Assessment of the Ceramic Building Material from Torksey (TOMS 03)

Alan Vince

An excavation at Torksey (Site Code TOMS 03) produced a collection of medieval ceramic building material, which has been identified and assessed by Jane Young. Within this collection were some pieces which were positively identified as being from the Beverley tilery and some from Lincoln. The majority, however, were of types which could not visually be matched with known sources. Samples of these groups, which were divided into four fabrics by Jane Young, were submitted to the author to see whether a Torksey source was supported by their ceramic petrology.

Description

Samples of each fabric were examined at x20 magnification using a binocular microscope.

Fabric T1

The fabric is oxidized, sometimes with a thin light grey core. The oxidized colour, a light brown to pink, suggests a moderately low iron content. Moderate subangular fragments of red/brown clay/ironstone were present, some of which are mottled, with light brown areas. Abundant illsorted quartzose sand is present, ranging in size from less than 0.3mm to sparse grains (including chert) up to 2.0mm across. Possible calcareous inclusions up to 0.3mm across and muscovite laths, c.0.5mm across, are present but rare and the groundmass is not micaceous.

Fabric T2

This fabric is oxidized, except for an overfired fragment from context 1108. the colour is similar to T1 and fragments of clay/ironstone are also present, although most have a lower iron content than in T1, and are similar in colour to the groundmass. These fragments are often visibly laminated, and could be classed as mudstone or shale. Quartzose sand, similar to that in T1 is present, alongside sparse rounded calcareous inclusions.

Fabric T3

Fabric T3 is relatively low-fired in comparison to T1 and T2. It can be scratched with the fingernail and the core is mainly a dark grey, indicative of unburnt carbon rather than reduction of the iron. Coarse inclusions consist of red/brown clay/ironstone (as in T1 and T2)

together with light brown/cream mudstone fragments. Quartzose sand similar to that in T1 and T2 is present but is less common than in T1 or T2.

Fabric T4

A single fragment of T4 was submitted. It has a grey core and thin oxidized margins. The oxidized colour, however, is similar to that of the remaining fabrics. The fabric is hard fired and has a conchoidal fracture. At x20 magnification, vesicular black inclusions can be seen, ranging up to 1.0mm across. These are probably heat-altered iron-rich clay/ironstone as noted in fabrics T1 to T3. Sparse rounded quartzose sand grains, up to 0.5mm across, were present.

Assessment

Although visually T1 looks very similar to early Beverley fabrics, at x20 magnification it does not conform to either of the two main fabrics made there (sometimes mixed together in the same tile): a) the body colour suggests a Jurassic clay, b) there are no visible fragments of flint or basic igneous rock. It is more likely that this fabric was made close to the Lincoln edge, either on the scarp slope, or on the outskirts of Lincoln or on the dip slip, close to the fen edge. However, thin section and chemical analysis would be able to test this suggestion.

Fabric T2 is similar to T1 but the mudstone inclusions make a local origin, utilising a Jurassic clay, even more likely.

Fabric T3 contains fragments of light-firing mudstone which occur locally only in the estuarine beds above and below the Lincolnshire Limestone. This makes the fabric quite distinctive although these beds were worked all along the Jurassic ridge and the mudstone fragments cannot be used to pinpoint the source of the fabric without further work, using thin sections and chemical analysis.

Fabric T4 also has a number of characteristics in common with T1 to T3 and this suggests that it too is a local product, made from a Jurassic clay.

The quartzose sand, seen in all four fabrics, is similar visually to that found in the Trent and Witham terrace sands, and in quaternary blown sand. It is therefore not particularly diagnostic.

In conclusion, there is little support from the binocular microscope examination of the fabrics for a Torksey source. In comparison with the late 9th to 11th-century pottery industry these tile fabrics are made from a clay with a lower iron content, which contains mudstone and clay/ironstone fragments which are absent from the Torksey wares.

It would be possible using thin section and chemical analysis to test whether there are petrological and chemical differences between the four fabric groups. It would also be possible to compare the fabrics in detail with those from the City of Lincoln, most of which were produced on the outskirts of the city, and with material from other tileries in the area (such as that at Meadow Lane, North Hykeham). These areas, well to the east of Torksey, are much more likely as a source for these tiles than Torksey. However, Jane Young states that visually the tiles are clearly not from the same source as the Lincoln tiles.

Ideally, at least six samples of each fabric group would be analysed using Inductively-Coupled Plasma Spectroscopy together with one thin section of each fabric. At 2005/6 prices this would cost £540.50 plus VAT (each sample costs £23.50 plus VAT, see breakdown in Table 1).

Table 1

Group	TS	ICPS	Cost (2005/6)
Fabric T1	1	6	£164.50
Fabric T2	1	6	£164.50
Fabric T3	1	6	£164.50
Fabric T4	1	1	£47.00
Total	4	19	£540.5