

Some late 12th- or early 13th-century great brick at Farnham Castle, Surrey

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SUMMARY

The discovery of great bricks in the fabric of Farnham Castle, and dateable to before 1208, represents its first known use as a building material outside East Anglia in a context other than a tile kiln.

INTRODUCTION

The use of great brick as a building material is most often recognised as a feature of ecclesiastical buildings in Essex, with Coggeshall and Bradwell-juxta-Coggeshall amongst the best known (Drury 1981, 126; Ryan 1996, 22-9; Rodwell 1998, 59-114). Outside Essex, great brick is virtually unknown though this may have much to do with the similarity of this building material to Romano-British brick types and thus the potential for confusing the two materials. A further problem in Essex is that the rapid introduction of so-called 'Flemish' bricks, manufactured either in Flanders or locally in East Anglia, has tended to obscure the part played by great brick in the early medieval use of ceramic building materials (Drury 1977, 83-86). The presence of great brick in ecclesiastical settings in Essex is generally dated to the second half of the 12th century although its use may

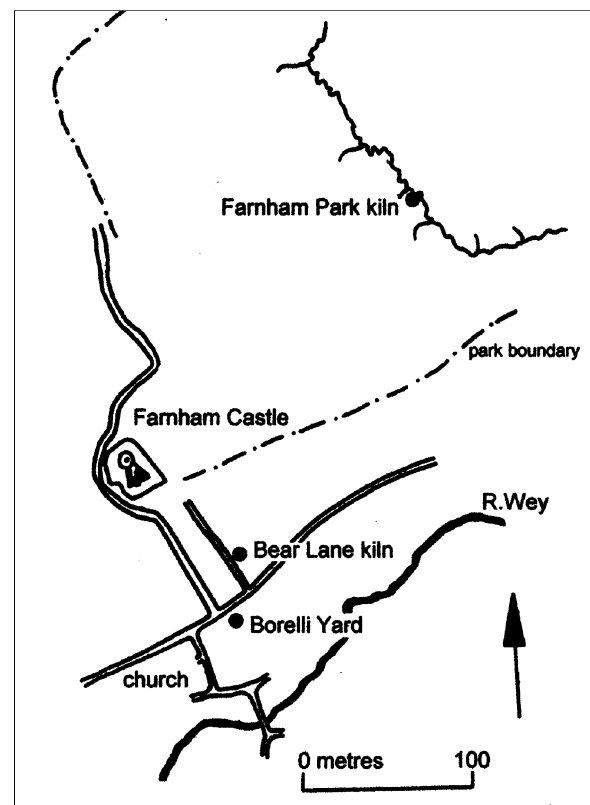
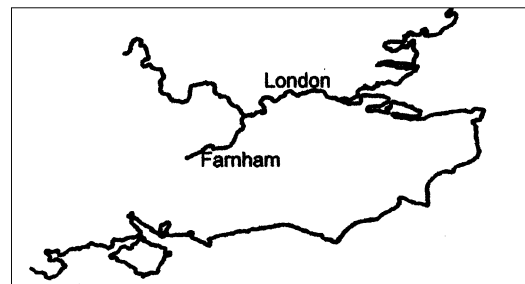


Fig. 1 Map of south east England and of Farnham, Surrey, showing the tile kilns and principal features of the medieval town.

well have continued as late as c.1220 in the construction of the chapel of St Nicholas outside Coggeshall Abbey. Great brick is now also known to have been used in the construction of three roof tile kilns in West Surrey: the Borelli Yard and Farnham Park kilns at Farnham (Riall 1997 and Riall 2003 b) and the kiln at Guildford Castle-Palace (Riall forthcoming). Following the excavation of the Borelli Yard kiln it became possible to identify examples of great brick and roof tile used at Farnham Castle as products of that kiln.

their servants on the castle and manor alongside the manorial income from agricultural produce, rents, fines and so on. From the first of these pipe rolls it is clear that ceramic roof tiles were in use on the castle roofs, although wooden shingles, thatch and lead, were also employed.

DOCUMENTARY EVIDENCE

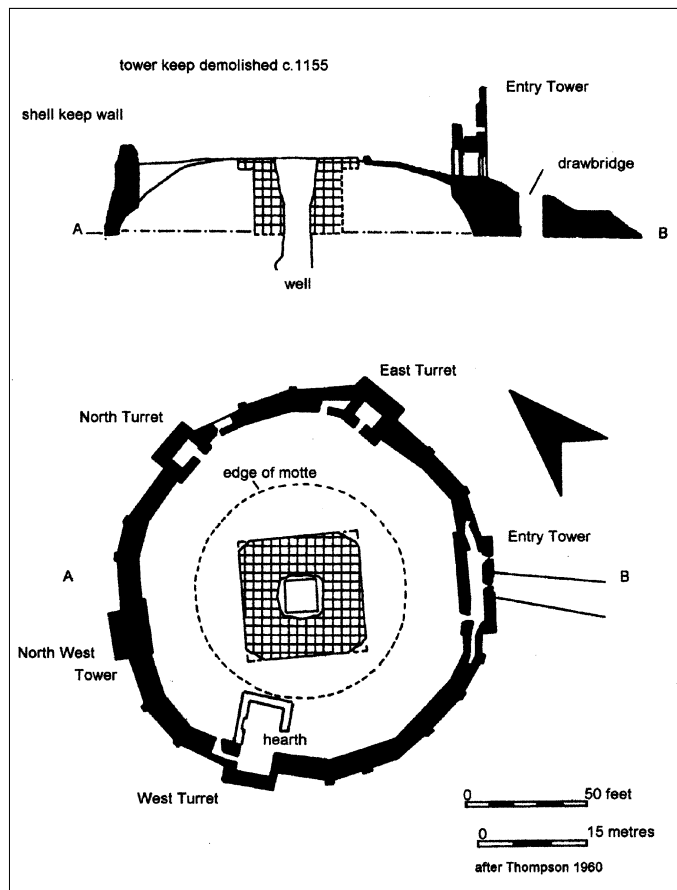


Fig 2. Plan of the keep at Farnham Castle showing site of hearth in the West Turret.

Farnham Castle was one of the principal manors of the bishops of Winchester throughout the medieval period. Here they built and maintained a substantial if relatively modest castle-cum-country house. The site has a number of interesting features including a motte surrounding a square keep which was demolished in c.1155. The earlier motte and keep were encased by a polygonal, five-towered, shell keep before the start of the 13th century (Thompson 1960a; Riall 2003a). It is from contexts within this shell keep that pieces of early brick and tile have been identified.

Studies of the castle benefit from the survival of the manorial accounts, the pipe rolls of the bishops of Winchester. These documents, which survive with the occasional gap from the accounting year 1208/09 until late in the post-medieval period, record in detail the expenditure by the bishops and

Fragments of Borelli-type roof tile and great brick is to be found scattered throughout the fabric of the towers of the shell-keep. The majority is in the internal walls of the East tower and they were also used in a hearth in the West Tower. These roof tiles were not, however, used as a roofing material on the shell keep. During the medieval period, these towers (more correctly termed turrets) seem always to have been roofed with shingles as shown by the following extracts from the pipe rolls,

1264/5 Wage of a mason working for two days (6d) and his helper (3d). Wage of a man cleaning the house(s) in the tower and a place where shall be put the new house for eleven and a half days by piece work (1s 8d). Nails for the gate of the tower (2d). Nails for repairs to the steps inside the tower, the boards bought for the room..... in the tower total (£3 15s 5d), Wage of a carpenter making a room in the tower with beams and new repairs to the towers (turrets) by piece work (£2 10s 3d). 4,250 shingles made for the work (12s 9d). Hooks and hinges (9d) for plastering the walls (6d).

A century later shingles were still in use,

1355/6 2 towers (turrets) roofed with shingles (1s 6d).

There was clearly a strong tradition for the production of shingles at Farnham. Details in the pipe rolls for 1208/9, 1209/10 and 1210/11 show quantities of timber and shingles being taken from Farnham to Winchester for the making of an *inclastrum* (cloister). This may have been for the Cathedral but is as likely to refer to works at the nearby bishop's palace at Wolvesey. By contrast, there were a number of buildings within the shell keep (these structures were always referred to in the pipe rolls as the 'houses of the castle') which were roofed with ceramic tiles,

1220 carriage of tiles for the repairs to the houses of the castle, 2d.

The earliest reference to roof tiles occurs in the 1210/11 pipe roll when the expense of 8s 9d was recorded for the repair of the stables with tiles. Thereafter roof tiles, or the work of the tiler himself, are mentioned in most years. It is possible that an entry in the 1223/4 pipe roll for a John the Tiler, who

paid a fine of 6d for a piece of land, may be the tiler who operated the Borelli Yard tile kiln and carried out roofing work in the castle (Riall 1995a; Riall 2003b). He may have been a floor tiler but, at this period, there seems no reason to suppose this craft was being plied at Farnham as there is no documentary reference to clay floor tiles being laid at this date and certainly nothing in the archaeological record to suggest that they were being manufactured in the Farnham area. Earlier pipe rolls record, in 1215/16, the payment of a fine of 2s for land by the daughter of the tiler and, in 1216/17, a payment of 12d for the same reason by the son of the tiler. These may all relate to the same family and it may well be that by this date John the Tiler had been in business producing tiles and, perhaps occasionally, bricks from before 1208/9 (the date of the first episcopal pipe roll) and, furthermore, that this same man ran his business from the tilerly at Borelli Yard. The original grant of land for the tilerly is not recorded in the pipe rolls and it is presumed that this occurred before 1208.

We may note, finally, a tantalising reference in the 1225/26 pipe roll to a chimney being made ‘in the tower’, that is within the shell keep, but we are offered no clue as to where this was located.

THE BRICKS AND TILES

Borelli Yard-type great bricks and tiles occur in four of the five shell keep turrets and in the rear-ward extension to the west turret where it was used in a fireplace. There does not seem to be any particular pattern to the use of this ceramic building material in the turrets other than as a leveling material within individual sections of the structure. One complete and one incomplete great brick occur in the entry tower in the north-west corner, beside a disused spiral stair. A further 45 pieces of brick and tile are to be found elsewhere in the shell keep apart from the material used in the fireplace. The East Turret has two forms of great brick and also flat roof tiles and ridge tiles incorporated into three internal wall faces along with pieces of great bricks used to form the draw-bar slot for the door. Great bricks and tiles again occur in the doorway and in the internal faces of the North Turret, with more in the internal face of the shell keep wall just to the west of the North Turret.

The fireplace in the West Turret was set into the north wall and originally had coursed brick and tile on three sides. The hearth measures some 1.20 by 0.75 metres with the remaining fireback standing 0.40 metres high and up to 0.20 metres thick. The base of the fireplace was defined by stonework with a roll-moulding along the edge into which tile on-edge had been laid. Much of this hearth has now been lost and the principal remnant is the hearthback (Fig. 3). This consists of three courses of great brick with some tile and, above, eleven courses of roof tile. The tiles and great bricks used in this



Fig. 3 Farnham Castle – great bricks and tiles in the West Turret hearth. Scale 50cm.

fireplace match those produced in the Borelli Yard kiln. Samples of both great bricks and tiles from Farnham Castle were examined microscopically and by disaggregation alongside material from the Borelli Yard kiln by the late Robert Foot, then with the Winchester Museums Service (Riall 2003b). He concluded that the fabric of the two sets of material were indistinguishable. The great bricks and tiles also physically match the material produced in the Borelli Yard kiln, a key feature being the treatment of the side faces of the great bricks. These were scored, or combed, with a toothed tool of some type - possibly a simple wooden comb - around all four faces producing a grooved appearance (Fig. 4). The grooves vary from 0.1 to 0.5mm in depth and sometimes show quite fine lines, 0.2-0.3mm wide, but can also be wider and coarser, up to 0.7mm wide.

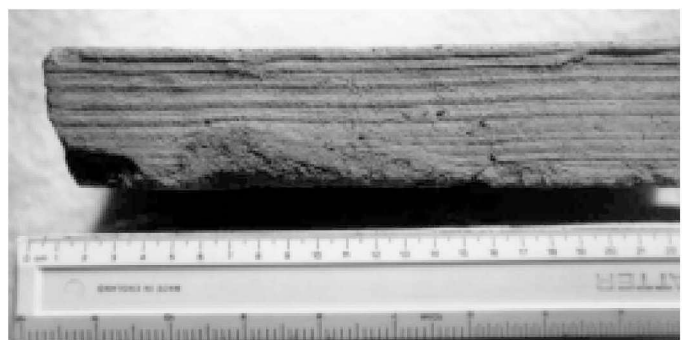


Fig. 4 Farnham Castle great brick – detail of a combed face.

This is a characteristic feature of all the Borelli Yard great bricks and also of the voussoirs used in the kiln arches. The combing also occurs on some of the great bricks used in the Farnham Park kiln (Riall 1997) and on all the great bricks and voussoirs used in the kiln at Guildford castle royal

palace (Riall forthcoming). The Essex material does not exhibit this combing. The need to apply this texturing to the faces of the great brick remains unknown. It may have been intended to provide a key to facilitate the application of plaster or rendering. There is some evidence to suggest that in their primary stages the oven structures of both the Borelli Yard and Guildford tile kilns were extensively rendered with a thin layer of clay. By the time of the final firings of the Borelli Yard kiln this practice had certainly ceased and the materials used in the oven structure were subjected to the full thermal blast of the kiln fires. The Surrey great bricks are a long and thin rectangular brick, that were made in a mould. The struck face is always slightly concave, or dished, while the lower face usually has a coarse texture resulting from sand derived from the moulding table being left on the bottom of the brick. The concave characteristic of the struck face appears to have been a deliberate design feature that allowed the kiln builders to bond bricks together using a clay mortar and leaving a joint no more than 3mm thick. The voussoirs in the Borelli Yard kiln were frequently so tightly bonded together that the joint was no more than paper-thick. In the hearth at Farnham Castle a lime mortar seems to have been used throughout. Two forms of great brick have been identified in the Borelli Yard assemblage: FBY-GB1 measuring 308–315mm long by 135–145 wide and 47–55mm thick and, FBY-GB2 which measure 320–330mm long by 140–145mm wide and 50–55mm thick, based on a sample of more than 100 individual bricks.

Table 1 Comparison of great bricks from sites in East Anglia and from the three Surrey kilns.

	type	length mm	width	thickness
East Anglian sites:				
Bradwell-juxta-Coggeshall	most	330	160	50
	some	360	190	60
Coggeshall		320-30	150-60	45-55
Pleshey Castle	A	305	130	75
	B	c.265	130-35	45-50
Rivenhall Church	B	320	145	50
Shouldham Abbey	6	300	150	45
Surrey sites:				
Farnham - Borelli Yard	GB-1	308-15	135-145	50-55
	GB-2	320-30	140-45	50-55
Farnham - New Park	GB	305-14	145-51	48-52
	GB-V	320-40	195-205	49-54 (30-33)
Guildford Castle Palace	GB	340-50	170-75	52-58

A second type of great brick was also encountered in the Borelli Yard assemblage. This has been classified as large great brick (FBY-LGB). No complete examples were found at Borelli Yard. It was made of the same fabric as the other ceramic building materials and, like the great brick and

voussoirs, had combing along the side faces. This form of brick, perhaps more accurately described as a ceramic slab, was at least 300mm long by 265–270mm wide and 38–45mm thick. Brick of this type was used in the East turret and in the wall alongside the North West turret. Brick of the FBY-LGB type are known only from Borelli Yard, none occur in the Farnham Park or Guildford assemblages.

The tiles employed in the Farnham Castle hearth appears to match the dimensions of the Borelli Yard type 2 tiles (FBY-T2). The hearth is built up of tiles cut down their length or, possibly, of tiles that were actually manufactured as half-width tiles. The excavation of the Borelli Yard kiln produced peg tile (FBY-T3) that was manufactured as a half-width of the standard full sized FBY-T2 tiles. Both tile types were part-glazed and traces of this glaze appear on tiles in the hearth. FBY-T2 tiles were rectangular with two peg holes; the bottom third or so of the mould face was glazed, and they measured c.340 x c.205 x 14–16mm. Peg-and-nib tiles also occur in the Borelli Yard assemblage but are not thought to be represented in the hearth. It may be noted here that some FBY-T2 tiles were re-used on the roof of the brick entry tower, Fox's Tower, on the south front of the castle. This was built in 1470–75 by Bishop William Waynfilet (Thompson 1960b) and may have been altered by Bishop Richard Fox in the early 16th century at the same time as the entry tower into the shell keep was remodelled.

DISCUSSION

Whilst some 16th and 17th-century brick is present in the East Turret and the entry tower, there is good reason to suppose that most, if not all, the brick and tile built into the shell keep turrets belongs to the original construction phases of this structure. Although the precise date of the construction of the shell keep remains unknown it is generally thought to be between 1190 and 1208, the date of the first episcopal pipe roll. We may with some confidence suggest that the ceramic building materials in the turrets belong to the main construction phase of the shell keep but dating the brick- and tile-built hearth is more problematic. Between 1208 and c.1280–1320 the space between the shell keep wall with its turrets and the earlier motte remained unfilled. The pipe rolls do not offer a dating for the leveling up of the keep interior but pottery and roof tile indicate a date of c.1280–1320 (Thompson 1960a, 86). Thompson suggests that the West Turret was extended at the same time as the keep interior was filled. All the brick and tile used in the hearth can have been produced only in the Borelli Yard kiln; there is nothing in the hearth that can be dated to the period when the keep interior was filled in. It is clearly possible for this material to be used and reused long after the date of its original manufacture but the absence of any later material should perhaps be taken to indicate an earlier

date for the hearth and, therefore, for the construction of this part of the keep.

The presence of great bricks and early tiles in the structure of Farnham Castle represents, in Surrey at least, their only known use outside of a tile kiln context. A date of 1235 +/- 15 years was obtained through the measurement of thermo-remnant magnetism of fourteen samples from various parts of the Borelli Yard kiln; this is supported by pottery spot-dating which suggests a date bracket of 1200-1230 (Riall 2003b). The presence of great bricks in contexts in the castle earlier than 1208/9 carries with it the implication that the Borelli Yard kiln was operating before this date which, prior to this discovery, it had not been possible to establish. The presence of great bricks in the castle also makes it clear that there was a strong relationship between the masons involved in the construction of the shell keep walls and the roof tilers and the tilery. This relationship is further emphasised by the use of much fine quality dressed stone in construction of the kiln walls of the Borelli Yard tile kiln. Fine quality stone was also employed in the construction of the Farnham Park kiln which is seen as the local successor to the Borelli Yard site. We may therefore conclude from this that the masons, roof tilers and tile kiln operators working on the castle, and perhaps also on the nearby parish church, were closely involved with one another.

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Résumé

La découverte de grandes briques de type Farnham Castle datée d'avant 1208, représente leur première utilisation connue en tant que matériau de construction dans un autre contexte qu'un four à tuiles et en dehors de l'East Anglia.

Zusammenfassung

Die Entdeckung großer Ziegel im Mauerwerk von Farnham Castle, das früher als 1208 datiert, bezeugt den erstbekanntesten Gebrauch dieser Ziegelart als Baumaterial außerhalb East Anglias in anderem Zusammenhang als dem Bau von Brennöfen.