Assessment of Medieval Ceramic Building Material from Beaudesert, Henley in Arden, Warwickshire (Site BEAU01)

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Summary

Four hundred and ten fragments of ceramic building material were submitted for identification and assessment by Time Team from their excavation at Beaudesert Castle, Henley in Arden, Warwickshire (BEAU01). One of these pieces was subsequently identified as plaster and another as a mortar-coated limestone. The remainder were assigned to one of seven fabric groups, identified by eye using a binocular microscope, and where possible to a form. Evidence for use was recorded together with condition.

The majority of the tiles appear to have been made in the same fabric and probably over a short period of time. They include flat roof tiles, ridge tiles, hip tiles and floor tiles. A likely date for these tiles is the later 14th or 15th centuries but a date in the preceding century (late 13th/14th century) cannot be discounted. The remaining tiles amount to no more than 40 tiles in total. Their more-fragmentary condition suggests that they may be residual from earlier activity, either being reused on later roofs or incorporated through movement of soil. These are likely to be of later 13th or 14th century date. In the main, they are likely to be ridge tiles. The lack of earlier flat roof tiles suggests that the earlier tiles were used with wooden shingles or thatch.

Site distribution

Fragments were recovered from nine areas (Trenches 1 to 8 and 'Moat slope'). In each case flat roof tiles formed the majority of the collection. There were, however, possibly significant differences in the distribution of other types (Table 1).

trench	NON - CBM	FLAT	FLAT /RIDGE	FLOOR	HEARTH TILE	HIP	RIDGE	RIDGE/ HIP	Grand Total
1	1	52	7						60
2		42	1	16			4		63
3	1	72					1		74
4		5							5
5		53		2		12	17	1	85
6		30	1						31
7		12		1					13
8		27	1		1				29
moat		12							12
us		6							6

Grand Total	2	311	10	19	1	12	22	1	378

Floor tiles were mainly found in Trench 2 (great hall) with smaller quantities from Trenches 5 and 7. The single piece of hearth tile came from Trench 8. Hip tiles were only certainly present in Trench 5. Ridge tiles came mainly from Trench 5 (which produced all of the ?earlier tiles of group MTILE7).

Fabric Groups

Seven fabric groups were recognised with the ceramic building material collection. None of these were known to the author and have therefore been given site-specific fabric group codes, MTILE1 to MTILE7.

MTILE1

This is the most common fabric at Beaudesert Castle, accounting for 336 of the 377 recorded tiles. Examples occur in every trench. Forms present include flat tiles with nibs, flat tiles with nibs and pegholes, hip tiles, floor tiles, a hearth tile, and ridge tiles.

The fabric is almost invariably oxidised, although a few examples are found with a blue-grey core. The texture by eye is fairly homogenous but under x20 magnification lenses of untempered clay can be seen suggesting that the clay was mixed with sand before use.

The sand temper is mainly a well-sorted subangular quartzose sand, in which the grains are often coated with haematite. Thin lenses of haematite in the body are probably also derived from this sand, as is the sanding on the tile's underside and sides. The thin dusting of sand on the upper surface of the tiles is finer in texture, supporting the proposal made below that this is evidence for production in a dusty atmosphere. Rare rounded quartzite pebbles are present. These range up to 10mm across and sometimes erupt through the tile surface.

The haematite-coasted quartzose sand is visually similar to Triassic sandstones which outcrop in Warwickshire (and elsewhere in midland England) whilst the well-rounded quartzite pebbles are likely to be derived ultimately from the Sherwood Sandstone. These features support a local origin for the fabric but do not suggest that petrology can be used to pinpoint the source.

MTILE2

Fourteen fragments classified as MTILE2 were found. Most come from Trenches 1 and 2, with single finds from Trenches 3, 5 and 6. None of the fragments is definitely from a curved tile and one tile seems to be clearly from a nibbed flat tile. The method of manufacture of this tile differs from those of MTILE1 in that the nib was separately applied rather than formed as part of the mould.

The fabric, which ranges in colour from pink to cream, is invariably oxidised. It contains abundant quartzose sand, with grains ranging up to 1.0mm across. The grains include white and red sandstone fragments as well as quartz.

This fabric is an example of a Coal Measures Whiteware, the nearest sources for which would be the Nuneaton area (Chilvers Coton) and south Staffordshire.

MTILE3

Three fragments classified as MTILE3 were found. They come from Trenches 2, 3 and 5. All are flat tiles, one of which is nibbed using exactly the same technique as MTILE1.

The tiles are all oxidised and differ from MTILE1 in fabric only in the character of the groundmass, which is variegated, with streaks of cream and pink-coloured clay. Some lenses contain noticeable quantities of muscovite but in the main the clay matrix is fine-textured. The range of colours, and the fact that the margins and surfaces are lighter/creamer in colour than the pinker cores, suggests that the clay may have been calcareous. The quartzose sand temper is identical to that of MTILE1.

It is likely that MTILE3 was made using a Triassic clay, such as the Mercian Mudstone. However, unworked relict clay pellets, which are common in wares made from clays developed on the mudstone, are absent. It is likely that MTILE3 represents the occasional use of this lighter clay source at the same tilery responsible for MTILE1.

MTILE4

Six fragments classified as MTILE4 were recorded. Four are from flat tiles, one from a hearth tile and one from a ridge tile.

The fabric appears to be lower-fired than MTILE1 and usually has a grey core with brown margins and surfaces. The fabric is tempered with a quartzose sand which includes rounded iron-rich nodules up to 2.0mm across and similar sized white sandstone fragments (with grains c.0.2mm across). The majority of the grains are subangular quartz up to 1.0mm. In comparison with MTILE1 the sand is coarser in texture.

MTILE5

A single very abraded fragment from Trench 8 was classified as MTILE5. The fabric had a grey core and light brown margins. The fabric is tempered with moderate quantities of quartzose sand, consisting mainly of subangular , often haematite-coated quartz grains up to 1.0mm across. Sparse larger fragments of rounded quartzite and sandstone occur, ranging up to 4.0mm. Angular voids suggest that calcareous inclusions have been leached out.

The quartzose sand and gravel inclusions probably have a similar origin to those in MTILE1. Without further work it is not possible to identify the calcareous inclusions.

MTILE6

A single fragment classified as MTILE6 was recorded from Trench 7. The fragment is from an overfired floor tile. The fabric is tempered with abundant quartzose sand with grains up to 1.0mm across. The high firing temperature obscures further details of the sand. A single fragment of white sandstone up to 2.0mm across was noted. Sparse heat-altered calcareous inclusions were also present.

It is not clear whether MTILE6 is actually a separate fabric or an overfired version of MTILE4 or MTILE1.

MTILE7

Fifteen fragments classified as MTILE7 were recorded. All came from Trench 5 and are from glazed ridge tiles.

The fabric has a grey or dark brown core and light brown surfaces. The fabric is tempered with an illsorted quartzose sand composed of subangular quartz grains up to 1.0mm across, and rounded iron-rich inclusions and rounded white and red fine-grained sandstone fragments up to 2.0mm across. A single much larger sandstone fragment, 10mm across, was also recorded. The groundmass is fine-textured and contains moderate quantities of muscovite.

The general character of the inclusions in MTILE7 is similar to that in other Beaudesert Castle fabrics (eg MTILE4). It too is probably of local origin.

Forms

The majority of the fragments come from flat roof tiles. The method of suspension is invariably nibbing although a proportion of the tiles also have diamond-shaped peg holes. There seems to be little variation in the method of manufacture.

The tiles were formed in a rectangular mould, which seems to have had a notch at one end to contain the clay which subsequently became the nib. This former was coated with a sand, both on its base and sides. A tool was then drawn across the top of the former to remove excess clay. A layer of fine sand was then dusted over the tile. Whether this was deliberate or a by-product of some other action is not clear (perhaps the workshop was particularly dusty?). The surface of the tile was then sometimes smoothed by hand (probably the thumb) around the edges to ensure that the clay filled the mould properly. Finally, the former was removed, the extension of clay bent through 90 degrees to form the nib and a single groove was made with a finger along the lower (in use) side of the nib. Any excess clay was trimmed off the sides or top face of the tile using the side of a blade (whose impressions are sometimes accidentally present on the top surface). In a few cases no finger groove is present below the nib or two parallel incised lines replace the groove. These were probably made by the thumb and finger pressed together. The tiles were then laid out to dry and at this stage animals were able to walk across the surface (as shown by two tiles from Trench 5. It is always possible that these prints, an adult dog, result from the same incident).

The hip tiles were made in a very similar manner, except that the wooden former was a trapezoid rather than rectangular in plan. The floor tiles were also produced in sanded moulds but the edges were subsequently bevelled with a knife.

Use

Many of the tiles show signs of use. In the case of the flat and hip tiles this consists of plaster on the upper and lower faces of the tiles, sometimes also on the sides. This plaster was laid between tile courses, which overlapped by about a third of a tile length. The lower end of several tiles has been lost to frost shattering, which also has affected a few of the long edges. In the latter case, the tiles must have come from a structure with a gable end rather than a hipped roof. There is also an apparent tendency for tiles to break horizontally about one half to two thirds of the way from the top.. This is the part of the tile which is least supported by laths during use. A few tiles have a light scattering of dark blotches. Although these were interpreted during recording as soot, a re-examination shows that they are actually likely to be manganese stains. They exhibit a roughly circular, dendritic structure, reminiscent of lichen, and it is possible that they are caused by the growth of moss or lichen on the roof.

In one hip tile an iron nail survives in the top peghole whilst the other is filled with plaster. However, in other hip tiles it is clear that the holes have never been used, and in these cases the tiles must have been held in place solely by plaster.

The floor tiles too have evidence for being laid on a mortar bed but there is very little sign of wear on the tile surfaces. This suggests that they may not have been in use for a long time before the abandonment of the structure (presumably the great hall). It is, however, possible that they were used in a part of the hall floor for which there was restricted access, such as a dais. Three of the floor tile fragments, all from Trench 2, have evidence for reuse, in the form of mortar/plaster coating of the top surface and, in once case, mortar/plaster along one broken edge. The latter tile appears to have been roughly trimmed to a rectangular shape before reuse. The mortar/plaster covering appears to be too thin and lacks the amount of aggregate which would indicate that the tiles were bonded onto some other material. It may indicate the presence of a lime wash.

Two of the ridge tiles have mortar on their undersides, along the edges whether they would have overlapped the top layer of flat tiles. One of these tiles is of MTILE7 fabric, suggesting that it was used alongside ceramic flat tiles.

Deposition and subsequent changes

Most of the collection consisted of large, unweathered fragments of tile. Many fragments were noted as either joining or being likely to come from the same tile. A proportion of these sherd families were caused by modern breakage but they probably include tiles broken in antiquity too. It is unlikely that these tiles have been disturbed since they were discarded, as destruction debris. Small, sometimes

abraded, fragments, which have been subjected to subsequent movement, were present in Trenches 2, 4, 6 and 8. They account for the entire collection in Trench 4.

Assessment

Because of the size of this collection and its variation from trench to trench, the ceramic building material collection from Beaudesert Castle has the potential to illuminate aspects of the superstructure of the castle buildings. The collection is also, however, of considerable interest to students of architectural ceramics.

In this author's experience, it is unusual to find a collection of ceramic building material of this size for which a late medieval date can be argued. In most urban excavations material of later 14th/15th century date is usually rare, either because of there was a decline in building activity in the late medieval period or because any tiles of this date were retained in use for centuries, being augmented with later tiles as roofs were repaired. Here, apparently, we have no post-medieval building activity whilst the internal features of the collection point to a later 14th-century or later date: 130mm square 'printed' tiles; hip tiles; and unglazed hearth tiles are all late medieval forms in this part of the world. It is important for architectural ceramic studies to make this collection widely known.

The collection should therefore be prepared for publication as part of an archaeological report on the excavation. This should include illustration of the principal forms (see appendix 2), thin-section analysis of examples of the fabric groups (see appendix 2) and integration of the collection into any local type fabric series.

At present, the collection occupies six boxes. However, 166 of the recorded fragments were featureless pieces of MTILE1 flat roof tile. These could be discarded, once they had been weighed and thicknesses measured, reducing the size of the collection considerably.

Costing

Task	Cost
Illustration of 7 fragments of tile	£70
Plating up of illustrations	£20
Thin-section analysis of 7 fabric samples	£147
Weighing of collection	£75
Recording of tile thicknesses	£75
Total	£387 (Plus VAT)

Appendix One: Catalogue of Ceramic Building Material

Context:	Cname:	Form:	Nosh:	NoV:	SUBFABRIC:	PART:	Description:
101	MTILE1	FLAT	1	1		BS	SQUARE NOTCH CUT OUT OF SIDE - INTENTIONAL?
101	MTILE1	FLAT	1	1		BS	NIBBED
101	MTILE1	FLAT	4	4		BS	PLASTER ON UNDERSIDE
101	MTILE1	FLAT	1	1		BS	PLASTER ON UNDERSIDE AND UPPER SURFACE;ASH GLAZE AT EDGE
101	MTILE1	FLAT	39	39		BS	
101	MTILE2	FLAT/RIDGE	5	5		BS	
101	MTILE2	FLAT/RIDGE	1	1		BS	
101	STONE		1	1	SHELLY LIMESTONE	BS	COATED WITH MORTAR
102	MTILE1	FLAT	2	2		BS	
102	MTILE2	FLAT/RIDGE	1	1		BS	
108	MTILE1	FLAT	2	2		BS	
108	MTILE1	FLAT	2	2		BS	PLASTER ON UNDERSURFACE
201	MTILE1	FLAT	1	1		BS	NIBBED (NO FINGER GROOVE BELOW NIB)
201	MTILE1	FLAT	13	13		BS	SMALL ABR FRAGS
201	MTILE1	FLOOR	1	1		BS	
201	MTILE1	FLOOR	1	1		BS	SCORED AND SNAPPED DIAG
201	MTILE1	FLOOR	1	1		BS	2-COLOUR STAMPED
201	MTILE1	FLOOR	1	1		BS	DIAG TILE SCAR ON SIDE
201	MTILE1	FLOOR	1	1		BS	
201	MTILE2	FLAT/RIDGE	1	1		BS	
202	MTILE1	FLAT	1	1		BS	
202	MTILE1	FLAT	1	1		BS	PLASTER ON UPPER SURFACE - LOWER END
202	MTILE1	FLAT	6	6		BS	NIBBED WITH NO EVIDENCE FOR PEGHOLES
202	MTILE1	FLAT	19	19		BS	

202	MTILE1	FLOOR	1	1	BS	SPALLED SURFACE
202	MTILE1	FLOOR	1	1	BS	SCORED AND SNAPPED DIAG
202	MTILE1	FLOOR	1	1	BS	SCORED AND SNAPPED DIAG
202	MTILE1	FLOOR	1	1	BS	MORTAR OVER TOP SURFACE AND ONE EDGE;TRIMMED TO RECT
202	MTILE1	FLOOR	1	1	BS	SCORED DIAG
202	MTILE1	FLOOR	1	1	BS	
202	MTILE1	FLOOR	1	1	BS	2-COLOUR STAMP UNDER PLASTER
202	MTILE1	FLOOR	1	1	BS	PLASTER OVER TOP SURFACE
202	MTILE1	FLOOR	1	1	BS	SCORED DIAG
202	MTILE1	FLOOR	1	1	BS	
202	MTILE1	FLOOR	1	1	BS	SCRAP
202	MTILE1	RIDGE	1	1	BS	
202	MTILE2	RIDGE	1	1	BS	FROST-SHATTERED ALONG LOWER UNDERSIDE
202	MTILE2	RIDGE	3	1	BS	MODERN BREAKS
202	MTILE2	RIDGE	4	1	BS	MODERN BREAKS;ACCIDENTAL 'NIB'; MORTAR ON UNDERSIDE
202	MTILE3	FLAT	2	1	BS	MODERN BREAK
301	MTILE1	FLAT	1	1	BS	BLACKENED RIGHT THROUGH
301	MTILE1	FLAT	1	1	BS	PLASTER ON UNDERSIDE;NIBBED
301	MTILE1	FLAT	6	6	BS	
301	MTILE2	FLAT	1	1	BS	EXTRACTED
302	MTILE1	FLAT	1	1	BS	PLASTER ON UPPER SURFACE
302	MTILE1	FLAT	2	2	BS	
302	MTILE1	FLAT	1	1	BS	NIBBED
302	MTILE1	FLAT	1	1	BS	SQUARE PEG HOLE (NOT TAKEN RIGHT THROUGH)
302	PLASTER		1	1	BS	
303	MTILE1	FLAT	2	2	BS	NIBBED AND SQUARE PEGGED
303	MTILE1	FLAT	1	1	BS	NIBBED (?) AND SQUARE PEGGED

303	MTILE1	FLAT	1	1	BS	MODERN BREAKS INTO 3
303	MTILE1	RIDGE	1	1	BS	
304	MTILE1	FLAT	3	1	BS	
304	MTILE1	FLAT	1	1	BS	NIBBED
304	MTILE1	FLAT	1	1	BS	NIBBED AND CERTAINLY NO PEGHOLES
304	MTILE1	FLAT	1	1	BS	NIBBED;FINGER/TEXTILE IMPRESSIONS ON UPPER SURFACE
304	MTILE1	FLAT	9	9	BS	
304	MTILE1	FLAT	1	1	BS	NIBBED AND CERTAINLY NO PEGHOLES
304	MTILE1	FLAT	4	4	BS	
304	MTILE1	FLAT	1	1	BS	PLASTER ON UNDERSIDE
304	MTILE1	FLAT	1	1	BS	NIBBED AND CERTAINLY NO PEGHOLES;FROST-SHATTERED ALONG ONE LONG EDGE
304	MTILE1	FLAT	2	2	BS	
304	MTILE3	FLAT	1	1	BS	NIBBED
305	MTILE1	FLAT	1	1	BS	
307	MTILE1	FLAT	1	1	BS	NIBBED AND CERTAINLY NO PEGHOLES (EXTRACTED)
307	MTILE1	FLAT	1	1	BS	PLASTER ON UPPER AND LOWER SURFACES
307	MTILE1	FLAT	6	6	BS	
307	MTILE1	FLAT	1	1	BS	IMPRESSIONS ON UPPER SURFACE - FINGERS? TEXTILE?
307	MTILE1	FLAT	1	1	BS	NIBBED
307	MTILE1	FLAT	1	1	BS	SQUARE PEGGED
307	MTILE1	FLAT	6	6	BS	
307/1/1	MTILE1	FLAT	13	13	BS	SCRAPS
401	MTILE1	FLAT	5	5	BS	SMALL FRAGS
501	MTILE1	FLAT	3	3	BS	NIBBED
501	MTILE1	FLAT	1	1	BS	SQUARE PEGHOLE
501	MTILE1	FLAT	1	1	BS	SQUARE PEGHOLE SET VERY CLOSE TO TILE EDGE
501	MTILE3	FLAT	1	1	BS	NIBBED

503	MTILE1	FLAT	1	1	BS	GLAZED FLOOR TILE SCAR DIAG SET ON TILE SIDE
503	MTILE1	FLAT	1	1	BS	PLASTER ON UPPER SURFACE AT LOWER END
503	MTILE1	FLAT	1	1	BS	ADULT DOG PAW PRINT ON UPPER SURFACE;MORTAR ON LOWER SURFACE
503	MTILE1	FLAT	1	1	BS	NIBBED
503	MTILE1	FLAT	1	1	BS	NIBBED; PLASTER ON UNDERSIDE AT TOP END
503	MTILE1	FLAT	1	1	BS	NIBBED
503	MTILE1	FLAT	2	2	BS	
503	MTILE1	FLAT	3	1	BS	FINGER PRINTS ON UPPER SURFACE;PLASTER ON UNDERSIDE AT LOWER END
503	MTILE1	FLAT	1	1	BS	SQUARE PEGHOLE
503	MTILE1	FLOOR	1	1	BS	
503	MTILE1	FLOOR	1	1	BS	
503	MTILE1	HIP	1	1	BS	TOP END WITH TWO CIRCULAR NAIL HOLES, ONE CONTAINING NAIL AND PLASTER ON UPPER SURFACE
503	MTILE1	HIP	1	1	BS	
503	MTILE1	HIP	1	1	BS	TOP END WITH CIRCULAR NAIL HOLE CONTAINING NAIL AND PLASTER ON UPPER SURFACE
503	MTILE1	HIP	1	1	BS	CIRCULAR NAIL HOLE
503	MTILE1	HIP	3	3	BS	
503	MTILE1	HIP	2	2	BS	PLASTER ON UPPER SURFACE AT TOP END
503	MTILE1	HIP	1	1	BS	TOP END WITH TWO CIRCULAR NAIL HOLES AND PLASTER ON UPPER SURFACE
503	MTILE1	HIP	1	1	BS	TOP END WITH TWO CIRCULAR NAIL HOLES
503	MTILE1	RIDGE	1	1	BS	APPLIED KNOB CREST
503	MTILE4	RIDGE	3	1	BS	APPLIED KNOB CREST
503	MTILE7	RIDGE	1	1	B	UNDECORATED WALL AND BASE
503	MTILE7	RIDGE	1	1	BS	APPLIED KNOB CREST
503	MTILE7	RIDGE	1	1	BS	APPLIED KNOB CREST
504	MTILE1	FLAT	1	1	BS	NIBBED AND PEGHOLES

504	MTILE1	FLAT	1	1	BS	NIBBED
504	MTILE1	FLAT	1	1	BS	NIBBED WITH NO PEGHOLES
504	MTILE1	FLAT	1	1	BS	NIBBED WITH NO PEGHOLES
504	MTILE1	FLAT	1	1	BS	NIBBED WITH NO PEGHOLES
504	MTILE1	FLAT	1	1	BS	NIBBED
504	MTILE1	FLAT	1	1	BS	NIBBED WITH PEGHOLE
504	MTILE1	FLAT	1	1	BS	NIBBED WITH PEGHOLE;PLASTER ON UNDERSIDE
504	MTILE1	FLAT	1	1	BS	NIBBED
504	MTILE1	FLAT	1	1	BS	NIBBED WITH NO PEGHOLES
504	MTILE1	FLAT	1	1	BS	OR HIP BOTTOM CORNER
504	MTILE1	FLAT	1	1	BS	PLASTER ON UNDER SURFACE
504	MTILE1	FLAT	1	1	BS	GLAZED FLOOR(?) TILE SCAR ON SIDE;PEGHOLE
504	MTILE1	FLAT	1	1	BS	PLASTER ON UPPER AND LOWER SURFACES
504	MTILE1	FLAT	1	1	BS	PLASTER ON UPPER AND LOWER SURFACES
504	MTILE1	FLAT	1	1	BS	PLASTER ON UPPER AND LOWER SURFACES
504	MTILE1	FLAT	1	1	BS	NIBBED AND PEGHOLES
504	MTILE1	FLAT	1	1	BS	NIBBED WITH NO PEGHOLES
504	MTILE1	FLAT	1	1	BS	DOG PAW PRINT
504	MTILE1	FLAT	1	1	BS	PLASTER ON UNDERSIDE LOWER END
504	MTILE1	FLAT	1	1	BS	
504	MTILE1	FLAT	2	1	BS	SOOT? ON UNDERSIDE;UPPER SURFACE SPALLED
504	MTILE1	FLAT	1	1	BS	PLASTER ON UNDERSIDE AND UPPER SIDE OF TILE AND AT EDGE WITH TILE IMPRESSION
504	MTILE1	FLAT	1	1	BS	NIBBED WITH NO PEGHOLES
504	MTILE1	FLAT	1	1	BS	PLASTER ON UNDERSIDE AND UPPER SIDE OF TILE
504	MTILE1	FLAT	1	1	BS	PLASTER ON UPPER SIDE OF TILE
504	MTILE1	FLAT	2	1	BS	NIBBED WITH NO PEGHOLES;PLASTER ON LOWER SURFACE
504	MTILE1	FLAT	1	1	BS	GLAZE DRIBBLE ACROSS UNDERSIDE

504	MTILE1	FLAT	2	1	BS	PLASTER ON UNDERSIDE AND UPPERSIDE
504	MTILE1	FLAT	2	1	BS	PLASTER ON UPPERSIDE;SOOT? (OR MANG STAINING?) ON UNDERSIDE
504	MTILE1	FLAT	2	1	BS	PLASTER ON UPPERSIDE;SOOT? (OR MANG STAINING?) ON UNDERSIDE
504	MTILE1	FLAT	4	1	BS	NIBBED WITH NO PEGHOLES;PLASTER ON UNDERSIDE AND UPPERSIDE;FLANGE ALONG ONE LONG EDGE (SCRAPER SLIPPED?)
504	MTILE1	FLAT	3	1	BS	NIBBED WITH PEGHOLES;KNIFE-CUT NOTCH IN ONE LONG SIDE;PLASTER ON UNDERSIDE
504	MTILE1	HIP	1	1	BS	TWO UNUSED HOLES AT TOP END
504	MTILE1	RIDGE/HIP	2	1	BS	KNIFE-CUT NOTCHES IN EDGE; PATCH OF GLAZING AT CENTRE
504	MTILE2	FLAT	1	1	BS	NIBBED
504	MTILE4	FLAT	1	1	BS	GLAZE DRIBBLE RUNNING ACROSS FROM EDGE
504	MTILE4	FLAT	3	1	BS	OVERFIRED BLACK
504	MTILE4	FLAT	1	1	BS	OVERFIRED BLACK;PLASTER ON LOWER SURFACE
504	MTILE7	RIDGE	1	1	BS	OVERFIRED BLACK;FRIED GLAZE
504	MTILE7	RIDGE	2	1	BS	
504	MTILE7	RIDGE	2	1	BS	
504	MTILE7	RIDGE	2	1	BS	
504	MTILE7	RIDGE	2	1	BS	
504	MTILE7	RIDGE	3	1	BS	
504	MTILE7	RIDGE	1	1	BS	KT AT EDGE ON UNDERSIDE
504	MTILE7	RIDGE	1	1	BS	FINIAL/KNOP
504	MTILE7	RIDGE	1	1	BS	KT AND MORTAR ON UNDERSIDE
504	MTILE7	RIDGE	3	3	BS	
601	MTILE1	FLAT	18	18	BS	SMALL ABR FRAGS
602	MTILE1	FLAT	12	12	BS	
602	MTILE2	FLAT/RIDGE	1	1	BS	
701	MTILE1	FLAT	12	12	BS	
701	MTILE6	FLOOR	1	1	BS	OVERFIRED

802	MTILE1	FLAT	2	1	COMPLETE	NIBBED AND CERTAINLY NO PEGHOLES;PLASTER ON UPPER SURFACE (LOWER END) AND UNDERSURFACE (TOP END)
802	MTILE1	FLAT	1	1	BS	NIBBED AND CERTAINLY NO PEGHOLES
802	MTILE1	FLAT	23	23	BS	
802	MTILE1	FLAT	1	1	BS	SQUARE PEGHOLE
802	MTILE1	FLAT	1	1	BS	PLASTER ON UPPER SURFACE
802	MTILE4	HEARTHTILE	1	1	BS	POSSIBLY A BRICK BUT FIRESHATTERING OF UPPER SURFACE AND FAINT TRACES OF SOOT
802	MTILE5	FLAT/RIDGE	1	1	BS	VABRADED;SPALLED ON UNDERSURFACE AT EDGE
moat slope	MTILE1	FLAT	1	1	BS	NIBBED
moat slope	MTILE1	FLAT	10	10	BS	
moat slope	MTILE4	FLAT	1	1	BS	
US	MTILE1	FLAT	1	1	BS	PLASTER ON UPPER SURFACE
US	MTILE1	FLAT	5	5	BS	

Appendix Two: List of fragments for illustration (DR), Photography (PHOTO) or fabric analysis (FTS)

Action:	Context:	Description:	Cname:	Form:	Nosh:	NoV:	SUBFABRIC:	PART:
FTS	301		MTILE2	FLAT	1	1		BS
FTS	304	NIBBED	MTILE3	FLAT	1	1		BS
FTS	307	NIBBED AND CERTAINLY NO PEGHOLES	MTILE1	FLAT	1	1		BS
DR	503	TOP END WITH TWO CIRCULAR NAIL HOLES, ONE CONTAINING NAIL AND PLASTER ON UPPER SURFACE	MTILE1	HIP	1	1		BS
DR;FTS	503	UNDECORATED WALL AND BASE	MTILE7	RIDGE	1	1		B
DR	504	NIBBED AND PEGHOLES	MTILE1	FLAT	1	1		BS
DR	504	TWO UNUSED HOLES AT TOP END	MTILE1	HIP	1	1		BS
DR	504	KNIFE-CUT NOTCHES IN EDGE; PATCH OF GLAZING AT CENTRE	MTILE1	RIDGE/HIP	2	1		BS
DR	504	NIBBED	MTILE2	FLAT	1	1		BS
FTS	701	OVERFIRED	MTILE6	FLOOR	1	1		BS
DR;PHOTO	802	NIBBED AND CERTAINLY NO PEGHOLES;PLASTER ON UPPER SURFACE (LOWER END) AND UNDERSURFACE (TOP END)	MTILE1	FLAT	2	1		COMPLETE
FTS	802	VABRADED;SPALLED ON UNDERSURFACE AT EDGE	MTILE5	FLAT/RIDGE	1	1		BS
FTS	moat slope		MTILE4	FLAT	1	1		BS

Appendix Three: Metrical data

Context:	Cname:	Form:	Nosh:	NoV:	SUBFABRIC:	PART:	Length:	Breadth:	Thickness:	Glaze:
201	MTILE1	FLOOR	1	1		BS			28	CU OVER WHSL
201	MTILE1	FLOOR	1	1		BS			28	CU OVER WHSL
202	MTILE1	FLOOR	1	1		BS	130	130	28	CU OVER WHSL
202	MTILE1	FLOOR	1	1		BS			27	CU OVER WHSL
202	MTILE1	FLOOR	1	1		BS			25	PLAIN OVER WHSL
202	MTILE1	FLOOR	1	1		BS			26	PLAIN OVER WHSL
202	MTILE1	FLOOR	1	1		BS			29	PLAIN OVER WHSL
202	MTILE1	FLOOR	1	1		BS			27	PLAIN
202	MTILE1	FLOOR	1	1		BS	134		28	PLAIN OVER WHSL
202	MTILE1	FLOOR	1	1		BS			26	CU OVER WHSL
503	MTILE1	FLAT	3	1		BS		160	13	
503	MTILE1	FLOOR	1	1		BS			24	PLAIN
503	MTILE1	FLOOR	1	1		BS			27	CU ON WHSL
504	MTILE1	FLAT	1	1		BS		168	15	
504	MTILE1	FLAT	1	1		BS		160	15	
504	MTILE1	FLAT	2	1		BS		182	16	
504	MTILE1	FLAT	1	1		BS		188	15	
504	MTILE1	FLAT	1	1		BS		181	15	
504	MTILE1	FLAT	1	1		BS		192	15	
504	MTILE1	FLAT	2	1		BS		181	15	
504	MTILE1	FLAT	2	1		BS		186	17	
701	MTILE6	FLOOR	1	1		BS			22	PLAIN (APPEARS DK BROWN/BLACK)
802	MTILE1	FLAT	2	1		COMPLETE	305	175	18	
802	MTILE4	HEARTHTILE	1	1		BS			39	