

## A Medieval English floor tile from the 14<sup>th</sup> century



I have read the fanciful suggestion that sheathing a building in clay tiles makes it equivalent to a big pot, containing the life within. However, I have to concede that this floor tile isn't a pot and it is a bit out of place in a series of articles on old pots. It is made of glazed and fired clay though and I have always found medieval tiles very evocative as I think of the generations of medieval feet that trod them.

Glazed clay floor tiles were first used occasionally in England from the late 10<sup>th</sup> century. These early tiles were decorated with raised lines on the surface of the tile. Around 1200 the big ecclesiastical institutions and royal palaces started laying clay tile mosaics on their floors, using tiles of different shapes and sizes. This procedure was very labour-intensive and expensive, so only the wealthiest could afford it. Patterns were produced in the mosaics by coating some of the tiles in a white slip before glazing, producing a cream or yellow colour. A few of the mosaic tiles were even stamped to create a pattern on the tile, which was then filled with white slip, creating a brown and cream design on a single tile. This led to the idea that the tiles could be square and all the same size, with all the pattern coming from the inlaid designs on each tile, reducing production and laying costs. The lower costs of this new technique resulted in a big increase in demand in the 14<sup>th</sup> century, with inlaid tiles being laid in most churches and many homes of wealthy individuals. Before the introduction of clay floor tiles most buildings would have had packed earth floors. In fact the introduction of tiled floors is part of a wider trend in the 13<sup>th</sup> and 14<sup>th</sup> centuries with a greater focus on comfort. Other building elements introduced at this time include glazed windows, wall chimneys and internal stairs.

This tile, which is 12 cm square and 25 mm thick, was clearly once part of a larger pavement, and the rear and the edges are still coated with mortar. The design is made up of quarter circles and plant-like forms. To try to find out more about it I consulted the British Museum's catalogue of their tile

collection. I often find, when I am researching my old pots, that despite its vastness the information available on the internet is disappointingly shallow, and I have greater success referring to specialist books. However, one area where the internet clearly beats books is in giving access to the collections of the museums of the world. On the British Museum's website they have images of 14,395 medieval tiles! Luckily I didn't have to look through them all to see several which, though not identical to mine, had enough similarities to suggest that they were made at the same place. That place was Penn, near High Wycombe.

In fact, it is not surprising that my tile was made in Penn, because in the second half of the 14<sup>th</sup> century the tilers at Penn had a virtual monopoly of tile-making in South East England. In the 12<sup>th</sup> and early 13<sup>th</sup> centuries, when the main customers for floor tiles were palaces, cathedrals and abbeys, tilers would move from one client to the next, making their tiles on site. From the second half of the 13<sup>th</sup> century this changed and at a number of sites around the country they started mass-producing tiles at a single location and transporting them to clients in their area. The business at Penn was particularly successful, selling the same types of tile to parish churches and royal palaces. In the twelve years after 1350 the Penn tilers provided Windsor Castle with 285,000 tiles! At the same time they were producing roof tiles as well – in fact they sold more roof tiles than floor tiles.

One characteristic type of Penn tile allowed four identical tiles to be put together to form a circular design. My tile has this sort of design, as can be seen if we combine four images of my tile as below:



In this ingenious way a larger design can be created without requiring a greater diversity of individual tile designs.

Rather surprisingly, there is some disagreement about how the inlaid tiles were made. Three alternative methods have been proposed. In one method the design is impressed in the soft clay tile, which is then coated with white slip. The white slip is then scraped off the surface, leaving it only in the grooves of the design. An alternative approach is to coat the tile first with white slip before impressing it with the design, and in a third technique (described as 'printing') the wooden tool that forms the design is coated with white slip and then impressed into the clay tile. It appears that early tiles were made using the first of these techniques and then the other methods may have been introduced later in an effort to speed up the manufacturing process and reduce costs.

The glaze is a lead glaze and it has been suggested that it was produced simply by brushing lead oxide over the surface, which would then react with the clay during firing to produce a glaze. Kilns that such tiles were fired in have been excavated by archaeologists – the tiles were stacked carefully on their edges in a particular pattern so that gaps in the stacking created controlled paths for the flames and hot gases. Temperature control (all done by eye) was quite critical – the temperature had to exceed 1000 C to produce the glaze, but if the temperature went above around 1100 C there was a risk that the tiles would warp, discolour and become more brittle.

The market for these tiles declined over time as an increasing proportion of potential customers had already fitted them, though there are examples where new tiled floors have been laid over older tiled floors which have worn out. Inlaid floor tiles continued to be produced until the middle of the 16<sup>th</sup> century when the new fashions of the Renaissance and the import of colourful maiolica tiles from the continent finally killed the industry. Except in the West Country! Medieval-style tiles continued to be made in Barnstaple for some reason until the 18<sup>th</sup> century.

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March 2022