

## **Assessment of the Anglo-Saxon Pottery from Site 10, Silk Willoughby to Hatton Pipeline (HAT00)**

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### **Introduction**

All of the Anglo-Saxon pottery recovered from the line of the Silk Willoughby to Hatton pipeline was examined under a binocular microscope at a magnification of x20. The pottery fabrics were either assigned to previously identified fabric groups, defined by the East Midlands Anglo-Saxon pottery project and summarised in the corpus of Anglo-Saxon and medieval pottery for Lincoln (Young & Vince forthcoming), or were given broad classifications together with a description of the principal inclusions observed.

### **Quantification**

A total of 401 sherds were recorded, weighing in total 4181gm. Where sherds in the same context were clearly from the same vessel this was noted, giving a maximum number of vessels of 225. However, there are likely to be crossfits between sherds in different contexts which might well reduce the total somewhat. A search was made for cross-fits but none were found.

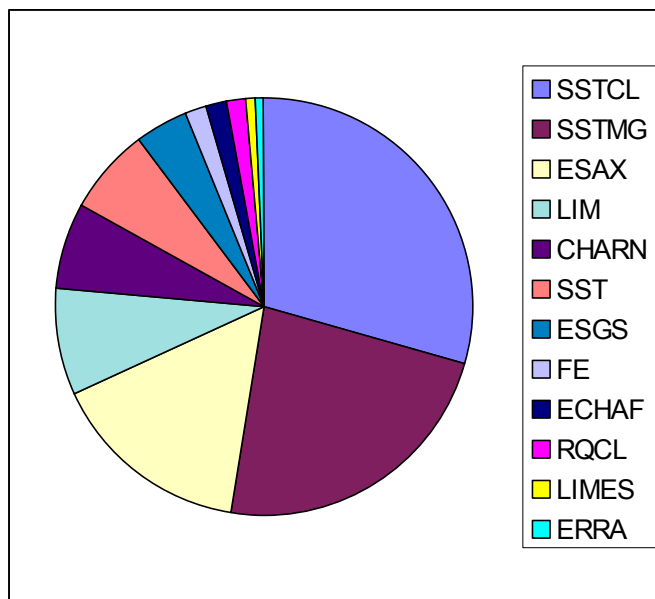
The average sherd size was 18gm although this is skewed by a few larger sherds and the mode is closer to 10gm. However, there was a considerable difference between contexts. In four contexts the average size was greater than 20gm (20395, 20329, 20403, 20282) and in four it was less than 5gm (20345, 20327, 20284 and 20357). There is no clear correlation of context type with sherd size, although one of the less fragmented collections came from 20395, a pot and bone scatter. This may be a rare example of primary refuse.

### **Fabrics**

The majority of the pottery from Site 10 either belonged to newly-defined fabrics (SSTCL and SSTMG) or to unclassified fabrics (ESAX - a code mainly assigned to sherds too small for identification), with only a third of the recorded vessels having fabrics of previously identified types. The latter group include types of probable Kesteven origin, which might be fairly local (LIM) but include sherds with acid igneous rock inclusions (CHARN, almost 7% of the recorded vessels), quartz grains which indicate an origin in the lower Cretaceous, of which the closest source is the western side of the Lincolnshire Wolds (ESGS), and basic igneous rock fragments derived from the glacial till, of which the closest source is the Lindsey Marshes (ERRA). Other fabrics were given broad classification which would require further scientific analysis. These include sandstone-tempered fabrics (SST), ironstone tempered fabrics (FE), chaff-tempered fabrics (ECHAF), rounded quartz sand tempered fabrics (RQCL) and limestone-tempered fabrics (LIMES).

The petrological characteristics of these fabrics suggest that many of them were tempered with naturally-occurring detrital sands and gravels and that the differences between the fabrics indicate different sources. However, there is clearly considerable variation in the raw materials and in one case (SSTCL) two coils can be seen in the sherd, each with a different composition (but both within the general classification of STTCL). In addition, a number of the sherds include sparse inclusions of acid igneous rock or biotite, and sometimes coarse-grained sandstone of Millstone Grit type, which are unlikely to occur naturally alongside the other inclusions in the fabric. In these cases, at least, it seems that sand/gravel from one source was added to a pottery fabric at another source. This phenomenon has often been suggested as an explanation for the occurrence of exotic rock and mineral types in coarse Anglo-Saxon pottery fabrics but it is rare to have distinctive inclusions in both the local and exotic fractions of the fabric which might be used to prove the point.

The Site 10 assemblage is atypical in the high quantity of sherds of fabrics SSTCL and SSTMG present. Further work is required to determine whether these two fabrics are locally produced or imported. This breakdown, by recorded vessel, is skewed by the presence of so many small sherds identifiable only as 'ESAX'. Between them, these three groups account for two thirds of the pottery present.



## Forms

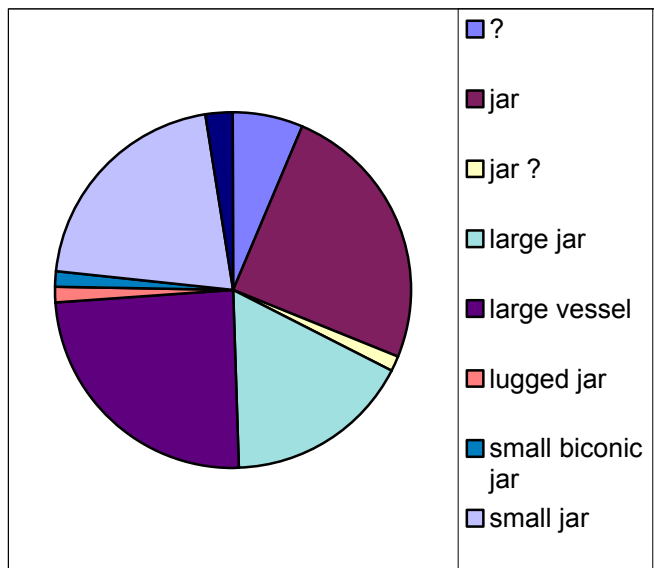
The majority of the sherds were featureless and were too small to be assigned to a form. Of those that could, all were different forms of jar. These ranged in size from large vessels (which are probably over-represented by these methods of quantification) to small jars, including examples with biconical forms and lugs. There does not appear to be a correlation between specific forms and fabrics. All fabrics with more than 15 recorded vessels have examples of small, medium and large vessels present (except for small sherds classed as 'ESAX').

Cname	jar	Large	nk	small	Grand Total
CHARN	1		13	1	15
ECHAF			4		4
ERRA		1			1
ESAX			35		35
ESGS	1	2	5	1	9
FE		1	3		4
LIM	4	3	9	3	19
LIMES			2		2
RQCL			3		3
SST	1	5	9		15
SSTCL	4	12	45	5	66
SSTMG	10	8	25	9	52
Grand Total	21	32	153	19	225

## Use

Of the 225 recorded vessels, only 27 had any evidence for their use. This consisted of soot coating on the exterior surface (18 examples), carbonised food on the interior (3 examples), leaching on the interior (2 examples), sooting on the inside of the pot (1 example), wear on the interior (3 examples) and a yellow deposit on the interior (1 example). This frequency of use patterns contrasts with that found in the later Anglo-Saxon and medieval periods, where unglazed vessels have a much higher frequency of sooting. It seems to suggest that cooking was not the sole function of these pots, perhaps not even the main function. This is probably true of most early to mid Anglo-Saxon pottery assemblages rather than just the Site 10 finds. However, it is unusual in Lincolnshire for the pottery finds to be sufficiently well preserved for this evidence to survive. Surprisingly, the assemblage from the hearth, 20350, did not have any evidence for use whilst the highest frequency of sherds with use traces came from the backfill of the sunken-featured building, 20313. This is probably simply due to the large size of that collection.

External Use	Internal use						Grand Total
	carb depo	leached	sooted	worn	yellow depo	(blank)	
				3	1	198	202
burnt post-breakage						1	1
Sooted		1		1		16	18
(blank)		2	2				4
Grand Total		3	2	1	3	1	215



## Decoration

Nine vessels were decorated. The decoration ranged from incised lines (6 examples) to stamps (5 examples) and bossing (1 example). In three cases stamping and incised decoration were combined. These types of decoration are typical of the early Anglo-Saxon period. There is no apparent patterning in the distribution of these decorated sherds across Site 10. The highest concentration is in the backfill of the sunken featured building, but there are two sherds from the hearth, 20350, which again suggests that the sherds are not related to the function of the features in which they occur.

## Chronology

There are no sherds of late Roman date from Site 10 [is this right? Or was it just that they were given directly to Barbara??]. Such sherds, at present, provide the only ceramic clue for identifying late 4<sup>th</sup>/early 5<sup>th</sup>-century occupation in Lincolnshire. It is therefore likely that the settlement starts later than c.425. So far, there is no evidence to show that any of the various pottery fabrics identified in the early Anglo-Saxon period in Lincolnshire are earlier or later than any others. However, it is possible that the atypical composition of the assemblage is related partly to date, in which case it would support an earlier rather than a later dating within the period. The decorated sherds are of types which appear to date to the later 5<sup>th</sup> and 6<sup>th</sup> centuries. Finally, there are no sherds of Mid Saxon type from the site, which confirms that it was abandoned before the end of the 7<sup>th</sup> century.

## Assessment

The site 10 pottery is of regional importance in that it mainly comes from stratified assemblages on a site which only appears to have been occupied within the early Anglo-Saxon period, probably somewhere between the later 5<sup>th</sup> and the earlier 7<sup>th</sup> century. The lack of superimposition of the various features would support a short occupation within that 200-year period. It might be possible to narrow down the period of occupation further using high-precision C14 dating, either of associated animal bone or charcoal or even by dating the soot coating on some of the sherds.

The pottery, in the main, does not seem to have been associated with cooking and may therefore either have been used for storage (for example, the large number of thick-walled sherds) or display (the thinner-walled and decorated vessels). There is no apparent correlation between function and fabric or source.

Recent work suggests that most early Anglo-Saxon pottery from settlement sites was not thrown into refuse pits or used as primary refuse to backfill abandoned sunken-featured buildings but was instead initially discarded in middens and that where features were backfilled this midden material was included in the backfill. The evidence from Site 10 is consistent with that interpretation. This suggests, therefore, that pits such as 20368, 20360 and 20356 initially had some other purpose than as refuse pits (for example perhaps as latrines or associated with industrial processes). The primary fills of these features are therefore worthy of study to establish the original function. The pottery from 20395 suggests that this pot and bone scatter may be the remnants of a ground-level midden deposit.

The source of the pottery is atypical and efforts should be made to investigate this, both by comparing the Site 10 assemblage in detail with others from the Sleaford area and by carrying out further studies on the pottery fabrics from Site 10 itself. In particular, the two 'new' fabrics (SSTCL and SSTMG) require definition and the various unclassified sherds require study. Both thin-section analysis and chemical analysis are recommended.

Sixteen of the vessels require illustration.

## Costing

At least six samples of each of the two 'new' fabrics should be analysed, together with 'control' sherds of types whose fabric and source are known (marked 'fabric type series' in the appendix). Most of the unclassified sherds are too small for further study but that from 20403 would repay analysis. At present, AVAC charges £21 per thin-section, including preparation at the University of Birmingham, analysis and report and £21 for each chemical analysis, carried out using Inductively-Coupled Plasma Spectroscopy at Royal Holloway College, London.

Illustrations are estimated at £10 per vessel (£160 in total).

## Appendix: List of Anglo-Saxon pottery from Site 10

contex t	cname	sub fabric	form type	sherd s	vessel s	weigh t	decoration	dec	part	action	ref no	description	use	internal
20222	SSTC L	M		1	1	2			BS					
20222	SSTM G			2	1	20			BS			soot ext;carb dep int	sooted	carb depo
20282	SST	lower carb & greensand & granitic	large jar	4	1	98			rim & BS	dr	DR2			
20282	SST	lower carb & greensand & granitic	large jar	1	1	11			neck					
20284	ESAX	various		5	5	2			BS					
20284	LIMES			2	1	0			BS			? Esax		
20311	CHAR N			1	1	8			BS					
20311	CHAR N			1	1	4			BS					
20311	CHAR N	+ sst		2	1	13			BS					
20311	CHAR N	+ sst		2	1	13			BS					
20311	ECHA F	+ rounded quartz		1	1	13			BS					
20311	ECHA F	+ sst		2	1	9			BS					

20311	FE			1	1	6		BS				
20311	LIM	+ comm fine sst	small jar	1	1	19		rim	dr	DR16	soot	sooted
20311	LIM	+ fine sst		1	1	10		base				
20311	LIM	+ greensand	small jar	1	1	5		rim				
20311	LIM	+ MG		1	1	10		BS				
20311	LIM	+ sst		1	1	2		BS				
20311	LIMES	+ biotite		1	1	7		rim				
20311	RQCL	+ comm fe		1	1	7		BS				
20311	SSTC	F		1	1	6		BS				
	L											
20311	SSTC	M		1	1	5	5 incised & A2bi stamp	dec	BS			
	L											
20311	SSTC	M		1	1	17		BS			int carbonised deposit	carb depo
	L											
20311	SSTC	M		1	1	8		BS				
	L											
20311	SSTC	M	large vessel	1	1	39		BS				
	L											
20311	SSTM			1	1	10		BS				
	G											
20311	SSTM	+ biotite		1	1	7		BS				
	G											
20311	SSTM	+ chaff &	large vessel	1	1	37		BS				

	G	limestone									
20313	CHAR N			1	1	12		BS			
20313	ECHA F	+ fine sst & fe		1	1	2		BS			
20313	ERRA	metamorphic rock;carbon sst;dull light grey/green mineral	large jar	9	1	120 fabric type series	rim & BS	dr	DR15		
20313	ESAX	various		19	19	10	BS			tiny frags	
20313	ESGS	+ charn & sst	small jar	1	1	8	BS		Saxon Fabric Type Series		
20313	ESGS	+ sst		1	1	13	BS				
20313	FE	+ chaff	large vessel	1	1	10	BS				
20313	LIM		jar	1	1	7	rim				
20313	LIM		jar	2	1	7	BS				
20313	LIM		jar	15	1	276	rim & BS	dr	DR14	everted rim	
20313	LIM	& sst	jar	1	1	35	rim	dr	DR13	burnish ext	
20313	LIM	& sst		3	1	10	BS				
20313	LIM	& sst		2	1	4	BS				
20313	LIM	& sst & greensand		3	1	20	BS			? Spilsby & Tealby sst	
20313	LIM	& sst;lower greensand chert & fine	large vessel	1	1	36	BS			worn int;high quartz content	worn



		sst											
20313	LIM	& sst;lower greensand chert & fine sst	large vessel	1	1	36		BS			worn int;high quartz content		worn
20313	LIM	& sst;lower greensand chert & fine sst	large vessel	1	1	28		BS			worn int;high quartz content		worn
20313	LIM	& sst;lower greensand chert & fine sst		1	1	8		BS			high quartz content		
20313	LIM	& sst;lower greensand chert & fine sst		2	2	4		BS			high quartz content		
20313	SST			1	1	4		BS					
20313	SST	mixed MG & finer sst	large jar	1	1	40		BS	Fabric type series				
20313	SST	variety of sst & ooliths & cardium shell ?	large jar	1	1	42		rim	dr	DR12			
20313	SST	very fine		2	1	4		BS					
20313	SSTC L	F	large vessel	2	1	29		BS	Fabric type series		soot		sooted
20313	SSTC L	F	large vessel	1	1	11		BS			soot		sooted
20313	SSTC	F	large vessel	1	1	8		BS			soot		sooted

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	L									
20313	SSTC L	F	large vessel	1	1	7		BS		soot sooted
20313	SSTC L	F		1	1	112		BS		
20313	SSTC L	F		1	1	4		BS		
20313	SSTC L	F	large vessel	1	1	10		BS	Fabric type series	soot sooted
20313	SSTC L	F		1	1	8		BS		
20313	SSTC L	F		1	1	5		BS		
20313	SSTC L	F		1	1	3		BS		
20313	SSTC L	F		1	1	2		BS		
20313	SSTC L	F		1	1	4		BS		
20313	SSTC L	F		4	4	8		BS		scraps
20313	SSTC L	F	large vessel	1	1	13		BS		semi burnished ext
20313	SSTC L	F	small vessel	1	1	5		BS		
20313	SSTC L	M		2	1	14	incised horizontal and diag	dec BS		could be drawn

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										lines		
20313	SSTC	M			1	1	6	BS		soot	sooted	
	L											
20313	SSTC	M	jar		1	1	24	BS	Saxon Fabric Type Series			
	L											
20313	SSTC	M	large jar		1	1	13	BS			very mixed fabric	
	L										flake	
20313	SSTC	M			1	1	3	BS				
	L											
20313	SSTC	M			2	1	12	BS				
	L											
20313	SSTC	M			1	1	9	BS				
	L											
20313	SSTC	M			1	1	10	BS				
	L											
20313	SSTC	M			1	1	4	BS				
	L											
20313	SSTC	M			1	1	6	BS				
	L											
20313	SSTC	M			1	1	3	BS				
	L											
20313	SSTC	M			2	1	5	BS				
	L											
20313	SSTC	M			1	1	5	BS				
	L											
20313	SSTC	M			1	1	5	BS				
	L											
20313	SSTC	M			1	1	2	BS				

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	L																		
20313	SSTC	M		1	1	5				BS									
	L																		
20313	SSTC	M		1	1	1				BS									
	L																		
20313	SSTC	M	large vessel	1	1	9				BS									
	L																		
20313	SSTC	M	large vessel	1	1	32				base									
	L																		
20313	SSTC	M		1	1	9				BS									
	L																		
20313	SSTC	M		2	1	14				BS									
	L																		
20313	SSTC	M	small jar	1	1	9	bossed	dec		BS									
	L																		
20313	SSTC	M (? Some MG)		1	1	11				BS									
	L																		
20313	SSTC	M + oolite	large vessel	1	1	45				BS	Saxon Fabric Type Series							coils of different fabrics	
	L																		
20313	SSTC	M + oolite (? Some MG)	jar	13	1	70				BS	Saxon Fabric Type Series							very mixed fabric	
	L																		
20313	SSTM			1	1	3	incised	dec		BS									
	G																		
20313	SSTM		jar	1	1	24				BS								soot	sooted
	G																		
20313	SSTM		jar	1	1	15			rim	dr	DR11							thick ext soot	sooted
	G																		

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20313	SSTM G			2	1	14		BS		soot int	sooted
20313	SSTM G	jar		1	1	8		rim		everted rim	
20313	SSTM G	large jar		1	1	10		BS			
20313	SSTM G			1	1	9		BS			
20313	SSTM G	large vessel		1	1	13		BS			
20313	SSTM G			5	5	11		BS			
20313	SSTM G	large vessel		1	1	77		base	Fabric type series		
20313	SSTM G			1	1	10		BS			
20313	SSTM G	+ greensand & ooliths	large vessel	1	1	46		base	Saxon Fabric Type Series	flat base	
20313	SSTM G	mixed also inc finer sst		1	1	6		BS			
20313	SSTM G	mixed also inc finer sst	small jar	1	1	4		BS			
20313	SSTM G	small jar		1	1	7		rim			
20327	SSTC L	M		2	1	2		BS			
20329	SSTM G	+ biotite & feldspar &	large jar	12	1	348		BS	Saxon Fabric Type Series	2 sherds to T-S	

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greensand									
20345	CHAR	+ MG & fe		1	1	5		BS	
	N								
20345	SSTC	M	jar ?	1	1	3		BS	
	L								
20350	CHAR	+ fe		1	1	5		BS	
	N								
20350	CHAR	+ fe +		1	1	15		BS	Saxon Fabric
	N	limestone							Type Series
20350	CHAR	+ MG	small jar	46	1	554	part	dr	DR10;RF26
	N						profile		149
20350	ESAX	various		3	3	1		BS	scraps
20350	ESGS			2	1	7		BS	
20350	ESGS	+ comm. Sst	large jar	4	1	83		BS	Saxon Fabric
		(? Spilsby)							Type Series
									very high
									fired/post
									firing heat
20350	SSTC	M		1	1	1 stamp ?	dec	BS	
	L								
20350	SSTC	M		1	1	2		BS	
	L								
20350	SSTM	+ granitic		2	1	9		BS	
	G								
20350	SSTM	mixed		3	1	8		BS	
	G								
20350	SSTM	very mixed		1	1	5		BS	
	G								
20357	SSTC	M	jar	1	1			BS	
	L								

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20361	CHAR N		1	1	1		BS				? ID		
20361	CHAR N		1	1	1		BS				? ID		
20361	CHAR + fe & sst N		1	1	9		BS				thin walled;soot	sooted	
20361	ECHA + rounded F quartz		1	1	8		BS				thin walled		
20361	ESGS		2	1	16		BS						
20361	ESGS + feldspar	jar	1	1	7		BS				thin walled;soot	sooted	
20361	ESGS + sst & shell	large vessel	1	1	9		base				thick walled		
20361	SSTC M L		5	1	24		BS				semi burnished ext		
20361	SSTC M L		1	1	1		BS						
20361	SSTC M L		2	1	3		BS						
20361	SSTM G		1	1	8		BS				thick int yellow deposit		yellow depo
20361	SSTM G	small jar	1	1	8		BS				soot	sooted	
20361	SSTM + biotite & G feldspar	small jar	1	1	10		rim	dr		DR9			
20363	SSTC M L		1	1	5		rim						

20363	SSTM G	large jar	1	1	23		BS				hard fired/ Post firing heat;int part blackened	burnt post- breakage
20369	CHAR N	jar	1	1	8		BS					
20369	CHAR N		3	1	17		BS					
20369	CHAR N		1	1	6		BS					
20369	ESAX	various	27	7	18		BS				tiny frags	
20369	ESGS	+ flint	1	1	18		BS					
20369	ESGS	+ granite	1	1	2		BS					
20369	FE	+ subround quartz	4	1	25		BS					
20369	LIM	+ comm. Sst small biconic jar	3	1	20	incised & stamped	dec BS	dr			DR6	
20369	SST	comm ooliths & mod- comm granite	1	1	5		BS					
20369	SSTC L	M	2	1	15		BS					
20369	SSTC L	M	1	1	6		BS	boss				
20369	SSTC L	M	1	1	3		BS					
20369	SSTM	jar	1	1	31		rim	dr			DR7	



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	G											
20369	SSTM G	jar	3	1	20	BS						
20369	SSTM G	small jar	1	1	6	BS			soot		sooted	
20369	SSTM G		1	1	9	BS						
20369	SSTM G	small vessel	1	1	8	rim	dr	DR8				
20369	SSTM G	+ feldspar & biotite	1	1	11	BS		Saxon Fabric Type Series				
20369	SSTM G	+ ooliths lugged jar	2	1	95	rim	dr	DR5;RF 25053	soot;swallow s nest lug		sooted	
20369	SSTM G	mixed	1	1	5	BS						
20369	SSTM G	mixed small jar	1	1	7	BS						
20369	SSTM G	mixed + limestone	1	1	9	BS						
20369	SSTM G	mixed + limestone & granitic & fine red sst	1	1	5	BS						
20377	SST	jar	4	1	32	BS						
20377	SST		1	1	2	BS						
20377	SST		1	1	1	BS						
20377	SST	fine fabric large jar	1	1	21	BS						

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20377	SSTC L	F (fe stained)	large jar	11	1	128		BS					
20377	SSTC L	M		1	1	2		BS					
20377	SSTC L	M	small jar	1	1	2		rim					
20377	SSTM G		small jar	2	1	4		BS					
20377	SSTM G		small jar	5	1	13		rim & BS					
20377	SSTM G	jar		1	1	9		BS					
20377	SSTM G	micaceous matrix	jar	2	1	116		rim	dr	DR3			
20394	FE			1	1	10		BS					
20394	SSTC L	F	small jar	1	1	34		base	Fabric type series		soot	sooted	
20394	SSTM G	& ooliths	large jar	1	1	17		BS	Fabric type series				
20394	SSTM G	+ biotite	jar	1	1	5 stamp	A4ai/ii dec	BS		RF 25054	soot int & ext	sooted	sooted
20394	SSTM G	mixed	jar	2	1	30 diag incised lines & A4ai/ii stamp	dec	BS	Fabric type series		? Same vess as RF25054		
20394	SSTM G	mixed	jar	1	1	21		base			carbonised deposit int		carb depo
20395	SSTM G	mixed & chaff	small jar	1	1	119		rim & BS	dr	DR4			

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20403	ESAX	shell & fe		1	1	54		BS			leached;near base	leached
20403	RQCL			1	1	2 incised	dec	BS				
20403	SSTC	M	small jar	1	1	26		rim	dr	DR1		
	L											
22000	RQCL		?	1	1	9		BS			? ID as leached	leached
22000	SST		?	1	1	13		BS			coarse + biotite;? ID or CHARN	
22000	SST		?	1	1	18		BS			coarse + biotite;? ID or CHARN	
22000	SST		?	1	1	9		BS			coarse fabric;? ID or IA	
22114	SST		?	1	1	8		BS			mixed mainly med coarse grains rare aggregate occ chaff occ limestone	

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