

# Ceramic Building Material

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## 1.0 INTRODUCTION

A large assemblage of ceramic building material (CBM) was submitted for assessment and full recording (10,231 fragments were individually recorded being 918.2kg). The assemblage was recovered during the course of an archaeological excavation undertaken by Field Archaeology Specialists at Blue Bridge Lane, York. CBM was recovered by hand, fine- and coarse-sieving and by flotation; no on-site disposal policy was implemented during excavation.

A small assemblage of Roman ceramic building material and a small fragment of opus signinum, albeit redeposited in an Anglian pit, suggests Roman building in the vicinity. The medieval assemblage was dominated by plain roof tile which was present in the typical York peg tile form; there was also a weak presence of curved and flanged tile. The excavation took place within the former area of the precinct of the Priory of St Andrews and it is thought that much of the material derives from construction, alteration and demolition of Priory buildings; waste from which may have been disposed of at the periphery of the establishment. Consequently, the material has been compared to the published CBM assemblage from earlier excavations undertaken by the York Archaeological Trust in the claustral range (Garside-Neville 1996, 294-297; Stopford 1996, 298-301). An assessment of the CBM recovered during the evaluation of the site prior to excavation has also been used (Garside-Neville 2001).

## 2.0 ASSESSMENT PROCEDURE

The assemblage was recorded using a system based on that used by the Museum of London and was undertaken in accordance with the draft Minimum Standards for Recovery, Curation and Publication for Ceramic Building Material issued by the Archaeological Ceramic Building Materials Group (ACBMG 2002).

Each piece of CBM was recorded individually and information about form, date, dimensions and weight were captured alongside features of note such as stamps, glazes or imprints. Marks from manufacture such as indented borders or over- and under-firing were recorded; evidence for reuse was also noted such as mortar or sooting. A small area of the CBM was broken off to inspect a clean section of fabric which was viewed using a hand lens (x10 magnification). The material was referenced to the fabric series of Roman and medieval fabrics compiled and maintained by Field Archaeology Specialists. Whether a piece of CBM was retained was also noted.

After full recording a disposal strategy was implemented and approximately 98% of the assemblage was discarded after full recording which reflects the homogeneity of the overall assemblage. The disposal strategy retains CBM if a piece displays added decoration, glaze, stamps, graffiti, imprints of tools, fingers, animals or textiles. Additionally, complete or near-complete examples of a form are considered for retention. Fragments of unusual forms within the site assemblage are retained, for example, fragments of curved and flanged tile and all ridge tile fragments. A sample of medieval brick was also retained for the site archive.

All information captured was entered directly into a Microsoft Access 2002 database and forms the full catalogue and part of the excavation digital archive.

## 3.0 ASSESSMENT

### 3.1 ROMAN MATERIAL

Roman CBM represented approximately c.3.5% of the assemblage and consisted of roof tile; tegulae and imbrices, although all the fragments were small and most were abraded, much of the material being redeposited in Anglian pits. Some excavated deposits contained only Roman CBM and although some are later in date (F43, C1163: F44, C1164; F389, C1782; F425, C1786; F442, C1951; F520, C2120; C2184; F546, C2201, C2205) it was present in sufficient quantity to suggest Roman building in the vicinity. The fabrics were limited to the typical range of fabrics known in York.

### 3.1.1 Roof tile

10 tegulae and 29 imbrices were identified during analysis. Only two tegula flanges were completely intact; one with a Betts' Lower cutaway type F (F43, C1163) (Betts 1985, 160). Two tallymarks were also noted on Roman brick fragments from F389; one has a deep knife-cut tally on the side of the brick in the form of an 'X' (Plate 1), the other has a larger possible 'X' mark on the sanded side (Plate 2). Betts (Op. Cit., 204) suggests that these tallymarks may be an indicator of military tile production.

### 3.1.2 Brick

Brick fragments were also found, but again were generally small and abraded. Some brick fragments may actually have been from tegulae but no distinguishing features could be identified and were subsequently defined as brick fragments. One brick fragment, possibly a product of military tile kilns at Peaseholme Green, York, displayed a partial, but deeply struck, stamp of the 9th legion and may date the context to the late 1st to early 2nd century (C1782) (Plate 3). The stamp is only partially preserved but ]X-HISP[ is half-intact. The stamp was compared to Betts' legionary stamp series (ibid., 209-10) but no match was found and the piece may represent a new tile stamp in York.



*Plate 1: Tally marks on Roman brick fragment*



*Plate 2: Tally marks on Roman brick fragment*



*Plate 3: Stamp of the 9th legion*

### 3.1.3 Heating system tile

One small fragment of box flue tile was also recovered. Additionally, the evaluation assessment notes the presence of hypocaust tile and burnt brick.

### 3.1.4 Assessment

Roman CBM from excavation in the 1980s was recovered from Roman ploughsoil or was redeposited in later features. Some of the present assemblage has been redeposited in later features but a proportion comes from features and deposits dated to the Roman period. Enough of a range of forms is now known from the site to suggest Roman building in the area. The range now includes, roof tile and brick (including a total of four 9th legion stamps), floor tile, hypocaust tile, flue tile, opus signinum, and chimney pot. These suggest the nearby buildings may have been relatively sophisticated, supplied by the military market and included tegulated roofing systems, plaster and tile floors and Roman heating systems. The assemblage is broadly dated to the 1st to 4th century.

## 3.2 MEDIEVAL MATERIAL

Approximately 90% of the assemblage was dateable to the medieval period. The earliest material in the assemblage was curved and flanged tile which is dated to the 11th to 13th century (Lewis 1987, 6; Betts 1985, 384) and which take a similar form to the Roman roofing system. Curved tile is an equivalent imbrex but is generally smaller and has a square peghole at the tapered end. Flanged tile is similar to tegulae but the flange is much smaller and the form has no cutaways. This roofing system is thought to be associated with high status buildings such as churches, stone halls and merchants' housing. In spite of the site's location within the precinct of St Andrew's, only 6 small fragments, two flanged tile fragments and four curved tile fragments, were present in the assemblage and are clearly not present in sufficient quantity to suggest this roofing system was in use nearby (Plate 4). This may be considered surprising given that this was a preferred Anglo-Norman roofing system for high-status building and that the first construction phase of

the Priory has been dated to the late 12th to late 13th century (Period 6a, Kemp and Graves 1996).

### 3.2.1 Fabric

All fabrics were described according to Peacock (1977, 21-33) and were recorded as being from one of 68 fabrics. However, since visually identifiable fragments do not necessarily reflect microscopically distinct fabrics broad trends will be used to create fabric groups within the collection. These will be analysed fully on completion of ceramic dating from the site. From the published descriptions of CBM from earlier excavation (Garside-Neville 1996, 294-5) it seems that the fabrics groups, recovered from recent excavations, reflect those already published.

### 3.2.2 Plain and peg roof tile

Medieval plain roofing tile forms the largest part of the assemblage (c. 87% of the overall assemblage) and is broadly dated to the 13th to 16th century. Where the method of suspension was no intact tiles were defined as plain tiles. 430 pegtiles were confidently identified in the assemblage and most of the fragments displayed the typical peghole placed centrally at one end, although two peg tiles has holes so close to a corner it would not be unreasonable to suggest that two-hole peg tiles were also used. Square (372), diamond (32) and circular (26) peg tiles were identified. One complete example of a square peg tile (Plate 5) and one near-complete square peg tile (Plate 6) were present in the assemblage with respective dimensions of 335 x 222 x 17mm and 327 x 224 x 18mm. These are on the large size falling roughly within Betts' Type 6 and 7 from measurements taken from complete tiles from York (Betts 1985, 459). Neither tile appeared to have been used, on a roof since no evidence for erosion, frost-cracking or mortar was identified, and they may represent construction waste. Where full dimensions were present from incomplete tiles they measured between 177 to 240mm (breadth) and 6 to 28mm (thickness) which again fall within York measurements compiled by Betts (ibid). The complete peg tile has an indented border and tapers slightly towards the bottom and the hole has been struck from the upper side. The incomplete example has a knife-cut tallymark on its top edge as well as a saltire cross executed across the body of the tile. This may be an elaborate tally or kiln-batch system but the possibility that the tile was from monastic tile production at the site should not be discounted. Two examples of CBM marked with religious symbols are known from East Yorkshire one with a decorated cross stamp and other stamped with a seal of Agnus Dei (Tibbles 2003, 31).

### 3.2.3 Glazed roof tile

41 plain roofing tiles also displayed glazes to varying degrees. Most displayed only splashed glaze which may suggest that the glazing was not intentional but an accidental product of firing or proximity to deliberately glazed products and some examples displayed glaze very similar to that on the Humberware pottery thought to have been produced at the site (Plate 7). One glazed circular pegtile was present in the assemblage and the circular peg hole was close enough to one corner to suggest the form may be a double peg type. It is thought that glazed roof tile represents a higher status product, for example, the glazed ridge and roof tile from Clarendon Palace. This type of tile would have been fitting for most buildings within the cloistral range, although it was not present in sufficient quantity to suggest large scale use. These glazed forms may relate to the high, rather than late, medieval buildings of the Priory.



*Plate 4: Curved roof tile*



*Plate 5: Square peg tile*



*Plate 6: Near complete square peg tile, with cross decoration*



*Plate 7: Glazed roof tiles*

### 3.2.4 Nib tile

Nine nib tiles were present in the assemblage. Two nib tile fragments had an applied triangular nib close to the corner of the tile may suggest the tiles at the site took the form of two applied nibs. Although applied nibs are known to have been positioned close to one corner (Armstrong 1991, 203; Armstrong 1992, 222; Potts 1996, 114) the form identified by Garside-Neville from earlier excavations suggests the Blue Bridge Lane material may derive from this form (Garside-Neville 1996, 296). This particular form of nib tile which has two discrete lumps of clay attached to the sanded side of the tile are dated in York to the mid-12th century onwards (ibid) (Plate 8). As Garside-Neville (ibid) suggests the presence of nib tile may represent piecemeal repairs to a roof rather than significant use of the form. One unusual fragment is part of a glazed nib tile; it has one well-fashioned knife-trimmed applied-nib intact and is covered with a green glaze (Plate 9). It is interesting to note that while nib tile is not common in York, it is found regularly in excavations in East and South Yorkshire and the Blue Bridge Lane nib tile almost certainly represents imported tile.

### 3.2.5 Ridge tile

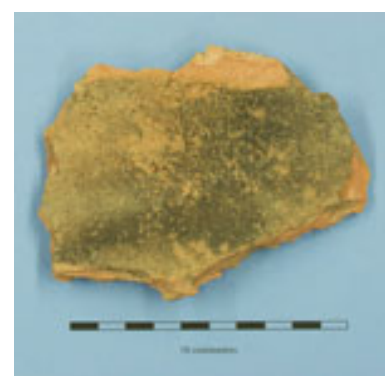
77 fragments of ridge tile were present in the assemblage. Crested ridge tiles are known in London from the 1190s (Dr Ian Betts, pers. comm.) but are broadly dated to the 13th to 16th century in York and complement rooves made of plain and peg tile. 72 fragments were from plain ridge tile, and some displayed smoke-blackening on their underside (Plate 10). This may be from having been in position on a roof which was open to the rafters.



*Plate 8: Nib tiles*



*Plate 9: Glazed nib tile fragment*



*Plate 10: Smoke-blackened ridge tile*

Five fragments of ridge tile were from ridge tiles with the form of an interrupted ridge decorated with upstanding square, triangular or trapezoidal tabs of clay (Plates 11, 12 & 13). One fragment of plain ridge tile had a green splashed glaze which appeared to be most concentrated towards the crest of the plain ridge. Similar ridge tiles have already been found at Fishergate, York and in Southampton where they were dated to the 13th to 14th century (Garside-Neville 1996, 295; Dunning 1975, 189). In fact, Garside-Neville (ibid) suggests that the Period 6 church of the Priory may have been furnished with glazed and crested ridge tiles.



*Plate 11: Decorated ridge tile*



*Plate 12: Decorated ridge tile*



*Plate 13: Decorated ridge tile*



*Plate 14: Combed crested ridge tile*

### 3.2.6 Mega ridge tile

One large and unusual piece of roof furniture was included in the assemblage and has been identified as a possible finial (Plates 15 and 16) (Garside-Neville, pers.comm.). The piece has suffered some damage and is sooted but its original shape is largely intact. Its form is similar to that of a ridge tile and includes a slot underneath for positioning on the

apex of a roof. The upstanding ridge however, is more squat and higher than a common ridgetile. At the top of the finial there is evidence for three upstanding crests divided by U-shaped indents but unfortunately these have been lost. Two very similar finials have been recovered from excavations at St Leonards Hospital. Both of the St Leonard's examples are decorated; one with the impression of a seal ring, the other with the end of a key.



*Plate 15: Mega ridge tile*



*Plate 16: Finial*

### 3.2.7 Floor tile

Only four fragments of floor tile were recovered during excavation, three were monochrome glazed tiles of yellow or dark green glazes and one was a fragmentary inlaid tile (Plate 17). None of the tiles were complete enough to gain any measurements as to their original size and so it was unclear as to whether they belonged to Stopford's Group A or B (Stopford 1996, 298-301). Regardless of group, the monochrome floor tiles certainly reflect those published by the York Archaeological Trust and may have belonged to pavement of alternating light and dark tile of the Phase 6b monastic church dated to the mid-14th century. The inlaid tile has a very worn top surface, but displays a partial curvilinear and foliate design, and may be part of a Gothic motif dateable to the 13th century. Tiles of similar design are still to be found at Rievaulx Abbey, North Yorkshire. The inlaid tile is unique to the site, but its poor preservation suggests it has suffered abrasion from recycling and may have been brought onto the site in dumping episodes. It is interesting to note that no evidence for highly decorative tile pavements have been recovered from St Andrews and this may reflect the early austerity of the Gilbertine order.

### 3.2.8 Brick

246 fragments of brick or wall tile were present in the assemblage. Such bricks were used as infill in timber framed buildings or as hearth make-up and date from the 14th to 16th century overlapping with the use of plain tile. The make-up of one hearth encountered during excavation consisted of reused walltile, brick and roof tile.

### 3.2.9 Stone roof tile

Two fragments of stone roof tile were included in the assemblage, one example had a small hole pecked through it (Plate 18); both are undateable in themselves. Stone roof tile from York in the medieval period is rare and the small number of fragments identified at Blue Bridge Lane reflects this.

### 3.2.10 Imprints

53 fragments of CBM, principally plain and peg tile, and brick bore marks from fabric, vegetation and animals. 14 fragments displayed signs of fabric. Such fabric imprints are thought to have come from the tilers clothing while carrying a batch of tiles under the arm (Walton-Rogers 1996, 117) (Plate 19 and 20).



*Plate 17: Fragments of floor tile*



*Plate 18: Stone roof tile*



*Plate 19: Fabric imprints on CBM*



*Plate 20: Fabric imprints on CBM*

The tracks of several animals were found on 36 fragments of plain and peg tile and included dog (Plate 21), possible fox, cat (Plate 22), pig (Plate 23), deer and caprovid. This is a common phenomenon and suggests that the tiles were left to dry and harden laid flat in a drying shed. No rain drops were noted on any of the tile. Earthworm imprints were found on the underside of several tiles and brick fragments, and support the evidence that some tiles or bricks were left to dry lying flat (Plate 24). Lastly, three tiles showed signs of straw and grass marks on their underside or side suggesting that some tiles may also have been left to dry on their sides.



*Plate 21: Dog print on a fragment of roof tile*



*Plate 22: Cat print*



*Plate 23: Pig trotter imprint*



*Plate 24: Earthworm imprint*

### 3.2.11 Miscellanea

Nine counters or 'pot lids' were also present in the assemblage; their weight ranging from 16 to 216 grams (Plate 25). They were all made from plain roof tile. Such finds are not uncommon and may have served many purposes.

Two plain tile fragments showed evidence for chequer board patterning; one post-firing, the other prior to firing (Plates 26 and 27). It is unclear as to why this had been done, although a similarly decorated plain tile has been recovered from Doncaster. Again, the rationale behind the decoration the Doncaster tile was not clear, but its use as a gaming board was ruled out by the author due to the irregular nature of the chequer. It does seem possible that the Blue Bridge Lane examples were used as gaming boards as the execution is reasonably measured, particularly that of the example scored post-firing.



*Plate 25: 'Pot lids' from the assemblage*



*Plate 26: Chequer board patterning: post firing*



*Plate 27: Chequer board patterning: applied before firing*

### 3.2.12 Assessment

Overall, the medieval CBM assemblage is quite typical of York and certainly reflects the nature of the assemblage recovered during excavation in the 1980s. The dominance of plain roof tile is to be expected although the relative paucity of earlier roofing systems and floor tile might be considered unusual given the probable provenance of the assemblage. The Gilbertine order were famously aesthetic and may not have sought high-status glazed and decorative roof furniture of flooring for the earlier buildings of the monastery. This ethos is certainly reflected in the mundane nature of much of the CBM recovered during excavation with the exception of the roof finial which represents an unusual find in the city, and which may reflect the burgeoning high -status tastes of the order in the later medieval period.

## 3.3 POST-MEDIEVAL MATERIAL

Post-medieval material was rare in the assemblage and was only represented by large slop-moulded and machine-made brick; pan tile was conspicuous by its absence, although this reflects the excavated sequence.

## 4.0 RECOMMENDATIONS FOR FURTHER ANALYSIS

The CBM remaining after full-analysis should be retained, since a full catalogue and disposal policy has been implemented there is little further analysis to be undertaken. The analysis of fabrics should be undertaken after ceramic dating has been received, to identify patterns of supply to the site, and to detect the possible products of the site itself. Selected fabric analysis is recommended, should any be undertaken on pottery from the site, on fabric groups especially where glazed roof and floor tile are included, since it is possible that these represent Gilbertine production at the site and this would be a valuable insight for York CBM production in the medieval period. It would also be important to source the clay since this might also affect interpretations of the large possible clay quarry pits excavated at the site. Selected illustration should be considered where photography is insufficient, this is particularly the case for the legionary stamp. Specialist analysis of the fabric imprints might be considered of anecdotal interest.

## 5.0 ARCHIVE

The retained sample of (40kg; 119 fragments) CBM will be kept to enable integration within a city-wide study of the use of CBM during the Roman and medieval periods. A copy of the full catalogue will be deposited with the site archive and a copy will be held by Field Archaeology Specialists.