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PETROLOGICAL EXAMINATION OF MEDIAEVAL POTTERY FROM THE 1981 EXCAVATIONS AT GEORGE STREET, AYLESBURY

D.F. Williams, Ph.D., F.S.A.

(DOE Ceramic Petrology Project)

Department of Archaeology, University of Southampton

INTRODUCTION

Twenty prepared thin sections taken from eleventh to thirteenth century material from excavations at George Street, Aylesbury were submitted for examination under the petrological microscope. The main objectives of the analysis were : (1) to characterize the fabrics involved and compare them with each other, (2) to further compare them with material from local kiln sites, and (3) if possible to suggest likely source areas. Prepared thin sections were also submitted of comparative material from the kilns at Brill and Denham, and possible kiln sites at Bolter End, High Wycombe, and Fulmer.

PETROLOGICAL RESULTS

A) Comparative material:

1. Bolter End, High Wycombe (possible kiln site) TS 1

Frequent ill-assorted subangular quartz grains, ranging in size from 0.02mm to 1.5mm, set in a matrix of reddish-brown anisotropic clay. Also present are flecks of mica, with some quartzite, felspar, iron ore/ironstone and one or two pieces of flint.

2. Brill kiln, 1978 excavations TS 2

A scatter of large pieces of flint, up to 3.4mm across, and subangular grains of quartz, average size 0.20-0.60mm, set in a clean close-textured matrix of golden yellow anisotropic clay. Also present are some grains of quartzite, felspar and iron ore.

3. Denham kiln TS 3

A groundmass of small quartz grains, under 0.05mm in size, with a scatter of larger grains up to 1.5mm across, together with some flint, quartzite, flecks of mica and ?iron ore, set in a matrix of dark brown isotropic clay.

4. Fulmer (possible kiln site)

A) Fabric 1 TS 4

Frequent inclusions of flint, up to 2.2mm across, and subangular grains of quartz, up to 0.60mm across, together with some quartzite, felspar, flecks of mica and a little iron ore and ironstone, set in a light brown to golden-yellow anisotropic clay matrix.

B) Fabric 2 TS 5

Similar to Fabric 1 but with fewer pieces of flint.

B) Samples from George Street, Aylesbury:

Quartz/Flint fabrics:

5) TS 13,21,23,24

Frequent subangular quartz grains, average size 0.05-0.50mm, and angular pieces of flint up to 2mm across, set in a light reddish-brown to golden yellow clay matrix. Also present are some grains of quartzite, iron ore and ironstone, felspar and a few flecks of mica.

Of the comparative material submitted (and described above), these sherds more closely resemble Fulmer Fabric 1 than the other samples.

6) TS 25,7

Similar to no. 5 but containing more smaller-sized quartz grains.

7) TS 14

Abundant closely-packed equal-sized subangular quartz grains, averaging 0.05-0.30mm across, with a scatter of medium-sized angular pieces of flint, average size 0.20-0.60mm, but with a few slightly larger pieces, a little quartzite and flecks of mica, set in a dark brown anisotropic clay matrix.

Quartz fabrics:

8) TS 8,9

Fairly fine-textured fabric containing a groundmass of small quartz grains, mostly under 0.10mm, and a scatter of slightly larger grains, with flecks of mica, some iron ore/ironstone and one or two small grains of felspar, set in a light brownish clay matrix.

9) TS 17

A groundmass of small quartz grains, mostly under 0.10mm, and frequent larger subangular quartz grains, average size 0.30-0.80mm, with plentiful flecks of mica, a little quartzite and some argillaceous material, set in a dark brown anisotropic clay matrix.

10) TS 10

Frequent subangular quartz grains up to 1mm across with a sparse scatter of angular pieces of flint, quartzite and flecks of mica,

set in a dark brown anisotropic clay matrix.

11) TS 16

A groundmass of frequent small grains of subangular quartz, mostly under 0.15mm in size, with a scatter of slightly larger grains and some small pieces of flint, average size 0.20-0.40mm, with quartzite, ironstone and flecks of mica, set in a dark brown anisotropic clay matrix.

12) TS 6,22

Frequent ill-assorted subangular quartz grains ranging up to 2.20mm in size, with some quartzite, flecks of mica, ironstone and the odd piece of flint, set in a dark to light brown clay matrix.

Glauconite

13) TS 20

Frequent reddish-brown to black grains of limonite (altered glauconite) and abundant equal-sized subangular grains of quartz, average size 0.05-0.15mm, with flecks of mica, some quartzite, a few fragments of shell and iron ore, set in a dark brown anisotropic clay matrix.

Shell

14) TS 11,12

Abundant fragments of shell, and it is possible to see some recrystalization of calcite, suggesting that it is fossiliferous. TS 11 has an isotropic clay matrix, while in TS 12 it is anisotropic.

Limestone

15) TS 15,19

Frequent rounded lumps of limestone and a scatter of subangular grains of quartz up to 0.60mm across, with flecks of mica, a little flint, quartzite and iron ore/ironstone. TS 19 has an isotropic matrix of dark grey clay, while TS 15 has an anisotropic matrix of light reddish-brown clay.

Quartz/Shell/Limestone

16) TS 18

A groundmass of small quartz grains under 0.10mm in size, with a scatter of slightly larger grains, flecks of mica and a little shell, limestone, flint, quartzite, felspar and iron ore, set in a reddish-brown anisotropic clay martix.

COMMENTS

The majority of the samples from George Street, Aylesbury, can be divided into two basic fabrics: one which predominantly contains quartz and another which contains both quartz and an appreciable amount of flint. These samples can perhaps be further subdivided on textural grounds, but it is not clear at this stage whether this may indicate different sources of production or instead merely reflect the variability of fabric within a single production centre - possibly over a period of time. Thus for example, although most of the samples were thought to have come from the Brill/Boarstal kilns (see attached list), the single sample submitted from Brill could not be easily matched to any of the George Street material. None of the latter having the distinctive close-textured matrix of the Brill

sample. However, it can be dangerous to characterize a kiln or production centre with just one sample, especially if it remained in production over some period of time, as did the Mediaeval kilns at Brill. More samples need to be analyzed to test the variability of inclusions and texture of different types of vessels over a chronological span.

It is not possible, therefore, to be confident in allocating the George Street sandy/flinty sherds to any of the four kilns or possible kiln sites for which comparative thin sections were received. Although there are some textural differences between the latter they all contain quartz and flint as their major inclusion types, each site being within easy reach of sandy, flinty clays (Sherlock and Noble, 1922; 1" Geological Survey Map no. 237). None of the George Street samples proved to be an exact textural match to this comparative material.

It is also difficult to point to an origin for the shell and limestone material. Brill is situated closeby to Jurassic formations, but shell and limestone appear to be lacking in the sample sherd from the kilns. A source on the Jurassic Ridge closer to Aylesbury might perhaps be considered.

No glauconite appeared in any of the comparative material from the four kiln sites. A source for TS 20 in the Upper Greensand and Gault is suggested by the presence of glauconite, perhaps closeby to Aylesbury (Sherlock, 1922).

REFERENCES

Sherlock, R.L. (1922) The Geology of the Country Around Aylesbury and Hemel Hempstead (London, 1922).

Sherlock, R.L. and Noble, A.H. (1922) The Geology of the Country Around Beaconsfield (London, 1922).

TS 1	from Bolter End, High Wycombe	poss. kiln site	
2	" Brill excavations 1978		
3	Denham SE Bucks	kiln site	
4	Fulmer SE	poss kiln site	fabric 1
5	"	" " "	fabric 2.
6	AGS (Aylesbury George Street)	fabric 1	Brill/Boarstall
7	AGS	fabric 2.	Brill/Boarstall
8	AGS	fabric 3.	" "
9	AGS	fabric 4	" "
10	AGS	fabric 5	" "
11	AGS	fabric 6	Shelly Limestone chalk, source unknown
12	AGS	fabric 7	" " " "
13	AGS	fabric 9	Brill/Boarstall?
14	AGS	fabric 11	" "
15	AGS	fabric 12	" "
16	AGS	fabric 13	Bedford source?
17	AGS	fabric 14	Brill/Boarstall?
18	AGS	fabric 15	Quartz + decayed limestone?
19	AGS	fabric 16	Limestone, source unknown.
20	AGS	fabric 17	Quartz, mica " "
21	AGS	fabric 18	Brill/Boarstal?
22	AGS	fabric 19	" " ?
23	AGS	fabric 23	" " ?
24	AGS	fabric 24	" " ?
25	AGS	fabric 25	" " ?