

## Pottery and Ceramic Building Material from site 1997.60/61. Water Pipeline, Kexby, York: Draft Publication Report

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### Introduction

All fragments of pottery, brick, tile and daub recovered from the fieldwalking (1997.60) and excavation (1997.61) were submitted for examination. The fieldwork produced a small collection of later prehistoric pottery (ie late Bronze Age to early Roman), some Romano-British pottery and tile, some medieval pottery (and possibly tile) and a quantity of post-medieval and early modern pottery and building material. Much of the prehistoric and Romano-British material was derived from the settlement investigated in Field 46, although there was a wider scatter of Romano-British material. The prehistoric pottery is potentially of some interest given current uncertainty about its mode of manufacture and source, although the study of the material from Kexby in isolation only serves to highlight the possibilities that a wider survey might reveal. The later material is in itself of little interest but will eventually help to establish the economic hinterland of York and the relationship of the city to the surrounding countryside.

### Description

All items were recorded to common name and form level and any significant details of manufacture, decoration or use were recorded as comments. Quantification was by sherd/fragment count alone and the data was entered into a MS Access 2 database, a copy of which has been deposited with the site archive.

**Table 1: Pottery sherd count by broad date by field number**

Period	F2	F12	F14	F17	F19	F24	F34	F38	F43	F44	F45	F46	F47	F56
late prehist						2						59		
late prehist/roman												10		
roman	1					1	1	2				19		
med	2				2			11				2	1	
pmed	1			1	2	1		3	4		2	1	1	4
emod	3	1	3	2	2	10		5	24	2	2	5	4	13

### Prehistoric

Sixty-one sherds of later prehistoric pottery were recorded. All but two (which were found in fieldwalking in Field 24) were from Field 46. All the vessels were tempered with moderate fragments of angular rock and were thick-walled and hand-built. The vessels were of several classes: storage jars, jars, bowls and dishes (Fig 1 No 4). The storage jars were represented by thick body sherds from vessels with diameters in excess of 300mm. No rims or bases of this class were present. The smaller jars varied in rim form (Fig 1 Nos 2, 3 & 5) but all had flat bases (Fig. 1 No 6). The bowl may actually be a globular jar, since its original orientation is uncertain (Fig 1 No.1). Study of Iron Age pottery from Easingwold has shown that similar wares were present there, alongside finer, sand-tempered types. A variety of materials were used to temper the coarser fabrics including quartzite, dolerite, granite, sandstone and slag. Similar temper has been identified by Ian Freestone and Peter Wardle on later prehistoric sites on the Yorkshire Wolds and the Vale of Pickering. Their work suggests that the raw materials used to provide the coarser temper fragments in these vessels does not occur locally in the sort of quantities found in the pottery but can be found as isolated boulders and pebbles in local boulder clays and glacial sands. They suggest that for unknown reasons prehistoric potters selected rock fragments by hand and reduced them to a suitable size by crushing. As evidence in favour of this hypothesis they give the fact that individual vessels often contain mainly fragments of the same rock type, but that there is a wide variety of rock types present *in toto*. Study of samples of the natural gravel found on the Easingwold site by the author failed to find any erratic fragments and it seems clear that the vessels could not have been made at Easingwold itself. Similarly, the Kexby site lies on fine sand, totally unlike the temper found in the later prehistoric pottery. It is likely, therefore, that manufacture of

this later prehistoric “erratic-tempered” ware took place on supra-site basis and that there was trade, or exchange, of complete vessels.

It is not thought that this tradition survived into the Romano-British period and there is apparently a great deal of conservatism in the potting tradition, so that it is not possible to date vessels closely.

A second fabric, tempered with large fragments of calcite (now leached) also occurs on other later prehistoric sites in Yorkshire. Petrological analysis has shown that the calcite is derived from veins formed within the chalk and typically occurs with other minerals of Cretaceous origin (flint, chalk, glauconite). Several fabric groups are known but it is not known whether they vary in date, source or simply in a random manner. The sherds all from flat-bottomed jars (Fig 1 Nos 7 and 8).

Much of this pottery was stratified in the fills of linear features revealed in the salvage excavation and area strip. Ten features produced sherds of either the erratic-tempered fabric (PERR) or the calcite-tempered one (PCALC) and thus might be of pre-Roman date.

**Table 2. Prehistoric and/or early Romano-British pottery sherd counts from the salvage excavation**

Context	Feature	PCALC	PERR
1006	1016		2
1075	1076		3
1074	1077		3
1082	1083	1	
1089	1083		2
1097	1098		1
1092	1101	3	7
1100	1101	2	
1096	1102		2
1099	1102		1
1113	1118		1
1123	1130		4
1114	1141		2

Further knowledge of the manufacture and source of this pottery will only come from more scientific analysis which can be used to confirm the range of temper types used in the Kexby vessels and perhaps establish whether or not the Easingwold, Wolds and Vale of Pickering vessels could have been made utilising the same resources or whether there are differences between the fabrics from site to site. Accordingly, a sample of twelve sherds was selected for thin-section and ICPS analysis (Table 3).

**Table 3. List of samples and analytical technique used**

Context	cname	TS	ICPS	Action	TSNO
1093	PERR	Y	Y	DR	AG123
1123	PERR	Y	Y	DR	AG124
1006	PERR	Y	Y	DR	AG125
1092	PERR	Y	Y	DR	AG126
1007	PERR	Y	Y	DR	AG127
1074	PERR	Y	Y	DR	AG128
1100	PCALC	Y	Y		AG129
1037	PCALC		Y		AG130
1007	PCALC	Y	Y		AG131
1037	PCALC	Y	Y		AG132
1082	PCALC	Y	Y	DR	AG133
1092	PCALC	Y		DR	AG134

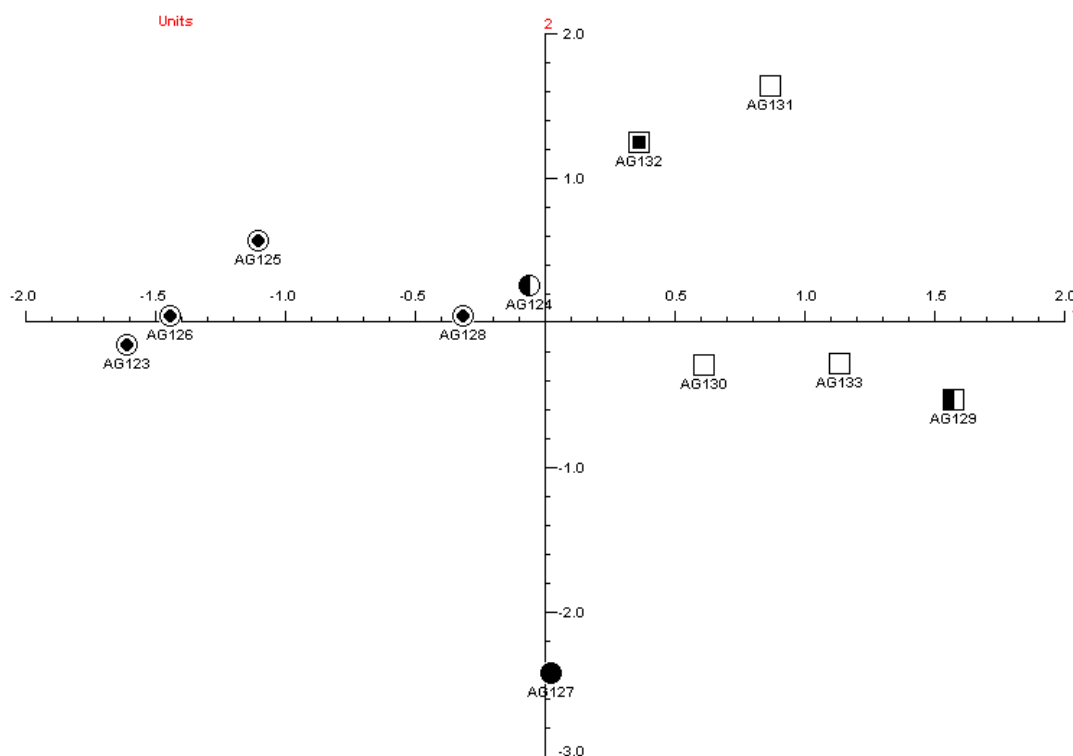
Analysis of the thin-sections demonstrates that only one sample, AG127, contained erratic rock fragments - abundant angular pieces of dolerite - whilst a second sample, AG124, contained moderate fragments of fayalitic slag, recognised at Easingwold as a tempering agent in several Iron Age vessels. The remaining PERR samples were all tempered with a sand derived from a coarse sandstone. The clay matrix of each sample was similar, containing few visible inclusions except for sparse flecks of muscovite. All were low fired (their clay matrices were still anisotropic).

These results are similar to those achieved at Easingwold, where coarse sandstone-sand was again by far the most common temper and on this evidence, combined with the fact that the subsoil at Kexby is different from the temper found in these vessels, it is possible that the Kexby sherds were from traded vessels, perhaps the same ones that supplied Easingwold.

The samples of calcareous wares PCALC were all entirely de-calcified but the presence of calcite and, rarer, chalk temper could still be demonstrated both by the shape of the voids left by the temper and by the character of the remaining inclusions. Highly rounded, polished quartz grains, typical of the Greensand, were noted in two of the samples, AG129 and AG134. Angular fragments of chert or flint were present in two other samples, AG131 and AG133. The final sample, AG132, contained abundant angular quartz fragments, up to 1.5mm across, in a notably silty matrix (paralleled in several Cretaceous deposits). Fragments of fayalitic slag up to 1.0mm across, were found in the same samples that contained the polished, Greensand-derived quartz grains. None of the samples contained glauconite, a distinctive feature of some of the Romano-British calcite tempered wares from the Vale of Pickering.

These results confirm that PCALC is indeed likely to have been a product of the Vale of Pickering but reveal unexpected detail - most notably the use of slag temper. This temper has not been noted in other thin-sections of calcite-tempered wares of Yorkshire origin, all of which have been of Romano-British date. However, the two slag-bearing samples are from contexts in the same ditch fill, 1101, and it is necessary to examine a larger sample before one can say that this use of slag is a useful chronological indicator, or indeed found in more than these two sherds. Nevertheless, to have found three distinctive fabric groups within five samples of a ware in which the inclusions appeared to have entirely weathered out is a remarkable result, which again points to the potential value of applying this technique to a larger and wider sample.

The ICPS results were analysed using Principal Components Analysis, using the WinBASP package (Fig. 1).



**Figure 1. PCA plot of ICPS data from Kexby**

There are too few samples for detailed analysis of the results to be worthwhile but it can nevertheless be shown from the PCA plot that there is a major separation between the dolerite-tempered vessel, AG127, and the remaining ten samples. This is the only sample to be distinguished by Principal Component 2. The remaining ten samples plot in a roughly linear cluster, along the axis of Principal Component 1, with the sandstone-sand tempered vessels at one end and the calcite tempered vessels at the other. Further samples are required to see whether or not the apparent separation of the calcite tempered ware into its three subgroups along this axis is repeated with a larger sample but it is already clear that the slag-tempered PERR sample, AG124, lies at the extremity of the sandstone-sand tempered cluster. Interpreting these results in terms of sources is perhaps premature. Nevertheless, the likelihood of the

dolerite-tempered vessel having a different source from the remainder, and being an import into this region is high.

## Roman

Two fragments of Romano-British tile were identified by S Garside-Neville (Field 23 fieldwalking and F46 context 1146). A small collection of pottery was present in fieldwalking Fields 24, 34 and 38 and from the excavated area in Field 46. Examination of this pottery by B Precious suggests that is of 2<sup>nd</sup> to 3<sup>rd</sup> century date. It includes a sherd of Samian ware and a colour-coated beaker and this, together with the tile, suggests a Romanised settlement.

**Table 4. Summary of Romanised wares by sherd count (includes field scatter)**

Code	Full Name	Sherds
CC	Colour-coated	1
CR	Cream-bodied	1
GREY	Greyware	7
OX	Oxidized	15
SAMCG	Central Gaulish samian	1

## Medieval

A small collection of medieval pottery was found, probably all of 13<sup>th</sup> to 14<sup>th</sup>-century date. The finds were mainly from fieldwalking in Fields 19 (2), 38 (7) and 48 (1). A single fragment was found in the excavation (context 1140). The wares present are all common on medieval sites in York and the surrounding countryside (York whitewares, produced at Brandsby and elsewhere; Beverley Orange ware and Humber-type wares, produced at sites in the Humber estuary and Red Sandy ware, of unknown origin, but found in York). The sites probably looked to York for the supply of pottery.

**Table 5. Summary of medieval pottery by sherd count**

Code	Sherds
BEVO	1
HUMB TYPE	3
RED SANDY	1
YORK GRITTY	2
YORK WHITE	11

## Post-medieval

A quantity of post-medieval pottery was recovered, almost all of 19<sup>th</sup>-century or 20<sup>th</sup>-century date. The wares were probably brought onto the fields with manure. The date-range of the wares present is probably mid 19<sup>th</sup>-century and later (there are very few sherds of Pearlware or Creamware or other distinctive late 18<sup>th</sup>/early 19<sup>th</sup>-century types, furthermore, the quantity of red earthenware 'country pottery' is very low, normally a sign of a late date). The earliest datable piece, however, is a mid-18<sup>th</sup>-century Saltglazed Stoneware plate with embossed border. Three sherds of this vessel were found, all in different fields (Fields 2, 45 and 56). In all likelihood, this was an heirloom when broken and discarded.

**Table 6. Summary of post-medieval and early modern pottery by sherd count**

Cname	full name	Sherds
CONP	Continental Porcelain	3
CREA	Creamware	3
DERBS	Derby Stoneware	3
ENGS	Unspecified English Stoneware	7
NCBW	19th-century Buff ware	1
PEAR	Pearl ware	3
TPW	Transfer printed ware	28
WHITE	Modern whiteware	28
BL	Black-glazed wares	8
CHPO	Chinese Export Porcelain	3
NOTS	Nottingham stoneware	2
PMED	Post-medieval Red Earthenwares	2

## Acknowledgments

The illustrations and computer input are the work of Alison Oliver. Building material was identified by Sandra Garside-Neville and Roman pottery was identified by Barbara Precious. The thin-sections were prepared by Alison Oliver and the ICPS analysis carried out by Dr N Walsh of Royal Holloway College, London.

Fig 1. Later Prehistoric and ?early Roman Pottery from Kexby, Yorkshire (1997.60/61). 1, YORYM 97.61, F46, 1006, PERR, BOWL OR JAR; 2, YORYM 97.61, F46, 1123, PERR, JAR; 3, YORYM 97.61, F46, 1074, PERR, JAR; 4, YORYM 97.61, F46, 1093, PERR, DISH OR JAR; 5, YORYM 97.61, F46, 1007, PERR; 6, YORYM 97.61, F46, 1092, PERR, JAR; 7, YORYM 97.61, F46, 1082, PCALC, JAR; 8, YORYM 97.61, F46, 1092, PCALC, JAR.