

## **Assessment of the Ceramic Building Material from the Hamble to Botley Jetline Pipeline (HBJ01)**

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One hundred and seventy eight fragments of ceramic building material from fieldwork on the line of the Hamble to Botley Jetline pipeline were examined. They represent no more than 134 objects and weigh in total 15.412 Kg. The material ranges in date from the Roman period to the 20<sup>th</sup> century.

### **Description**

Since there is little difference in the raw materials used or the firing temperatures employed in the manufacture of ceramic building material from the Roman period through to the 20<sup>th</sup> century but it is likely that the source of raw materials changed through time. Therefore, in order to see if the dating of the material could be aided by fabric analysis, the fabric of the fragments was examined using a x20 binocular microscope and each piece was assigned to a fabric number, starting with F01. In total, twenty-one fabrics were identified although some of these appear to be the same basic raw materials fired at different temperatures.

Where possible, forms were identified. Most of the material came from flat roof tiles (coded FLAT) and in the absence of any evidence for nibs or other fixing methods and the presence of several tiles with peg holes it is likely that all are from pegtiles. Two thicknesses of brick (BRICK) were noted, thin examples, some with knife-trimmed edges, which are probably of Roman date and thicker examples of standard post-medieval and later date. A few curved tile fragments are probably from ridge tiles.

A single fragment of a tin-glazed wall tile (WALT) was found. Like the tin-glazed pottery from the same pipeline the glaze on this tile was still *in situ* although starting to flake off. A single fragment of a black moulded edging tile (EDGING TILE), of the type used in the later 19<sup>th</sup> and 20<sup>th</sup> centuries for forming the borders to paths and flowerbeds, was recovered and two fragments of unglazed field drain (FIELD DRAIN), one of which was possibly a cylindrical form and the other a flanged U-sectioned tile.

An attempt to date all of the pieces has been made. Following the recognition of Roman bricks in the collection (3119, 3129, 3131 and 3133), featureless fragments with the same fabrics were also identified as being of Roman date (1109 and 1525). Medieval flat roof tiles were identified by their thickness and uneven finish. Most of these tiles were made in Fabric 2 or variations of this fabric but these fabrics were also used for objects which are clearly much later. Twenty one objects were assigned to the post-medieval period, of which only the tin-glazed wall tile could be positively identified. The remainder were assigned mainly because their characteristics did not suggest an early modern date. Finally, early modern material was either identified by form (such as the field drains and the edging tile), or by the thickness of the flat roof tiles (less than 10mm thick) or by the presence of frogs in the hand moulded bricks, an early 19<sup>th</sup> century introduction.

## **Romano-British**

Fragments of four bricks and two featureless fragments were identified as being of Roman date. They occurred in two fabrics: F15 and F16. Both fabrics were poorly mixed with red-firing and light-firing clay lenses. In F15 the fabric is silty and micaceous but F16 is finer-textured. The fragments occur on three Plots: 11/1 15/3 and 15/5.

## **Medieval**

Twenty-six fragments of medieval tile were identified. They come from six Plots: 5/3, 9/1, 13/1, 13/2, 13/3 and 15/5. Of these, 13/1 produced the majority of fragments (14). Four fragments with round pegholes were noted and one fragment decorated with two parallel grooves, set diagonally to the edge of the tile. Five fabrics were present in the medieval tile collection: F2, F4, F5, F12 and F20. Of these, the first three are all light coloured with pellets and streaks of white clay and little sand temper. F12 has a fine-textured silty red fabric and moulding sand of fine sand grade and F20 is a sand-tempered fabric with a silty, micaceous groundmass and a moulding sand including abundant angular white flint fragments.

Only two of the Plots producing these tiles (5/3 F12, and 9/1 F2 and F20) did not also produce medieval pottery and the relative proportion of pottery to cbm fragments in Plots 13/1, 13/2, 13/3 and 15/5 is similar.

## **Post-medieval**

Twenty-one fragments of post-medieval cbm were identified. Of these, seven were not studied in detail (either because they were missing or consisted of small scraps found with the pottery). The remainder come from Plots 8/1, 9/1, 13/1, 13/2, 18/5 and 19/5. The highest quantity (9 fragments) came from Plot 13/2.

The tin-glazed wall tile is likely to be of London manufacture and of later 17<sup>th</sup> or 18<sup>th</sup> century date. It is decorated with a sailing scene within a circular band in purple (manganese) paint.

The remaining fragments include flat roof tiles and bricks in fabrics 1, 2, 3, 4, 8, 10, 11 and 13. Only Fabric 1 (from Plots 9/1, 13/1 and 13/2) is not found in earlier or later tiles.

## **Early modern**

One hundred and twenty-four fragments of ceramic building material were dated to the early modern period (ie from the late 18<sup>th</sup> to the 20<sup>th</sup> centuries). They come from Plots 4/2, 5/3, 7/2, 8/1, 9/1, 11/1, 11/2, 13/1, 13/2, 13/3, 15/3, 15/5, 18/5, 18/6, 18/8, 19/5 and 20/1. Only four Plots produced more than 10 fragments: 4/2, 13/1, 13/2 and 13/3.

The material was assigned to twelve fabric groups: 2, 3, 6, 7, 8, 9, 10, 11, 14, 17, 18 and 19. Of these, the most common was F8, which is a red-firing fabric containing abundant quartz sand, up to 0.5mm

across. The size range and texture of the sand suggests that this was made from brickearth, which outcrops extensively along the south Hampshire coast including, no doubt, on the line of the pipeline. Fabrics 10 and 11 are essentially the same as F8 but in the former case includes streaks or lenses of white-firing clay and in the latter is overfired. Fragments of bloated tiles and of tiles with ash glaze over broken edges were recovered from Plots 4/2, 13/1 and 13/2. These suggest that bricks were made close by (depending on where the material found in these Plots originated). Other fabrics include various light-firing clays, some of which were fired to high temperatures, giving the fabric a stoneware appearance and a purple tinge (F3). However, some lower-fired examples are similar in fabric to earlier medieval/post-medieval examples (F2). A group of bricks (and one flat tile) made from fabrics with poorly mixed red- and white-firing clays occur only on the southernmost Plots (4/2, 5/3, 7/2 and 9/1). Fabric 17 (one example, Plot 13/1) is similar but with sand tempering. Two unique fabrics were found. F14 (Plot 18/6) has a fine-textured, red-firing groundmass consisting of mixed calcareous and non-calcareous clays and F19 (Plot 13/1) is sand tempered with white clay lenses.

One fragment of a F8 brick with a thickness of 57mm was found in Plot 18/5. This brick was hand made in a simple mould. Two complete F8 bricks were recovered from Plots 9/1 and 19/5. The bricks have very similar dimensions (232x113x66 and 230x107x66) and both have a crude frogging formed on the sanded side of the brick, presumably added by hand whilst the bricks were still in the former. Moulded frogs were in use by the 1840s and it is likely that these two bricks are of similar date.

The two field drains are of different forms: that from Plot 20/1 has a U-shaped profile and square flanged edges. It is likely that they were used inverted with the flanges designed to stop the tiles from sinking further into the ground. That from Plot 18/5 was probably a cylindrical drain and had parallel drag marks on the outer surface. Its exact method of manufacture is uncertain.

## Assessment

The ceramic building material from the Hamble to Botley Jetline pipeline includes little of intrinsic interest, with the exception of the tin-glazed wall tile. This tile probably came from a house of middling standing and is consistent with the discovery of Chinese porcelain and Westerwald stoneware. A fragment of a Chinese Porcelain bowl came from the same plot.

The Roman fragments, coming from bricks rather than tegulae or imbrices, indicate that they came from structures with mortared walls. It is common in Hampshire for such structures to have walls of flint rubble with decorative or levelling layers of brick. However, such bricks were often robbed and reused and where found without other evidence for Roman occupation as in Plots 11/1 and 15/3 they may have been brought onto the site at a later date. However, this particular plot produced no medieval finds and only two post-medieval potsherds, both of imported types quite possibly discarded in the early modern period. It is unlikely that such bricks would have been reused in recent times and this is perhaps reason to suppose that they relate directly to Roman occupation nearby.

The medieval flat roof tiles are probably of later medieval date and do not include any examples with glaze. Their distribution points to the existence of medieval structures with tiled roofs close to plots 13/1, 13/2 and 13/3.

The remaining material is of early modern date and includes a concentration on Plot 4/2. This plot also produced a large assemblage of post-medieval and later pottery. The collection includes types of early to mid 18<sup>th</sup> century date and only a handful of earlier medieval sherds. This suggests that the ceramic building material comes from the site of a early to mid 18<sup>th</sup>-century household which, according to the pottery, was moderately well-off. The other main concentrations come from Plots 13/1, 13/2 and 13/3 where, by contrast, there is evidence for nearby settlement from the medieval period onwards.

A fabric and form series should be retained for future reference and the remaining material discarded.