. paper)

ISBN-13: 978-1-4051-1171-3 (vol. 3 : pbk. : alk. paper) 1. Historic buildings–Conservation and restoration. I. Forsyth, Michael, 1951–

TH3301.H57 2007

690′ .24–dc22

2007006647

A catalogue record for this book is available from the British Library.

Wiley also publishes its books in a variety of electronic formats. Some content that appears in print may not be available in electronic books.

Cover image: © English Heritage/James O.Davies

Cover design by Workhaus

The publisher's policy is to use permanent paper from mills that operate a sustainable forestry policy, and which has been manufactured from pulp processed using acid-free and elementary chlorine-free practices. Furthermore, the publisher ensures that the text paper and cover board used have met acceptable environmental accreditation standards.

Preface

This is the first in a series of books that combine conservation philosophy in the built environment with knowledge of traditional materials, and structural and constructional conservation techniques and technology. The chapters are written by leading architects, structural engineers and related professionals and practitioners, who together reflect the interdisciplinary nature of conservation work.

While substantial publications exist on each of the subject areas – many by the present authors – few individuals and practices have ready access to all of these or the time to read them in detail. The aim of the series is to introduce each aspect of conservation and to provide concise, basic and up-to-date knowledge sufficient for the professional to appreciate the subject better and to know where to seek further help.

Of direct practical application in the field, the books are structured to take the reader through the process of historic building conservation, presenting a total sequence of the integrative teamwork involved. The second volume, *Structures & construction in historic building conservation*, traces the history of structures in various materials and contains much guidance on the survey, assessment and diagnosis of structures, the integration of building code requirements within the historic fabric and much else besides. *Materials & skills for historic building conservation*, the third volume in the series, describes the characteristics and process of decay of traditional materials which inform the selection of appropriate repair techniques.

The present volume, *Understanding historic building conservation*, discusses conservation philosophy and the

importance of understanding the history of a building before making strategic decisions, the vital role of each conservation team member and the challenges of conservation at planning level in urban, industrial and rural contexts and in the conservation of designed landscapes. The framework of legislation and charters within which these operate is described; at the time of writing, designation legislation in the United Kingdom is due to undergo substantial reform over several years, and the context of this is comprehensively reviewed. The book provides guidance on writing conservation plans, explains the basic issues of costing and contracts for conservation, and highlights the importance of maintenance.

The series is particularly aimed at construction professionals – architects, surveyors, engineers – as well as postgraduate building conservation students and undergraduate architects and surveyors, as specialist or optional course reading. The series is also of value to other professional groups such as commissioning client bodies, managers and advisers, and interested individuals involved in house refurbishment or setting up a building preservation trust. While there is a focus on UK practice, most of the content is of relevance overseas (just as UK conservation courses attract many overseas students, for example from India, Greece, Australia and the USA).

Michael Forsyth

Acknowledgements

I am grateful to the following for permission to reproduce illustrations: English Heritage (4.1, 4.2, 5.2, 6.1–6.9); Mendip District Council (4.3); Eric Berry (5.1); Peter Gaskell (5.3); Bob Edwards (5.4, 5.5); Jeremy Lake (5.6, 5.7); John Winter (8.1, 8.2); Philip Whitbourn (10.2); Peter Davenport (13.1–13.4); Maintain our Heritage (16.1, 16.2).

Contributors

Timothy Cantell

Heritage and planning consultant, project coordinator of Maintain our Heritage and Manager of the South West Design Review Panel. Founding trustee of SAVE Britain's Heritage and was a trustee of Bath Preservation Trust. Formerly liaison officer for the Civic Trust and deputy secretary of the Royal Society of Arts. Interest in maintenance can be traced back to *Left to Rot* (SAVE, 1978) of which he was co-author.

Martin Cherry

Taught medieval history at the Universities of Exeter, St Andrews and Leicester, then moved into historic buildings conservation as fieldworker in Devon on the Accelerated Listing Resurvey. Worked on medieval houses in Kent for the Royal Commission on the Historic Monuments of England, then briefly as conservation officer in Leicestershire. Joined English Heritage, 1988; positions held include Head of Listing and Research Director. Publications on medieval and nineteenth-century architecture and conservation policy; edits *Vernacular Architecture*. Visiting Professor, Department of Architecture and Civil Engineering, University of Bath.

Nigel Dann

Building surveyor, senior lecturer and researcher, University of the West of England, Bristol. A founder and director of Maintain our Heritage. Management and conservation research projects for English Heritage, the Department of Trade and Industry, the Heritage Lottery Fund and other organisations. Extensive publications on conservation and maintenance issues and has co-authored (with D. Marshall)

The House Inspector (Estates Gazette Books, London, 2005), a book on building defects and inspection.

Peter Davenport

Field archaeologist, particularly interested in the built environment, historic buildings and the relationship between urban archaeology, conservation and development. Studied, University of East Anglia and Keble College, Oxford, 1969–77. Archaeological excavations at Senior Supervisor and Deputy Director level, then appointed to Bath Archaeological Trust, 1980; Director of Excavations, 1990. Activities included excavation of the Temple Precinct under the Pump Room and, from 1996, research into the form and function of the Roman town of Bath. Joined Oxford Archaeology, 2005, and Cotswold Archaeology, 2006, as Senior Project Manager. Considerable experience in the archaeological investigation of historic gardens. Long-term prehistoric to post-medieval research projects in southern Spain and Brittany, 1987–2002.

Geoff Evans

Quantity surveyor in private practice; senior partner, Bare, Leaning & Bare, specialising in historic buildings, conservation, repair and alteration. Projects from timber-framed buildings, vernacular dwellings, barns and chapels to major country houses, castles and, as named quantity surveyor, six cathedrals. Projects include: Dinmore Manor, Hereford; Ipswich Town Hall; the Castle, St Michael's Mount, Cornwall; major repair, maintenance and new works at St. Paul's, Canterbury, Wells, St. David's and Truro Cathedrals; Westminster Abbey; Abbey Gatehouse, Bristol; St Barnabas Church, Homerton; Roman Baths, Bath; Royal Foundation of St Katharine, East London; Knole, Sevenoaks, Kent (refurbishment of the private apartments); and the listed 1960s Blue Boar Quad, Christchurch, Oxford by Powell and

Moya.

Keith Falconer

Head of Industrial Archaeology, English Heritage. Appointed survey officer to the Council for British Archaeology's Industrial Monuments Survey in 1971 and transferred to the Royal Commission on the Historic Monuments of England, 1981 then English Heritage, 1999. Coordinates industrial archaeological work across English Heritage from its Swindon base. Author of *Guide to England's Industrial Heritage* (Batsford, 1980) and co-author of *Swindon: the Legacy of a Railway Town* and numerous articles on the management of the industrial heritage. Visiting Fellow of the Centre for the History of Technology, University of Bath.

Michael Forsyth

Architect and director of the postgraduate degree course in the Conservation of Historic Buildings, University of Bath. Studied, University of Liverpool, held the Rome Scholarship in Architecture and, after residence in Italy, moved to Canada, working on the design of the new concert hall for the Toronto Symphony Orchestra with the architect Arthur Erickson. Lectured at University of Bristol, 1979–89 and has lived and practised in Bath since 1987. Books include *Bath – Pevsner Architectural Guides* (Yale University Press, 2003) and *Buildings for Music: The Architect, the Musician, and the Listener from the Seventeenth Century to the Present Day* (MIT Press and Cambridge University Press, 1985), which won the 19th Annual ASCAP–Deems Taylor Award. Translations in French, German, Italian and Japanese. Holds a Doctor of Philosophy degree of the University of Bristol.

James Maitland Gard'ner

Studied architecture at the Victoria University of Wellington, New Zealand; completed training in building conservation at

the Architectural Association, London. Joined English Heritage as a historic buildings architect, advising public and private sector owners on the care of historic buildings and working on the conservation and adaptive reuse of English Heritage's properties in care. Involvement in conservation planning included the preparation of plans for English Heritage's own sites and organising seminars. Now resident in Australia.

Colin Johns

Architect and planner; member of the Institute of Historic Building Conservation. Sole practitioner in Bradford on Avon, Wiltshire, specialising in the conservation of historic buildings including individual projects, conservation area assessments and community action. Visiting lecturer in conservation legislation and practice at the Universities of Bath and Plymouth. Chairman of the United Kingdom Association of Preservation Trusts and architect to the Wiltshire Historic Buildings Trust Ltd.

Jeremy Lake

Worked with the National Trust, publishing the book *An Introduction and Guide to Historic Farm Buildings* (National Trust, 1989) and as a field worker on the Accelerated Listing Resurvey of England. Joined English Heritage, 1988, carrying out a range of surveys in urban and rural areas, and, since the mid-1990s, thematic listing surveys on chapels, military and industrial sites and farmsteads that have connected designation to guidelines for reuse and management. Since 2002 has worked with Characterisation Team, developing new methods for understanding and managing the historic environment, including landscapes and rural buildings. Extensive publications on farmsteads, military sites and chapels.

Jonathan Lovie

Holds degrees from the University of St Andrews, including Master of Philosophy. From 1994, developed a consultancy undertaking historic landscape research and conservation management plans for private clients and public bodies. Consultant Register Inspector, English Heritage, 1998–2004, with particular responsibility for revising and upgrading the *Register of Parks and Gardens of Special Historic Interest* in the south-west of England. Involved in thematic studies leading to the inclusion of significant numbers of public parks, cemeteries, institutional and post-war designed landscapes on the *Register*. From 2004, additional to ongoing private practice, appointed as Principal Conservation Officer and Policy Adviser in England to The Garden History Society. Lectures on courses relating to historic landscape research and conservation.

Duncan McCallum

Policy Director for English Heritage. Worked for Cumbria, Durham and Devon County Councils in various historic environment roles, then joined English Heritage, the government's adviser on the historic environment, in 1996. Produced England's first annual state of the historic environment report (now known as *Heritage Counts*). Became Head of Planning and Regeneration, then Policy Director. Holds an honours degree in Town and Country Planning and a Master of Arts degree in Conservation Studies from the Institute of Advanced Architectural Studies, York, and is a member of the Institute of Historic Building Conservation.

Martin Robertson

Historic buildings consultant. Educated at Dulwich College, Downing College, Cambridge (History Tripos) and University of Edinburgh (History of Art). With the government historic buildings service from 1968 working for two ministries, then

English Heritage, becoming Principal Inspector of Ancient Monuments and Historic Buildings and leader of the East Midlands Team. Gained wide experience in historic building types, their problems, conservation, grant aid, taxation and legislation. Contributed to the advice given in PPG15 (1994). Private practice from 1993 working for private clients and national and local bodies including Cadw. This work has given insights into conservation from the owner's perspective, the constraints placed on people and the occasionally bizarre results. Lecturing includes University of Bath.

Adrian Stenning

Chartered quantity surveyor and senior partner, Bare, Leaning & Bare, specialising in the repair and conservation of, and sympathetic extension to, historic buildings, from formal classical architecture to vernacular timber-framed buildings. Member, RICS Register of Surveyors Accredited as experienced in Building Conservation Work. Member of the Association for Studies in the Conservation of Historic Buildings (ASCHB). Lectures on quantity surveying with reference to historic buildings at the Universities of York and Bath, and for the Society for the Protection of Ancient Buildings (SPAB) as part of their twice-yearly repair courses.

David H. Tomback

Development Economics Director, English Heritage. Chartered surveyor, 1974; worked with surveying practices and a development company, then as an American bank's in-house property adviser. Helped run a Swiss-owned property development company, 1987–91. Formed own practice; joined English Heritage, 1993, advising on in-house commercial property, grant levels, enabling development, reuse of redundant historic buildings, and conservation economics. Involved in economic studies: *The Investment*

Performance of Listed Buildings, The Listing of Buildings – the effect on value and *The Value of Conservation*. Responsible for *Heritage Works – The use of historic buildings in regeneration* (2006). Member, working group producing English Heritage's *Policy Statement and Practical Guide on Enabling Development*, National Audit Office panel of expert valuers on the disposal of NHS Estates properties and RICS Public Sector Advisory Committee; joint chair, NHS Estates/English Heritage working party. Visiting lecturer, College of Estate Management and universities of Bath, Bristol and Oxford Brookes.

Giles Waterfield

Independent curator and writer, Director of Royal Collection Studies and an Associate Lecturer at the Courtauld Institute of Art. He is Chairman of the Trustees of the Charleston Trust, and of the Paul Mellon Centre for Studies in British Art, and was Director of Dulwich Picture Gallery, 1979–96. He was joint curator of the exhibitions Art Treasures of England at the Royal Academy of Arts in 1998, In Celebration: The Art of the Country House at the Tate Gallery in 2000 and Below Stairs at the National Portrait Galleries in London and Edinburgh, 2003–2004. Publications include *Palaces of Art*, *Art for the People* and *Soane and Death*. He has published three novels, *The Long Afternoon*, *The Hound in the Left Hand Corner* and *Markham Thorpe*.

Philip Whitbourn

Trained in Architecture and Town Planning at University College, London and spent ten years in architectural practice before joining the Historic Buildings Division of the former Greater London Council in the mid-1960s. After 20 years with the GLC, became chief architect to English Heritage for some ten years. Served as Secretary, ICOMOS-UK (The International Council on Monuments and Sites-UK),

1995–2002. Elected Fellow of the Society of Antiquities, 1984; awarded the OBE., 1993. Holds a Doctorate in Town Planning.

John Winter

Completed studies, Architectural Association, London, 1953; elected Associate, Royal Institute of British Architects. Completed first building, 1956, a house included in Pevsner's *North-East Norfolk*. Studied, Yale University, 1956–7 then worked with Skidmore, Owings and Merrill, San Francisco and Ernö Goldfinger, London. Taught, Architectural Association, London, 1960–64 and formed John Winter and Associates, 1964. His buildings have been extensively published in England, Europe, North America and Japan and received numerous awards. Awarded MBE for services to architecture, 1984. Member, Royal Fine Art Commission, 1986–95; Council of The Architectural Association, 1989–95. Appointed trustee of the Architectural Association Foundation, 1995 and of DoCoMoMo, 1999 and as Architectural Adviser to the Heritage Lottery Fund, 1996. Author of *Modern Architecture* (Paul Hamlyn, 1969), *Industrial Architecture* (Studio Vista, 1970) and of two co-authored books.

1

The past in the future

Michael Forsyth

Buildings can be victims of conservation interests. An Australian engineer, Tony Graham, bought the last remaining ironworks near Mells in Somerset. He planned to convert the handsome but decayed office building into a house. Different conservation bodies then descended. The site contained greater horseshoe bats, and became a Site of Special Scientific Interest and could not be disturbed. The Victorian Society, on the other hand, had the site listed and demanded that the office building be restored. The industrial archaeologists, meanwhile, took an interest in the foundry ruins and declared that the site must be cleared. Naturalists discovered rare ferns and said that the site was not to be touched. After prolonged disagreement the owner, wanting simply to proceed with the work, requested a site meeting with the local council and the parties involved in order to resolve the situation. Meanwhile, some boys caught in a rainstorm sheltered in the building and lit a fire to dry their clothes. The building caught fire and burned down.[1]

In the United Kingdom half of the building industry's workload, including maintenance, is concerned with existing buildings. Yet conventional training for architects and engineers provides little or no guidance on the care of existing buildings and too many historic structures are still being damaged by unsympathetic treatment. Despite this, and despite the changed construction methods and

materials that replaced building techniques lost during the twentieth century, traditional craft skills are steadily being rediscovered. This is due in no small part to the series of fires at York Minster in 1984, Hampton Court, Surrey, in 1985, Uppark, West Sussex, in 1989 and Windsor Castle in 1992. Meanwhile, since the mid-1970s we have swung from an era that saw destruction of historic town centres and country houses alike, to a planning ethos where ‘heritage’ and ‘conservation’ are words that recur. We border dangerously on a museum mentality that fiercely resists change.

The Venice Charter – the philosophical manifesto produced by the International Congress for Conservation in Venice in 1964 – defined several possible approaches to conservation. Preservation involves the minimal repair and maintenance of remains in their existing state. Restoration involves the removal of accretions to return a building to an earlier state. Reconstruction also involves returning a building to an earlier state, but involves introducing new – or old – materials to the fabric. Conservation may involve one or more of these, as well as the adaptation of buildings to new uses. Historically, the stance that we have taken on building preservation has constantly shifted, and the only certainty is that tomorrow's conservation philosophy will be different from that of today.

Until William Morris founded the Society for the Protection of Ancient Buildings (SPAB) in 1877, a ruthless philosophy of restoration and reconstruction was normal. The usual approach to church restoration was to undertake whenever possible a radical return to a definite style and to make the building look smooth and crisp and symmetrical like the new churches of the Gothic Revival. The eighteenth-century restorations of James Wyatt and his contemporaries posed a greater threat to medieval buildings than either neglect or fire. Wyatt's new west front to Hereford Cathedral of 1788

provoked an outcry even at the time. In 1818 at Chester Cathedral, Thomas Harrison added squat corner turrets to the south end of the transept. Anthony Salvin (a pupil of John Nash of Regent's Park fame) in 1830 refaced the south transept of Norwich Cathedral, replacing the original Perpendicular with a Norman design to match the north transept. At Canterbury in 1834 George Austin demolished the Romanesque north-west tower and replaced it with a copy of the south-west tower for symmetry. In the 1830s, the thirteenth-century nave of Southwark Cathedral was demolished, and at Bath Abbey a programme of correcting the building, including the addition of false flying buttresses, was carried out by George Phillips Manners. In 1870 Scott demolished the whole east end of Christ Church Cathedral, and rebuilt it in Norman style. And so the list goes on.

In the past, different categories of buildings were thought worth preserving at different times – mainly because they reached an age at which they were regarded as venerable. By the late nineteenth century, medieval buildings were sufficiently esteemed to be preserved for their antiquity. The first protective legislation was the Ancient Monuments Act 1912, which served to preserve decayed and obsolete structures that had artistic or historic interest. By the early twentieth century Jacobean and Queen Anne buildings became respected, but later Georgian buildings only gained sufficient historical perspective to be regarded as worthy of protection with the formation of the Georgian Group in the 1930s. The turn of Victorian architecture came much later. The 1960s and 1970s are now recognised as historical eras in their own right, and eminent listed buildings from this era now include London's Centrepoint office block and Norman Foster's high-tech Willis Faber & Dumas building, Ipswich.

With the 1944 Town and Country Planning Act, historical buildings were first seen for their townscape value as groups rather than on their own architectural merit. But the

conservation movement as we know it was slow to gather pace following this basic legislation. Widespread destruction in the Second World War, and the social optimism of the era that followed, led to a comprehensive attitude towards redevelopment. In a lecture given at Bristol University in 1947 and published in his collection of essays *Heavenly Mansions*, Sir John Summerson pleads for the preservation of outstanding historic buildings. But his list of ‘types of buildings which may in certain circumstances deserve protection’ reads from our perspective as positively advocating the comprehensive redevelopment schemes that swept away the centres of most historic English towns and cities after 1945. Following Sir Patrick Abercrombie's post-war plan for Bath, which proposed that the Royal Crescent be converted into council offices linked to a modern block at the rear, about one third of Bath's historic city – about 1000 Georgian buildings, of which some 350 were listed – were demolished between 1950 and 1973. By the 1970s, traffic problems added to inner-city congestion and decay. The countryside also suffered as badly. Multiple death duties during the First World War, often within months, caused the downward slide of hundreds of country houses. In the period from 1945 to 1973, 750 major country houses were demolished, and the impossibility of their upkeep culminated in the Labour government's wealth tax of April 1974 when the top rate of tax increased from 90% to 98%.

But the tide was turning. The Civic Amenities Act 1967 called for local authorities to designate conservation areas. Conservation studies were published in 1969 for Bath, Chester, York and Chichester[2] to examine methods of funding and repair of historic buildings. In 1973 an influential book, *The Sack of Bath* by Adam Fergusson, published for the first time the scale of destruction in this most intact of historic cities. Marcus Binney created in 1974 The Destruction of the Country House exhibition at the

Victoria and Albert Museum, showing grim pictures of architectural decay and demolition. In the same year he set up the campaigning organisation SAVE Britain's Heritage, and the following year was European Architectural Heritage year. In 1976, faced with a flood of country houses coming onto the market, the Labour government replaced the wealth tax with a new Finance Act. Moreover, the new affluence of the 1960s brought about the car-owning society – by 1964, 20 million private vehicles were on the road – and this caused a new interest in the countryside.

From the early 1970s through to the Thatcher years of the 1980s, vast numbers of city dwellers dreamed of moving to the countryside and bought period cottages as first or second homes. Country house visiting became a major pastime and membership of the National Trust soared, doubling to 550 000 between 1972 and 1975, and reaching 850 000 by 1980. Particular interest in visiting historic gardens resulted, in the late 1990s and early twenty-first century, in members of the Historic House Owners' Association (HHA) rebranding their houses, open to the public, as gardens with houses attached rather than historic houses with gardens. In cities, too, fuelled by the country house interiors style, upstairs-downstairs films and the desire to own a period home, there was everywhere the wish to preserve or evoke the past. The heritage society had arrived.

With this swing of the pendulum came the new danger that our historic cities would lose their vitality and become heritage museums. There is a tension between keeping cities alive and conserving their historic fabric, a dilemma between ‘development’ and ‘conservation’. Conservation has as much to do with breathing new life into old buildings as it has with repair. Nearly all buildings have evolved over their lifetime, adapting to the needs and uses of successive generations. Buildings decay when they are abandoned

without a use, and their spirit dies when they become frozen in time as near museum pieces. Historically, buildings that lost their purpose disappeared, and those old buildings that are still with us have usually undergone frequent adaptation or changes of use. When buildings have a viable use, there is the incentive to repair and maintain the fabric, while old buildings deteriorate rapidly when neglected or empty. Urban regeneration is a vital ingredient in conservation, involving a partnership of business initiative with the skills of town planning and heritage management. Buildings should preferably maintain their original purpose, but the door should always be open where appropriate to new uses, adaptability and extension. The conversion of redundant warehouse buildings has revived many dockland areas. The reuse of St Katharine's Dock in London, built in 1827–29, as apartments and a hotel led to numerous other schemes, including the conversion of Jesse Hartley's Albert Dock, Liverpool, of 1839–45 into a recreational and residential area. The conversions into art galleries of the Castellveccio in Verona by Carlo Scarpa and of a redundant Paris railway station at the Musée d'Orsay are outstanding European examples.

Another important field for conservation at the level of urban planning is the consideration of new buildings within historic cities. An interesting example of the possible scope of this is the Historic Royal Palaces Tower Environs Scheme. Under the scheme, sightlines from within the Tower of London were projected into infinity to define the maximum height of new buildings around the Tower. This ensures that no building in the City or beyond may be visible from the enclosure of the historic buildings.

If one end of the conservation spectrum embraces the urban management of entire towns and cities, the other end, involving the care of individual buildings, ultimately concerns good construction practice and an understanding

of how buildings were originally designed. At least when working on eighteenth- and nineteenth-century buildings, the conservation architect requires knowledge of classical architecture, in addition to a philosophical standpoint and knowledge of traditional materials. Western industrial cities – whether London, Paris or New York – can be thought of as fundamentally classical. Each comprises a legacy of buildings, whether classical, Gothic or whatever, that were originally designed by architects trained in the classical tradition. Builders, too, had knowledge of the same visual language, and from the eighteenth century onwards speculative houses were built with the aid of pattern books, such as Battey Langley's *Builder's Jewel* of 1739. These well-thumbed, pocket-size books explained everything the builder needed to know, from the construction of classical orders to the geometry of mouldings and the proportions of a room. Sadly, the classical training – with students routinely producing astonishingly competent renderings – died out in schools of architecture in the early 1950s. But when working on historic buildings, it is essential for present-day architects to have a working knowledge of those same principles in order to design even a glazing bar or a balustrade or to position a dado rail.

Before undertaking any conservation work on a building, it is essential to understand the building by carrying out a careful assessment of its history, the decay of its fabric and the causes. Repair work should always respect the history of a building, and this appraisal will help to keep intervention, repair and treatment works to a minimum. For any historic building this will involve an archival investigation and a survey of the building structure and fabric. It is then possible to make a conservation plan that assesses what needs to be done – if anything – and the repair techniques and technologies that will be used. If the planner and heritage manager are significant in conservation initiatives

at an urban level, then individual building repair increasingly involves the architectural historian and building archaeologist, in addition to the team of architect, engineer, quantity surveyor and builder.

Every building, however humble, possesses a history, and buildings from different periods and regions are unique. All historic buildings undergo cycles of alteration in their lifetime. Typically, minor repairs are carried out periodically, with programmes of major maintenance, renovation and modification taking place at less frequent intervals. This pattern may alternate with periods of relative inactivity and perhaps neglect. Major changes are usually made to buildings to modify or extend their use, to update their style, and particularly to repair fire damage. Most country houses have suffered fires, while theatres in the western world, before modern fire prevention codes were developed in the second half of the nineteenth century, suffered major fire damage on average every eighteen years.

The first task is to carry out investigations through a combination of archival research and on-site survey. For the archival research, county and city archives, local libraries and the National Monuments Record in Swindon are usually invaluable sources. Where appropriate, an architectural historian may carry out this work. Meanwhile, engineering and other investigations into the building fabric, tailored to each situation, should be carried out. These will reveal how the building stands, and whether or not any structural work is necessary. It is vital that all members of the team understand the building and that a sequence for the work is planned. A shortfall in knowledge leads to surprises, and buildings are most at risk when they are being worked on. During investigations, appropriate caution and a basic knowledge of historic building technology are necessary. One builder took up all the floorboards in a Georgian house