

The Medieval Floor Tiles from Site 12, Reading Oracle, Reading

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This report is part of a series of archive reports on the Roman, medieval and later ceramic building material from the Reading Oratory project excavations carried out by Oxford Archaeology.

Seventeen fragments of medieval floor tile were recovered from site 12. They can be grouped into five fabrics, given the codes A to E. These five groups appear to differ not only in fabric but in their method of decoration, size, use and condition and therefore are interpreted as representing five separate events.

Fabric description

Each tile was examined at x20 magnification and the principal features of the fabric (inclusion types, groundmass and firing) were noted. A full description would require thin section and chemical analysis.

Fabric A

Eight fragments of Fabric A were found. The fabric is oxidized and contains few large inclusions, principally large red haematite pellets up to 10mm across, some containing quartz sand grains. The tiles have moulding sand on the base and this consists of a mixed quartzose sand containing sparse rounded, and abundant subangular quartz up to 0.5mm across and sparse angular white flint fragments up to 1.0mm across. The groundmass contains lenses of differing colour and texture and the impression of a leaf (possibly a beech?) was noted on the interface between two laminae. A slight micaceous sheen is noted on the lower-fired examples.

It is likely that the parent clay was a Tertiary clay, probably from the Reading beds, which includes light-firing clays. Such clays outcrop close to Reading but the style and decoration of the tiles suggests that they may be products of the Penn industry, which operated in the later medieval period. Penn lies on the Oxford-London road near High Wycombe, some way from Reading, and the possibility of a local 'daughter' industry should also be considered.

The tiles include fresh and worn examples, including one very worn example. Assuming that the tiles were originally laid in the late 14th or early 15th centuries, they might have been in use for a considerable time thereafter.

Of those tiles whose original decoration can be made out the following types were noted:

- white slipped under a clear lead glaze, one scored and snapped diagonally – 3 examples
- 'printed' two-colour designs, one scored and snapped diagonally – 3 examples

- black glazed (over-fired oxidized with copper as a colourant?), scored and snapped diagonally
– 1 example

The presence of diagonally-snapped tiles and the high incidence of plain yellow and black tiles is consistent with a late 14th or early 15th-century date. Such pavements were laid at 45 degrees to the walls and consisted of panels of 4, 9 or 16 tiles within borders of yellow and black tiles. The border tile colours would probably have changed where two borders crossed.

The fragments are less broken up than those of the other fabrics and consequently in three cases we have the tile quarry sizes: ranging from 110 to 120mm square. The tiles vary from 21 to 33mm thick.

Although used mainly in church floors, by the later 14th century the use of these mass-produced tile pavements had spread to ancillary structures in religious houses and to secular contexts where they would have been used in public spaces, such as open halls.

Fabric B

Five tiles of Fabric B were found. The fabric is poorly mixed and under x20 magnification considerable variation in texture and colour can be seen. The fabric contains abundant subangular quartz up to 0.5mm across and moderate rounded iron-rich pellets up to 3.0mm across. Some of the clay lenses are almost pure white clay and overall the fabric seems to include a lot less iron than Fabric A.

Like Fabric A, it is likely that the parent clay for Fabric B is a light-firing Tertiary clay. Two options are the Reading Beds and the Bagshot Beds. However, well-rounded quartz grains with haematite coating and veins are commonly found in objects made from the latter and therefore, again, a Reading Beds origin is most likely.

Four of the tiles were very worn, in one case removing all trace of the original surface and with this one exception the tiles were decorated with shallow inlaid white clay.

The style of decoration suggests that this industry post-dates the late 13th/early 14th-century Chertsey/Halesowen school but a production date in the first half of the 14th century is likely. As with Fabric A, the tiles must have been laid for some time to receive the wear and the overall wear is heavier than in Fabric A. Perhaps the two pavements were laid at different times but destroyed at the same time?

Early 14th century tiles are likely to have been used mainly in religious houses, and probably mostly in the principal spaces within those houses (churches, chapter houses, cloisters). There is a strong possibility that these tiles, therefore, were in use in Reading Abbey.

Fabric C

There are two tiles of Fabric C from Site 12. The overall appearance of this fabric is similar to that of Fabric B but they contain large rounded quartz inclusions and brown-stained and white angular flint fragments, up to 5.0mm across which are absent from Fabric B. It is quite likely that the two fabrics were produced from the same parent clay, possibly in the same place but represent different batches of tiles.

The two examples are both extremely worn, such that the tiles are much thinner than those of Fabric B (16-17mm compared with 20-31mm).

Fabric D

A single example of Fabric D was found. The fabric has abundant quartz sand inclusions, consisting of rounded quartz grains up to 1.0mm across. The tile has heavily bevelled edges and a plain lead glaze.

Fabric E

A single example of Fabric E was found. The fabric contains abundant subangular quartz, ranging up to 0.5mm across and contains numerous angular grog fragments, mostly of the same colour and texture as the groundmass. Sparse rounded quartz grains up to 2.0mm across are also present.

The tile has a roughly knife-trimmed edge and has sparse moulding sand on one face. There is, however, only splashes of glaze but no sign of wear on the upper surface. At 22mm thick, the tile may be an unusual flat roof tile rather than a floor tile.

Discussion

Interpretation of these finds depends mainly on the stratigraphic context but one possible interpretation is that they represent the dumping of debris from the demolition of Reading Abbey on the site in the post-dissolution period. It is highly unlikely that tiles of Fabric B (and by implication also Fabric C) would have been used on a secular site. The difference in wear between the main fabric groups suggests that they can be ordered as follows: Fabric C; Fabric B, Fabric A and Fabric D.

It is unlikely that Fabric E is actually a floor tile.

Further work

Four of these tiles have designs which should be reconstructed and compared with published data, such as the BM catalogue (Eames 1980 #11333), Hohler's catalogue of Penn tiles (REF) and the Reading Abbey finds (Fasham & Hawkes 1985 #3843). There is considerable potential for being able to provenance floor tiles using petrological and chemical analyses. At the very least one would want to examine a sample of each of the five fabric groups whilst for the main fabrics (A, B and C) chemical analyses would provide a basis for comparison with other groups of similar tiles and for the recognition of individual batches.

Costing

Reconstruction of tile designs and production of pencil tracing – 1 hour

Production of digital drawings from scanned tracing – 2 hours

Comparative research – 1 hour

Thin section analysis of five fabrics – 5 thin sections at £22 plus VAT each

Chemical analyses of 14 tiles (5 each from fabrics A and B, 2 from Fabric C and one each from Fabrics D and E) – 14 analyses at £22 plus VAT each

Total: £506 plus VAT = £594.60

Appendix

ID	BoxNo	Context	Subfabric	Count	Glaze	Use	Width	Length	Thickness	Comments	Action
2954	BM32	2742	B	1		UNUSED				DEC	PH209
2862	BM33	2745	B	1	CLEAR	WORN	30				
2893	BM30	644	E	1	GREEN	WORN			22		
2696	BM31	692	C	1		WORN			16		
2480	BM175	8755	B	2	WHITE SLIP	VERY WORN			30	DEC	PH204;DR
3094	BM162	8760	C	1	GREEN/CLEAR	VERY WORN			17		
2492	BM163	8792	A	1	DARK	UNUSED			33	HALF CUT DIAGONALLY	PH201
2436	BM164	8817	A	1	CLEAR	UNUSED					
2478	BM175	9003	A	1	WHITE SLIP UNDER CLEAR GLAZE	UNUSED	11	15	31	DEC HALF DIAGONAL	PH205;DR
2723	BM166	9022	D	1	CLEAR	WORN/ABRADED				GREEN GLAZE FROM STACKING ON BOTTOM	
2733	BM166	9054	A	1	CLEAR	VERY WORN	115	118	23		
2475	BM175	9054	A	1	GREEN	UNUSED				HALF DIAGONALLY	PH207;DR
2096	BM167	9086	A	1	NO GLAZE	USED	120	120	22		
2069	BM168	9305	A	1	GREEN GLAZE	UNUSED					
2815	BM169	9394	B	1		VERY WORN			20		

ID	BoxNo	Context	Subfabric	Count	Glaze	Use	Width	Length	Thickness	Comments	Action
2477	BM175	9497	B	1	WHITE SLIP UNDER CLEAR GLAZE	USED			31	DEC	PH206;DR
2598	BM171	9509	A	1	CLEAR	UNUSED			31		PH202