

SECOND EDITION

# ARCHITECTURAL TILES

*Conservation and Restoration*



LESLEY DURBIN

ROUTLEDGE

# Architectural Tiles

This new edition of *Architectural Tiles: Conservation and restoration* continues to inform and educate on appropriate methods for preserving this valuable heritage.

It not only contains new and up-to-date information on materials, practical methods and historical research but also reflects changes in the attitudes, outlook and perceptions within the wider conservation, architectural heritage and construction communities, which give a new dimension to the conservation and restoration techniques described in the previous edition. The growing interest in the preservation of post-war ceramic tile murals and the subsequent demand for information pertaining specifically to this era form a welcome and useful addition.

The new overview of common problems will be helpful in domestic and ecclesiastical situations and will appeal to independent tilers who are in need of information to deal with problems out of the normal run of their work, which are now more commonly being dealt with outside of conservation practice circles. The book has always been and remains an accessible resource to anyone who is interested either professionally or as an enthusiast in the preservation of historic architectural tiles.

**Lesley Durbin** is Senior Conservator at the Jackfield Conservation Studio, UK. She has over thirty years' experience in the conservation of architectural ceramics.

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# **Architectural Tiles**

Conservation and restoration

*Second edition*

**Lesley Durbin**

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*Medieval tile pavements*

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## Disclaimer

While every effort has been made to present accurate information designed to offer guidance in the restoration and conservation of architectural tiles schemes neither the author nor the publishers can be responsible for the accuracy of that information or for the results of any actions following the advice offered in the text.

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# Introduction

The term 'architectural tile scheme' covers a very broad church of ceramic decoration found usually on the inside but also frequently on the outside of buildings. Tiles are superficial to the structure of the building, being used to cover walls, floors and sometimes ceilings for both functional and decorative reasons. Neither roof tiles nor faience and terracotta are included under my heading 'architectural tile scheme' because even though they may also be functional, decorative and worthy of conservation, their primary use is structural and therefore they require additional considerations in conservation to that of non-structural ceramic. For the purposes of what I hope will be a better understanding of conservation ethics and treatments, I have subdivided this discussion of 'architectural tile schemes' into distinctive groups of tiles, not as you may imagine along the lines of function, i.e. wall, floors or ceilings, but into groups defined by age, technology in manufacture and provenance.

A tile scheme may be highly valued by virtue of its age and historic or artistic importance. The technology used in manufacture is important because of the direct relationship between the type of clay body and glaze, the causes of degradation and the methods of conservation. Finally, provenance has a direct bearing on the balance between conservation and restoration techniques. I have divided all of my discussions in the following text into three groups of tiles which follow each other chronologically: medieval; seventeenth- and eighteenth-century tiles; and nineteenth- and twentieth-century tiles, largely because those divisions reflect the distinct changes in the technology used to manufacture and install tiles, which directly affects conservation practices. In the main, my discussions relate to tiles found outside of the museum environment which do not necessarily have the benefit of a secure and protected location.

Medieval tiles form part of the group of tiles which we may still find outside the museum environment in churches and a small number of secular buildings. Archaeologists from the mid-nineteenth century onwards have taken an interest in the international heritage of ancient and medieval tiles. It is largely due to their interest in recording and the methods of preservation rooted in archaeology that we have a significant insight into the artistic and cultural development of tile-making in its many forms, and they have subsequently enhanced our ability to conserve these important historic artefacts.

The peak of manufacturing of the Dutch and Flemish tin-glazed tile industry during the seventeenth and eighteenth centuries produced tiles in enormous quantities for widespread domestic use across northern Europe. An appreciable heritage has survived, particularly in Holland, mainly because there has remained in place a constant, if small, manufacturing base which has kept the tradition alive. The conservation and restoration of this significant heritage are generally considered to be unproblematic because the clays and glazes used in early manufacturing remained available. In Great Britain, however, no such tradition survived in the face of the burgeoning nineteenth-century tile industry; consequently we seek to conserve the heritage which remains without resorting to replacement.

Similarly, the traditional methods of tile-making still thrive in southern Spain, Portugal and across the Islamic world. The continuing tradition of tile-making using much the same skills, materials and decorative styles makes the conservation of historic tiles in southern Europe, outside of the museum environment, a less than viable economic option. A product indistinguishable from the original has always been cheaply and readily available, making replacement the preferred option. Additionally, the absence of a damp cold climate, which is so detrimental to the survival of architectural ceramics, considerably reduces the instance of many of the problems found in tiles further north. It is for these reasons that we have not specifically included the tiles of southern Europe in this study; they are, however, so similar in terms of clay body and glaze types to those of the delft tradition that the techniques for conservation of the latter can also apply to this group of tiles.

At the very end of the 1970s, it became apparent among a small and scattered group of enthusiasts in the UK that there was a significant part of the built environment, not only in the UK but also across those parts of the developed world that had formerly been the trading empire of Great Britain, which was artistically and culturally important but which was being largely ignored: decorative tiles of the nineteenth and early twentieth centuries. More recently greater importance has been placed on the conservation of post-war decorative tile schemes which formed part of the movement of the inclusion of art into modern architecture.

There are many reasons to preserve, conserve and restore this important part of our architectural heritage; it represents an impressive leap forward in technological development coupled with the real desire of our Victorian forefathers to improve not just the surroundings but also the artistic sensibilities of society at large. It is also important to preserve the finished product of the industrial skills and techniques of mass production and the variety of raw materials which have been lost to today's world of economic competition and improved working conditions.

The aim of this book is not to dictate absolutely the precise methods, technology and uses of materials which combine to encompass all aspects of conservation, as these are many and varied, but to advise and encourage on appropriate means towards preservation of this valuable heritage. The text is arranged to begin at the start of the process of conservation, and each group of tiles is dealt with chronologically within that process. All of the projects used as source material, except where stated, are taken directly from the portfolio of the Jackfield Conservation Studio covering almost 30 years of experience in the field of architectural ceramics conservation.

The causes of degradation in ceramics and related building materials are well documented, namely:

- water, movement of moisture;
- external stress;
- deterioration by salt crystallisation;
- use, abrasion, impact damage;
- dirt and staining;
- climate and weathering;
- unsuitable treatments and materials.

Detailed analysis of the causes can be found in recognised research on the deterioration of ceramic, glaze and similar siliceous materials carried out by Buys and Oakley (1993), Warren (1999), Fielden (1992) and Ashurst (1988). Research into deterioration is beyond the scope of this book, however, the results of deterioration are identified throughout. The text deals with the responses to deterioration in terms of prevention and treatment and the materials and techniques required in those treatments. The materials and methods chosen for architectural tile conservation and restoration in this text are not necessarily those which come most highly recommended for use in the controlled environments found in museums and conservation laboratory studios, but are those which have been selected by

experience to perform best in the environmental and economic conditions which tend to prevail at the site of most architectural refurbishment programmes.

The historian and scholar Hugh Trevor-Roper commented, 'Fertile error is to be preferred to a sterile accuracy' (Sharpe, 2003). Conservators, as a professional group that encompasses backgrounds from the arts, engineering and science, have a history of fertile and imaginative solutions for seemingly insurmountable problems of resisting the decay and loss of valuable heritage, solutions which eventually become accepted as standard practice. If there is any axiom which describes the daily working routine for conservators it must surely be 'nothing ventured, nothing gained'. It was in this same spirit, which we must applaud, that much of the early work towards the conservation of nineteenth-century architectural tiles was carried out under the auspices of the Jackfield Tile Museum and the Tiles and Architectural Ceramics Society almost 35 years ago.

### **Bibliography and further reading**

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# 1 Looking at tile schemes

## Introduction

Though the material condition of the tile scheme is the primary concern of the conservator, attribution is another area of interest which is of great value. The conservator need not be a tile historian, the subject is vast and can range worldwide, but to have a working knowledge of the history of tiles, and the capacity to identify the status of a scheme and to place it in the correct historical context is a worthwhile tool. The use of tiles ranges from the purely utilitarian, for example, the interior of a stable block or water pumping station (Figure 1.1), to high status art decoration. The ability to identify the origin of a scheme and disseminate the information, if it might otherwise be overlooked, will support the move towards conservation for the future. The aim of this chapter is to give a broad overview of the different ways in which tiles have been used in the past to create recognisable styles within the history of decorative architectural design of northern Europe.

The use of design in tile schemes falls into two main categories: decoration on individual tiles, and the juxtaposition of plain and decorated tiles to create a larger design plan. The use and variety of decoration and methods of decoration on individual tiles are too large a subject to be discussed in great detail here, suffice to say that from the earliest efforts in manufacture, artists and artisans have used their skills and inspiration to decorate tiles in countless different ways. The decoration found on tiles reflects not only the skills and fashions of the times but also the dominant religious and secular themes in society.

The conjunction of plain and decorated tiles, or permutations and arrangements of individually decorated tiles, to create a larger design has been part of the development of the history of the tile scheme from the beginning of tile manufacture. Distinctive arrangements of tiles or distinctive colour combinations can sometimes give an indication as to geographical origin or school of tile-making in the case of pre-industrial age tiles, or in nineteenth-century and later tiles, the identity of the manufacturing company. Deviations within the design or colour scheme can indicate that a scheme may have been altered or undergone a change of location in its lifetime.

The latter part of the twentieth century saw a significant rise in the use of decorative ceramic tiles as part of a movement towards the integration of art and architecture in the post-war reconstruction period.

At the beginning of the twenty-first century, while there is still a place for artful tile decoration on a small scale, the main function of mass-produced tiles in architecture is utilitarian. The use of tiles as a design statement is falling out of favour as mass producers place cheapness of raw materials and ease and consistency of production above design aesthetic. Tiles are no longer the chosen medium for designed decoration of high status interiors.



*Figure 1.1* A utility tile scheme in an old stable block.

## Medieval pavements

In the UK there are few medieval pavements that have lain undisturbed or unchanged in their original design format and it would be fair to say that there are probably none remaining which have not received the benefit of scholarly attention to investigate their origin, format and later history. Most important tile pavements have been lifted and reset in the past with sometimes little in the way of accompanying documentation to substantiate the accuracy of the setting format.

A summary of studies of medieval pavement design, particularly the work carried out by Elizabeth Eames at the British Museum in the 1950s and 1960s, shows that large tile pavements were often laid in diagonal fashion, while smaller pavement areas were laid square on. Both the pavement in the small refectory at Cleeve Abbey and the Canynoges pavement (fifteenth century) found in Bristol, but now in the British Museum, demonstrate this format. Two lesser-known pavements – the refectory pavement at Denny Abbey (thirteenth century) (Figure 1.2) and the guest room floor in Guy's Tower, Warwick Castle (early fourteenth century) (Figure 1.3) – also demonstrate the same format with the addition of tramlines of tiles at intervals laid square on. Diagonal configurations are often arrangements of 16, 9, or 4 individually patterned tiles which make up a complete design surrounded with single rows of plain dark glazed tiles (Figure 1.4).

Plain tiles set in square-on fashion were often in chequerboard configuration of dark green or black and plain yellow (Figure 1.5). Small pavements of square-on tiles are found arranged in panels



*Figure 1.2* Part of the thirteenth-century refectory floor at Denny Abbey, Cambridgeshire, showing the diagonal format with single lines of tiles inserted.





*Figure 1.3* Part of the thirteenth-century floor in the suite of guest chambers in Guy's Tower, Warwick Castle, showing the diagonal format with double tramlines of inserted tiles.

of decorated tiles, sometimes of random design, sometimes of repeating pattern. The small pavement located in the south transept chapel at Bylands Abbey is a square-on format with a central roundel, though this form of configuration was probably reserved for important areas.

Armorial designs of royal, noble or ecclesiastical origin found on individual tiles usually signify a particular patron or significant family in the locale of the original site. Some armorial designs can date a pavement quite accurately. However, it was general practice for tile-makers to sell on surplus tiles for use in other pavements to anyone who wished to buy. It was also common practice to continue to use designs which had been specially commissioned for one location in other subsequent locations.

The majority of pavement designs are unattributable. According to Eames (1992), the paviour or tiler is likely to have worked from a design sheet drawn up by a monk who was resident in the abbey or priory, but they may equally have been designed by the master tile-maker himself or by the master builder in charge of construction. The lead glazes which were used to decorate and add colour to the surface of the red clay tile body were not hard enough to withstand the wear and tear of footfall, and much of the colour of the glazes would have worn away even by the time of the dissolution of the monasteries, thus, it is often difficult to distinguish exactly how a design might have originally been configured.

Some pavements have no recognisable design features and display random placement of tiles, usually indicating that the floor has been moved, altered or reset from the original design, though there are other reasons why a floor might not display a regular discernible design; the tiles may be

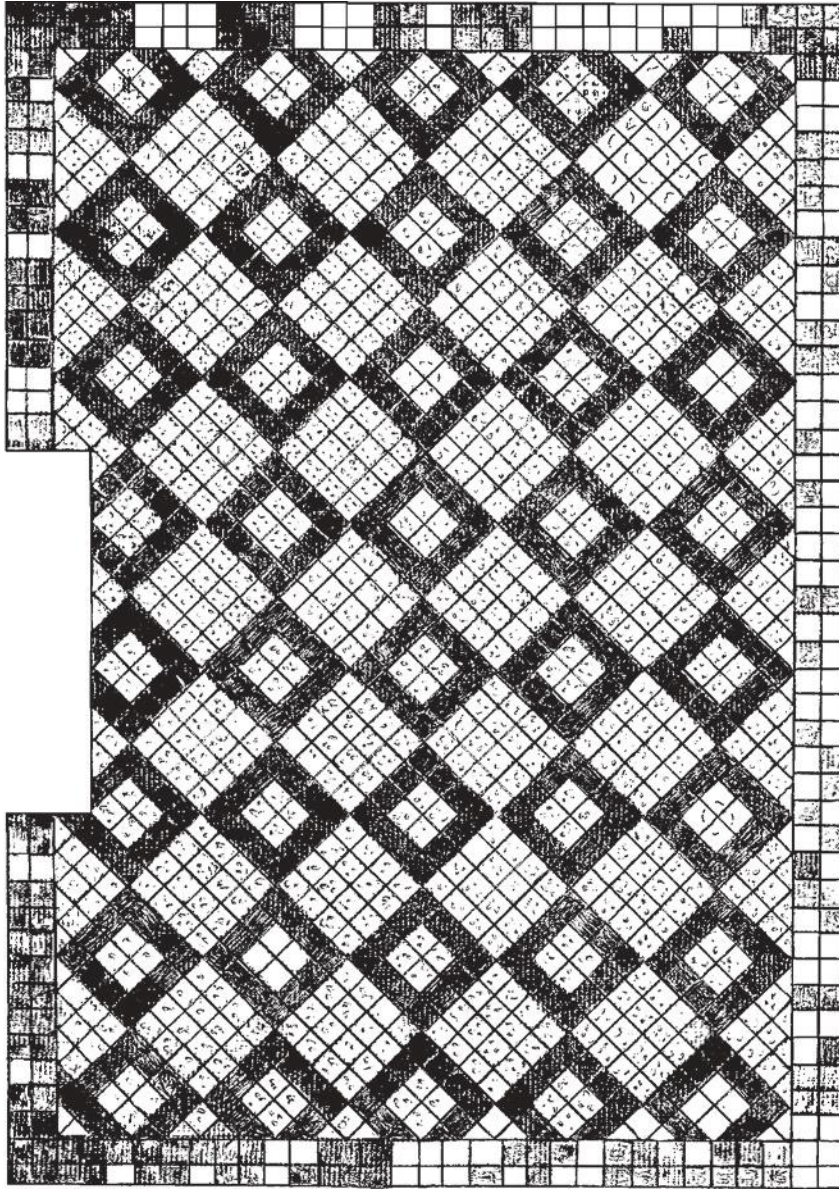


Figure 1.4 Diagram of the Canynge pavement, British Museum, a diagonal format of groups of 16 and 4 decorated tiles surrounded by plain dark tiles.

excess material from a large important pavement which have found their way onto a lower status floor or possibly they may be part of a purchase of stock material bought for use in a secular or domestic building. During the later phase of medieval tile-making in the mid to late fifteenth century, tileries tended to be in fixed locations and wealthy merchants provided a ready market for excess material.





Figure 1.5 Checkerboard format found at Thetford Abbey, Norfolk.

### **Delftware interiors**

Dutch tin-glazed delftware tiles have been liberally used to cover and decorate utility surfaces in northern Europe from the late seventeenth century onwards. The fashion for using tiles to cover not just floors but walls also can be traced to the Islamic-influenced tiles of southern Spain. Dutch-made delftware tiles continue to be manufactured for the same decorative purposes today. Utility uses include fireplaces, stoves, kitchens, wash-houses or bathrooms and dairies (Figure 1.6). In England, tin-glazed tiles became popular from more or less the beginning of the eighteenth century and were for the most part, other than occasional notable exceptions, used without any particular architectural design format other than decorative arrangements, including grouping of flower patterns, biblical stories, landscapes, ships or other social narrative themes, perhaps interspersed with plain tiles (Figure 1.7). Repeating corner motifs sometimes forms a strong alternative decorative diagonal feature to the overall composition. The English delftware tile manufactured in Liverpool for the same utilitarian purposes and featuring many of the same designs as the Dutch tile was, in part, intended for export to New Englanders on the eastern seaboard of America.

On the northern European mainland, from the late seventeenth and throughout the eighteenth centuries, alongside the continuing utilitarian use, there flowered an extravagant but considered use of delft tiles in an architectural sense in some of the wealthiest interiors. Tile painters began to copy illustrious and fashionable Dutch seascape and flower paintings over large expanses of tiles, to the extent that tile panels became a substitute for paintings, complete with elaborate frames painted onto surrounding two or three courses of tiles. Architectural features such as columns, swags and