Late and Post-medieval Pottery from Newark Castle, Ardglass, Northern Ireland (AJC98)

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Excavations undertaken by Tom McNeill and Queen's University Belfast on the site of a possible late medieval warehouse produced a collection of medieval and early post-medieval pottery. A number of sherds were submitted to the author for further study and as a result of this a series of samples were taken for thin section and chemical analysis.

Handmade Micaceous Fabric

A single sherd of an unglazed, handmade jar was recovered from Trench B, context 12. By eye abundant large flakes of muscovite can be seen. A thin section of this sherd (V2345) reveals the following inclusion types:

- Abundant angular rock fragments up to 3.0mm across. The rock consists of interlocking grains of microcline, plagioclase, zoned plagioclase, muscovite, graphic intergrowth of quartz and feldspar and minor quartz. The plagioclase feldspar tends to be slightly altered whereas the remaining minerals are fresh.

- Sparse angular quartz with mosaic texture up to 3.0mm across.

- Sparse angular strained monocrystalline quartz up to 2.0mm across.

The groundmass consists of anisotropic baked clay minerals with sparse muscovite flecks up to 0.05mm long.

The temper appears to be an angular gravel derived from a muscovite granite and coarse-grained metamorphic rocks. Three potential sources are southeast Ireland, the Southwest of England, Portugal/Southwest Spain and Brittany. Of these, the southwestern English micaceous wares either contain biotite (North Devon Medieval Coarseware) or fine-grained metamorphic rocks (South Western Micaceous ware and Lostwithiel Ware). Breton micaceous wares of medieval date are likely to have been wheelthrown, as are Iberian ones. This leaves southwest Ireland as the most likely source. Such wares were produced at Dublin and were tempered with Liffey gravels derived from the Wicklow Mountains, which include muscovite granites and a metamorphic aureole.

Wheelthrown Micaceous Fabric

A single sherd from a wheelthrown vessel with a cordon on the shoulder and containing abundant muscovite and coarse-grained rock fragments was recovered from Trench F, context 105. A thin section (V2349) reveals the following inclusions:

- Abundant rounded fragments of coarse-grained metamorphic rock, including both mosaic quartz and heavily sutured and strained grains, up to 3.0mm across. Quartz is the main mineral present but muscovite is also present.

- Abundant laths of muscovite, up to 0.5mm long.

The groundmass consists of light-coloured baked clay minerals and abundant quartz, muscovite and light green pyroxene, ranging up to 0.3mm long.

As with the handmade micaceous ware, the potential sources for this ware are southeast Ireland, the southwest of England, Brittany and the Iberian peninsula. The lack of granite fragments and the light body colour distinguish this sherd from southeastern Irish wares and neither is any similar ware known from late medieval or post-medieval southwest England. This leaves Brittany and the Iberian peninsula as potential sources (with the outside possibility of a source in the Massif Central, where both light-firing Tertiary clays and coarse-grained gneiss-rich gravels occur).

The light-firing clay groundmass is both coarser and more varied in mineralogy than the light-firing Tertiary clays utilised by potters in the Seine and Loire valleys and in the Saintonge region of southwest France. It may be, therefore, that it owes its light colour not to paleosol formation in the Tertiary period, as those clays do, but to the weathering of a feldspar-rich parent rock. If so, this might be the origin of the pyroxene, and the majority of the quartz and feldspar in the groundmass.

Without any comparanda, it is impossible to choose between these potential sources, although it can be said that the fabric is different from that produced at St Jean la Poterie, near to Rennes in Brittany, and to that produced in the hinterland of Lisbon (Iberian Red Micaceous ware, 1986). Should comparative samples become available, the fabric is sufficiently distinctive for a positive identification to be made.

Fine-grained wheelthrown glazed wares

Three sherds of fine-grained, lead-glazed red earthenwares were submitted for study. One of these was too small for further study (Trench F context 96) and the other two were thin-sectioned (Trench F context 96, sample V2348 and Trench A context 20, sample V2346).

Despite their similarity in the hand, the thin sections indicate two distinct fabrics and possibly two distinct sources. Sample V2346 contained the following inclusions:

- Moderate rounded quartz grains up to 0.3mm across. Most of these grains are monocrystalline with straight extinction but examples with strained extinction and with polycrystalline mosaic texture are also present.

- Sparse rounded siltstone grains up to 0.3mm across
- Sparse rounded fine-grained sandstone up to 0.3mm across.

The groundmass consists of red-firing optically anisotropic baked clay minerals with abundant muscovite and sparse biotite laths up to 0.1mm long and sparse angular quartz up to 0.1mm across.

The range of mineral inclusions present suggests a detrital sand derived from an area of fine-grained sedimentary rocks. Similar sands occur in the west midlands of England, from Cheshire down to Worcestershire, whilst the fine-grained, micaceous groundmass has many parallels and cannot be used to localise the source.

A chemical analysis of the fabric was carried out (using Inductively-Coupled Plasma Spectroscopy) but there are as yet insufficient comparanda from areas where the sand might be expected to occur for this to be of use in characterisation at present. A factor analysis of the chemical data alongside data from samples studied by the author from Staffordshire, Shropshire, Worcestershire and Cheshire indicated that the closest match was with Catholme, in the upper Trent valley, where the parent clay used was probably derived from Mercian Mudstone.

The second sample, V2348, contained the following inclusion types:

- Moderate rounded quartz grains up to 0.3mm across. Most of these grains are monocrystalline with straight extinction but examples with strained extinction and with polycrystalline mosaic texture are also present.
- Sparse voids, probably from burnt-out organic inclusions up to 0.5mm long.
- Sparse rounded fine-grained sandstone up to 0.3mm across.

The groundmass consists of red-firing optically anisotropic baked clay minerals with abundant muscovite laths up to 0.1mm long and sparse angular quartz up to 0.1mm across.

The range of inclusions and the characteristics of the groundmass are similar but distinct from the first sample but would also fit a West Midlands source.

Saintonge unglazed ware

Six sherds from one or more unglazed Saintonge ware vessels were recovered, from Trench E contexts 95, 97 and 99 and from Trench F context 99. The only typological features present are a vertical applied strip. The sherds come from a vessel similar to those described by Hurst (Hurst 1974), either a pegau (a three-strap-handled squat jug) or a bucket-handled jug.

Although all the evidence points to these vessels coming from Southwest France there is no evidence for their having been produced at La Chapelle des Pots, the source of at least some of the 13th and 14th-century Saintonge wares. A sample of the vessel was therefore taken for chemical analysis (V2347). The only data known to the author for Saintonge ware consists of analyses of sherds found at the Bryggen in Bergen (Deroeux and others 1994).

The data from the Ardglass sample were compared with this Bergen dataset, which only covers the major elements, and a factor analysis was carried out. This revealed two significant factors, which between then accounted for 61.4% of the variation in the data. A plot of F1 against F2 showed that the Ardglass sample has a much higher F1 score than any of those from Bergen (Fig 1). Examination of the factor analysis indicates that Factor 1 is mainly determined by high weightings for Potassium (K2O) and Magnesium (MgO) with strong negative scores for Titanium (TiO). Factor 2 scores are due entirely to high weightings for Calcium (CaO), Phosphorus (P2O5) and Manganese (MnO) and are mainly low for Saintonge wares but sometimes much higher for Seine valley (Rouen) wares, which have low or negative F1 scores.

Thus, on this evidence, we can say that the Ardglass vessel is certainly not made from the same raw materials as the earlier Saintonge wares and we cannot even be sure that it is a southwestern French product. Further work on the characterisation of these wares may well help to clarify the matter.

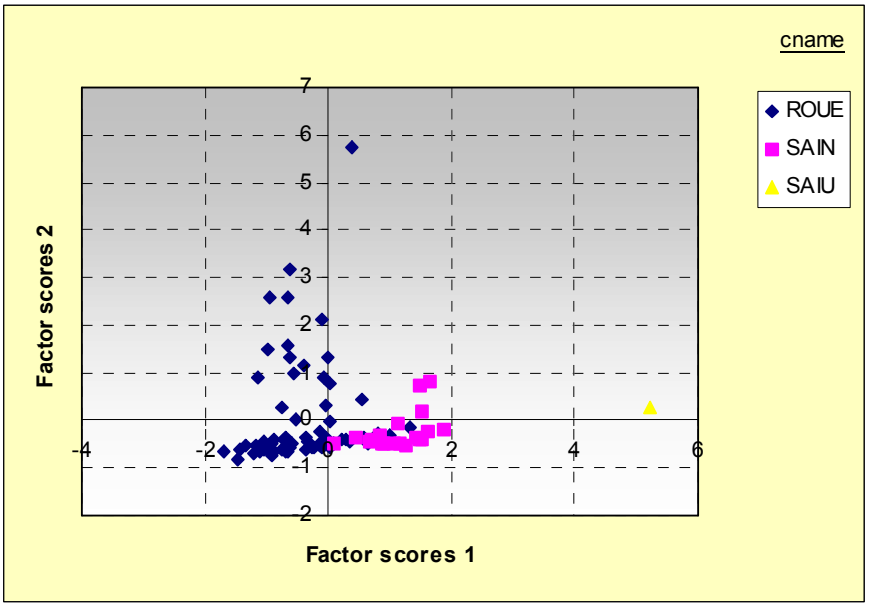

Figure 1 The Ardglass Saintonge vessel (SAIU) compared with French whitewares from Bergen (source: Deroeux et al 1994).

A recent study of medieval whitewares from central western France (Husi) included the analysis of samples from several sites, mainly in the Loire valley. Factor analysis of the

Ardglass data with this dataset showed that here too the Ardglass vessel has a distinctive composition, due mainly to its K2O and MgO content. Fig 2 shows a plot of these two elements (relative to Al2O3) which again demonstrates that the fabric is distinct.

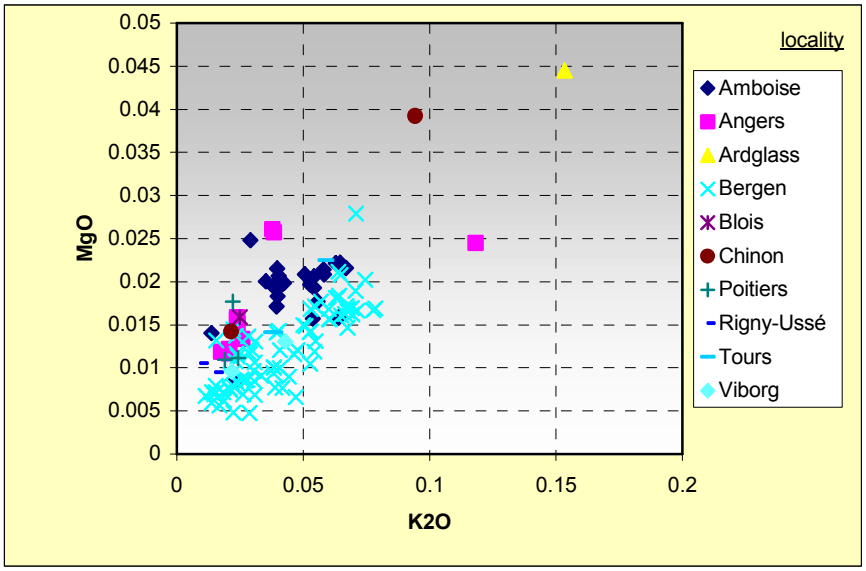

Figure 2

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