

## **Assessment of the post-Roman Pottery from Archaeological investigations at Clampgate Road, Fishtoft, Lincolnshire (fcr03)**

**Revised December 2004**

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### **Introduction**

A quantity of post-Roman pottery was recovered during excavation work at Clampgate Road Fishtoft; the material is mainly middle Saxon in date. In total, eight hundred and fifty-nine sherds of pottery representing a maximum of five hundred and twelve vessels were recovered.

The assemblage was laid out stratigraphically using a preliminary matrix provided by the site excavator and then quantified by three measures: number of sherds, weight and vessel count within each context. Visual fabric identification of the Saxon pottery was undertaken by x20 binocular microscope. The pottery data was entered on an access database using fabric codenames (cnames) developed in Lincoln and during the East Midlands Anglo-Saxon Pottery Project. One new fabric type was noted and this has been given the temporary coding of MAX Fabric 1 pending further petrological investigation to determine the typology and source of the sherds.

### **Condition**

The pottery is mainly in a slightly abraded condition with sherd size varying widely (between less than 1gm and 123gm) but mainly falling into the small to medium range (below 15grams). One hundred and seventeen vessels are represented by more than one sherd, however only one cross-context join was noted. More than 30% of the vessels have external soot residues suggesting that they have been used over an open fire. Several of these vessels also have soot deposits internally, whilst a smaller number have internal soot or carbonised deposits only. The shell and limestone temper has been leached from only eight of the vessels containing these inclusions (349 shell-tempered vessels in total).

### **The pottery**

In total about five hundred and twelve vessels in fifty-one identifiable main post-Roman ware types were recovered (Table 1). So far as it is possible to determine most of the sherds come from medium-sized middle Saxon vessels (Table 2), probably jars of a rounded or bucket shape. Most of the vessels are in shell-tempered Maxey-type fabrics (MAX, MAXQ and RMAX). Twelve of these middle Saxon vessels are large-sized and seventeen are small vessels; the rest of the sherds appear to be from medium-sized vessels, probably jars. Pottery of late Saxon, medieval and post-medieval date etc is also present in the assemblage but includes few vessels of note.

*Table 1. Pottery types with total quantities by sherd and vessel count*

cname	full name	Total sherds	Total vessels
BERTH	Brown glazed earthenware	2	1
BEVO1	Beverley Orange ware Fabric 1	1	1
BL	Black-glazed wares	3	2
BOSTLT	Boston Glazed ware - Lincoln type	2	2
BOSTTT	Boston Glazed ware - Toynton type	15	3
BOU	Bourne D ware	2	2
BOUA	Bourne-type Fabrics A, B and C	1	1
CIST	Cistercian-type ware	2	1
DUTR	Dutch Red Earthenware	26	1
ECHAF	Early to mid Anglo-Saxon chaff-tempered ware	5	3
ELGQC	East Lincolnshire Glazed Quartz and Chalk fabrics	1	1
ELY	Ely-type ware	1	1
EMHM	Early Medieval Handmade ware	30	29
FREC	Frechen stoneware	1	1
GRE	Glazed Red Earthenware	2	2
GRIMT	Grimston-type ware	2	1
IPS	Ipswich-type ware	48	40
LKT	Lincoln kiln-type shelly ware	12	12
LS/SNLS	Late Saxon/Saxo-Norman Lincoln Sandy ware	2	2
LSAX	Late Saxon	2	2
LSAXX	Late Saxon Non-local Fabrics	1	1
LSH	Lincoln shelly ware	4	4
LSW1/2	12 <sup>th</sup> -13 <sup>th</sup> century Lincoln Glazed ware	1	1
LSW3	14 <sup>th</sup> to 15 <sup>th</sup> century Lincoln Glazed Ware	1	1
LSWA	Lincoln Glazed ware Fabric A	1	1
MAX	Northern Maxey-type ware	457	245
MAXQ	South Lincs maxey-type ware	4	4
MEDLOC	Medieval local fabrics	3	3
MEDX	Non Local Medieval Fabrics	9	9
MISC	Unidentified types	8	2
MSAXX	Non-local mid-Saxon fabrics	6	5
NOTGL	Nottingham glazed ware Light Bodied	2	2
NOTS	Nottingham stoneware	1	1
POTT	Potterhanworth-type Ware	1	1
PREH	Prehistoric wares	1	1

R	Roman pottery	2	2
RGRE	Reduced glazed red earthenware	1	1
RMAX	Southern Maxey-type ware	130	73
SAIG	Saintonge green-glazed ware	1	1
SAIM	Saintonge mottled glazed ware	1	1
SCAR	Scarborough ware	1	1
SLSQ	South Lincs Shell and Quartz (generic)	2	2
SLST	South Lincolnshire Shell Tempered ware	7	7
SNEOT	St Neots-type ware	2	2
ST	Stamford Ware	6	6
STANLY	Stanion/Lyveden ware	2	1
STSL	Staffordshire/Bristol slipware	3	1
TB	Toynton/Bolingbroke wares	4	4
TGE	Tin-glazed earthenware	2	2
TORK	Torksey ware	1	1
TOY	Toynton Medieval Ware	31	16
TOYII	Toynton Late Medieval ware	1	1
UNGS	Unglazed Greensand-tempered fabrics	1	1
WEMS	Wheelthrown Early Medieval Shell-tempered	1	1

*Table 2. Pottery by ceramic period with total quantities by vessel count*

Ceramic period	Total vessels
Prehistoric	1
Roman	2
Anglo-Saxon (5 <sup>th</sup> to 8 <sup>th</sup> )	2
Middle Saxon (late 7 <sup>th</sup> to mid 9 <sup>th</sup> )	367
Late Saxon (late 9 <sup>th</sup> to mid 11 <sup>th</sup> )	22
Saxo-Norman (11 <sup>th</sup> to 12 <sup>th</sup> )	8
Medieval (12 <sup>th</sup> to 15 <sup>th</sup> )	88
Late medieval to early post-medieval (mid 15 <sup>th</sup> to mid 16 <sup>th</sup> )	9
Post-medieval (17 <sup>th</sup> to 18 <sup>th</sup> )	11
Not known	3
Total vessels	512

### **Anglo-Saxon to middle Saxon**

Two handmade chaff-tempered vessels are of Anglo-Saxon type, however this fabric can continue in use through the middle Saxon period (see below). The middle Saxon vessels are of five types:

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Northern Maxey-type (MAX), Southern Maxey-type (RMAX), South Lincolnshire Maxey-type (MAXQ), regionally imported Ipswich ware (IPS) and a small number of shell-tempered sherds that appear not to be of Maxey-type (MSAXX). A high number of Ipswich ware vessels (40 vessels) were recovered from the site, however, only one identifiable pitcher was present.

### **Late Saxon to Saxo-Norman**

Thirty vessels date to the period between the late 9<sup>th</sup> and early/mid 12<sup>th</sup> centuries. Eighteen of these vessels are of Lincoln production and date to the 9<sup>th</sup> or 10<sup>th</sup> centuries. Only two of these vessels are stylistically dateable, both are bowls with inturned rims dating to between the early/mid and late 10<sup>th</sup> centuries. Six vessels are in Stamford ware fabrics and two are in St. Neots -type ware.

### **Medieval**

Eighty-eight vessels in a range of local and regionally imported fabrics are of medieval type. The earliest type is Early Medieval Handmade ware (EMHM with twenty-nine vessels) a quartz-tempered coarseware which starts in the 12<sup>th</sup> century and continues in use in the Boston area until the mid to late 13<sup>th</sup> century. A wide range of other types occur, including vessels from known centres at: Beverley, Bourne, Ely, Lincoln, Nottingham, Potterhanworth, Scarborough, Stanion/Lyveden and Toynton. Two continentally imported vessels from the Saintonge region of France (SAIG and SAIM) also occur.

### **Late Medieval to Early Post-Medieval**

A small group of nine vessels belong to the period between the mid 15<sup>th</sup> and mid 16<sup>th</sup> centuries. The material includes vessels from Bourne and Toynton/Bolingbroke as well as a Cistercian ware cup and a substantial part of a Dutch Red Earthenware (DUTR) cooking pot.

### **Post-Medieval**

Only eleven post-medieval vessels were recovered, most dating to the second half of the 17<sup>th</sup> and 18<sup>th</sup> centuries.

## **Assessment of the Assemblage**

### **The Early to Mid Saxon pottery**

Only five sherds, representing two vessels, of handmade black-fired vessels of early to mid Anglo-Saxon date were recovered from the site (ECHAF). Such vessels could be of early Anglo-Saxon date and evidence for 5<sup>th</sup>- to 7<sup>th</sup>-century occupation in the area or they might have been produced in the later 7<sup>th</sup> or 8<sup>th</sup> centuries in continuation of earlier traditions. If the sherds come from the core area

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of Maxey ware production then it is more likely that they pre-date the Mid Saxon period but if they come from peripheral areas then it is possible that they may actually have been contemporary. It is clear from excavations at Flixborough that such wares did continue to be used into the later 7<sup>th</sup> century since there are at that site smashed vessels of ESGS (tempered with a quartzose sand derived from the lower Cretaceous rocks which outcrop along the western and southern flanks of the Lincolnshire Wolds) and CHARN (tempered with biotite-rich acid igneous rock fragments).

Only one of these sherds is large enough for destructive analysis, although it would, however, be worthwhile examining these three sherds at x20 magnification using a stereo-microscope to amplify the evidence gained from the assessment.

*(TASK 1 Examination of early to mid Anglo-Saxon sherds)*

One vessel, however, could be sampled for thin section. Initial visual examination indicates that it is tempered with organic matter (ECHAF) together with fragments of possible basic igneous rock and sandstones. Such inclusions suggest a source in the boulder clay to the east of the Wolds, some of which probably underlies the Fishtoft site itself. Similar inclusions, however, would be found in beach and river sands in the Lindsey Marshes. Thin section and chemical analysis should be able to differentiate between these various options. It is possible that a sherd from the 2003 Clampgate Road site is also of early to mid Anglo-Saxon date and this too is large enough to sample.

*(TASK 2 TS and ICPS analysis of ECHAF)*

**The Mid Saxon pottery**

Six hundred and forty-five sherds of definite mid Saxon date were recovered. The size of this collection distinguishes it from most previously known collections in the county. Flixborough produced over 5000 sherds, which places it in a category of its own, but Fishtoft is the second largest collection, followed closely by Quarrington, which produced 628 sherds and Riby Crossroads with 317 sherds. Only two other collections of mid Saxon pottery in the county have more than 100 sherds: Gosberton (242 sherds) and Normanby-le-Wold (217 sherds).

Given the rarity of collections of this date the opportunity to study the pottery in some detail should be taken since it is possible to establish the sources of supply of the pottery and to compare this data with that from other moderately large collections, and then to use data from the smaller collections to provide a regional context.

Five major middle Saxon fabric groups were recognised at Fishtoft (Table 3). Although Northern Maxey-type ware (MAX) was the most frequent type measured either by sherd count or weight, followed by Southern Maxey-type ware (RMAX) and Ipswich ware (IPS), the relative frequency of the Ipswich-type wares was much greater by weight than count. This is due to a considerable difference

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in mean sherd weight. This difference could be interpreted in several ways: thicker walled vessels tend to form heavier sherds; Ipswich ware is less susceptible to mechanical weathering, since the shell inclusions in the other wares tend to leach out and allow groundwater and roots to penetrate the fabric. All other factors being equal, a higher mean sherd weight would suggest that the larger sherds had undergone less recycling in the ground than the smaller sherds.

*Table 3*

Cname	Sherds	Maximum vessels	Weight	Mean Weight
IPS	49	40	1031	20.60
MAX	487	245	3760	8.89
MAXQ	4	4	37	9.25
MSAXX	6	5	57	10.3
RMAX	132	73	2134	9.52
Total	678	367	7019	10.32

#### Ipswich ware (IPS)

The source of Ipswich ware seems to have been conclusively and finally established through the Ipswich ware survey, which examined sherds of Ipswich ware from sites throughout England. No regional fabric groups were recognised, either using thin sections or chemical analysis and the range of fabrics found in the ware were seen to reflect the use of varying proportions of a small number of sand and clay outcrops in the Ipswich area. The sherds from Fishtoft are identical under x20 magnification with those from Ipswich itself and contain the same range of fine quartz sand/silt, a sand containing moderate amounts of polished quartz and rare angular flint. Little would be gained from further analysis of this group.

#### Northern Maxey-type ware (MAX)

Northern Maxey-type ware, however, appears to have been produced from outcrops of Jurassic clay on the eastern, dip, slope of the Lincolnshire Jurassic ridge, tempered with a sand composed of shelly limestone, probably from the Great Oolite outcrop. An obvious source for this ware would be the Witham Gap, and it is unlikely to have been made as far south as Sleaford, since at the Quarrington site, immediately to the south of Sleaford, MAX is rare. A source, or sources, to the north of the Witham Gap is possible, however, and further work is required to establish the similarity of the Fishtoft Northern Maxey-type wares to those found elsewhere.

With this in mind, Jane Young has identified a number of subfabrics within the Maxey-type ware group. Most of these reflect differences in texture (A, B and C), which themselves are likely to reflect the way in which the clay was prepared as much as the use of different raw materials. However,

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there are in addition a number of sherds where inclusions additional to the shelly limestone were noted. These include echinoid spines (Sub-fabric E), and sherds with this present do tend to be more common in northern Lincolnshire than in central Lincolnshire.

*Table 4. Northern Maxey subfabrics*

Subfabric	Sherds	Vessels	Weight	Mean Weight	TS and ICPS
-	64	26	25	0.39	
A	1	1	1	1.00	
A/B	1	1	3	3.00	
B	303	178	2379	7.85	17
B + clay pellets ?	1	1	4	4.00	1
C	13	6	185	14.23	3
E	9	6	44	4.89	3
Fabric 1	48	15	210	4.38	6
U	1	1	63	63.00	1
U + quartz	13	7	108	8.31	4
U + rounded quartz	3	3	95	31.67	2

A total of 35 sherds have been selected for further analysis. These are a mixture of typical examples (including examples of subfabrics B, C and E, all of which have some typological features present) and atypical ones (Fabric 1, U, U + quartz, U + rounded quartz). Despite the visual petrological similarity of the Fabric B sherds to Fabric B examples from other parts of the county there appear to be subtle manufacturing, vessel and rim form differences. The large number of samples of Fabric B vessels covers what may either represent different manufacturing processes or different production sites.

A considerable body of petrological and chemical data now exists to compare with these sherds, but most comes from northern Lincolnshire, since it was collected as part of the Flixborough post-excavation programme. This collection would provide a good opportunity to study samples that might be expected to come from the Witham gap or thereabouts.

Four sherds of a variant fabric recognised at Quarrington, MAXQ, were present. Two examples of this fabric from Quarrington were analysed as part of the Flixborough project and were shown to be quite distinct from the Northern Maxey wares. Three of the Fishtoft examples are large enough to sample and their analysis would provide a test of whether this group is indeed distinct or whether the difference was simply due to an abnormal composition of the samples. Assuming that the group was produced in the Sleaford area, then it might provide evidence for the use of the Old Slea during the mid Saxon period.

#### Non-local wares (MSAXX)

Six sherds (from five vessels) have a shell temper, broadly similar to Maxey wares, but do not share the same typological characteristics. At x20 magnification, some of these are quite distinct and in one case the sherd may contain an erratic basic igneous rock which suggests a coastal origin whilst the texture of the fabric is similar to Roman Dales-type shelly ware, possibly made on the south bank of the Humber to the north of Flixborough. It is suggested that all five of these vessels are analysed using thin section and chemical analysis as they may provide evidence for coastal trade.

*Table 5*

sub fabric	analyse	analyse ?	Grand Total
?		1	1
light firing shelly	1		1
shell	1		1
shell + erratic ?	1		1
shelly	1		1
Grand Total	4	1	5

#### (TASK 4 *TS and ICPS analysis of MSAXX*)

#### Southern Maxey-type ware (RMAX)

Southern Maxey-type ware is recognised by the presence of punctate brachiopod shell and has much more varied shell fauna than Northern Maxey ware. It is suggested that unlike northern Maxey-type ware this fabric was produced from naturally shell-tempered marl. Similar shelly marls have been exploited in Bedfordshire in the Roman period and in Northamptonshire in the medieval period. In both cases, it is likely that an upper Jurassic clay was the source. Although upper Jurassic clays occur in Lincolnshire they are mostly obscured by fluvioglacial deposits (in the central clay vale) and by holocene silts and clays in the fens. Nevertheless, there are exposures of Oxford Clay, for example in the Silk Willoughby area to the south of Sleaford. However, there is no evidence that shelly marls occur this far north. Analysis of the distribution of Southern Maxey ware suggests that it was probably produced to the southwest of the county and distributed via the fen river systems to the Wash. Thus, the Fishtoft finds were probably coastally traded from one of the more southerly river mouths, such as the Welland, rather than the Witham.

One hundred and thirty sherds of Southern Maxey-type ware were present, representing no more than seventy-three vessels. Eleven of these vessels were chosen for thin section and chemical analysis. The purpose of analysing these samples is to confirm the presence of punctate brachiopod shell, to test for the presence of limestone matrix (present in Northern Maxey-type ware but absent



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in Southern Maxey-type ware) and to see whether the chemical composition indicates a single source or several groups.

There are no definite imported wares present (but see below) but the English wares indicate that the site was probably supplied from inland potteries in the Lincoln and Sleaford areas as well as with pottery produced to the southwest of the county, probably in Cambridgeshire, Northamptonshire or Bedfordshire), which probably arrived through coastal trading, and with pottery produced at Ipswich, also coastally-traded. Although this degree of sophistication in the 8<sup>th</sup> century is no longer surprising it still requires confirmation and elaboration through further analysis.

*(TASK 5      TS and ICPS analysis of RMAX)*

### **Anglo-Scandinavian pottery**

Although there is a scatter of pre-conquest pottery on the site, including Lincoln-made wheelthrown shelly wares (LKT and LSH) which ceased to be produced at the beginning of the 11<sup>th</sup> century, there is no evidence for a continuity of settlement from the mid Saxon to the Anglo-Scandinavian period.

Various diagnostic 9<sup>th</sup>- to mid 10<sup>th</sup>-century wares (such as ELFS, LG, and LSLS, together with the earliest types of LKT and TORK) are absent. There are two sherds that might be of late 9<sup>th</sup>/early 10<sup>th</sup>-century Lincoln sandy ware (LSLS) but these are also quite possibly of later, early to mid 11<sup>th</sup>-century, date (SNLS). There are, however, three sherds of wheelthrown greyware which are not recognisable as Anglo-Scandinavian Lincolnshire products (LSAX and LSAXX). These may be non-local Anglo-Scandinavian wares or they may be mid Saxon continental imports. One of these has been selected for analysis and comparison with mid-Saxon imported wares from various sites in Eastern England.

*(TASK 6      TS and ICPS analysis of LSAXX)*

The pottery has been fully archived to the standards for acceptance to the Lincoln City and County museum. Further recording work should only be necessary if scientific analysis proves that the sherds identified by x20 microscopic analysis as Fabric B are not in fact one cohesive fabric group. If this was the case, the sherds submitted for thin-section and ICPS analysis would be re-examined at x20 magnification to see if it was possible retrospectively to see identifiable textural differences. Further visual identification of significant groups would then be needed.

*(TASK 7      further x20 visual analysis of selected groups)*

## **Comparanda**

### **Examination of comparative material**

There are twenty-seven assemblages recorded on the East Midlands Anglo-Saxon database that lie within 25 miles of Fishtoft and contain middle Saxon pottery (some of which are noted by Palmer-Brown 1996). These assemblages range from a few sherds to that at Quarrington, the third largest middle Saxon group recorded in the county. A number of these sites were not viewed during the compilation of the East Midlands Anglo-Saxon database and therefore are only recorded as having middle Saxon pottery. They are not numerous and one days work would be sufficient to fully record these groups to enable comparison with the Fishtoft material.

*(TASK 8 Further recording of comparative material)*

### **Comparative study of Northern Maxey-type ware**

Most of the chemical analyses of Northern Maxey-type ware available for comparison are from sites in northern Lindsey (now North Lincolnshire and Northeast Lincolnshire) which were examined as part of the Flixborough project. A sample of vessels from central Lincolnshire is required and the best collection to choose would be The Lawn, City of Lincoln, which is the largest collection of mid Saxon pottery from the Witham valley. A sample of 6 vessels is required.

*(TASK 9 TS and ICPS study of Northern Maxey-type wares from the Lawn)*

### **Comparative study of Southern Maxey-type ware**

Fishtoft is the only site north of the Witham so far recorded to have produced sherds of Southern Maxey-type ware. Sherds of Southern Maxey from Quarrington and Gosberton and MAXQ from Quarrington should undergo ICPS to compare to the sherds recovered from Fishtoft. Vessels from Quarrington and Gosberton have been drawn and these should be compared with those from this site.

*(TASK 10 TS and ICPS analysis of selected sherds from Quarrington and Gosberton, comparative analysis of rim and form types)*

### **Stratigraphic Analysis**

Initial work suggests there may be a pattern to the distribution of the different middle Saxon fabric types across the site, although at this stage it is not possible to say whether this is chronological or spatial. There are few sizeable groups amongst the assemblage recovered from this site and preliminary work suggests there is little typological change in vessel or rim shape, however once a site narrative is written there is great potential for integrating the pottery analysis with the

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stratigraphic sequence to enhance chronology and functional interpretation. This work should involve studying the intra-site distribution of the various fabrics, vessel classes and rim forms.

*(TASK 11 integration of pottery within site sequence )*

### **Drawing**

A total of twenty-four vessels have been selected for illustration. These should be compared with form and rim types from other sites. It is assumed that the costing and management of the pot drawing will be covered by APS and is not included here. However, the typological analysis and checking of the drawings at the pencil stage are included.

*(TASK 12 Pottery drawing, catalogue and comparative analysis of form types)*

### **Pottery from other sites in Fishtoft**

All the previous collections of Anglo-Saxon pottery from excavations and fieldwork in Fishtoft have been recorded as part of the East Midlands Anglo-Saxon Pottery Project but ought to be re-examined following the analyses carried out as part of this project so as to bring their records up to the same standard as the final Fishtoft pottery database. At this point, the various collections can be compared, which may lead to insights concerning the function and date of the Fishtoft Anglo-Saxon settlement. These sites include the 1995 excavations at White House Lane undertaken by PCA (which produced late 9<sup>th</sup> to early 10<sup>th</sup>-century pottery, absent from Clampgate Road), the 2001 excavations at White House Lane undertaken by JSAC (RGF01), the initial investigations at the Clampgate Road site (FRC03), which seem to have produced wares absent from the 2004 excavations. In addition, Hilary Healey has recorded the finding of Ipswich ware from Fishtoft, presumably from fieldwalking and this material may be in the Lincoln City and County Museum.

*(TASK 13 Re-examination of previous finds from Fishtoft)*

### **Discussion**

The majority of the pottery recovered from this site is of middle Saxon date and within this, shell-tempered Maxey-type ware is the main type. This middle Saxon pottery collection is the second largest to be recorded within the county of Lincolnshire (645 sherds). The collection is distinguished from most previously excavated assemblages in the county by its size. Major excavations at Flixborough produced over 5000 sherds, but Fishtoft is the second largest collection, closely followed by Quarrington, which produced 628 sherds. Only three other collections of mid Saxon pottery in the county are recorded as having more than 100 sherds: Riby Crossroads with 317 sherds, Gosberton (242 sherds) and Normanby-le-Wold (217 sherds).

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The site did not produce large groups of material that can be used statistically to establish precise chronologies for form and rim types, in fact initial assessment seems to suggest that there is little variation within the assemblage. Comparative studies, however, may be able to establish the similarities and differences between the material recovered from this site and others within the surrounding area. Initial assessment also suggests that there are different patterns of pottery use within the site, although at this stage it is not possible to determine whether they are chronological or spatial. Detailed spatial and contextual analysis of individual ceramic groups should take place to aid the overall interpretation of chronological, spatial and functional organisation within the site. Scientific analysis of the pottery should enable discussion of the settlement's integration within local, regional and long-distance exchange networks and this, in turn, provides further evidence to consider in the discussion of the function of the Fishtoft site. It is recommended, therefore, that a statement on the interpretation of the Fishtoft settlement, based on the pottery analysis, should be prepared for publication.

*(TASK 14 Statement on the interpretation of the Fishtoft site)*

### Statement of potential

- Further analysis of the middle Saxon pottery has the potential to answer questions of site chronology and provide indications of exchange links, character and status of the site.
- Full stratigraphic cross-referencing and integration of the ceramic material will enhance the understanding of site development and function.
- Scientific and comparative analysis will confirm ceramic fabric types allowing the material to be understood within the local, region and national context.

### Costing

Table 6 shows the 2004/5 and 2005/6 rates for the various resources required for this project. Table 7 shows the estimated cost of the 12 tasks identified here. The costings are based on 2005-6 rates and could be reduced appropriately should the project be commissioned to begin before the end of March 2005. All time required from Jane Young should be commissioned directly from her, otherwise VAT is chargeable.

*Table 6*

Code	Resource	2004/5 Rate	2005/6 Rate
JY	Jane Young	£175 per day	£180 per day

AGV	Alan Vince	£180 plus VAT per day	£184 plus VAT per day
TS	Thin section analysis	£22.50 plus VAT each	£23.00 plus VAT each
ICPS	Inductively-Coupled Plasma Spectroscopic Analysis	£23.50 plus VAT each	£24.00 plus VAT each

**Table 7**

TASK	JY	AGV	TS	ICPS	Total
Task 1		£ 23.00			£ 23.00
Task 2	£ 22.50		£ 46.00	£ 48.00	£ 116.50
Task 3	£ 22.50		£ 690.00	£ 720.00	£1,432.50
Task 4	£ 22.50		£ 115.00	£ 120.00	£ 257.50
Task 5	£ 22.50		£ 253.00	£ 264.00	£ 539.50
Task 6	£ 22.50		£ 23.00	£ 24.00	£ 69.50
Task 7	£ 540.00				£ 540.00
Task 8	£ 180.00				£ 180.00
Task 9	£ 90.00		£ 138.00	£ 144.00	£ 372.00
Task 10	£ 90.00		£ 276.00	£ 288.00	£ 654.00
Task 11	£ 360.00	£ 184.00			£ 544.00
Task 12	£ 180.00				£ 180.00
Task 13	£ 180.00				£ 180.00
Task 14	£ 180.00	£ 184.00			£ 364.00
Total	£1,912.50	£ 391.00	£1,541.00	£1,608.00	£5,452.50
VAT	£ -	£ 68.43	£ 269.68	£ 281.40	£ 619.50
Total inc VAT	£1,912.50	£ 459.43	£1,810.68	£1,889.40	£6,072.00

### Timetable

Three tasks should take place before any sampling of the sherds (Tasks 1, 8 and 12). Task 12 is dependent on illustration time being provided by APS. Then, all of the tasks involving thin section and ICPS analysis should take place at the same time (Tasks 2-6, 9-10). Task 7 can only take place once these analyses have been carried out. Finally, Task 11 and 13 followed by Task 14 complete the pottery analysis.

Jane Young could find time for this project from June 2005 onwards but could spare time to extract the sherds for analysis and drawing before April 2005 if required. Alan Vince could then carry out the analyses immediately. There is a 2-month turn-around time for these analyses.

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## Bibliography

Palmer-Brown (1996) "Two Middle Saxon Grubenhäuser at St Nicholas School, Church Road, Boston." *Lincolnshire Hist Archaeol*, 31, 10-19.