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Ancient Monuments Laboratory Report 160/88

A NOTE ON THE PETROLOGY OF THE POTTERY FROM THE SAXON CEMETERY AT GREAT CHESTERFORD, ESSEX.

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Summary

Nearly all of the Saxon pottery from Great Chesterford held at Birkbeck College and the British Museum was examined for an identification of the various fabrics involved. On the basis of the range of non-plastic inclusions present in selected thin-sectioning, a number of fabric divisions were made: (1) granitic, (2) colitic (3) quartz/flint-chert, (4) quartz/shelly limestone and (5) sandstone/metaquartzite. Although a variety of inclusions appear in this group of pottery, the probability is that most, if not all, was produced fairly locally, the majority of the raw materials used deriving from the local drift deposits.

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## A NOTE ON THE PETROLOGY OF THE POTTERY FROM THE SAXON CEMETERY AT

## GREAF CHESTERFIELD, ESSEX

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# Introduction

A small programme of thin section analysis was conducted on almost all of the pottery from the Saxon cemetery at Great Chesterford, Essex, held at Birkbeck College, London, together with a number of the pots from the collection housed at the British Museum. The main objectives of the analysis were twofold: (1) to characterize in detail the fabrics represented in this group of pottery, and (2) if possible to suggest where the raw materials used in the manufacture of these pots might have been obtained. It was not possible to sample all of the Great Chesterford pots held by the British Museum as many are complete or nearly complete vessels. In some cases, therefore, a handlens (x 10) was used to try to macroscopically identify the fabrics of these vessels, though this proved difficult where the surface had been burnished, masking the inclusions in the paste.

#### Petrology

On the basis of the range and texture of the non-plastic inclusions present in the Great Chesterford pottery sampled and studied under the petrological microscope, a number of broad fabric divisions have been made.

(1) <u>?Granite</u>
Birkbeck College:
75/255
Crem. 30/430
Crem. 23/442
Unass. 528
British Museum:
Crem. 7/246 7-2 476

? Grave 93/312 7-2 306

The most prominent inclusions in this group are large discrete grains of potash and plagioclase felspar, together with some fragments of granite or grano-diorite. Also present are quartz grains, some of them polycrystalline, flecks of biotite mica and the odd piece of sandstone, metaquartzite and limestone.

(2) <u>Oolitic</u>
Birkbeck College:
142/462
136/443
Crem. 27/451
British Museum:
Unass. 142 7-2 521

Scattered throughout the fabric are fragments of limestone and fossil shell, amongst which distinct ooliths can be made out, where it is possible to see the concentric structure within the limestone body. Also present are grains of quartz and the odd piece of sandstone and metaquartzite.

(3) Quartz/Flint-Chert

Birkbeck College:

6/57

Crem. 16/337

Unass, 281

All four samples contain frequent grains of quartz up to 0.80mm across, although the majority of grains are of a lower size-range than this, together with a sparse scatter of angular pieces of flint-chert, metaquartzite, flecks of mica, iron ore and a few small grains of felspar.

(4) Quartz/Shelly Limestone

Birkbeck College:

80/265

Crem. 32/494

Crem. 24/447

Crem. 10/280

Crem. 28/452

A scatter of quartz grains up to 1.30mm across in size and some small fragments of shelly limestone, together with flecks of mica and iron ore, all set in a fairly clean clay matrix.

# (5)

Birkbeck College:

72 Fill

13/15

2A(3)

43/166

113/376

69/235

10/20

Crem. 25/448

Crem. 26/450

Crem. 13/301

Crem. 20/362

Crem. 4/180

Crem. 31/481

Crem. 9/278

Crem. 22/430

Crem. 2/55

Crem. 14/302

Crem. 13/359

Crem. 29/470

Crem. 25/44S

- Crem. 9/278
- Crem. 33/495
- Crem. 18/359
- Crem. 8/249
- Crem. 2/56
- Unass. 446
- Unass. 251
- Unass, 505
- Unass. 279
- Unass. 252
- Unass. 529
- Unass. 161
- Unass. 162
- British Museum:

Grave 93/298 7-2 295

- ? Grave **33/127** 7-2 161
- ? Grave 145/472 7-2 522
- Grave 107/331 7-2 329
- Grave 121/332 7-2 370
- Grave 158/509 7-2 442
- Grave 91/291 7-2 301
- Grave 140/460 7-2 550-1
- Horse Grave 1/76 7-2 511
- Crem. 19/360 7-2 484
- Crem. 15/320 7-2 480
- Crem. 1/49 7-2 466
- Crem. 3/140 7-2 467
- ? Crem. 530/35

? Crem. 161/514 Crem. 6/241 7-2 471 Crem. 17/333 7-2 481 Crem. 11/287 7-2 477 Crem. 12/283 7-2 478 204 L2 7-2 515 Unass. 522 7-2 520 Unass. 299 7-2 518 Unass. 299 7-2 518 Unass. 254 7-2 519 Unass. 253 7-2 516 Unass. 135 7-2 513

Thin sectioning shows inclusions of quartz-sandstone and metaquartzite, in all probablility deriving from the same rock, with discrete grains of quartz and the odd piece of flint/chert, felspar and limestone. Crem. 3/140 7-2 467 also contains elongate voids suggesting that organic material was once in the fabric. There is some variation of texture within this large group: Crem. 13/301, 2A(3) and 43/166 for example appearing quite coarse, while Crem. 4/180 and 118/376 are fairly fine in texture by comparison.

## Unassigned

Grave 143/434 7-2 530 Grave 123/392 7-2 382 Grave 128/410 7-2 409 Grave 37/120 7-2 183

The above are all complete or almost complete vessels, their smoothed surfaces making it very difficult to determine which fabric group they belong to.

#### Comments

The cemetery at Great Chesterford is situated on Middle Chalk, closeby to Chalky Boulder Clay deposits and Valley Gravels (Geological Survey 1" Map of England Sheet no. 205). At first sight, fabric groups 1 and 2, containing inclusions of granite and ooliths respectively, would appear to represent imported pottery brought to the site from some distance away. In respect of fabric 1, the nearest appropriate igneous formations to Great Chesterford lie in the Charnwood Forest area (including the Mountsorrel grano-diorite) to the south-west of Leicester and the post-Tremadoc 'diorites' around Nuneaton. While the ooliths in fabric 2 suggest an origin on the Jurassic ridge, situated some distance to the east of Great Chesterford. However, far-travelled granite erratics and ooliths have both been noted in the local Chalky Boulder Clay deposits and Valley Gravels nearby to the site (White and Edmunds, 1932). It is possible, therefore, that these particular inclusions present in fabric groups 1 and 2 may merely indicate the use of nearby drift deposits by the Saxon potter, obtaining local raw materials for the production of pottery.

It is though, interesting to note that similar granitic inclusions have also been found in early - middle Saxon pottery from a growing number of sites in the east of the country (Walker, 1978; Williams, 1979; plus some unpublished material seen by the writer). Perhaps slightly more than might satisfactorily be accounted for by accidentally occuring in the drift clays selected for **potting.** Furthermore, if we also discount a single production centre for this granitic pottery (whether in the Charnwood Forest area, or indeed as far away as the north German plain), and there seems to be no clear evidence of close similarity in vessel form or decoration to support this, we appear to be left with the possibility of the deliberate searching out of granite erratics in the drift for use as temper. The deliberate choice and preparation

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of particular materials for pottery making is nothing new (Rye, 1976; Peacock, 1970; Williams, 1982), and is suggested here in only a tentative way until further work has been done on this type of pottery.

The flint/chert inclusions present in fabric group 3 are typical of pottery from sites situated on the Chalk and probably indicates local production in this case. By far and away the largest group of pottery, fabric 5, is characterized by inclusions of sandstone and metaquartzite, both of which are commonly found in the drift deposits which occupy large areas of the country around Great Chesterford, and almost certainly point again to some form of localized production, though not necessarily in one place (White and Edmunds, 1932). The same may also be true of the sherds making up fabric 4, for shelly limestone can also be found in the local drift deposits (ibid.).

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