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PETROLOGICAL ANALYSIS OF MEDIAEVAL FLOOR-TILES FROMHAILES ABBEY, GLOUCESTERSHIRE

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Introduction

Fourteen samples of Mediaeval floor-tiles from Hailes Abbey were submitted for thin sectioning and study under the petrological microscope. The object of the examination was to test the validity of allocation groupings based on typological considerations (see attached list). Munsell colour charts are referred to together with free descriptive terms.

Results1. 'HeraldiCS': A and B.

Both samples are in a soft fabric, and decorated on the surface with white inlaid slip. Sample A has a dark grey (5YR 4/1) core while B has a light reddish-brown (5YR 6/4) core. Both tiles have been glazed, although the condition of the tiles is much abraded, and the undersides are stabbed for better bonding with the mortar.

In thin section sample A contains a groundmass of silt-sized quartz grains and plentiful flecks of mica; a scatter of larger quartz grains, up to 0.80mm across, also occurs, together with a little quartzite, plagioclase feldspar, flint and sandstone. Sample B appears to be in a quite different fabric, containing little else but frequent well-sorted quartz grains, average size 0.30-

.60mm, and a little iron ore, set in a matrix of fine clay.

2. 'Chertsey School': 9 and 22.

Both samples are in a soft fabric, decorated with inlaid white slip and green glaze, and with a light red (2.5YR 6/8) core.

The underside of sample 9 contains a ridge and trough.

Thin sectioning shows that sample 9 contains frequent inclusions of well-sorted quartz grains, average size 0.10-.40mm, flecks of mica and a little iron ore. Sample 22 seems to be in a different fabric, containing large inclusions of limestone, a scatter of quartz grains up to 0.90mm in size, quartzite, iron ore and flecks of mica.

3. 'Midland Group': 13th and 14th centuries: 38 and 41.

Both samples are in a soft fabric, and are decorated with inlaid white slip with a light red (2.5YR 6/8) core.

Thin sectioning reveals that samples 38 and 41 contain a scatter of quartz grains up to 0.60mm in size, clay pellets, quartzite and flecks of mica.

4. 'Midland Group': 14th and 15th centuries: 13 and 43.

Both samples are in a soft fabric, decorated with inlaid white slip and colourless glaze on the surface, sides and underside, and with a reddish-yellow (5YR 6/6 to 6/8) core.

In thin section sample 13 contains fragments of sandstone, clay pellets, flint, quartzite, a scatter of quartz grains up to 0.80mm across and flecks of mica. Sample 43 is different to this, containing frequent well-sorted quartz grains, average size 0.20-.50mm, and a little quartzite. This sample bears some resemblance to B of the 'Heraldics Group'.

5. 'Midland Group' 15th century: 74 and 78.

Both samples are in a soft fabric, decorated with inlaid white slip and colourless glaze, with a reddish-yellow (5YR 7/6 to 7/8) core.

In thin section both samples contain fragments of sandstone, a scatter of quartz grains up to 0.60mm across and flecks of mica.

6. 'Malvern and Canynge type': 16, 69 and 71.

All three samples are in a soft fabric, decorated with inlaid white slip and colourless glaze, and with a light red (2.5YR 6/6 to 6/8) core.

In thin section sample 16 is seen to contain large inclusions of limestone, some sandstone and a scatter of quartz grains. Samples 69 and 71 also contain a little limestone, together with clay pellets, a scatter of quartz grains and what appears to be sericite.

8. 'Relief': C.

Soft fabric, relief decorated with stabbing on the underside and a red (5YR 6/8) to dark grey (5YR 4/1) core.

Thin sectioning shows a scatter of quartz grains, with some sandstone, flint and flecks of mica.

Conclusions

Of the groups tested with multiple samples, only the tiles in Groups 3, 5 and possibly 6 were enough alike in thin section to suggest a common origin. There were noticeable differences of inclusion type or texture in the samples of the remaining groups to suspect that they did not share the same source. However, more work obviously needs to be done on these typological groupings to see how much variation there is in any one group, and whether or

not in itself this suggests a single or multiple centres of production. The inclusion types present in the fourteen samples are all fairly common, and thus it is not really feasible to try to pinpoint likely source areas from this information alone. What is required is comparable material from known or suspected origins in order to tie down more precisely the sources of tile supply for Hailes Abbey.

1. Heraldics - 2 specimens. Cl3th - only found at Hailes though thought to be affiliated to the 'Wessex school'.
2. Chertsey school - 2 examples. Cl3th/14th - inlaid - are found at:-
 9 - Warwickshire and Hereford and Worcestershire.
 22 - Surrey
 Other tiles in the same group are also found in other parts of Gloucestershire and Avon.
3. Midland group - Cl3th/14th - inlaid - are found in: 2 examples
 38 - Worcs and Warks
 41 - " "
4. Midland group - Cl4th/15th - stamp on slip - 2 examples - also found at:-
 13 - Gloucestershire and Avon
 43 - " "
5. Midland group - Cl5th - stamp on slip - 2 examples - also found at:-
 74 - Gloucestershire and Avon
 78 - not known anywhere else
6. Malvern and Canynoges type - Cl5th - inlaid - 3 examples - also found at:-
 16 - Gloucestershire and Avon
 69 - Avon
 71 - Avon and Gloucestershire
8. Relief - 1 example - not much known about this group.
7. is the Stafford/Melton group which have already been done.

Where Gloucs is mentioned as a location it means the tiles are found elsewhere in the county.

14 examples in all.