

Glazed Eleventh-Century Wall Tiles from London

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SUMMARY

Recent excavation and research has brought to light a small group of early medieval glazed wall tiles which appear to be unique to important religious sites in London. The form and provenance of these tiles is discussed and suggestions are made about their possible origin and their relationship with late Anglo-Saxon and early medieval tiles found in London.

INTRODUCTION

Large glazed wall tiles were used as decoration in the 11th-century rebuilding of Westminster Abbey. In two areas of the Abbey these tiles still survive in their original position. Further examples have been recovered from excavations undertaken by the Museum of London at the Abbey (site code WST 86) and at Newgate Street (site code POM 79) and Guildhall Yard (site code GYE 92) in the City of London (Fig. 1).

THE FINDS

1) Westminster Abbey Wall Tile

i) Cheyneygates and Little Cloister

Two areas of *in situ* wall tiles still survive intact, in the 11th-century fabric of the Abbey. No doubt other areas of tiling were lost when much of the Abbey was comprehensively rebuilt by Henry III between the years 1246 and 1272 (Wilson *et al.* 1986, 30). The majority of tiles are to be found in the west wall of the refectory which ran along the south side of the cloister (in an area now known as Cheyneygates). A small area of tiles survives in the east wall of what was the reredorter or lavatory block (now the Little Cloister). The reredorter was constructed in the 1060s or early 1070s, but the refectory seems slightly later; a late 1070s or 1080s date seems likely (*ibid.* 17). A total of 34 tiles survives in Cheyneygates (although three are almost certainly later replacements), with a further five tiles in the Little Cloister.

All the wall tiles are set into the wall at an angle of 45° to form a diamond pattern. There are nine

horizontal lines of tiles at Cheyneygates, many of which are arranged to form a decorative chequer-board design (Col. Pl. 3). The uppermost tile is a broken example which may well not be in its original position. The rest of the wall and the gaps between the tiles are filled by squared stone blocks set at the same angle. At the Little Cloister only one horizontal line of tiles still survives intact, while the remaining part of the wall comprises square stone blocks. Identification of the types of stone used in the two areas of walling is hampered by weathering on the surface of the blocks, particularly those in the Little Cloister. The Cheyneygates blocks are of chalk and weathered, grey-coloured tufa.¹

Three Cheyneygates tiles have straight edges, indicating knife-cut sides, and smoothed tops, all characteristics of floor tiles rather than wall tiles. There seems little doubt that these were added later to replace damaged, worn or missing wall tiles, and that they were selected because of their similarity in size and glaze colour to the originals. Their average size (195–210mm square) is comparable with probable late 15th- to mid 16th-century plain glazed floor tiles reused in the tiled floor of St Botolph's, Billingsgate, which was laid in the church just prior to the Great Fire of 1666 (Betts 1991).

ii) Other wall tiles from Westminster

Two fragments of what are probably wall tiles were recovered from excavations in the dorter undercroft (WST 86), although only one came from an 11th-century context.

The earlier tile was found in the backfill of a broad ditch which is believed to define the southern boundary of the monastic precinct (Fig. 2b). Along

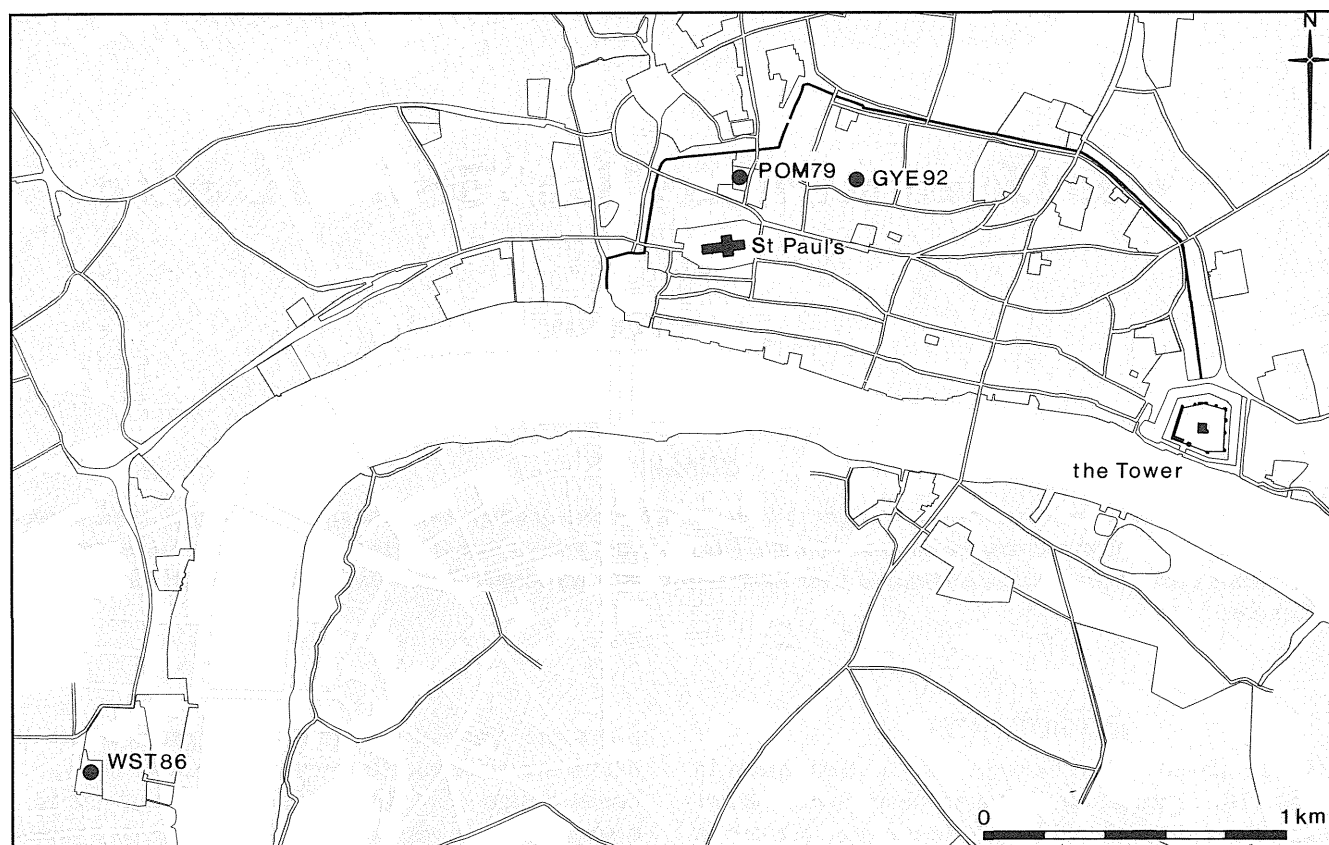


Fig. 1. Find-spots of 11th-century wall tiles from London: Westminster Abbey (WST86); Newgate Street (POM79); Guildhall Yard (GYE92).

with the tile fragment, the ditch also contained a considerable amount of building debris, including glass chippings and pieces of grooved window panes. This debris almost certainly relates to the comprehensive rebuilding programme instigated by Edward the Confessor in *c.* 1050 (Mills forthcoming).

There is no indication whether the wall tile is of pre- or post-Conquest date as the ditch fill is associated with pottery dated *c.* 1050–1080 (L. Blackmore pers. comm.), although it must predate the construction of the dorter undercroft which dates to the late 1060s or early 1070s. If this wall tile belongs to the same series as the *in situ* examples, which seems likely, then it may represent a fragment which was discarded during the building work in the 11th century (Mills forthcoming).

The second fragment came from a shallow pit cut into the rubble floor of the south bay of the undercroft, containing pottery of 17th- to 19th-century date (*ibid.*). This wall tile has mortar covering much of the damaged upper glazed surface, and is clearly a much older tile which has been reused.

2) Newgate Street

The Newgate Street wall tile was found in a silt layer above an area of brickearth slabs, on top of which

were several hearth areas indicating occupation (POM 79; Midgley 1981). The tile is associated with pottery dated *c.* 1050–1200 (J. Pearce pers. comm.).

The wall tile may have been used as decoration in St Martin le Grand, an important royal religious establishment which lay just to the west of Newgate Street. St Martin le Grand was a collegiate church and sanctuary founded, or enlarged, by Ingelric, a royal clerk and landowner, and Girard, his brother, in 1056 (Wheatley and Cunningham 1891, 486). It was also a royal chapel which constituted a modest haven of royal power within the City (Brooke and Keir 1975, 310). It has been suggested that the new college of St Martin le Grand may have occupied what was originally the royal palace of Edward the Confessor, vacated by a move to Westminster (Vince 1990, 32–3).

The wall tile fragment from Newgate Street has a covering of green glaze on the top surface. One side is knife-cut at a 45° angle, which suggests the tile was originally triangular in shape (Fig. 2a). Such tiles would have been needed to continue the diamond pattern to the edge of the wall. A similar triangular tile was used at the wall corner in the Little Cloister at Westminster Abbey, although this seems to have been broken rather than cut to shape.

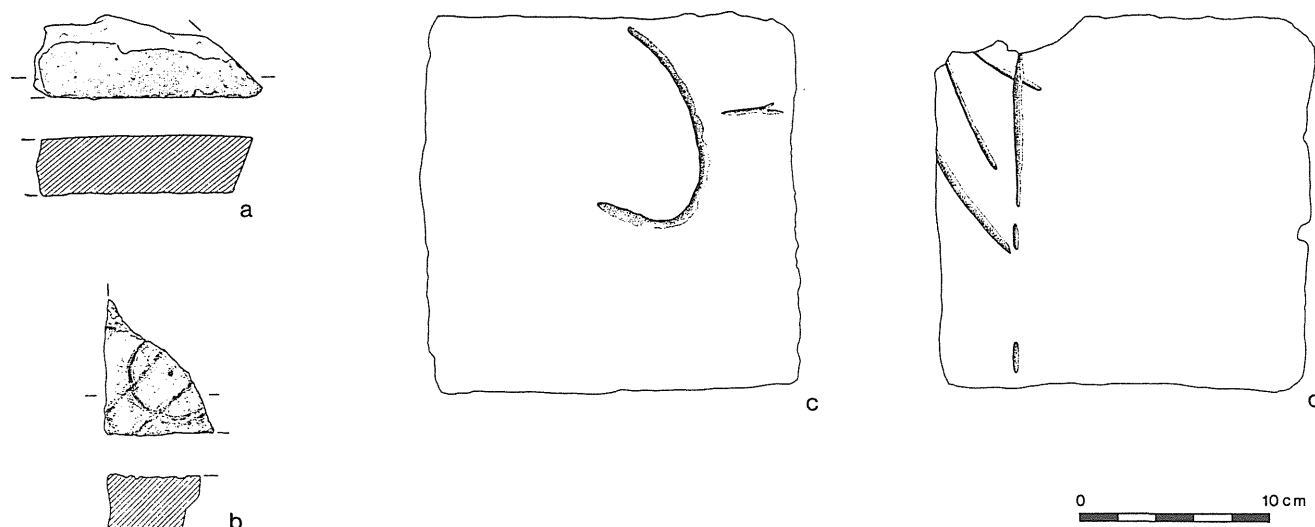


Fig. 2. a) Triangular wall tile, Newgate Street; b) wall tile with compass-inscribed decoration, Westminster Abbey; c) markings on two tiles at Cheyneygates, Westminster Abbey. Scale 1:4.

3) Guildhall Yard

This wall tile, which is totally reduced to a grey colour, has the remains of a green glaze covering most of the slightly irregular top surface. It was found in a midden deposit associated with a sequence of timber buildings which were in use to the early 12th century (G. Porter pers. comm.). These timber buildings lay within the decaying earthworks of the ruined Roman amphitheatre (Bateman 1994, 170–1). A large assemblage of pottery which was found in the same context as the wall tile can be dated with reasonable accuracy to c. 1080 (J. Pearce pers. comm.)

Despite its association with timber buildings, there seems little doubt that the tile would originally have been used as decoration in some sort of stone building. The most likely candidate is the church of St Lawrence Jewry, which lay just to the south of the timber buildings and their associated yards. The first documentary references to the parish of St Lawrence Jewry date from c. 1180 and c. 1197. However, the earliest phase of the associated burial ground has recently been dated to c. 1040, which implies that a church or chapel was in existence by at least that date (Betts *et al.* 1995).

FABRIC TYPE

The inclusions in the clay matrix of all wall tiles not *in situ* were examined with the aid of a binocular microscope at $\times 10$ magnification. Two fabric types are apparent:

i) Fabric 1

Extremely fine sandy fabric comprising frequent very small quartz ($< 0.1\text{mm}$) and common red and black iron oxide ($< 1\text{mm}$).

In this fabric type are the wall tiles from Newgate Street, Guildhall Yard and the example found reused in a post-medieval context at Westminster Abbey. The Newgate and Westminster tiles are fired reddish-orange with a reduced grey core, whilst the Guildhall tile is completely reduced. Where visible the clay body of the *in situ* tiles at Westminster is normally red or reddish-orange, although at least one tile in the Little Cloister has a grey core.

ii) Fabric 2

The clay matrix contains frequent very small quartz and calcium carbonate inclusions ($< 0.2\text{mm}$), with occasional isolated larger quartz grains ($< 0.4\text{mm}$). There are frequent, fairly rounded, dark red, orange and black iron oxide inclusions ($< 0.5\text{mm}$). Two large white calcium carbonate inclusions measuring 2 mm are also present.

The only wall tile in fabric 2 is the example found in an 11th-century context beneath the dorter undercroft at Westminster Abbey. The tile has a grey, reduced core with only a narrow, reddish-brown, oxidized margin. This fabric shows a marked similarity to London-type ware pottery, which first appeared in London in the late 11th century (Vince and Jenner 1991, 85).

METHODS OF MANUFACTURE

Discussion of methods of manufacture is hindered somewhat by not being able to examine the sides and bases of the *in situ* examples. The loose tiles were clearly made in sanded moulds, as moulding sand is still attached to the sides and base. On three tiles this moulding sand is very fine (c. 0.05mm), whilst on the fourth loose tile, the 11th-century Westminster example, a coarser sand was used (< 0.8mm). There was no attempt to trim the sides with a knife, which would have been expected if they were meant for some other purpose, such as flooring. The top edges of most of the *in situ* tiles are slightly irregular, which would indicate that these too were not knife-trimmed after they left the mould. The top surface of many tiles is very irregular, as no attempt was made to smooth the surface prior to the application of lead glaze.

Glaze

Where the surface survives, the majority of tiles are covered by a brown-coloured lead glaze. On certain tiles the glaze colour is more of a greenish-brown, whilst on one tile it is almost black. A number of brown tiles also have areas where the glaze is almost black.

The glaze forms a uniform layer covering the whole of the upper surface of the tile. The method of adding the glaze is uncertain; it may have been applied with a brush or by dipping the tile into liquid glaze. On certain tiles there are numerous shallow, circular pits, 1–3mm in diameter, with darker glaze in the centre. Similar minute pits are a feature of 12th-century glazed pottery. According to Newell (1995, 82), they are caused by coarse particles of metallic lead or lead ore reacting corrosively on the tile surface during the formation of lead silicate in firing. Some glaze pitting may, however, be due to holes in the underlying tile surface.

One Cheyneygates tile incorporated into the wall, has part of the top surface broken off, leaving a deep hole. Despite this the tile was still glazed and fired, the glaze covering both the top surface and the broken hollow. A number of other tiles appear to have been partly broken after firing, but were nevertheless set into the wall.

SIZE

The only complete wall tiles are those still *in situ* at Westminster Abbey, where two size groupings are apparent. The first comprises approximately square tiles with an average length/breadth range of 172–185mm (eight examples); the second has an average size of 194–205mm (22 examples). There is little to indicate thickness, although one worn tile of the larger type is at least 24mm thick, whilst

another, with part of an edge visible, is over 28mm.

Both sizes of tile are found at Cheyneygates, whilst only the larger type was used in the small area of walling still visible in the Little Cloister. At Cheyneygates the majority of smaller-sized tiles are set in the lower part of the wall. Whether these are any different in date from the larger examples is not known, although there are no obvious differences in glaze type, nor any other feature. The two separate wall tiles from Westminster, together with those from Newgate Street and Guildhall Yard, provide information on tile thickness: all fall into the range of 28–36mm.

The size and thickness of the wall tiles, as well as their general appearance, is very similar to that of Roman *bessalis* bricks found in London, although the Romans never applied glaze to the surface of bricks.

MARKINGS

Two *in situ* wall tiles at Cheyneygates, Westminster have markings in their top surface. On one tile this consists of a single semi-circular mark, whilst on the other there is a faint line parallel to the edge, together with a series of diagonal strokes (Fig. 2c). These seem to have been made with either a blunt tool, or, more likely, the tips of the fingers. The purpose of these marks is not clear, nor is it certain if they are accidental or deliberate.

The fragment found in the ditch beneath the 11th-century dorter undercroft at Westminster, has an entirely different kind of marking on its upper surface: a circle crossed by two narrow diagonal lines (Fig. 2b). This circle was clearly made by a compass as the mark of the compass point is plainly visible in the centre. Unlike the Cheyneygates examples, there seems little doubt that these lines were added as decoration. It is uncertain, however, whether this particular tile belongs to the same group as the other wall tiles. Not only is it in a different fabric from the other separate tiles examined, it also seems to be of earlier, possibly pre-Conquest, date.

DISCUSSION

The inclusion of wall tiles as a major decorative element in the large scale rebuilding of Westminster Abbey clearly illustrates the prestige and resources of the late Anglo-Saxon and Norman monarchy. Not only were walls partly covered with large glazed tiles; the 11th-century rebuilding may well have incorporated elaborately decorated late Anglo-Saxon polychrome relief floor tiles. A fragment was found beneath the dorter undercroft constructed in the late 1060s or early 1070s (Betts *et al.* 1991, 37).

These late Anglo-Saxon tiles, which are believed

to have been made in the Winchester area², may have been the inspiration behind the addition of glazed wall tiles in the post-Conquest abbey rebuilding. It is perhaps significant that the only other late Anglo-Saxon polychrome relief tile so far found in London came from a dump deposit of *c.* 1100 at Guildhall Yard, which lay adjacent to the sequence of 11th-century timber buildings and yards from which the glazed wall tile was recovered. As at Westminster, this close proximity of occurrence would strongly suggest that both wall tiles and polychrome relief tiles were used to decorate the same prestigious 11th-century building. The closest building to Guildhall Yard, which recent work has shown seems to be of 11th-century date, is the church of St Lawrence Jewry (Betts *et al.* 1995). The importance of this building may be derived from its location; there is documentary evidence for a late Saxon palace situated to the north-west (*ibid.*).

A number of late 11th-century buildings outside London have decorative lozenge patterns on their walls, although these are entirely of stone (Gem 1980, 59–60). There is currently no evidence for the use of plain glazed wall tiles in buildings of 11th-century date elsewhere in Britain, nor are there any obvious continental parallels. There are a number of, as yet unparalleled, late 11th-century glazed floor tiles from the church of St. Désir, in Lisieux, Normandy, but these are quite unlike any wall tiles found in London. The Lisieux tiles combined 'white slip applied by the *sgraffiato* technique' and 'hand-incised decoration' (Norton 1983, 42–3). In addition, certain Lisieux tiles have hollows cut into their surface filled with pieces of coloured glass, a decorative technique never used in England.

The use of wall tiles as a decorative element seems to have been a short-lived building style. There is no evidence for the use of any newly-made, as opposed to reused, ceramic tile or brick in London during the first quarter of the 12th century. When manufacture of ceramic tile did resume in the mid 12th-century, the nature of the industry was very different. Instead of wall tiles there was manufacture of at least four different types of roofing tiles (Betts 1990, 221–3). Even the nature of the clays used is very different, indicating production from tileries away from the area which produced the wall tiles. The production of roofing tile seems also to have begun at around the same time in other parts of medieval England, such as Beverley (Armstrong *et al.* 1991, 28, 201–7)³, Southampton and Scarborough (Drury 1987, 127; Lewis 1987, 6)⁴.

The increasingly widespread use of ceramic roofing tile in London on both secular and monastic buildings, during the second half of the 12th century is in marked contrast to the position in the 11th century, where ceramic wall tiles and decorated relief tiles seem to have been restricted to a very

small number of important religious buildings.

Footnotes

1. Stone which may be tufa was used in the dorter undercroft of the Abbey, believed to have been constructed in the late 1060s or early 1070s, along with Reigate Stone, Caen Stone and chalk (Samuel forthcoming).
2. Examination of the fabric of the Westminster Anglo-Saxon tile has revealed that it was made from the same distinctive clay as that used for the Anglo-Saxon tiles from Winchester (Betts 1986, 40–2). It also closely matches certain more sandy Anglo-Saxon Winchester ware pottery vessels and a number of medieval roofing tiles from the city.
3. The earliest roofing tile from Beverley is dated *c.* 1070–1135, although the small quantity present would suggest a date of introduction nearer the mid 12th than the 11th century.
4. A number of roofing tile fragments from Battle Abbey may be as early as *c.* 1100.

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BIBLIOGRAPHY

- Armstrong, P., Tomlinson, D. and Evans, D. H. 1991, *Excavations at Lurk Lane, Beverley, 1979–82*, Sheffield Excavation Rep 1.
- Bateman, N. 1994, 'The London Amphitheatre', *Current Archaeol* 137, 164–171.
- Betts, I. M. 1986, 'Analytical Analysis and Manufacturing Techniques of Anglo-Saxon Tiles', *Medieval Ceramics* 10, 37–42.
- Betts, I. M. 1990, 'Building Materials' in J. Schofield, P. Allen and C. Taylor (1990), 221–9.
- Betts, I. M. 1991, *The Building Material: Billingsgate Fish Market Car Park, Lower Thames Street (BIG82)*, unpublished archive report, Museum of London.
- Betts, I. M., Crowley, N. and Keily, J. 1991, 'Recent Work on Medieval and Later Building Materials in London', *Medieval Ceramics* 15, 37–41.
- Betts, I. M., Bateman, N. and Porter, G. 1995, 'Two Late Anglo-Saxon Tiles from London', *Medieval Archaeol* 39, 165–70.
- Brooke, C. N. L. and Keir, G. 1975, *London 800–1216: The Shaping of a City*, London.
- Crossley, D. W. (ed) 1987, *Medieval Industry*, CBA Research Rep 40.
- Drury, P. J. 1987, 'The Production of Brick and Tile in Medieval England' in D. W. Crossley (1987), 126–142.
- Gem, R. D. H. 1980, 'The Romanesque Rebuilding of Westminster Abbey, Proceeding of the Battle Conference 1980', *Anglo-Norman Studies* 3, 33–60.
- Lewis, J. M. 1987, 'Roof Tiles: Some Observations and Questions', *Medieval Ceramics*, 11, 3–14.

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- Midgley, C.** (ed) 1981, *GPO Site, Newgate Street (Middle Area), EC1*, Unpublished Archive Report, Museum of London.
- Newell, R. W.** 1995, 'Some Notes on Splashed Glazes', *Medieval Ceramics* 19, 77-88.
- Norton, C.** 1983, *A Study of 12th- and 13th-Century Decorated Tile Pavements in France and Related Material in England*, Unpublished PhD Thesis, University of Cambridge.
- Mills, P.** forthcoming, 'Excavations at the Dorter Undercroft, Westminster Abbey'.
- Samuel, M.** forthcoming, 'Worked Stone', in P. Mills (forthcoming).
- Schofield, J., Allen, P. and Taylor, C.** 1990, 'Medieval Buildings and Property Development in the Area of Cheapside', *Trans London Middlesex Archaeol Soc* 41, 39-238.
- Vince, A. G.** 1990, *Saxon London*, London.
- Vince, A. G.** (ed) 1991, *Aspects of Saxon and Norman London 2: Finds and Environmental Evidence*, London Middlesex Archaeol Soc Spec Pap 12.
- Vince, A. G. and Jenner, A.** 1991, 'The Saxon and Early Medieval Pottery of London', in A. G. Vince (ed) 1991, 19-119.
- Wheatley, H. B. and Cunningham, P.** 1891, *London Past and Present, Vol 2*. London.
- Wilson, C., Tudor-Craig, P., Physick, J. and Gem, R.** 1986, *Westminster Abbey*, London.

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Résumé

Des recherches et fouilles récentes ont mises à jour un petit groupe de tuiles murales du Haut Moyen Age, qui semblent être unique aux importants sites religieux de Londres. La morphologie et la provenance de ces tuiles est discuté, et des suggestions sont postulées au sujet de leur origine possible, et leur liens avec d'autres tuiles des périodes anglo-saxones tardives et du Haut Moyen Age trouvées à Londres.

Zusammenfassung

Jüngste Ausgrabungen in West Street, Rickinghall Inferior, zeitigten einen spät mittelalterlichen Brennofen und zugehörige Gegenstände. Diese Entdeckung ermöglichte vergleichende Studien mit früher in den Nachbargemeinden Hopton, Wallisfield und Hinderclay gefundenen Öfen. Die Bauarten anderer, im Waveney Tal gefundener Öfen werden dargestellt und ihre verschiedenen Formen in Beziehung zur spät mittelalterlichen und Übergangs-Töpfertradition (LMT) in East Anglia gesetzt und diskutiert.