

# **Assessment of Fired Clay from North Killingholme: Vehicle Distribution Facility, Area E, North Killingholme, Lincolnshire (NKE 07)**

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A small collection of fired clay was recovered from excavations conducted by Lindsey Archaeological Services on an Iron Age to Roman settlement at North Killingholme. The material was submitted to the authors for identification and assessment.

## Description

### **Fired Clay**

Forty-five fragments of fired clay were recovered. Three fabrics were recognised, Fabrics A, B and C. All were either completely oxidized or, rarely, have oxidized surfaces and margins and a dark grey to black core.

#### Fabric A

The fabric is fine-textured with no inclusions larger than c.0.1mm across. The groundmass is variegated and consists of poorly-mixed lenses of micaceous, silty clay varying in colour due to variations in iron content and, probably, calcareous content. Some lenses have a very high iron content, appearing rust-brown.

#### Fabric B

The fabric contains moderate inclusions ranging in size up to 10mm. They consist of rounded chalk, rounded micaceous sandstone, rounded, matt-surfaced quartz, rounded ironstone and rounded mudstone fragments. The groundmass is rougher in texture than either Fabrics A or C but individual grains are impossible to see at x20 magnification.

#### Fabric C

A single fragment of this fabric was present. It is an amorphous lump with a silty micaceous groundmass, but lacking the variegation seen in Fabric A. The fragment has abundant round-sectioned holes which are probably either rootlets or insect burrows. These, and the broken surfaces, are covered with a light grey crust, presumably a phosphatic coating.

The Fabric A fragments include several which have been worked into rough lumps without any obvious function. They are similar to the scatter of squeezed lumps of clay found alongside container, oven and pedestal fragments found on salt-working sites. However, none show the typical colouration of calcareous ceramics heated in the presence of salt (whites and yellows at low temperatures and greens at higher ones). There is also one Fabric

B fragment which may have a wattle impression (although it is by no means a certain identification).

The Fabric B samples all come from objects with one flat face and no evidence for either wattle impressions or sides (as one would expect from pyramidal loom weight fragments).

The Fabric C sample appears to be fired, unworked estuarine/salt marsh silt. It may have been accidentally burnt but similar fragments occur on early medieval and later (11<sup>th</sup>/12<sup>th</sup> century onwards) salt-working sites.

### Assessment

The three groups of fired clay probably were made from different sources of clay. Fabric A is probably estuarine silt, and the thin laminae suggest that the silt was deposited in a changing environment (such as a tidal estuary). Fabric C is similar but shows signs of soil formation whilst Fabric B is probably boulder clay. All of the inclusions found in Fabric B are consistent with a local, Lindsey Marshes, boulder clay and the inclusions are probably of Triassic, Jurassic and Cretaceous origin. It is unclear what the function of any of the groups might have been but there are clear differences between the groups and so probably each group was used for a different purpose.

### Further Work

The function of at least two of the three groups could be established by the use of thin section and chemical analysis. Fabric C is represented by too small a sample for further study. Thin section analysis would test the suggested source of the clay whilst the ICPS analysis would concentrate on establishing the sodium content, which is enriched in unleached estuarine clays.

Task	Unit cost	Quantity	Estimate
Thin section	£26.00 plus VAT	3	£78.00 plus VAT
Chemical Analysis (ICPS)	£26.00 plus VAT	13	£338.00 plus VAT
Grand Total			£416.00 plus VAT
Inc VAT			£488.80

### Retention

All of the material comes from stratified deposits and should be retained for future study. The undiagnostic fragments could be weeded out but even these could be used for fabric analysis.

### Appendix 1

Context	Description	Form	Part	Nosh	NoV	Weight
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1007	IRREGULAR FRAG WITH SMOOTH GROOVE, POSSIBLE WATTLE	DAUB?	FRAG	1	1	35
1007	IRREGULAR FRAGS	FIRED CLAY	FRAGS	11	11	67
1011	FLAT SURFACE ON FRAG 6 THICK	FIRED CLAY	FRAG	1	1	1
1019	IRREGULAR FRAG	FIRED CLAY	FRAG	1	1	3
1020	IRREGULAR FRAG	FIRED CLAY	FRAG	1	1	20
1033	FLAT AND THEN CURVED CONVEX SURFACE	FIRED CLAY	FRAG	1	1	36
2003	CURVED CONVEX SURFACE	FIRED CLAY	FRAG	1	1	48
2005	IRREGULAR FRAG	FIRED CLAY	FRAG	1	1	3
2006	IRREGULAR FRAGS	FIRED CLAY	FRAGS	4	4	19
2006	FLAT SURFACE ON IRREGULAR FRAGS	FIRED CLAY	FRAGS	3	3	37
2007	FLAT SURFACE ON FRAG 9 THICK	FIRED CLAY	FRAG	1	1	11
2007	IRREGULAR FRAGS	FIRED CLAY	FRAGS	2	2	14
2007	CURVED CONVEX SURFACE	FIRED CLAY	FRAG	1	1	18
2011	CURVED CONVEX SURFACE ON IRREGULAR FRAG	FIRED CLAY	FRAG	1	1	136
2011	IRREGULAR FRAG WITH STRAW/GRASS INDENTS	FIRED CLAY	FRAG	1	1	10
2011	IRREGULAR FRAG	FIRED CLAY	FRAG	1	1	22
2011	IRREGULAR FRAGS WITH POSS SURFACES	FIRED CLAY	FRAGS	6	6	28
2013	FLAT SURFACE ON IRREGULAR FRAGS	FIRED CLAY	FRAGS	2	2	8
2013	HAND SQUEEZED CLAY	FIRED CLAY	FRAG	1	1	128
2013	IRREGULAR FRAGS	FIRED CLAY	FRAGS	4	4	16