

Assessment of the Ceramic Building Material from Clampgate Road, Fishtoft, Lincolnshire (FCR03)

Alan Vince

A collection of ceramic building material from an excavation at Clampgate Road, Fishtoft, were submitted for identification and assessment. In addition, unidentified fragments of fired clay/briquetage/ceramic building material recovered from sieved soil samples was also submitted for identification. Ceramic building material found in the sieved residues were added to the ceramic building material record and the remainder passed on to the appropriate specialist for assessment.

The ceramic building material was all examined at x20 magnification using a stereo microscope and details of the fabric were noted. In addition, where possible, the form of the object was recorded. Fragments were counted and weighed.

Description

It proved possible to positively identify a group of Romano-British brick and tile and a small quantity of medieval flat roof tile and medieval/post-medieval brick. In addition, there were several small fragments whose fabric was similar to that of the brick but which might be daub or some other fired clay.

Romano-British Ceramic Building Material

Fifteen fragments of Romano-British ceramic building material were identified. In total they weigh 1.082Kg and have a mean weight of 72.1gm. However, the fragments range in size from specks weighing less than 1gm to fragments weighing 403gm and 505gm. Most of the fragments have unabraded edges but several have spalled, suggesting exposure to the elements and in particular freeze-thaw. The character of the fragments does not suggest that they were ever exposed to horticulture or agriculture (for example, in ploughsoil).

All the fragments have similar fabrics, which consist of poorly-mixed lenses of off-white and red-firing clay, containing no visible inclusions except for a micaceous sheen (i.e. probably containing muscovite laths less than 0.1mm long). A rounded quartz sand is present, both as moulding sand on the base and sides of the tiles and as lenses within the fabric.

The characteristics of the fabric indicate that they were probably made from Jurassic clays, including perhaps lenses from the Upper Estuarine Beds, whilst the sand is visually identical to that found in the Witham and Trent valleys. Tiles with these characteristics could have been made in the Witham Gap at Lincoln or at any point along the Lincoln Edge where the Lias and Upper Estuarine clays outcrop together with superficial quartz terrace sand. However, the most likely source is in the Lincoln area itself. A source closer to Fishtoft,

utilising the Oxford or Kimmeridge Clay, for example, can be discounted because of the lack of off-white-firing clays in this area and the character of the quartz sand.

Most of the fragments were too small to identify the form but there were no curved tile fragments nor any evidence for flanges. It is therefore likely that the tiles were square bricks of the type used in hypocausts and for architectural features in stone walls (as, for example, in the Mint Wall in Lincoln, where they form both horizontal decorative courses and the edging for windows).

Some of the tiles bear traces of mortar and this mortar, when examined under the microscope, can be seen to include rounded quartz grains, possible fossil shell fragments and sub-angular white flint fragments.

Several tiles have soot traces, either on one of the flat faces or on a flat face and a broken edge. This suggests that the tiles were reused to form hearths.

Medieval Ceramic Building Material

Six fragments of flat roof tiles of medieval date were recovered. Of these, four have characteristics which suggest that they were produced in the Lincoln tiliary, one has a red, calcareous fabric which was either produced locally (for example, at Boston) or perhaps at Beverley. The fifth fragment has a yellow, calcareous fabric. Such tiles occur widely along the east coast and are often ascribed to a Flemish source. However, it was suggested that some of those found at Hull were locally produced whilst there is clear evidence for the manufacture of similar tiles in the Ely region and elsewhere in Cambridgeshire, using a marl bed in the Kimmeridge clay.

None of the tile fragments have either peg holes or nibs, nor is there any sign of glaze. It is therefore not possible to date them closely within the late 12th to 17th centuries.

Table 1

Subfabric	Data	1022	1053	1087	1130	2445	2602	Grand Total
Lincoln area?	Nosh		1	1		1	1	4
	Weight		4	40		21	61	126
Red calcareous fabric	Nosh	1						1
	Weight	38						38
Yellow calcareous fabric	Nosh				1			1
	Weight				38			38

Medieval/Post-medieval Ceramic Building Material

Twenty-three fragments of medieval or post-medieval handmade bricks were recovered. Sixteen of these fragments have the typical silty, calcareous fabric of fenland bricks. An example made in a sanded mould was present but the majority were made in straw-lined moulds. Some of the fragments are very small and were identified by fabric alone. These may well be mis-identified fragments of fired clay (although most of the fired clay had distinctly different fabrics). There was, however, no doubting the identification of the larger fragments (for example the pieces from contexts 216, 1013, 1106, 1130, 2555 and 2602).

Four fragments had thicknesses which could be measured and these ranged from 51mm (one example) to 60mm (two examples) and 61mm (one example). A single width was measurable: 135mm (from context 2602).

In addition to these fairly definite medieval/post-medieval bricks there were also fragments which were less certain:

Two fragments from context 1018 come from the same silty, micaceous brick. The fabric is similar to one produced at Beverley and could be a medieval brick from the Beverley tiler.

A fragment from context 2275 has a fabric which is visually similar to samples of chalky boulder clay from the Grimsby area (although there is no reason why similar boulder clays should not occur much closer to Fishtoft).

Fragments from contexts 2330, 2714, 2765 and 2776 had sandy fabrics which are also similar (but not so certainly) to boulder clay from the Grimsby area. All of these are small fragments and it is by no means certain that they are bricks rather than daub or other fired clay.

Discussion

The Romano-British brick fragments are likely to have come to the site as a single batch, since they all have the same fabric and were probably all used for the same purpose. It is most likely that the tiles themselves were made at Lincoln or immediately downriver (there is evidence for production at Washingborough and for the dumping of tile waste at Fiskerton). The tile might have been plundered from structures at Lincoln or from a villa in the Lincoln area. However, the character of the mortar (the presence of common white flint) suggests that they may have been used in a mortared structure somewhere in the lower Witham / fens area rather than at Lincoln. One obvious source would be the town walls of Horncastle and it would be interesting to examine tile from Horncastle to see how similar it is in both fabric and mortar to the Fishtoft material. Another possibility would be Roman defensive structures at Skegness or Burgh-le-Marsh. One would have imagined that tiles used in the

latter areas in the Roman period would have been made in the area rather than imported but this too could easily be tested.

A study of the stratigraphic distribution of the Roman tile would indicate the earliest point in the site sequence at which the tiles could have been brought to the site and perhaps the general location of the hearth or oven where the tiles were re-used.

The medieval tile and medieval/post-medieval brick clearly indicate the presence of building rubble of this date on the site. However, it might have been deposited on the site at any point subsequent to the production of the bricks and tiles. The high percentage of Lincoln tile in the, admittedly, very small tile collection may indicate a direct connection with Lincoln for the structure from which the tile came since, according to Jane Young, Lincoln and Beverley tiles do occur in Boston, alongside the more common Boston products (which were absent from Fishtoft).

Assessment

The Romano-British tile forms an interesting group of material which, with a small amount of further work, could add significantly to the history of the Clampgate Road site. It is possible that they came to the site in the mid-Saxon period and, if so, would provide evidence for the use of the Witham for transporting rubble over reasonably long distances at this time.

One really ought to establish beyond any doubt (a) that the tiles came from the Lincoln area (b) that the mortar found on the tiles is not paralleled in Lincoln, (c) whether similar tiles were used at other Romano-British sites further downriver and closer to Fishtoft. In addition, it might be possible to establish whether the tiles were re-heated in the Roman period or later but this can probably be established by stratigraphic analysis.

The medieval and post-medieval brick and tile required no further work but an example of the larger brick fragments and samples of each fabric should be retained for future study. All of the medieval tile should be retained for future study.

Costing

Task	Comments	Cost
Petrological and Chemical analysis of the Romano-British tile	A single thin-section to confirm the visual identification and six samples for chemical analysis. Unit cost £22.00 plus VAT	£157.50 plus VAT

Chemical analysis of comparative tiles from Lincoln	Six samples	£135 plus VAT
Visual study of Romano-British tiles from sites in the lower Witham valley	One day to be spent in the City and County Museum stores.	£180 plus VAT
Total		£472.50 plus VAT = £555.18 inclusive

Acknowledgements

I am grateful to Jane Young for the suggestion that I examine this material.

Appendix: List of Recorded Finds

Context	Cname	Form	Nosh	NoV	Weight	Subfabric	Use	Condition	Description
2876	MTIL	BRICK	1	1	40	SILTY CALCAREOUS		FRESH	
2845	RTIL	-	1	1	4	LINCOLN AREA			
2845	RTIL	-	2	2	3	LINCOLN AREA			
2776	MTIL	BRICK	1	1	7	SANDY			
2765	MTIL	BRICK	1	1	3	SANDY		ABR	
2714	MTIL	BRICK	1	1	11	SANDY		ABR	ID?
2714	MTIL	BRICK	1	1	30	SILTY CALCAREOUS		FRESH	
2708	RTIL	BRICK	1	1	403	VARIEGATED; FINE SLIGHTLY MICACEOUS CLAYS (RED- AND LIGHT-FIRING); STREAKS OF ROUNDED SAND CF WITHAM	SOOTED ON ONE FLAT FACE	SPALLED	
2640	MTIL	BRICK	1	1	7	SILTY CALCAREOUS			
2609	MTIL	BRICK?	1	1	13	SANDY (INC GSQ)			
2602	MTIL	FLAT	1	1	61	SPARSE LIGHT-COLOURED CLAY PELLETS; FINE-TEXTURED CLAY; A RQ	MORTAR ON FLAT SURFACE		
2602	MTIL	BRICK	1	1	29	SILTY CALCAREOUS			
2602	MTIL	BRICK	1	1	339	SILTY CALCAREOUS			
2602	MTIL	BRICK	1	1	1205	SILTY CALCAREOUS			
2555	MTIL	BRICK	1	1	4	SILTY CALCAREOUS			
2555	MTIL	BRICK	1	1	70	SILTY CALCAREOUS			STRAW-LINED MOULD
2463	RTIL	-	1	1	2	LINCOLN AREA			
2460	RTIL	TILE	1	1	82	FINE-TEXTURED, JURASSIC?; RQ SAND	SOOTED OVER BROKEN EDGE		BRICK OR TEG?
2445	MTIL	FLAT	1	1	21	FINE-TEXTURED, JURASSIC?; A RQ SAND			
2443	RTIL	TILE	1	1	42	UNTEMPERED JURASSIC? RED-FIRING CLAY; SHALE/RELICT CLAY	MORTAR CONTAINING WHITE ANGULAR FLINT	FRESH	COULD BE TEG OR BRICK
2426	RTIL	-	1	1	1	LINCOLN AREA			ID?
2396	RTIL	TILE	1	1	0	FINE-TEXTURED, JURASSIC?; RQ SAND			
2394	RTIL	TILE	1	1	0	FINE-TEXTURED, JURASSIC?; RQ SAND	SOOTED OVER EDGES		
2389	RTIL	-	1	1	9	LINCOLN AREA			
2381	RTIL	TILE	1	1	24	FINE-TEXTURED, JURASSIC?; RQ SAND			
2364	MTIL	BRICK	1	1	3	SILTY CALCAREOUS			
2350	FCLAY	DAUB?	3	3	5	SILTY CALCAREOUS			
2333	MTIL	BRICK	1	1	3	SILTY CALCAREOUS			ID?
2332	FCLAY	-	1	1	1	ORGANIC SILTY			ONE FLAT FACE
2330	MTIL	BRICK	1	1	14	SANDY		ABR	STRAW-LINED MOULD
2303	FCLAY	DAUB	1	1	35	CHALKY BOULDER CLAY			

Context	Cname	Form	Nosh	NoV	Weight	Subfabric	Use	Condition	Description
2275	MTIL	BRICK	1	1	9	CHALKY BOULDER CLAY WITH ROUNDED ERRATICS			STRAW- LINED MOULD
2275	RTIL	TILE	1	1	5	FINE-TEXTURED, JURASSIC?;RQ SAND			
2231	RTIL	BRICK	1	1	505	VARIEGATED;FINE SLIGHTLY MICACEOUS CLAYS (RED- AND LIGHT-FIRING);STREAKS OF ROUNDED SAND CF WITHAM	MORTAR CONTAINING WHITE FLINT;SOOTED FLAT FACE	FRESH	
216	MTIL	BRICK	1	1	384	OVERFIRED SILTY CALCAREOUS		FRESH	SANDED MOULD;
2146	RTIL	-	1	1	2	LINCOLN AREA			
2054	FCLAY	DAUB	1	1	8	SANDY BOULDER CLAY		ABR	
1130	MTIL	FLAT	1	1	38	YELLOW CALCAREOUS WITH ROUNDED RED INCL			
1130	MTIL	BRICK	2	2	234	SILTY CALCAREOUS		FRESH	STRAW- LINED MOULD
1106	MTIL	BRICK	1	1	324	SILTY CALCAREOUS		FRESH	
1106	MTIL	BRICK	1	1	4	SILTY CALCAREOUS		FRESH	
1087	MTIL	FLAT	1	1	40	FINE-TEXTURED, JURASSIC?;RQ SAND	MORTAR ON NARROW EDGE	FRESH	SHL=1053
1074	FCLAY	DAUB	3	1	20	SANDY BOULDER CLAY			
1053	MTIL	FLAT	1	1	4	FINE-TEXTURED, JURASSIC?;RQ SAND			SHL=1087
1022	MTIL	FLAT	1	1	38	RED CALCAREOUS			SANDED MOULD
1018	MTIL	BRICK	2	1	15	SILTY MICACEOUS BUT EVENLY OXIDIZED AND FINER THAN DEFINITE MED BRICK			ID?
1013	MTIL	BRICK	1	1	103	SILTY CALCAREOUS		FRESH	