

ENGLISH HERITAGE
PRACTICAL BUILDING CONSERVATION

MORTARS, RENDERS & PLASTERS

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THE PRACTICAL BUILDING CONSERVATION SERIES v

This series of *Practical Building Conservation* technical handbooks supersedes the original five volumes written by John and Nicola Ashurst, and published in 1988.

The series is aimed primarily at those who look after historic buildings, or who work on them. The ten volumes should be useful to architects, surveyors, engineers, conservators, contractors and conservation officers, but also of interest to owners, curators, students and researchers.

The contents reflect the work of the Building Conservation and Research Team, their colleagues at English Heritage, and their consultants and researchers, who together have many decades of accumulated experience in dealing with deteriorating building materials and systems of all types. The aim has been to provide practical advice by advocating a common approach of firstly understanding the material or building element and why it is deteriorating, and then dealing with the causes. The books do not include detailed specifications for remedial work, neither do they include a comprehensive coverage of each subject. They concentrate on those aspects which are significant in conservation terms, and reflect the requests for information received by English Heritage.

Building conservation draws on evidence and lessons from the past to help understand the building, its deterioration and potential remedies; this encourages a cautious approach. New techniques, materials and treatments often seem promising, but can prove disappointing and sometimes disastrous. It takes many years before there is sufficient experience of their use to be able to promote them confidently. Nonetheless, understanding increases with experience and building conservation is a progressive discipline, to which these books aim to contribute.

The volumes also establish continual care and maintenance as an integral part of any conservation programme. Maintenance of all buildings, even of those that have deteriorated, must be a priority: it is a means of maximising preservation and minimising costs.

Most of the examples shown in the books are from England: however, English Heritage maintains good relations with conservation bodies around the world, and even where materials and techniques differ, the approach is usually consistent. We therefore hope the series will have a wider appeal.

Dr Simon Thurley
Chief Executive, English Heritage

ABOUT THIS BOOK

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Mortars, renders and plasters are common terms to describe diverse applications of generic building materials that are based on a binder, usually with the addition of an aggregate. These serve functional roles as bonding agents of masonry units or as protective coatings, often with decorative effect.

Traditional binders consisted of clay, lime and gypsum. These were later complemented by the development of natural and artificial cements. Lime-based mortars are given prominence in this book as they were of central importance to traditional building in England, and remain the material of choice in most repairs today. Earth-based mortars were also significant (these are treated within the *Earth, Brick & Terracotta* volume of this series). Many important historic features of the 19th century were executed in cement, and advice on their conservation is also provided. As cement mortars have otherwise proven detrimental to the preservation of much traditional lime construction, their general use is not advocated.

In the repair of historical buildings, mortars are commonly considered as new materials to serve the conservation of masonry. As a result of their renewable nature, these 'silent performers' are often undervalued in relation to structural masonry. Some mortar applications are indeed sacrificial, such as external pointing or render requiring occasional renewal to protect structural fabric. Poor understanding of their performance and relative significance, however, has led to the unnecessary removal of many sound and often very important historic materials. Mortars are an integral part of historic masonry, contributing, sometimes intangibly, to the authenticity and the inherent and often subtle aesthetic that makes old buildings so appealing.

This work gives guidance on the selection and use of appropriate mortars, renders and plasters for masonry repair, including modern sustainable materials. It also provides practical guidance on understanding the performance and significance of historic mortars and their conservation.

The organisation of this book is as follows: first, mortars, renders and plasters are described in terms of their technological evolution, historical applications and material properties; second, processes of deterioration are discussed, followed by approaches to the assessment of their condition as well as the range of appropriate options for their treatment and repair. Special related topics review paints for plasters and renders, conservation of historic natural cement, mortar floors, ruinous structures and decorative painted surfaces.

Since the publication of the first volume of *Mortars, Plasters & Renders* in 1988, interest in the topic has increased enormously, first as part of the lime revival of the late 20th century, and more recently in the use of lime in sustainable renovation and new construction. These developments have generated a great deal of research and publications on lime in general and historic materials in particular, with strong commercial responses in the supply of a wider range of products. This publication provides a broad perspective of contemporary theory and practice not otherwise found under one cover, including extensive historical research.