



ADVANCE INFORMATION

Earth masonry

Design and construction guidelines

Author Tom Morton, Arc Architects

Tom Morton is a bright light in Britain's developing sustainable construction industry. Practising as an ecological architect since the early 1990s, he has developed expertise in earthen materials through conservation of historic buildings, design of modern eco-houses and research and development. He has written widely about earth construction and is secretary of Earth Building UK, the national organisation for earth construction.

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Classification Building elements and structures: Masonry, walls and chimneys

Keynote An inspirational introduction and guide to sustainable earth building

Description

Earth masonry is the one of the oldest and most widespread building materials. Though technologically simple, it can produce a durable architecture of considerable artistic sophistication, and buildings that are appropriate to their climate and suited to a wide range of uses. A timeless construction material, earth brick has an important technical role to play in the current exciting phase in the development of ecological architectural technology. Humidity control, low embodied carbon and near zero waste are key characteristics of earth buildings, but all involved in design, construction and use of buildings need guidance on using this unfamiliar material in the modern construction industry.

This book fills in the considerable gaps in our understanding of earth masonry, with a factual account of technical, design and construction issues. It also explores the cultural background to earth masonry, with an enthusiasm for the subject born of conviction for its potential, even for sizeable projects. It gives technical details as well as practical guidance and is extensively illustrated.

Contents

Foreword by Rab Bennetts

Preface. Acknowledgements. Scope and structure. List of Illustrations. Glossary

1 INTRODUCTION

What is earth masonry? Why use earth masonry? A brief history of earth masonry. Practical advantages and disadvantages

2 PRELIMINARY DESIGN CONSIDERATIONS

Appropriate applications. Earth masonry in a construction process. Codes, testing and building standards. Compliance with UK building standards

3 MATERIALS FOR EARTH MASONRY

Raw materials. Bricks and blocks. Mortars. Plasters. Paints and other coatings

4 DETAILED DESIGN CONSIDERATIONS

Appearance. Structural design. Shrinkage and thermal movement. Moisture. Thermal characteristics. Acoustic characteristics. Performance in fire. Design for durability. Typical design details

Readership

Architects and architectural technicians, planners, building control officers, developers, contractors, self-builders, government agencies, structural and building services engineers, environmentalists, waste and energy companies.

5 BUILDING EARTH MASONRY

Keeping people informed. Transportation, delivery and storage. Building walls. Plastering. Services. Fixings. Aftercare. Health and safety

6 LIVING WITH EARTH MASONRY

Common defects in new construction. Unusual causes of damage. Repairs and maintenance. Alterations

7 THE FUTURE FOR EARTH MASONRY

Earth in a sustainable construction industry. Developing manufacturing capability

Appendices: Standards; Testing procedures

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Benefits

- Detailed guidance on contemporary construction using earth masonry
- Provides clients, designers and builders with clear, up-to-date information and advice
- More than 210 colour photos and diagrams

