

## **The ceramic building material from selected sites, Reading Oracle**

### ***Alan Vince and Kate Steane***

The ceramic building material from Sites 12, 29 and selected sites south of the river Kennet was examined by the authors in 2003 as part of the post-excavation analysis of the Reading Oracle site. As a result of limited funds and bearing in mind the results of an assessment of the material carried out by \*\* it was decided that a detailed fabric analysis would not be very productive. Furthermore, the material was not weighed. The aim of the study was to find semi-qualitative variations in the deposition of ceramic building material and to interpret those in terms of site formation and the structural history of the site.

Information was recorded on the following aspects:

- Firing. The presence of over-fired or under-fired objects was noted. Where these firing defects might have affected the function of the object this was noted.
- Form. Fragments of six object types were recognised (excluding bricks, which are the subject of a separate specialist report). These are: drains, flat roof tiles, hip tiles, curved fragments which might come from either hip or ridge tiles, louver fragments and ridge tiles.
- The presence and character of peg holes on flat roof tiles. A distinction was made between holes which had been pierced right through the tile and those which had not. The latter were termed 'blind'. Where a tile had two blind holes it could not have been fixed to a roof. In most cases the peg holes were circular but in the rare cases where rectangular or square holes were used this was noted.
- The presence of lead glaze on the tiles was noted. From the study of complete flat roof tiles it is clear that glaze was only ever used sparingly, on the lower third of the upper surface, i.e. that part of the tile which would have been exposed to the elements. However, even in these cases the tiles often only show splashes of glaze and the technique can never have had any effect on the function of the tiles and was merely decorative. In a few cases the tiles had a clear glaze, often just on one edge, which is interpreted as an accidental 'ash glaze' caused by the fluxing of the tile surface in the kiln in the presence of alkaline ash derived from the kiln fuel. This effect was encouraged in the post-medieval period by the addition of salt into the kiln, mainly in the production of bricks, and it is just possible that some of these 'ash-glazed' tiles were accidentally glazed during the production of salt-glazed bricks.
- Traces of use were noted. Particular care was taken to note the incidence of sooting, which might have been caused by the use of roof tiles on a structure with an open hearth (or faulty

chimney) and to distinguish this from burning, which indicates direct contact with flames and is likely to have been brought about through the use of the tiles in hearths, ovens or firebacks.

- The incidence of mortar was noted. A distinction was drawn between mortar which occurred on all surfaces, including broken ones, and which is interpreted as evidence for the use of the tile in walling, and mortar (or plaster) used in between tiles on a roof. Where possible the position of the mortar on the latter tiles was noted.
- The dimensions of tiles were recorded in mm. Only complete lengths and widths were recorded.
- Impressions. Paw prints from deer and cat were recorded.

## Site 12

There were 1442 fragments of ceramic building material (excluding bricks) recorded from Site 12, coming from no more than 1389 objects. Most of these (97%) were flat roof tiles with other forms accounting for less than 2% in total (36 objects).

### Project Phase 1

Three flat tiles were recovered from Phase 1 deposits. This is consistent with the dating of these deposits to the mid 12<sup>th</sup> century. Two of these tiles were glazed. One had sooting on the underside and another had sooting on the upper surface, which may indicate that it was used for some other purpose than roofing (although soot would have percolated through the cracks between roof tiles if no mortar was used to seal these joints).

### Project Phase 3

Ninety fragments of tile were recovered from Phase 3 deposits (Phases 1202 and 1203a). Apart from a single fragment of ridge tile they were all from flat roof tiles. Twenty-four tiles had traces of glaze. Some tiles had blind pegholes and had definitely not been used for roofing. Only two tiles had traces of use, both being burnt (one on the upper face and the other all over).

### Project Phase 4

One hundred and six fragments of tile were recovered from Phase 4 deposits (Phases 1204a, 1204b, 1205a and 1205b). The flat roof tiles include three overfired and one underfired example. Only six of these tiles had pegholes, two of which were blind. Sixteen fragments had traces of glaze. One flat tile had mortar on the underside (1205b). Four tiles with complete widths were measured: 170mm, 180mm (x2) and 195mm.

This Phase saw the first occurrence of a hip tile (1205a), with a blind peghole and therefore held in place solely by friction, and a used early 14<sup>th</sup>-century floor tile.

## **Project Phase 5**

Fragments of 465 tiles were recorded from Phase 5 contexts (1206a and 1206b). All but seven were flat roof tile fragments. Seven of the flat roof tiles were overfired but could still have been used and a further three tiles had ash/salt glaze on an edge. Fifty-three pegholes were noted, of which one was blind and one was rectangular. Twenty three tiles had traces of glaze. Seven tiles had sooting on the underside and fourteen had evidence for burning or sooting on other surfaces. Three flat tiles had been reused in mortar walling and six had probably been mortared into position on the roof. Three complete flat tile widths were recorded: 187mm, 192mm and 194mm.

Two fragments of floor tile were found, a worn early 14<sup>th</sup>-century tile and an unworn late 14<sup>th</sup>/15<sup>th</sup> century example. One definite hip tile was found, together with three hip or ridge tile fragments and a single fragment of louver.

## **Project Phase 6**

There were 724 objects recorded from Phase 6. All but 24 of these were flat roof tiles. Seventeen of the flat roof tiles were overfired, one was underfired, and eleven had ash or salt glaze but all were useable. One hundred and sixty peg holes were noted, of which eight were blind and two were rectangular. In addition, three tiles had two peg holes of which one was open and the other blind. Thirty five tiles had traces of glaze. Seven flat tiles had sooted undersides and 11 had other traces of burning or sooting. Twenty two tiles had been reused in mortar walling and ten had been secured on the roof using mortar. Twenty tiles had complete widths, ranging from 160mm to 193mm. The remaining objects include drains (two from 1212a), floor tiles, hip tiles, ridge tiles and curved pieces of hip or ridge tile. The floor tiles include both early 14<sup>th</sup>-century types and late 14<sup>th</sup>/15<sup>th</sup> century tiles.

## **Site 12 Discussion**

There was no reused Romano-British tile on Site 12, in contrast to Site 29. There was also no tile of diagnostically 12<sup>th</sup>-century type. The tiles from Phases 1, 3 and 4 (up to and including 1204b) are consistent with the use of simple flat tile gabled structures with a row of ridge tiles along the crest. There is no evidence for the use of mortar in the roofing at this period.

There is a change in the character of the roof tiles in Phase 1205a with the first appearance of hip tiles. Only five such tiles were recovered, from contexts dating to Phases 1205a to 1208b. Similarly, fragments of curved tile which might be hip tiles are also limited to these Phases (1205b to 1207a). The fragment of louver came from a similar context (1206a) and 7 of the 11 Phased fragments of floor tile come from these same deposits. The provisional dating of these Phases suggests that they pre-dated the dissolution and therefore are unlikely to be spoils from the destruction of the abbey. The fragment from Phase 1205a has been used but was recovered from a context with a provisional late 13<sup>th</sup> century date. This conflict in the evidence needs to be examined. Similarly, the hip tile from this same Phase is remarkably early. Most such tiles appear to date to the later medieval period (i.e. late 14<sup>th</sup> to 15<sup>th</sup> centuries). The contexts involved are 9497 and 9639. With these possible early exceptions, the roof

and floor tile from these Phase 4 and 5 deposits appear to have been brought onto the site during reclamation. Whilst they may have come from the guild hall this cannot be proved.

Twenty five fragments of tile in total were reused in mortared walls, either in the rubble core of a faced wall or as levelling material in the wall face. They range in date from Phase 1206b to Phase 1213.

Since the latest stratified hip tiles come from Phase 1208a it seems that Building 3 and its additions may not have used hip tiles but the quantity of tiles recovered from deposits contemporary with or later than these structures is much lower than that recovered from the earlier dumped deposits.

There is a slight difference in the incidence of glazing between 1205a and 1205b. Glazed tiles are slightly more common in the earlier deposits and less common in the later ones. Indeed, it is quite likely that all the glazed roof tiles found in the later deposits are residual. Likewise, the first evidence for the use of mortar in roofing occurs in Phase 1205b.

Only 27 flat tiles on site 12 had measurable widths. There are clear variations in width, ranging from 160mm to 195mm and a trend for the tiles to get narrower with time. However, there are no clear breaks in this trend and examples of narrow tiles in early deposits (eg. 170mm in 1204a) and wider tiles in later deposits (eg. 190mm in 1210a).

## Site 29

### Project Phase 1

A single unglazed fragment of flat roof tile was recovered from a Phase 1 context (2901a, ctx 6891). Although flat roof tiles were not introduced into England until the mid 12<sup>th</sup> century a single fragment of tile cannot be used as dating evidence unless: a) the context is securely stratified, b) there is no possibility of misnumbering and c) the identification is absolutely certain. In this case, the fragment was examined without any knowledge of its archaeological context and should be re-examined critically given the early date.

### Project Phase 2

Fourteen fragments of ceramic building material were recovered from Phase 2 deposits. Of these, eight were of Romano-British date and included *tegula*, *imbrex* and brick fragments. The remainder were flat roof tiles, of which 5 of the 6 fragments were glazed. They come from Phases 2902a, 2903a and 2904b. These tiles provide a *tpq* of mid 12<sup>th</sup> century for this Phase.

### Project Phase 3

There are 286 fragments of ceramic building material from Phase 3 deposits. Most of the fragments are from flat roof tiles, ridge tiles or unidentified curved fragments.

Twenty-two tiles with pegholes were recorded, of which 6 had blind holes. Seventeen percent of the flat tiles had traces of glaze although this varied considerably from Phase to Phase. For example in Phase 2905a the proportion is 33% glazed whilst in 2905b the proportion is 5%. The assemblages are of comparable size (110 vs 137 fragments). Two tiles had soot on the underside and 7 had sooting on the upper surface. One tile has possible evidence of being fixed in place on the roof with mortar (Phase 2904a-05b). Three tiles have measurable widths, ranging from 186mm to 191mm. A tile from Phase 2905b has iron corrosion around the circular peghole suggesting that it was secured with an iron nail rather than a wooden peg.

### Project Phase 4

There are 727 fragments of ceramic building material from Phase 4 deposits. These include 18 fragments of Romano-British tile, all bricks. Most of these come from Phase 2905c. The remaining tile includes a fragment of shouldered peg tile of 12<sup>th</sup>-century date, a finial fragment, three floor tiles, including an example with impressed decoration (ie stamped with a die but no white clay infill), a hearth tile and a fragment of hip or ridge tile (probably in this case a ridge tile, since there is no evidence for hip tiles in this Phase).

The flat roof tiles include 148 recorded peg holes, of which 67 have at least one blind hole and 18 definitely have both. 20% of the tiles have traces of glaze, although this varies considerably from Phase to Phase (2905c = 14% and 2905d = 31%). Four tiles have sooting on the underside whereas 18 have other evidence for sooting or burning and 30 have burnt edges, which suggests that they may have been used in a pegtile hearth, oven or fireback. These tiles come from a range of contexts in both 2905c and 2905d (Table 1).

**Table 1. Tiles with evidence for burning along one edge only.**

Context	2905c	2905d	Grand Total
5656		1	1
5694		1	1
5765		1	1
6052			3
6053	1		1
6066		8	8
6067	9		9
6134	6		6
<b>Grand Total</b>	<b>19</b>	<b>11</b>	<b>30</b>

Eleven flat roof tiles were held in place on the roof using mortar. In eight cases these tiles had mortar on the top half of the upper surface and the bottom half of the lower surface, indicating that the mortar was applied between the tiles as they were being placed on the roof rather than pointing the joints at some later date. These tiles almost all come from Phase 2905c. There are also 31 tiles which have been used in mortar walling, 30 of which come from 2905c. Twenty-five tiles have measurable widths

(Table 2) and these range from 174mm to 202mm. There is, however, considerable variation in width from Phase to Phase.

**Table 2**

width	2905a-05c	2905b-05c	2905c
174	0	0	1
177	0	0	1
180	1	0	0
182	1	0	0
183	1	0	2
185	2	0	1
187	0	0	2
188	0	0	1
192	0	2	0
193	0	2	2
194	0	1	0
195	0	0	2
197	0	1	0
198	0	1	0
202	0	1	0
<b>Grand Total</b>	<b>5</b>	<b>8</b>	<b>12</b>

### **Project Phase 5**

There are 534 fragments of ceramic building material from Phase 5 deposits. They include 12 fragments of Romano-British tile, mostly bricks. The majority of the fragments, however, are medieval flat roof tiles (510 fragments) together with examples of floor tiles, hip tiles and ridge tiles.

Of the 510 flat roof tile fragments 11 were over-fired, including two which had bloated and were probably not usable. Sixty-eight peg holes were recorded, of which 15 were blind. Thirteen percent of the tiles have traces of glaze (ranging from 23% in 2906a to 8% in 2906b). Eleven tiles have sooting on the underside and 20 have other sooting or burning. Two tiles have burnt edges. Ten tiles have mortar traces which indicate use of mortar on the roof and 14 tiles were incorporated into masonry walling. Eleven tiles had measurable widths and these range from 180mm to 193mm.

### **Project Phase 6**

There are 857 fragments of ceramic building material from Phase 6 deposits. These include 5 fragments of Romano-British tile (4 imbrex tiles and one brick, all from Phase 2907a). The remaining tiles are mainly flat roof tiles (799 fragments), floor tiles (36 fragments), hearth tiles (4 fragments, all from 2908c), hip tiles (4 fragments, from 2908a and 2908c), unidentified curved tiles, a louver fragment, ridge tiles and an unidentified object, possibly roof furniture.

The floor tiles are mostly wasters of early 14<sup>th</sup>-century date, clearly brought onto the site in Phase 2907a as make-up. They do include some used floor tiles, from later deposits within Phase 6. There is also a flat tile waster from this Phase, from 2908d.

Ninety-nine flat tiles with peg holes were recorded. Of these, three had rectangular peg holes, four had blind holes and four had one blind and one open hole. Glaze traces were present on 6% of the tiles but the proportion of glazed tiles declines throughout the Phase, from 11% in 2907a to 5% in 2908d. Twelve flat tiles have sooting on the underside, fourteen had burnt edges and 34 had other sooting or burning. Seven tiles incorporated into masonry walling were present (5 in 2907a and 2 in 2908c) and 10 which had been secured on the roof with mortar. Twenty five tiles with complete widths were recorded (Table 3). These include a number of tiles which are much narrower than those found in the earlier deposits, including one from a Phase 2907a deposit. However, a tile from Phase 2908d is much wider than any from earlier deposits. Three tiles have iron staining which suggests the use of iron nails instead of wooden pegs and one actually has a corroded nail fused onto the tile near the peg hole.

**Table 3**

Width	2907a	2908a	2908c	2908d	Grand Total
160			1		1
162	1		1		2
166			3		3
172			1		1
176			3		3
177			4		4
178			2		2
180	1		1		2
185		1	3		4
190	1				1
232				2	2
<b>Grand Total</b>	<b>3</b>	<b>1</b>	<b>19</b>	<b>2</b>	<b>25</b>

### **Project Phase 7**

There are 1064 fragments of ceramic building material from Phase 7 deposits. One is a fragment of Romano-British imbrex tile. The remaining tiles are mainly flat roof tiles (1045 fragments) but floor tiles, hearth tiles, unidentified curved tiles, ridge tiles, drains and a flat tile reused as a circular counter were also present. The lack of definite hip tile fragments suggests that the unidentified curved tiles are likely to be ridge tiles.

Eighty-three flat tiles with peg holes were recorded. Of these, 8 had rectangular peg holes and 4 had blind holes. Glaze traces were present on 2% of the tiles. Fourteen tiles had sooting on the underside, 6 had burnt edges, and 24 had other sooting or burning. Fifteen tiles had been incorporated into masonry walling and eighteen had been secured to the roof with mortar. Of the latter, three had mortar filling a peg hole and were therefore either secured by a single peg or perhaps were only secured by mortar. Thirty tiles with complete widths were recorded. The widths range from 157mm to 185mm.

**Table 4**

Width	2908e	2909a	Grand Total
157	1		1
158		1	1
162		3	3
165	1		1
167	1	5	6
169		3	3
170		1	1
171		1	1
174		2	2
175		2	2
176		1	1
177	1		1
178		5	5
182	1		1
185	1		1
<b>Grand Total</b>	<b>6</b>	<b>24</b>	<b>30</b>

**Project Phase 8**

There were 237 fragments of ceramic building material recorded from Phase 8 deposits. Most of these were flat roof tiles but floor tiles, hip tiles and ridge tiles were also present.

Forty-eight peg holes were recorded of which one was particularly wide diameter, six were rectangular, and four blind. Only one tile with a trace of glaze was recorded. Eight tiles had sooting on the underside and five had other sooting or burning. Sixteen tiles had been incorporated into masonry walling and thirteen had been secured to the roof with mortar. Eighteen tiles had complete widths (Table 5), ranging from 154mm to 237mm.

**Table 5**

width	Total
154	1
155	1
165	3
168	2
170	5
172	3
173	1
186	1
<b>237</b>	<b>1</b>



---

**Grand Total**      18

---

### **Project Phase 9**

Nine fragments of ceramic building material were recovered from Phase 9 deposits. They consist of eight flat tiles and one unidentified curved tile. Five tiles had peg holes, of which one was blind. One of the tiles had a trace of glaze. One tile was secured to the roof with mortar and one tile had a complete width, 155mm. This tile had iron staining around one of the peg holes.

### **Project Phase 10a**

One hundred and twenty-nine fragments of ceramic building material were recovered from Phase 10a deposits. Most of these were flat roof tiles (120 fragments) but there were also fragments of drain, floor tile, hip tile, unidentified curved tile, ridge tile and a single pantile.

The flat roof tiles included 93 with peg holes, of which three were blind and two were rectangular. 10% of the tiles had traces of glaze. Five tiles had sooted undersides, one had a burnt edge and six had other traces of sooting. Seven tiles had been incorporated into masonry walling and two had been secured to the roof with mortar. Fourteen tiles with complete widths were measured (Table 6) and these range from 148mm to 240mm.

**Table 6**

width	2910a	Grand Total
148	1	1
153	1	1
154	1	1
160	2	2
162	2	2
163	1	1
166	1	1
170	1	1
173	1	1
210	1	1
240	2	2
<b>Grand Total</b>	<b>14</b>	<b>14</b>

### **Discussion of Site 29 ceramic building material**

Ceramic building material is ubiquitous on medieval urban sites and much was clearly recycled, in various ways. Tiles could be reused from one structure to another. They could be reused as rubble in walling. They could be used to create pegtile hearths, ovens and firebacks and they could be used as hardcore or an accidental component in dumped rubble. It is therefore difficult to interpret the site 29 finds without making several assumptions.

## Romano-British tile

There are 44 fragments of Romano-British tile from Site 29. The majority of these were bricks, ideally suited for use in masonry walling and it is likely that the majority of these tiles were brought onto the site in Phase 4 for the construction of hall 5860. There are, however, eight fragments from earlier deposits and it is notable that these include a wider range of forms. Whilst it is easy to explain the presence of the Phase 4 bricks as plunder from Silchester these earlier finds may suggest a more local source, since there appears to be no pressing reason for bringing the tiles (none of which have traces of mortar like those in Phase 4) onto the site. The finds in later deposits are probably evidence for redeposition of debris from hall 5860 or disturbance of its walls.

**Table 7**

project Phase	BRICK	IMBR	TEG	Grand Total
2	2		1	5
4	18			18
5	11		1	12
6	1		4	5
7			1	1
<b>Grand Total</b>	<b>32</b>	<b>7</b>	<b>5</b>	<b>44</b>

## Flat roof tile

There is no doubt that a high proportion of the flat roof tile in the later Phases of the site is recycled in some way or other. It is likely that the smaller the fragment the more likely it is to have been recycled. Therefore, if we restrict our study to those tiles with complete widths this is likely to give a clearer picture of the changing character of the flat roof tiles through time.

In this restricted sample, of 108 tiles (165 fragments), glaze is present on 25% of the tiles up to and including Phase 5 but on only one tile thereafter, from Phase 2908e. There is no real support for a gradual decline in the use of glaze during Phases 3 to 5 since the frequencies for these Phases are 33%, 19% and 27%.

Only one of these complete width tiles has rectangular peg holes, from Phase 6, and all the more fragmentary tiles with square peg holes occur in later Phases. The earliest stratified example comes from Phase 2907a (construction of building 5835) and the complete tile comes from 2908d. It is possible, therefore, that all the rectangular peg hole tiles came onto the site for the roof of building 5835.

It is quite clear that the first use of flat tiles in masonry walls occurs in Phase 2905c with the construction of hall 5860. Only one mortared fragment occurs in an earlier deposit, ctx 6511, Phased as 2902a-05a. This might be a stray from an earlier masonry building but is more likely to be due to the misphasing of this context.

The earliest evidence for the use of mortar to secure roof tiles comes from a poorly-Phased context in Phase 3 (ctx 5407, Phase 2904a-05b) and there are fragments in the construction deposits for hall 5860. However, tiles with mortar traces on would not be generated during construction and these are evidence for the use of this method on an earlier structure, presumably stone hall 5840 (Phase 2905a).

The earliest stratified tiles for which widths can be measured come from Phase 3 and are probably associated with the construction of hall 5840. They range from 186 to 191mm. The tiles from the next Phase have a much wider range (174 to 202mm) and their frequency distribution suggests that there are several different groups of tiles represented (Fig 1). These include both narrower and wider tiles than those from Phase 3. The tiles from Phase 5 have a narrower range (180 to 193mm) and these to judge by the site interpretation, are likely to be mainly derived from the roof to hall 5860. The tiles from Phase 6 include examples which are narrower than any used in Phases 3 to 5 and these tiles were presumably brought onto the site for the roofing of building 5835. As in Phase 4, however, there is not only a wide range of sizes but evidence for grouping which suggests that several groups of tile were present. The majority of these overlap in width with those from the earlier Phases but do not have the same size distribution, suggesting that few of these tiles origination on the roof of hall 5860. A single

very wide tile was found in this Phase, the earliest of four such tiles. The Phase 7 tiles have similar widths to those in Phase 6 and presumably come mainly from the roofs of the Phase 6 tannery buildings.

The tiles in Phase 8 deposits, however, are narrower than those in Phase 7 and presumably are tiles used on the original Oracle roofs. They include two larger tiles. The single tile with a complete width from Phase 9 and those from Phase 10a have a similar size range to those in Phase 8.

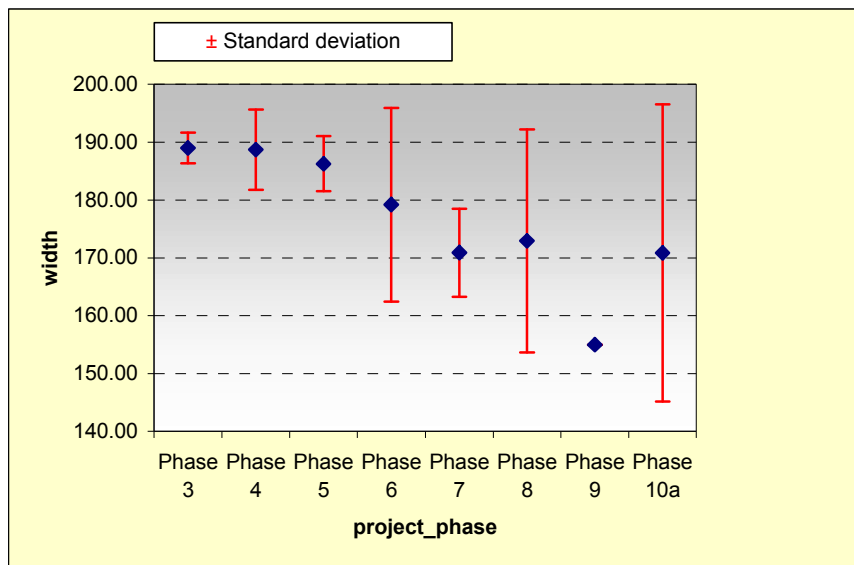


Figure 1

### Ridge tiles

Fourteen fragments of ridge tile were found on Site 29. Four of these were glazed and none were decorated. The earliest stratified fragment came from a Phase 3 deposit, the construction of building 5840. It may have been broken during construction or be debris from an earlier, Phase 2, structure. It is possible that the number of ridge tiles recorded is too low because the lower edges of these tiles are very similar to those of flat roof tiles. Similarly, a proportion of the unidentifiable curved tile fragments from the site are also probably from ridge tiles.

### Louvers

A single fragment of a louver was recovered from Site 29, from a Phase 6 context. The louver is likely to have been used on a Phase 5 or earlier structure.

### Finials

A single fragment of a finial was recovered from Site 29. It came from a Phase 4 context, the construction levels of hall 5860. However, unless it was broken during construction the finial would have been used on an earlier structure, perhaps building 5840.

### Floor tiles

Fifty-two fragments of floor tile were recovered from Site 29 (Table 8). They were each examined using a binocular microscope at x20 magnification and compared with the floor tiles from Site 12. They could be divided into eight groups, of which five were present on Site 12.

Table 8

Phase	A	B	D	FLEMISH	G	TGW	Grand Total
Phase 03			1				1

Phase 04				1		1
Phase 05	2	1				3
Phase 06	1	30			1	32
Phase 07	1	4	2	1		8
Phase 08	1	2			2	5
Phase 10a		1		1		2
Grand Total	3	39	4	1	2	52

The earliest stratified example was a small fragment of a Fabric D tile from a loosely-phased deposit, Phase 2905a-05c. The tile had been used and is worn with mortar on the base. The floor from which it came is therefore likely be considerably earlier than Phase 2905c, the latest possible phase for the findspot.

Phase 4 produced a single floor tile of Fabric G. Only three examples of this group were found in total and it is not possible to suggest a close date for its manufacture.

Phase 5 produced three floor tiles, two of which had been used (Fabrics B and D). The third, from context 5331, is a waster of Fabric B, of early 14<sup>th</sup>-century date. Similar tiles were found in the succeeding phase. Either this tile provides evidence that these wasters were present on the site before Phase 6 or the context may require re-phasing. The tile was decorated and the die used has been recorded at Reading Abbey (REF).

Thirty-two tile fragments were recovered from Phase 6 deposits. Thirty of these were Fabric B wasters, again of early 14<sup>th</sup>-century character and including several dies found at Reading Abbey. In addition, plain dark glazed tiles and plain white slipped, clear glazed tiles were found, also with evidence for wastage. The tiles were found in 13 contexts, assigned to Phases 2907a, 2908a, 2908c and 2908d. In addition, a used floor tile of Fabric A and an extremely worn tile of fabric H were recovered. Fabric A is thought to be of late 14<sup>th</sup> or 15<sup>th</sup>-century date and a similar date is postulated for Fabric H. However, the amount of wear present on the Fabric H tile suggests a deposition date in the 15<sup>th</sup> or 16<sup>th</sup> century.

Phase 7 produced eight fragments of floor tile, all of types found in earlier phases on the site.

Phase 8 produced five fragments of floor tile, three of which are of types found in earlier phases on the site together with two fragments of a tin-glazed floor tile. This tile is of the type made in London in the late 16<sup>th</sup> and early 17<sup>th</sup> centuries by Antwerp tilers and their successors and is consistent with a 1620s date. It may therefore be evidence for the use of a tin-glazed tile floor in the Oracle, replaced in the late 17<sup>th</sup>/early 18<sup>th</sup> century by which time such floors were out of fashion. Similar tiles are not unusual finds in the City of London in Great Fire deposits, showing that they remained in use into the 1660s.

Phase 10a produced two tiles, one a residual fragment of Fabric B but the other a complete but very worn tile which appears to be Flemish. Flemish lead-glazed floor tiles were used throughout southern and Eastern England in the later medieval and post-medieval periods. They were normally undecorated and used in chequer patterns by alternating white-slipped yellow-glazed and white slipped green-glazed tiles. It is possible that this tile too was used in the Oracle from its construction in the early 17<sup>th</sup> century.

### Hearth tiles

Four fragments of hearth tile were recovered from Site 29. The tiles are unglazed and have knife-cut bevelled edges like those found on floor tiles. There was no evidence for sooting or post-firing burning on any of the tiles. The earliest stratified example came from a Phase 4 deposit, the construction levels of hall 5860. As with other material from these levels, it is likely that the tile was debris from an earlier structure. The remaining fragments all came from Phase 6 deposits association with the backfilling and abandonment of the tannery.

## Site 300

One hundred and seventy-two fragments of ceramic building material were recovered from Site 300 deposits (Table 8). Because of the small size of the collection no phase by phase description is given here.

**Table 9**

Project Phase	Final Phase	FLAT	FLOOR	HIP	HIP/RIDGE	Grand Total
1	3000	2				2
4	3001b	53	1	4	1	59
4	3002a	29		1		30
4	3002b	14				14
7	3003a	14				14
9	3004a	20				20
9	3004b	14				14
2 to 9	300203	6				6
10a	3005	13				13
<b>Grand Total</b>		<b>165</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>172</b>

The majority of the tiles are flat roof tiles. They include one example with a square peg hole (Phase 3004a). Fourteen fragments have traces of glaze. All come from Phase 4 deposits (3001b, 3002a and 3002b). One fragment has sooting on the underside (Phase 3003a). One complete width was measured, 165mm, from Phase 3004a.

A floor tile was recovered from a Phase 4 deposit (Phase 3001b). It is undecorated with a dark glaze, possibly containing copper.

Five fragments of hip tile were present, all in Phase 4 deposits.

## Discussion

One of the flat roof tile fragments from Phase 3001b is waterworn and clearly residual. Three fragments of flat roof tile were coated in mortar and therefore incorporated into a masonry structure. The earliest stratified of these pieces is in a Phase 9 deposit (Phase 3004a). The remaining tiles show no evidence for their taphonomy. Only the floor tile, hip tiles and the tile with a complete width may be capable of a closer dating than 'mid 12<sup>th</sup> century or later'. The floor tile, of Fabric D, is quite possibly of later 13<sup>th</sup>-century date. Hip tiles tend to be assigned a late medieval date, which is consistent with their occurrence on Sites 12 and 29. However, Phase 3001b is given a *taq* by the dendrochronological dating of the succeeding phase. If there is no possibility that these deposits could contain material later than 1308AD then these tiles provide a useful marker for further work in Reading.

Tiles of similar width to that from Phase 3004a occur on both Sites 12 and 29 in Phase 6 deposits and later and this is consistent with the mid 18<sup>th</sup>-century date for the context. The tile itself may have been used on the preceding Phase 7 mill roof.