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Medieval Kiln Wasters

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Medieval Kiln Wasters from St. Peter's Church, Bristol

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Summary

WASTE material from a late medieval pottery kiln of a different character to the known Ham Green products was recovered from the foundation trench of the north aisle of St. Peter's Church, Bristol. (ST 59107309).

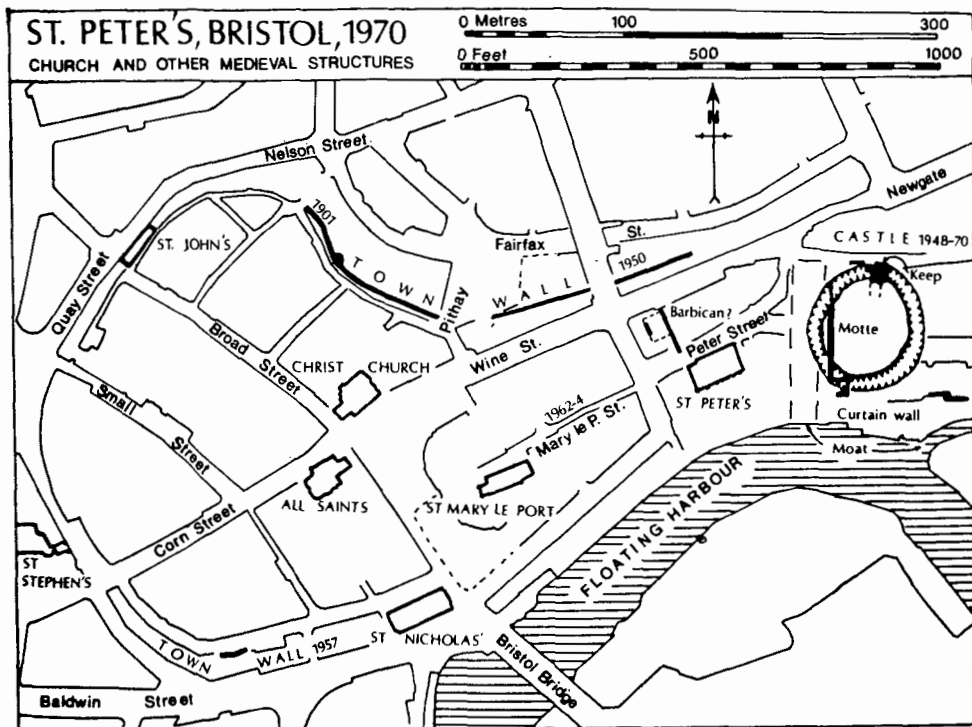
The Site

St. Peter's Church is probably the oldest parish church in Bristol as there is strong contention that it was the original church of the manor of Barton Regis. It has been much rebuilt in the late medieval period and after (Boucher, 1909), but the earliest surviving portion is a substantial part of the fabric of the tower at the west end against which the aisle walls and arcades have been clearly butted. During enemy action in 1940 the body of the church was severely damaged by incendiaries and has remained a roofless ruin. The church stands overlooking the Avon between the city and the site of the castle on the ridge of red sandstone and marl lying between the valleys of the Avon and Frome which made the area such a suitable place for settlement.

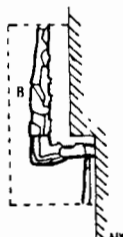
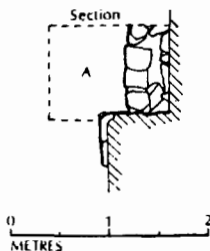
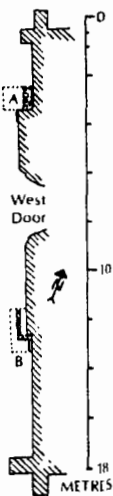
The foundations of the aisle and tower were built in the soft clean yellow sand which overlies the sandstone at the west end of the castle area running northward to Newgate as seen in later excavations carried out by the City Museum on the north side of Peter Street in 1971. Prior to the demolition of all but the church tower, a survey of the fabric was undertaken by the City Architect's and Engineer's Departments and the City Museum.

During operations to test the depth and stability of the foundations to the tower preparatory to restoration, workmen from the City Engineer's Department brought to our notice a quantity of potsherds which they had unearthed by the northwest corner of the tower, against the north aisle.

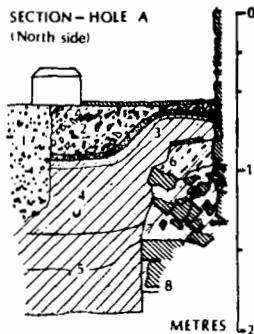
TRANSACTIONS FOR THE YEAR 1972



PLAN OF TRIAL HOLES



SECTION - HOLE A
 (North side)



1. Concrete
2. Humic soil and rubble
3. Mortar layers
4. Brown soil (grave backfill)
5. Similar to 4 but with less mortar
6. Grey ashy soil
7. Brown sand, mortar and pennant rubble
8. Brownish sand, mortar flecks.

Fig. 1

Further investigation of the trench was undertaken when the trial work had been completed. This showed that most of these sherds were precisely the same types as those in layer 6 (FIG. 1).

The Excavation

The foundations of the aisle wall were built on top of an earlier offset of dry-built carboniferous limestone, infilled with brownish sand flecked with mortar (FIG. 1. Plans, Hole A and section, layer 8) which is bonded into a similar block under the north-west corner of the tower. This offset was laid directly on the natural sand. On this fairly substantial foundation, and directly below the aisle wall, there were several irregularly laid courses of pennant sandstone.

Over the offset, and against the dry built foundations, had been dumped a mixture of brown sand, mortar and pennant rubble (layer 7). Above this heavy material was a thick layer of grey ashy soil and pottery wasters (layer 6) which forms the fill of the foundation trench of the aisle wall.

These two layers had been cut and overlain by a series of graves filled with brown soil (layers 4 and 5). These in turn had been sealed by two layers of mortar and modern mixed rubble and humic soil (layer 2), capped by a pavement of pennant flags with a dressed and chamfered limestone kerb.

In the last few years concrete (layer 1) had been poured in after the removal of the burials both within and outside the blitzed church.

A second trial hole, excavated by the City Engineers at the south corner of the tower (FIG 1, B), showed that about two courses of the foundation were mortared but sand-filled below. The two corners appear to be of a different build. This excavation produced no medieval finds and had been badly disturbed by the concrete filling. The mortar in the aisles and tower base was pinkish and hard and is typical of 15th-17th century bonding in Bristol.

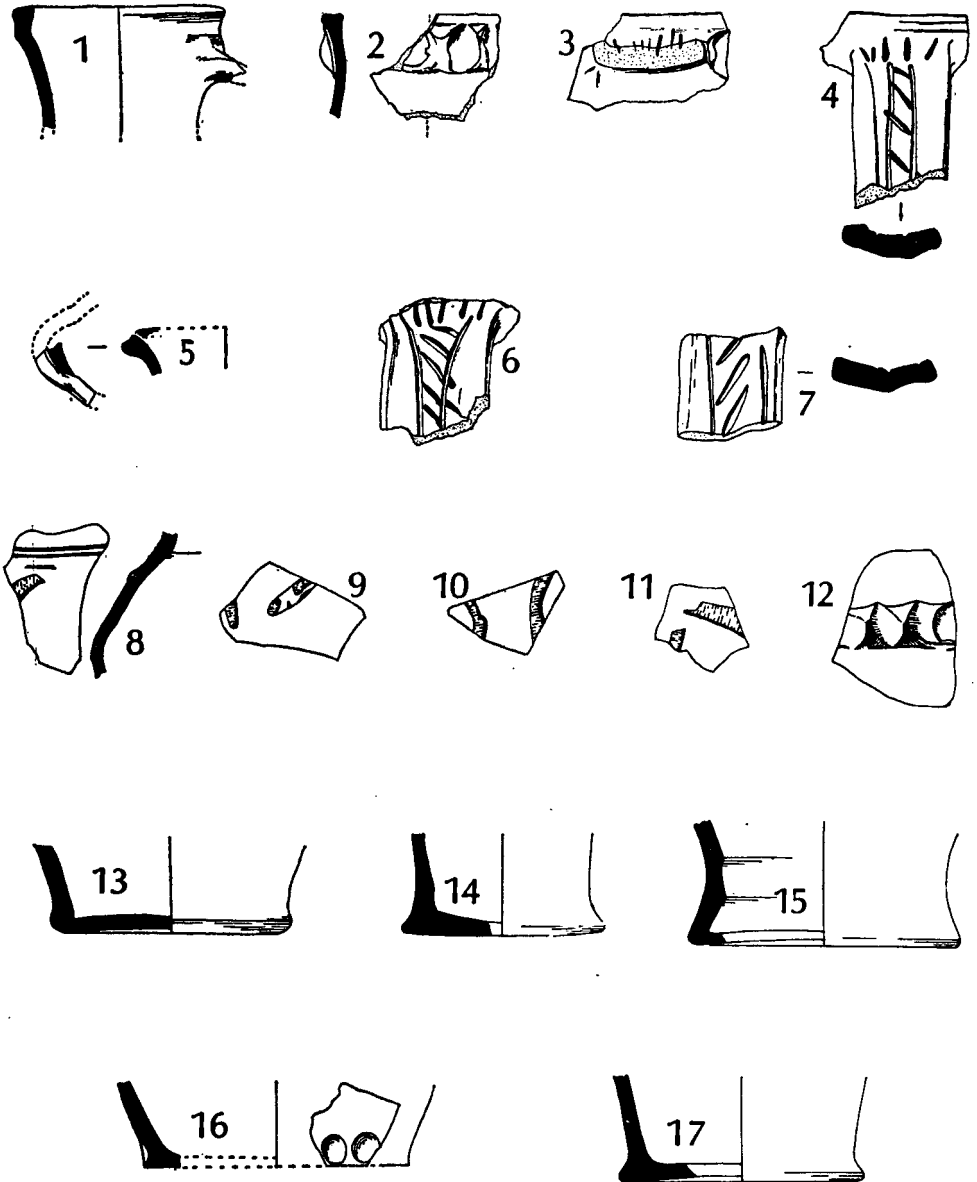
The Pottery

I Wasters

(a) *Jugs* (FIG. 2)

The fabric (A) is very hard fired almost to a stoneware having a sandy but not rough feel. It was probably intended to be oxidised. In colour it is off-white to pinkish red, usually fired uniformly right through except where rather thicker as in the handles and bases, or where reduction has taken place, probably by accident.

The inclusions consist of very fine black fragments or occasionally



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Fig. 2. Jug Fragments

white or red flecks, fragments of hard stone or even slag (see Appendix).

Many of the sherds show the typical over-fired powdery glazes, glazing of fractures, or coating of fired clay over the glaze. On others the glaze is bubbly while some are obvious wasters because of their misshapen appearance.

The bases are slightly splayed with a shallow but definite kick in the centre. No frilled bases were found.

The jugs seem to have a characteristic simple rim with a pinched-out spout.

- 1 Rim with top of a plain applied strap handle. Good green interior glaze, burnt-off exterior.
- 2 Rim with applied thumb-impressed cordon. Exterior and interior covered with powdery glaze.
- 3 Rim with the remains of an applied strap handle with vertical slashing on top and part of a thumb impression. Internal and external glaze damaged in firing.
This handle decoration is not a typical Ham Green arrangement. (Barton 1963, fig. 4, p. 102.)
- 4 Rim with applied strap handle decorated with two axial incisions with diagonal slashing between them and vertical slashing on top. Fabric is softer fired and has internal and external glaze fouled by kiln debris. To the right of the handle the fabric has blown due to a concentration of charcoal inclusions. This decoration occurs on several fragments of handle. One has already been published (Barton (1964), p. 192, fig. 65). Another is from the Pithay material (Bristol City Museum Accession No. 8203).
- 5 Part of a pinched spout. Slight exterior pale green glaze. Combined on another fragment with thumb-pressed cordon as (2).
- 6 Fragment of applied strap handle similar to (4) covered with a dull green glaze.
- 7 Fragment of a strap handle with decoration as (4) but with the diagonal slashing from right to left. Undecorated strap handles also occur plus a thin piece of rod support possibly for a tubular spout.
- 8-11 Four sherds with iron-rich slip brushed or trailed on, mottled green-brown glaze.
- 12 Sherd with applied thumb-pinched waist cordon. Partly powdered external glaze.
- 13 Base deformed in firing with powdery external glaze.
- 14 Base with very dark external glaze, reduced to a very hard fabric.
- 15 Base with external green glaze which has begun to powder in places.
- 16 Thumb-impressed base with partly burnt-off external and internal glaze.
- 17 Base with dull green glaze encrusted with kiln effusion, on very hard-fired reduced fabric.

(b) *Jars* (FIG. 3)

These are in fabric A and have a strongly everted rim with a pointed edge, which rolls back slightly into a bulge just below, and no neck. The internal glaze runs over the rim.

- 1 Rim of a jar with leaf green overall glaze. The glaze has run over the edge of the sherd.
- 2 Internally glazed base.
- 3 Internally glazed base.

(c) *Cooking pots* (FIG. 3)

The fabric (B) of these vessels is very hard but with calcareous inclusions and a rim shape which is identical to the jar form. The glaze is restricted to a very thin spread over the top and inside of the rim.

- 4 Rim with thin glaze on top. Sherd has been overfired and some of the lime inclusions have burnt out.
- 5 Angle of a large cooking pot decorated with a band of three parallel incisions. This may be the basal angle but is more likely to be part of the body of the vessel.

(d) *Roof tiles*

A few glazed sherds were found. Some are wasters but all are too fragmentary to be illustrated.

II *Kiln furniture* (FIG. 3)

- 6 Fragment of roof tile with the impression of a pot rim and covered with glaze. This, and a number of flat pieces of pennant sandstone, had been used to separate pots in the kiln.

III *Other pottery* (FIG. 3)

- 7 Frilled base of a pitcher with external mottled green glaze. Pinkish-buff fabric with some large stone inclusions (layer 6). Resembles Ham Green ware in fabric, thumb-impressed edge and sagging base.

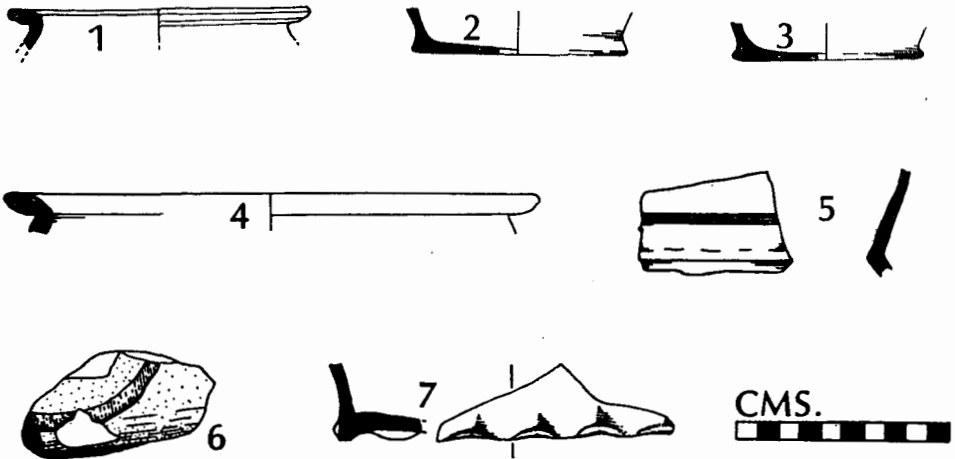


Fig. 3. Other Pottery and Stone

The date and analogies for "St Peter's" ware

It is clear that Ham Green ware (Barton 1963) is quite different from the Bristol pottery. The latter lacks the bridge spout, frilled base, applied strips in the body colour or any abundance of decoration. The main similarity is that of the horizontal applied thumb-impressed strip.

The fabric is also quite different even by examination with the naked eye (see Appendix). The Bristol fabric is orangey or pink and exhibits a better finish internally.

The glazes are also quite different, the Ham Green coating being a lighter green. The Bristol ware is very hard-fired and this, together with the splayed base and slight kick, suggests at earliest a fourteenth century date. Recent excavations in Bristol have shown that at some time around 1300 the Ham Green ware, as at present known, ceases to occur stratigraphically and wares similar to those from Bristol appear to take their place. The typical Ham Green cooking pot (Barton, 1963 p. 112, fig. 7) also goes out to be replaced by the type known from St Peter's with no neck and highly everted rim with its typical bulge below.

The cooking pot is related to what has been called Selsley Common pottery (O'Neil, 1952, fig. 9—typologically later with longer neck, Dunning, 1949, Fig. 4, 16, Fig. 2, 1). It is, however, quite clear that there are several "shelly" fabrics very similar to this ware being made throughout Gloucestershire and at least as far south as Bristol, and with similar combed decoration. However such a "neckless" vessel is unknown in published groups.

Further work will provide more evidence for the context of St Peter's ware. Suffice it to say at present that it is later than Ham Green ware. Other pottery which is unlike the normal Ham Green ware came from Burton's Almshouses where the small jars are frequently represented (Marochan, 1959, Fig. 2 A4 B5 fig. 3 B13). It also is thought to be later.

The aisle of St Peter's should provide an architectural date but all the windows save one can be shown to be secondary. The one remaining is probably of 14th century date and in the north wall immediately south of the rood stair (Boucher 1909 Plan. p. 260). It is hoped to publish an account of the architectural development at a later date.

The evidence suggests a 14th century date for a distinctive Bristol ware. Since these finds were made further discoveries of very similar material have occurred in an excavation on the north side of Peter Street and also rescue excavations in Redcliff Hill.

The latter included finds from an obvious waster pit including burnt clay lumps. It is possible that there are kilns in Redcliffe as well as in the St. Peter's area, some of which may be earlier.

The finds have been deposited at the City Museum, Bristol (Accession No. 156/1970).

APPENDIX

Petrological analysis of pottery using simple optical and chemical techniques

Five specimens were submitted for analysis, three from the area of St. Peter's Church, Bristol (1, 2, 3) and two from the Ham Green Kiln near Pill, Somerset (4, 5).

Method

Fresh surfaces were first viewed under a stereoscopic microscope (Nikon SMZ 2) to give a rough appraisal of the main constituents of the fabric. Selected surfaces were then treated with hydrochloric acid (5/10% solution) and reactions noted, i.e. change in colour, formation of carbon dioxide bubbles. Pieces of each sample were then crushed and the resultant powder viewed under the microscope.

Results

1. (Fabric A). Red in colour, very porous texture.
Large number of well-rounded, mainly milky quartz grains but a few clear ones.
Small quantity of an angular black material (Slag?)
No chemical reaction or colour change with HCl.
2. (Fabric B). Red in colour, a fairly porous texture. Fabric contains no quartz.
Main constituents were rounded fragments of lime and angular fragments of a grey limestone (probably Carboniferous). These fragments and the clay matrix showed a vigorous reaction with HCl.
3. Similar to fabric of Fig. 3, 7. Light grey with poor porosity.
Large number of well rounded clear to milky quartz grains.
Small quantity of a black angular material. This after crushing was found to be a slag.
Also present were a number of angular fragments of a grey siliceous material (chert?).
Strong reaction with HCl leading to the formation of CO₂ and the appearance of red spots in cavities that had formed in the fabric. This colouration may be due to the presence of an iron compound.
4. Dark grey in colour with poor porosity.
Quartz grains mainly rounded though some are angular. Majority clear.
Small quantity of a black slag.
Reaction with HCl very slow.
Numerous air cavities lined with a white deposit that stains red with HCl.
5. Light grey in colour with poor porosity.
Well rounded clear to milky quartz grains.
Large fragments of a siliceous material (chert).
Pieces of black slag numerous.
Reaction with HCl was again slow but the formation of red spots due to possible presence of iron was observed.

MEDIEVAL KILN WASTERS

Conclusion

From the above results it may be seen that specimens 1 & 2 can be separated from the others; 2 due to its lack of quartz and 1 because of the negative reaction with HCl.

The red colouration in these two may be due to the use of Trias marls and sands found in and around the centre of Bristol.

The remaining three specimens show certain similarities, e.g. formation of red spots with HCl and the presence of a black slag. There are minor variations in content, but they are not enough to allow a positive separation to be made.

Sherd 3 may be of a different source from both Ham Green and "St. Peter's". It is certainly not a typical product of the latter.

Acknowledgements

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BIBLIOGRAPHY

- BARTON, K. J. (1963). A Medieval pottery kiln at Ham Green, Bristol. *Trans. BGAS* LXXXII pp. 95-126.
- BARTON, K. J. (1964). The Excavation of a Medieval Bastion at St. Nicholas's Almshouses, King Street, Bristol. *Medieval Archaeology* 8, pp. 184-212.
- BOUCHER, Charles E. (1909). St. Peter's Church, Bristol. *Trans. BGAS* xxxii pp. 260-300.
- DUNNING, G. C. (1949). Report on the Medieval Pottery from Selsley Common, Stroud. *Trans. BGAS* LXVIII pp. 30-44.
- MAROCHAN, K. and REED, K. W. (1959). Burton's Almshouses, Long Row, Bristol. *Trans. BGAS* LXXVIII pp. 119-128.
- O'NEIL, HELEN, E. (1952). Whittington Court Roman Villa. *Trans. BGAS* LXXI pp. 18-37.

References in Trans. BGAS to sites included in Plan Fig. 1

1901. xxiv. pp. 274-282. (J. E. Pritchard); 1926. XLVIII. pl. iv. p. 274. (J. E. Pritchard); 1951. LXX. pp. 5-50. (K. Marshall); 1960. LXXIX. pp. 221-259. (P. A. Rahtz); St Mary-le-Port (P. A. Rahtz forthcoming) and Bristol Castle (M. W. Ponsford forthcoming), for City Museum, Bristol and M.P.B.W.