The Archaeological Potential for Characterisation Studies of the Faverdale East, Darlington, Pottery

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Excavations at Faverdale East by Pre-Construct Archaeology (North) revealed an extensive rural settlement dating to the earlier part of the Roman period. The site produced a large collection of pottery, much of it fresh and capable of typological analysis. The pottery is being studied by Scott Martin and the author examined the fabric series constructed by Scott Martin for the handmade wares; the form series created for these wares; the fired clay and a selection of the Romanised wheelthrown wares.

Methodology

It is recommended that thin section analysis and chemical analysis is used to investigate the source of some of the wares found at Faverdale. Thin section production would be carried out at the University of Manchester where stained thin sections would be made. These would then be studied at the Alan Vince archaeological consultancy based in Lincoln where the sections would be retained as part of the consultancy's reference collection (now containing over 4000 sections, with a high proportion coming from northern England).

Chemical analysis would be undertaken at Royal Holloway College, London, under the supervision of Dr J N Walsh. A range of major elements would be measured as percent oxides and a range of minor and trace elements would be measured as parts per million. The data would then be available as a table published online on the AVAC website and summarised by group (means and standard deviations) for publication by the client. Analysis of this data would be undertaken using multivariate statistics of examine the structure of the data, which would then be compared with material from relevant sources (in the case of Faverdale these include Piercebridge, Catterick, Scorton and Ingleby Barwick, all located within 20 miles of the Faverdale site).

Handmade wares

It was concluded that much of the handmade pottery was probably produced from boulder clays available within easy reach of the site but that the fired clay, which was most likely to have been made from resources available on site, was not made in the same fabric and therefore it is unlikely that the pottery was actually domestically produced. Furthermore, it is likely that the handmade pottery was produced using techniques passed down from pre-Roman potters and it may be that it is evidence for the survival not only of generalised knowledge of pre-Roman ceramics but also the clay sources, temper sources and methods of preparation as well as specific handforming techniques. That this is not simply due to the

presence of residual Iron Age pottery on the site is evident from the presence of vessels in clearly Romanised forms, imitative of Dorset Black Burnished ware, mortaria and other distinctive forms (such as lid-seated jars and lug-handled cauldrons).

Martin has identified ten fabrics in the handmade wares and these can be grouped into seven petrological groups:

- Fabric 10 – appears to be similar to marine and estuarine clays, probably only available locally at the mouth of the Tees and the coastal marshes to the immediate south of the Tees mouth. Five groups of sherds of this type were recorded and Scott Martin estimates that they come from three vessels. Analysis of a sample of each vessel is recommended using ICPS and thin sections.
- Fabric 4 – is probably tempered with sparry calcite. The most likely source for this fabric is the Vale of Pickering and a series of analyses have been undertaken by the author of calcite-tempered wares in Yorkshire which indicate that there are several distinct sources within the Vale of Pickering as well as one possibly located in the southern Wolds, between Market Weighton and the Humber. At least one of the vessels grouped as Fabric 4 contains a mixture of igneous erratic rocks and leached calcareous inclusions. These might be Permian limestone rather than calcite and it is recommended that all the Fabric 4 vessels from the site are examined at x20 magnification by the author, a sample of 6 vessels chosen for analysis and if this second fabric is a major element in the collection, rather than a one-off, that samples of that fabric too are selected for analysis. Therefore, an hour's examination and selection followed by between 6 and 12 samples for ICPS and thin section analysis.
- Fabric 6 – this fabric is tempered with a coarse quartzose sand, composed mostly of Millstone Grit sandstones and their constituent sands. This is a major northern fabric both in the Iron Age and the Roman (and early to mid Anglo-Saxon) periods. It is recommended that 6 samples are chosen for thin section and chemical analysis.
- Fabrics 1, 3, 5, 8, and 9 – these fabrics all contain large angular fragments of igneous rock and can be divided using a binocular microscope into two main groups: basic igneous rock, probably derived from local dykes in County Durham, and acid igneous rock, probably derived from the Lake District and South West Scotland and present in boulder clays which have been transported southeast across this region. It is possible that the different fabric groups identified by eye, which reflect differences in texture as well as the identity of the inclusions, represent different sources of boulder clay and it is recommended that the 5 fabric samples are analysed together with 6 samples containing basic igneous rock and 6 containing acid igneous rock. Al, samples should be analysed using thin sections and ICPS.
- Fabric 7 – this fabric is tempered with what appears to be fire-cracked vein quartz. Such material is present in the Triassic sandstones which outcrop to the south of

Darlington and could easily have been selected from river gravels and prepared on a domestic fire. The use of this material is a pre-conquest tradition but the Faverdale sherds include a mortarium and are clearly of post-conquest date. It is recommended that a sample of 6 sherds is analysed using thin sections and chemical analysis.

- Fabric 2 – this is a distinctive vessel, both in fabric and form (it is a wide-mouthed jar decorated with a row of dimples at the girth). The fabric appears to be made from light-firing clays, rather than the dark brown firing boulder clays which predominate on the site but the inclusions could include angular basic igneous rock fragments. A sample should be analysed using thin sections and ICPS to test whether it is locally produced or a regional import.

Fired Clay

A small quantity of fired clay was recovered from the Faverdale East site. It is usually assumed that fired clay would not be traded, especially where clay is readily available locally. It is therefore worthwhile analysing a sample of fired clay to compare with the handmade pottery, to test whether the two fabrics are distinguishable. A visual examination suggests that the fired clay does not contain the large angular rock fragments found in the handmade pottery but that the groundmass of the two groups is similar in texture. Thin section and ICPS analyses can establish whether this similarity is due to the adding of temper to the local boulder clay or whether there are differences in the character of the clays themselves.

Wheelthrown Wares

Greywares (GW6 and GW7)

The most common greywares in the collection are GW06 and GW07, which is a coarser version. Examination at x20 magnification indicates that neither fabric contains much quartz silt or fine sand and this probably excludes boulder clays as a source. Sparse rounded calcareous inclusions are visible but cannot be identified by eye. They might be of Permian or perhaps Triassic or Jurassic origin. If the former then a local source is possible but if not then the source probably lay to the south or southeast, perhaps exploiting the Triassic mudstone which outcrops along the south side of the Tees valley. It is recommended that six samples of each fabric are analysed using thin sections and ICPS analysis.

Black Burnished Ware

Dorset Black Burnished ware is common on the site, which is of some interest because the frequency of this ware in 2nd century assemblages in Northern England is often very low indeed. However, a reasonable proportion of the handmade Black Burnished ware from Faverdale was identified by Scott Martin as being of a different texture and some of these sherds were examined at x20 magnification and appear to be of South Yorkshire origin. The two groups are produced from very different raw materials – Tertiary ball clay with

Quaternary sand temper in the case of the Dorset BB (BB1) and Triassic mudstone with fluvioglacial sand in the case of the South Yorkshire ware. It is recommended that a sample of 6 sherds of likely South Yorkshire origin is analysed using thin sections and ICPS.

Oxidized Ware

The main oxidized ware at Faverdale is OW2 which has an extremely fine texture. Suitable clays to produce such a ware are weathered Carboniferous mudstones, which outcrop both to the north and southwest of Faverdale, and Triassic mudstone. The latter source is preferred on the basis of colour range but this requires confirmation by thin section and chemical analysis. It is recommended that a sample of 6 sherds is analysed using thin sections and ICPS.

Mortaria

Scott Martin has identified 17 different mortaria groups, based mainly on colour and texture. These specialised products were often widely traded and can be an indication of trade contacts not represented in other aspects of the ceramics. It is recommended that at least one example of each fabric is analysed using thin sections and ICPS.

Costings

The following costings are calculated using 2007-2008 rates and hold valid until 31st March 2008.

Preliminary assessment

Visit to Leicester, examination of representative sherds at x20 magnification and production of report, inclusive of travel: £260.00 plus VAT

Handmade wares

42 thin sections and 42 ICPS analyses each at £25.00 plus VAT. Production of technical report included.

Production of summary report suitable for publication: £100.00 plus VAT

Fired Clay

6 thin sections and 6 ICPS analyses at £25.00 plus VAT. Production of technical report included.

Production of summary report suitable for publication: £25.00 plus VAT

Romanised wares

41 thin sections and 41 ICPS analyses at £25.00 plus VAT. Production of technical report included.

Production of summary report suitable for publication: £200.00 plus VAT

Grand Total

£5035.00 plus VAT