Late Saxon Pottery from Berkeley Castle, Berkeley, Gloucester

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Excavations at Berkeley Castle, Berkeley, Gloucester, undertaken by Stuart Prior for the University of Bristol revealed evidence for late Saxon activity. A small quantity of pottery was associated with this activity and in an assessment it was recommended that samples were examined in thin section and using chemical analysis to establish the source of the vessels, none of which appeared to have been made locally in south Gloucestershire. The results of this geological and chemical analysis together with a typological study are consistent with the vessels coming mainly from a source in Wiltshire with a small number coming from Gloucester. They indicate that in the late 10th to early 11th century there was no local pottery industry which could supply south Gloucestershire and therefore that unless a site was of high status, as the monastery of Berkeley undoubtedly would have been, it occupants probably did not have access to pottery.

The Late Saxon Pottery

A total of 35 sherds of late Saxon pottery were recovered from the 2005 and 2006 seasons at Berkeley Castle. They represent no more than 23 vessels, and weigh in total 232gm (Table 1).

Table 1

Cname	NoSH	NoV	Weight
Grand Total	35	23	232

The pottery was all examined at x20 magnification using a stereomicroscope and could be divided into three ware groups, here termed Fabrics A and B (Table 2).

Table 2

TSNO	DN	Context	Ware	Description
V4793	DN3	121	FAB A	HM EVERTED RIM;THICKENED NECK
V4794	DN2	121	FAB A	HM EVERTED RIM;THICKENED NECK
V4795	DN1	121	FAB A	HM WITH WF LID-SEATED RIM
V4796	DN4	121	FAB A	HM EVERTED RIM;THICKENED NECK
V4797	DN5	121	FAB A	LID-SEATED RIM
V4798	DN6	305	FAB B	EVERTED FLAT TOPPED RIM;NOT THICKENED AT NECK

Fabric A

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http://www.postex.demon.co.uk/index.html
A copy of this report is archived online at
http://www.avac.uklinux.net/potcat/pdfs/avac2008042.pdf

In the hand, this fabric is vesicular with sparse angular flint, rounded, polished quartz grains and probable chert inclusions up to 1.0mm across. The core is dark brown to black and the surfaces dark brown.

In thin section, the following inclusion types were noted:

- Chert. Sparse well-rounded grains up to 1.5mm across. Probably derived from Triassic deposits and ultimately of Carboniferous origin.
- Echinoid spine. A single rounded fragment of leached limestone 0.5mm across was identifiable as an echinoid spine because of replacement of the structure by brown clay/iron.
- Flint. Sparse angular and rounded fragments up to 1.0mm across. The rounded fragments include brown-stained grains and the angular fragments are mainly unstained with a fresh appearance.
- Oolitic limestone. A single fragment 1.0mm across was identifiable through survival of the limestone.
- Organics. Sparse fragments up to 0.5mm long..
- Quartz. Moderate rounded grains up to 0.5mm across, some well-rounded and probably of Triassic origin. Sparse angular fragments of overgrown quartz up to 1.0mm across. These are probably of Carboniferous age.
- Shell. Sparse thin-walled shell fragments up to 1.0mm long and c.0.1mm thick. Probably recent land or freshwater snail rather than fossil.
- Voids. Abundant rounded voids up to 1.5mm across. Most are now filled or partially filled with unfired clay and quartz, contamination from the soil matrix.
- Gypsum. Sparse tabular fragments up to 1.0mm long and c.0.3mm wide.

The groundmass consists of optically anisotropic baked clay minerals and moderate subangular opaque grains up to 0.1mm across.

Fabric B

In the hand, this fabric is also vesicular with abundant voids and moderate rounded quartz up to 1.0mm across. The core and margins are black to dark brown.

In thin section, the following inclusion types were noted:

- Echinoid shell. A single rounded fragment of leached limestone 0.5mm across could be identified as an echinoid shell fragment because of replacement of the shell structure by clay/iron.
- Flint. Moderate rounded and angular fragments as in Fabric A.

- Organics. Sparse fragments up to 1.0mm long.
- Voids. Abundant rounded voids, some surrounded by a darkened halo, up to 1.5mm across. The voids are partially filled with unfired clay minerals and quartz and those closest to the surface are filled with brown phosphate.

The groundmass consists of optically anisotropic baked clay minerals, abundant angular quartz grains up to 0.1mm across and sparse muscovite laths up to 0.1mm long.

Chemical analysis

Offcuts from the six samples were taken and the surfaces mechanically removed. The resulting lump was crushed to a fine powder and analysed using inductively-coupled plasma spectroscopy under the supervision of Dr J N Walsh, Royal Holloway College, London. The frequency of a series of major elements was measured and expressed as percent oxides (App 1). The frequency of a series of minor and trace elements was measured and expressed as parts per million (App 2). Silica was estimated by subtracting the total measured oxides from 100%. The data were normalised to aluminium and the data then compared with that from a series of medieval wares of known or supposed origins.

The comparative samples consist of samples of three wares from Dursley: Minety ware, produced in the Minety/Ashton Keynes area of north Wiltshire; Gloucester TF41B, produced at Haresfield; and Bath Fabric A, presumed to have been made at a site in central western Wiltshire (such as Potterne or Crockerton, both of which have place-name evidence for medieval pottery production) and samples of chert-tempered ware from West Lears Farm, a site on the Somerset/Dorset border (Anthony 2007). This latter ware shares some features with Fabric A – a fine-textured groundmass and polished quartz inclusions but contains no flint or calcareous inclusions and instead contains Lower Cretaceous chert fragments absent from Fabrics A and B.

Factor analysis of the Berkeley data and comparanda was carried out using the WinSTAT for excel add-in (2002). This analysis found four factors in the data and a plot of the F1 and F2 scores (Fig 1). The Berkeley Fabric A samples all have higher F2 scores than the comparanda and the Fabric B sample has a slightly lower F2 score and a slightly higher F1 score than the Fabric A samples, but is still clearly separated from the comparative samples. Examination of the data indicates that high F2 scores are due to high values for iron, barium, cobalt, zinc and manganese. In most cases, the Fabric A samples have higher values than the Fabric B sample with the comparanda having lower values still. These distinguishing elements include both major and minor elements and are unlikely to be due to post-burial contamination, although the thin section analysis makes it clear that such contamination took place and may have had an effect on some of the minor and trace elements, if the soil matrix was particularly high in these. The chert-tempered ware (SWCHT) has the most similar composition to Fabrics A and B.

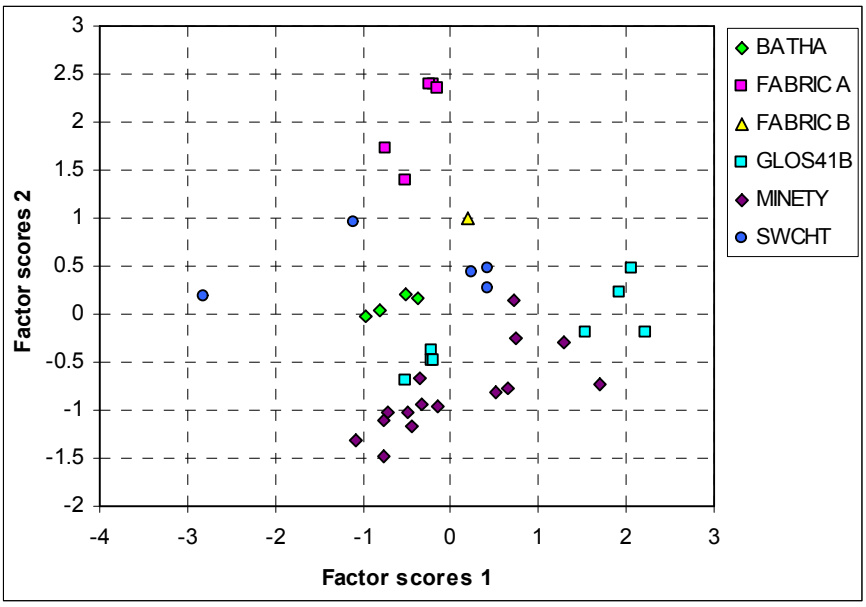

Figure 1

A plot of the F3 against F4 scores (Fig 2) separates the Bath A samples from the remainder, through high F4 scores whilst both the Bath A and Gloucester TF41B samples have lower F3 scores than the remainder, which includes the Berkeley and Minety samples. The Fabric B sample has a higher F4 score than the Minety and Fabric A samples. The higher F3 scores are probably due in the main to higher chromium and scandium values whilst the higher F4 scores in the Fabric B samples is probably due mainly to the titanium content. The F3 and F4 scores distinguish the chert-tempered samples from the remainder through their lower F3 scores.

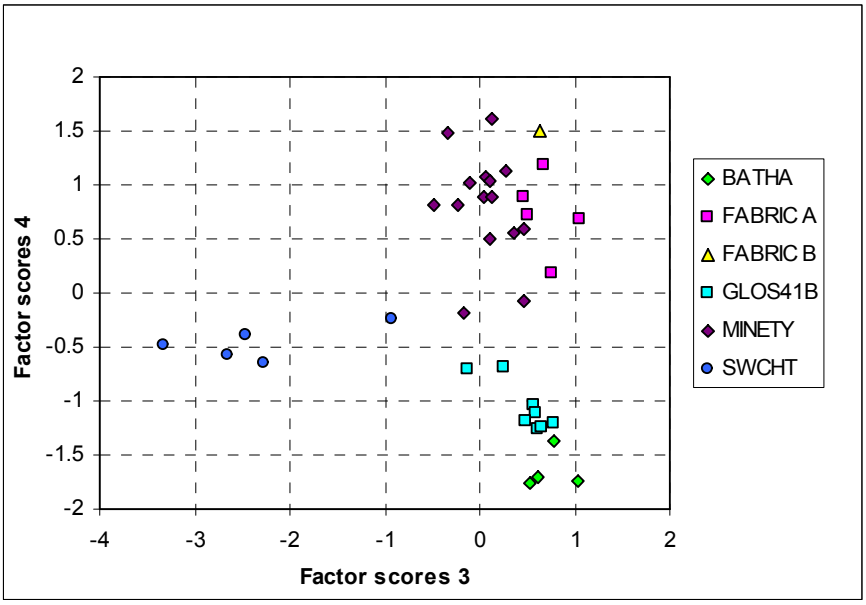

Figure 2

Discussion

The ICPS and thin section analyses both indicate that the samples are of two distinct fabric groups. Both groups contain fresh and rounded flint, neither of which are found in south Gloucestershire gravels and the general similarity of the inclusions in the two groups, together with their similarities in chemical composition, both suggest that both groups come from a similar area.

The fine-textured nature of the groundmass in Fabric A indicates the use of a Jurassic clay, such as occur both in the lower Severn valley and to the west of the Cotswold scarp. The few limestone inclusions which survive through the replacement of some of the structure by clay/iron are interesting. Such iron-stained limestone sands occur in north Wiltshire, for example at Minety, both those sands neither contain the quartzose inclusions seen in Fabrics A and B nor the flint. A source further east is likely and this is in agreement with the general lack of similarity in chemical composition of the Berkeley samples and the Minety and Gloucester TF41B comparanda. Bath Fabric A does contain quartz and flint of similar character to that in Fabrics A and B but the groundmass is quite different from Fabric A, having abundant angular quartz and muscovite silt inclusions whilst the groundmass of Fabric B is more similar. However, the factor analysis clearly shows that the chemical composition of the Berkeley and Bath Fabric A groups is different.

The bag shaped body of the Fabric A and B samples and the tall everted rim and thickened neck found on most of the examples are features of mid- and late-Saxon pottery from Hampshire and Wiltshire and the mixture of fresh angular and brown-stained, rounded flint found in both fabrics is consistent with a south-eastern Wiltshire or Hampshire source. The Jurassic limestone indicated by the presence of stained echinoid shell and spine and the

oolitic limestone fragment, however, exclude a Hampshire source and point to southern Wiltshire as the source area.

The lid seating seen on one of the examples, however, is normally a feature of wheelthrown late Saxon pottery from the Danelaw and has not been seen, by this author, on late Saxon ceramics either in Wiltshire or Hampshire. It is known, however, at Gloucester (Heighway et al. 1979) where a pit filled with pottery wasters was excavated at 1 Westgate Street in 1979. Examples of this lid-seated form in a fabric which suggests a Gloucester origin have been found on various sites in Gloucester, at Hereford in pre-conquest 11th-century levels and at various sites in the Vale of Gloucester. However, the thin section analysis makes it clear that the Berkeley fabrics were not made at Gloucester.

In a final attempt to match the Berkeley fabrics, the data were compared with all the Wiltshire, Dorset and Hampshire ICPS data available to the author. This analysis indicated that the closest parallels for the Berkeley samples from those three counties are indeed the Thorncombe chert-tempered wares, together with stray samples of other types: Iron Age flint-tempered samples from Andover, Basingstoke, Winchester and Southampton; a late Saxon ware from Thorncombe with leached calcareous inclusions; and a sample of South Hampshire redware from Winchester. These samples were re-analysed excluding the non-matching types (Fig 3). The Iron Age flint-tempered samples and the South Hampshire redware sample come from projects where a large number of samples were analysed which do not match the Berkeley samples and therefore this seems to confirm that Hampshire is not the source.

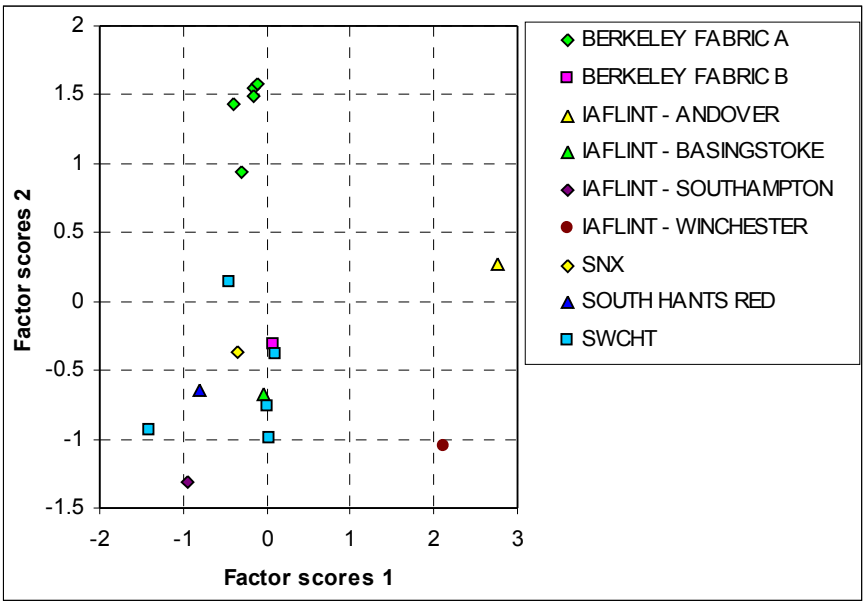

Figure 3

The conclusion, therefore, is that the similarity in typology between these wares and those produced at Gloucester Westgate Street is due to similarity in date and cultural affinities not

source and that all of the Berkeley late Saxon wares were obtained from a south to the east, in Wiltshire or perhaps Dorset.

This conclusion is at first glance illogical, since clay suitable to make these pots is obviously widely available in south Gloucestershire and much of the pottery of 12th/13th-century date found at Dursley appears to have been produced in south Gloucestershire. However, the reliance of sites in Wales and the west of England on suppliers further east is actually a well-documented phenomenon, both in the late Saxon period and after the Norman conquest, finally ceasing in the early 13th century, by which time the whole of England and Wales was served by a network of production centres, with few areas being more than 15 to 20 miles from a pottery (Vince 1984).

For the late Saxon period, the clearest example comes from Hereford, where no pottery at all was used in the first phases of occupation, probably dating to the late 9th to mid 10th centuries (Vince 1985). In the late 10th century, however, pottery was used but was all imported from Stafford, 80 miles to the NNE. By the mid 11th century this was had been joined by Gloucester products and Stamford ware. It was not until the early 13th century that local production began and a further half century before virtually all of the pottery used in the city was made within the surrounding county. A similar pattern is probably true at Chester and Shrewsbury. Meanwhile, in Somerset the earliest phases at Cheddar Palace were also aceramic (Rahtz 1979) and were followed by a phase in which Cheddar E was used. Thin section analysis has shown that this ware was produced somewhere in Wiltshire (Vince 1984) whilst further south, at Exeter, the earliest pottery appears to be immediately pre-conquest and consists of a short-lived kiln in Exeter itself and chert-tempered wares which were probably produced in south Somerset or west Dorset (Allan 1984).

In all of these areas, pottery has, so far, been found only on a handful of sites which have some claim to be higher in status than the general rural settlement and this is the likely context for the Berkeley finds. It is likely, therefore, that rural settlements in south Gloucestershire were aceramic at this period until the mid 11th century, which is the date of the earliest pottery found in Bristol (Ponsford 1974; Watts and Rahtz 1985) and Dursley (Jackson in prep).

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