

The Imported Medieval Pottery from South End/Skirbeck Road, Boston (BSE01)

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Archaeological fieldwork at South End, Skirbeck Road, Boston by APS Ltd revealed a number of deposits of later medieval date, probably relating to refuse dumping on the site. These deposits include a small quantity of 13th-century and earlier pottery but are mainly composed of late 14th and early 15th-century material with no examples of Raeren stoneware, which, given the high frequency of imported pottery in the collection, dates the end of deposition to the 1480s or earlier.

The pottery therefore provides a useful snapshot of the character of the late medieval pottery used in Boston.

Catalogue

French wares

From the late 12th century onwards, finely-potted glazed jugs made in fine-textured white clays were imported to the British Isles. These vessels were made from Tertiary deltaic clays which outcrop in small patches around the French coast, from the Pyrenean foothills in the south to Flanders in the north, where they give way to Tertiary marine clays.

Numerous production sites exploiting these clays existed in the medieval period but in general only two of these were producing pottery for export: the Saintonge region north of the Gironde in the southwest and the Lower Seine valley, around Rouen, in the north. In terms of exports to eastern England, the lower Seine industry is more important up to the mid 13th century, after which the Saintonge region takes over. This broadly reflects English interests in France, although it seems that the importation of pottery from Normandy continued well after the conquest of Normandy by Phillip II of France in 1204. However, there are clearly also a number of minor centres whose products arrived in the British Isles, either as items of trade or in the personal belongings of travellers, sailors and merchants.

Because of the widespread outcrop of the parent clay, the lack of coarse sand or gravel inclusions which might reflect local geology and the basic similarity of the products it is difficult to attribute every sherd of French medieval Whiteware to a source. As part of a long-term study of the French medieval Whiteware export industry, samples were taken from

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each of the eight French medieval Whiteware vessels present in the collection. Visually, these were assigned to four groups:

- NFREM – North French Monochrome. Mottled green-glazed vessels were produced alongside the distinctive polychrome vessels in the lower Seine valley, but usually have too few typological or fabric characteristics to enable them to be assigned to a source.
- SAIM – Southwestern French Mottled Green Glazed. From the middle of the 13th century until the 16th century, vessels with a mottled green glaze and fine white body were imported to the British Isles. Unlike those from the Lower Seine Valley and other northern sources these vessels have a wheelthrown strap handle and their forms clearly show that they are related to the Saintonge Polychrome and All-Over-Green wares, produced at La Chapelle Des Pots. However, it has been doubted whether all of the vessels of this type found in the British Isles were made at La Chapelle Des Pots and it is possible that they are a regional type produced at several centres. Visually, however, their fabric, appearance and typological features are remarkably uniform.
- Saintonge Sgraffito ware. A single sherd with a red-brown slip under a clear glaze was found. It may come from a sgraffito-decorated vessel, a rare product of La Chapelle Des Pots. An example of this type was found at Southampton associated with Saintonge Polychrome vessels. However, sherds of sgraffito-decorated vessels have been found in archaeological contexts which pre-date the introduction of the polychrome and all-over-green vessels and these too may be a regional type made at several centres.
- Saintonge Unglazed ware. During the later medieval period and extending into the 16th century, vessels with either no glaze or spouts of copper-green glaze became the norm. Unless a complete vessel is present it is impossible to demonstrate that sherds do not come from partially-glazed vessels but it is still useful to distinguish unglazed from glazed sherds, since their ratio is a rough indicator of date. It is likely that the single sherd of this type from the site comes from the same source as the mottled-glazed vessels.

The sherds all come from jugs but in three cases a more precise form can be identified. That from context 843 comes from a tall, thin form, a baluster jug. This form is particularly common in the 13th century, pre-dating the Saintonge polychrome ware. The vessels from contexts 330 and 841 are pegaux, a squat, rounded form with a parrot beak. Some examples have a bucket handle (especially in the 16th century) whilst others have three wide strap handles. The wide everted rims of these vessels suggest they may have had lids, and since no ceramic lids in this ware are known they must have been made of wood. The pegau form seems to have been produced from the 13th century onwards but is more common on sites in the British Isles in the later 14th to 16th centuries.

One of the sherds has faint scratches which might possibly be a “merchant’s mark”. Southwestern French wares, including definite Saintonge vessels, often have these post-firing marks which are assumed to be related to their trade rather than marks of ownership, since they do not occur on other similar vessels.

Table 1

Context	Code	Form	Sherds	TSNO	Comments	Part	Wt
1317	NFREM	jug	1	V3161		BS	4
410	SAIM	jug	1	V3162		BS	1
330	SAIM	pegau	2	V3166	POSSIBLE MERCHANTS MARK/GRAFFITI	BS	15
666	SAIM	jug	1	V3165		BS	4
843	SAIM	baluster	1	V3163		BS	4
666	SAIM	jug	2	V3164		rim & BS	15
666	SAIM	jug	1	V3167	BRIDGE SPOUT OR HANDLE SCAR	rim	12
841	SAIM	pegau	4	V3168		rim	12
129	SAISG	jug	1	V3169	PLAIN REDUCED GLAZE OVER RED SLIP	BS	5
200	SAIU	jug	1	V3170		BS	4

Chemical Analysis

The data obtained from ICPS from the French wares from Boston were compared with a range of data from other medieval French whitewares. Factor analysis clearly showed that the Boston samples were dissimilar to those from the Seine valley and Paris Basin. The analysis was therefore repeated, omitting these wares. This analysis showed that the Boston samples are all similar to other Southwestern French wares and distinct from wares from sites in the Loire valley and Poitiers (Fig 1). Within the Southwestern French group the unglazed and mottled glazed samples are more similar to each other, and to samples from Dublin and Ardglass (Northern Ireland) than they are to the sgraffito-decorated sherd, which is more similar to a group of sherds from Dublin, including a green-painted vessel and a sgraffito-decorated vessel. However, there is no clear separation of “Saintonge” from “Southwestern French” wares and the analysis suggests that all of the samples are actually from La Chapelle des Pots.

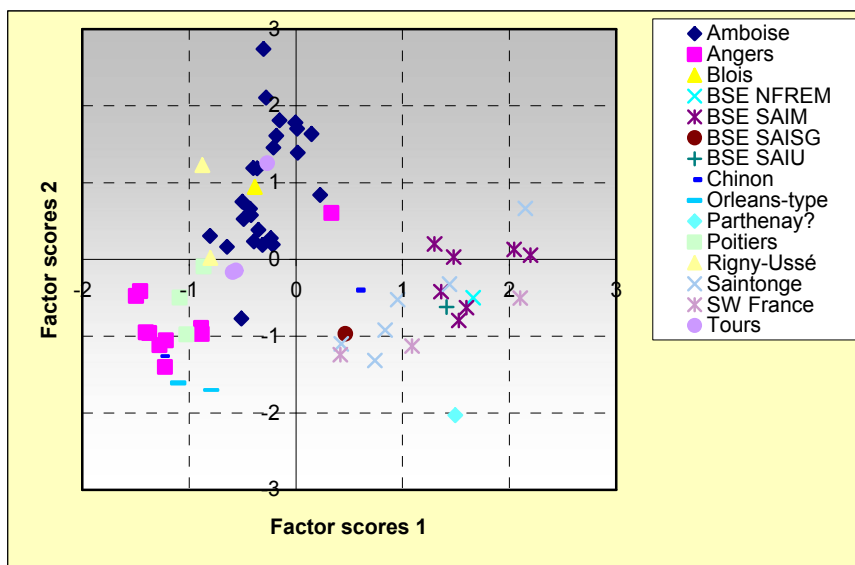


Figure 1

Rhenish wares

High-fired earthenwares and stonewares from the middle Rhine valley usually make up the largest group in late medieval import assemblages from eastern England and this Boston collection is no exception. By the late medieval period pottery production for export was concentrated in a single area: Siegburg, on the east bank of the Rhine.

A few sherds cannot be assigned to a known production source by eye and these have been selected for analysis. The earliest Rhenish types present are a possible sherd of Pingsdorf ware (code PING) and two possible sherds of blue-grey Paffrath ware (code BLGR). None of these are typical pieces and alternative identifications have been investigated using thin section and chemical analysis (Table 2).

A small group of sherds have been classified by eye simply as Early German Stoneware (Code EGSW). However, these too might be Siegburg wares, but dating to the earlier phases of production before the use of the typical fine light-firing clay, which was initially used after tempering with a well-sorted fine quartz sand, but which from the late 14th century was used without any temper. These EGS sherds probably came from tall jugs with a collar rim (Beckmann 1974, Nos. 56-76).

Typical Siegburg wares are of types which span the early/mid 14th century to the early 15th century. Seven sherds of sand-tempered Siegburg stoneware were present. This type is datable to the early to mid 14th centuries. Most of the sherds can simply be identified as jugs, without any further typological details. However, that from context 659 has a collar rim, an

early feature, whilst that from context 703 has a biconical form, similar to Beckmann 1974 No.92. Most of the sherds come from oxidized, unglazed stoneware vessels, but that from context 118 has reduced, dark grey, surfaces and that from context 670 has a salt glaze, a later feature (unless this is actually an ash glaze).

Seventeen untempered stoneware vessels were present. Two of these come from biconical jugs, probably used as drinking vessels (Hurst *et al* 1986, 178-9, No. 260). This form is given a wide date range by Hurst, from c.1350 to c.1450, but typologically belongs at the beginning of the Siegburg stoneware sequence. A number of examples of straight-sided jugs (similar to Hurst *et al* 1986, 178-180, No. 262) were present, although it is impossible in most cases to distinguish this form from the *Jacobakanne* form, which differs in having a slightly bulbous neck (Hurst *et al* 1986, 178-180, No.263). This latter type is definitely present in deposits of c.1360 and c.1380 from the City of London (Vince 1985;Vince 1988) and is absent from groups dated by coins to the first few decades of the 15th century. Examples are known from Denmark where they occur as coin hoard containers dated c.1400 (Liebgott 1978, 78-87). It has been suggested that the narrow rim is more suitable for wine- than beer-drinking, in which case it may be that the straight-sided and *Jacobakanne* forms are contemporary but used for different functions (Gaimster 1997, 169-170 summarises the dating arguments for this form). Examples of flaring-necked beakers and jugs (*Trichterhalsbecher* and *Trichterhalskrug*, actually probably best thought of as handled beakers) occur in one context, 402. These vessels appear in the early 15th century (Vince 1985; Vince 1988; Hurst *et al*, 178-267; Gaimster 1997, 170-174) but since they sometimes occur with dated applied medallions of late 16th-century date the type was clearly current throughout the 15th and early 16th centuries.

A single example of a shallow bowl was present, in context 714. This form is usually found in association with flaring-necked beakers and drinking jugs and like them sometimes has applied stamped medallions. Gaimster presents the evidence, mainly from contemporary art works, that these vessels were used for drinking (Gaimster 1997, 168-9). The type has a wide date range, from the early 15th to the mid/late 16th century.

Table 2

<i>Context</i>	<i>cname</i>	<i>subfabric</i>	<i>Form</i>	<i>Action</i>	<i>TSNO</i>	<i>Description</i>	<i>Part</i>	<i>Weight</i>
118	SIEG	Sandy	jug	ID		REDUCED SURFACES AND MARGINS	BS	28
122	SIEG	sand-free	Jacobakanne	ID		RIBBED BODY	BS	19
122	SIEG	sand-free	Jacobakanne/straight	ID		CORDON ON SHOULDER;RIBBED NECK AND BODY;HANDLE JOIN	BS	36
123	SIEG	sand-free	Jacobakanne	ID		late 14th+	BS	20
123	SIEG	sand-free	Jacobakanne/straight	ID		mid14th+	handle	16

123	SIEG	sand-free	Jacobakanne/straight	ID		CORDON ON SHOULDER;RIBBED NECK AND BODY;HANDLE JOIN	BS	39
123	SIEG	sand-free	Jacobakanne/straight	ID		mid14th+	handle	26
129	SIEG	sandy	jug	ID			BS	9
200	SIEG	sand-free	biconical jug	ID		ribbed neck; globular body; mid 14th+	neck	23
327	SIEG	sand-free	biconical jug	ID		mid 14th+;Hurst fig85-260	BS	19
402	SIEG	sand-free	Trichterhalskrug?	ID		frilled base	BS	236
402	SIEG	sand-free	Trichterhalskrug?			oxid fabric	handle & BS	70
402	LANG		large type I jug	ID;ICPS	V3156	ash glaze; Hurst fig91-272;ROULETTED CORDON	BS	28
410	SIEG	sand-free	Jacobakanne	ID		handle scar	BS	10
410	LANG		LARGE JUG	ID		BROWN WASH EXT AND SALT GLAZED INT AND EXT;KT INT;THUMBED FRILL BASE	BS	98
414	SIEG	sand-free	Jacobakanne	ID		NECK/SHOULDER	BS	10
414	SIEG	sand-free	large jug	ID			BS	4
414	LANG		LARGE JUG	ID		BROWN WASH EXT AND SALT GLAZED INT AND EXT;KT INT;THUMBED FRILL BASE	base	259
415	LANG		LARGE JUG	ID;ICPS	V3154	BROWN WASH EXT AND SALT GLAZED INT AND EXT;KT INT;THUMBED FRILL BASE	BS	3
424	SIEG	sand-free	biconical/straight	ID		ribbed neck	BS	9
429	SIEG	sandy	jug	ID		early 14th;CYLINDRICAL RIBBED NECK	BS	10
441	BLGR		ladle	ID;TS;ICPS	V3143		BS	2
442	PING	YELLOW CORE WITH DKBR/GREY SURFACES (PROBABLY REDUCED FIRING NOT SLIP);YELLOW AND FE CLAY PELLETS	SJ/PTCH	ID;TS;ICPS	V3160	KT INT	BS	3
611	SIEG	sand-free	small jug	ID		PROBABLY FROM A JAKOBAKANNE	handle	24
659	SIEG	sandy	jug	ID;DR		COLLARED RIM;HANDLE	rim	91
661	LANG		type I jug	ID;ICPS	V3155	COLLARED RIM;BROWN WASH INT AND EXT;HANDLE JOIN	rim	7
666	EGSW		jug	ID;TS;ICPS	V3151		BS	85

666	EGSW		jug	ID;TS;ICPS	V3153	CORDON ON SHOULDER WITH DIAMOND RS BELOW	neck	5
666	EGSW		jug	ID;TS;ICPS	V3152	RIBBED	neck	5
670	BLGR		Small jug?	ID;TS;ICPS;DR	V3144	Semi vitrified; sandy fabric? ID	base	18
670	SIEG	sandy	jug	ID		salt glaze	BS	15
670	LANG		small/med jug	ID;ICPS	V3157	frilled basify wash	base	165
703	SIEG	sandy	BICONIC JUG	ID;DR		CF BECKMANN 1974, NO.92	R	18
714	SIEG	sand-free	small bowl	ID		Hurst Fig88-257	rim	32
840	SIEG	sandy	jug	DR		late 13/early 14th	rim & BS	25
847	SIEG	sandy	jug	ID		squatter form;e14th;RIBBED BODY	BS	2

Thin Section Analysis

The possible sherd of Pingsdorf ware was examined in thin section (V360) and the following inclusions noted:

- Quartz. Sparse angular and subangular grains up to 0.5mm across. Mostly monocrystalline and unstrained.
- Clay/Iron. Moderate subangular and rounded grains up to 0.4mm across. The grains are dark brown to opaque and contain sparse angular quartz inclusions up to 0.1mm across.
- Sandstone. A single subangular sandstone fragment consisting of well-sorted angular grains c.0.15mm across in a red cement. The fragment is 0.4mm long.
- Siltstone/slate. A single fragment 1.0mm long and 0.2mm wide composed of angular quartz grains up to 0.05mm across in a dark brown groundmass.

The groundmass consists of isotropic light brown baked clay minerals, streaks and pellets of lighter-coloured clay and abundant angular quartz grains and moderate dark brown clay/iron grains up to 0.1mm across.

These characteristics are inconsistent with those observed in samples of Pingsdorf ware from the City of London (Vince and Jenner 1991, REDP) and from Lincoln (Young & Vince forthcoming) but are similar to those of Andenne-type ware (ANDE), produced in the Meuse valley, which was exported to England between the 11th to 13th centuries. Earthenwares were also produced alongside stonewares in the late medieval period at Aachen (W Giertz pers comm). However, given the size of the sherd and the lack of typological features it is impossible at present to identify it.

Two samples of Paffrath ware were examined in thin section (V3143-4). The two samples have a similar fabric and the following inclusions were noted:

- Quartz. Abundant, well-sorted grains c.0.3mm across. The grains are mainly subangular monocrystalline and unstrained. Some grains appear to have been well-rounded and then cracked and rounded
- Chert. Sparse, rounded grains c.0.4mm across.

The groundmass consists of anisotropic off-white clay with few inclusions.

These characteristics are consistent with an origin in the Vorgebirge area of the Rhine valley.

Three samples of Early German Stoneware were examined in thin section (V3151-3). All have a similar fabric and the following inclusions were noted:

- Quartz. Abundant, moderately well-sorted grains ranging from c.0.2mm to 1.00mm across. The grains include polycrystalline and strained examples but are mostly monocrystalline and unstrained. Some unstrained mosaic quartz grains are also present, indicative of high-grade metamorphic origin.
- Clay/iron. Sparse rounded opaque slag inclusions, formed *in situ* through the firing of clay/iron grains, up to 0.5mm across.

The groundmass consists of isotropic off-white baked clay minerals and abundant angular quartz grains up to 0.05mm across.

There are no features in these three sections which discount a Rhenish source and the three samples certainly all come from the same source. One possible source would be Siegburg, which was producing red-slipped, sandy vessels in the later 12th and early 13th centuries.

Chemical Analysis

The ICPS data from the Rhenish and Meuse valley wares from Boston were analysed using factor analysis and compared with a small collection of samples of supposed Rhenish origin (Fig 2). This analysis shows that the supposed sherd of Pingsdorf ware from Boston is similar, but not identical, to samples of Walberburg and Badorf wares, made in the same area but in the 7th/8th and 8th/9th centuries respectively. The two samples of supposed Paffrath ware (BLGR in Fig 2) are more similar to the Langewehe samples than to the Rhenish wares. However, more comparative samples are required before we can securely say that they are not Rhenish products.

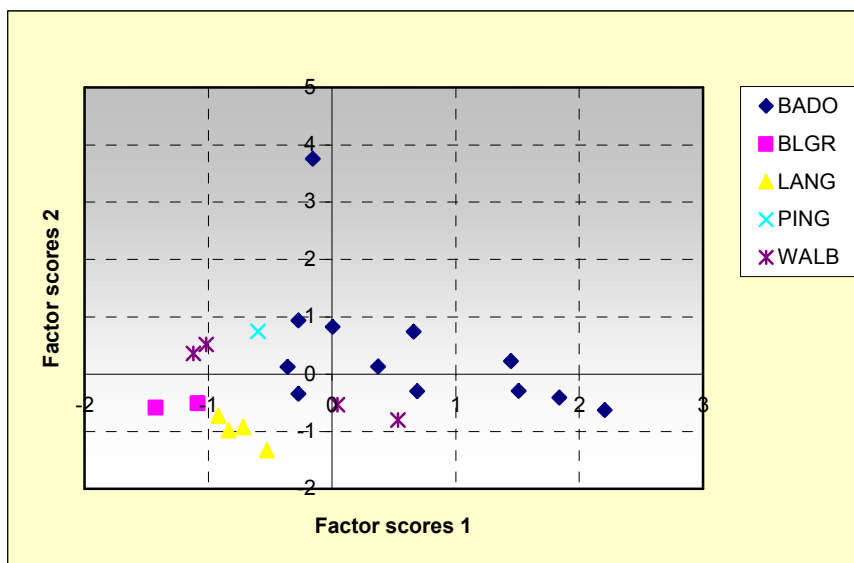


Figure 2

Meuse valley wares

Fifteen sherds of Langerwehe stoneware, from six different vessels, were found. They all come from late medieval contexts and can all be assigned to one of the jug types recognised by John Hurst: a type I jug (1), a large type I jug (1), large jugs (2), a small/medium jug (1), and a large ribbed jug (Hurst *et al* 1986, 184-190). Langerwehe stoneware was produced in the Meuse valley, near Aachen, and probably exported separately from the Rhenish wares (although it is also possible that some was carried overland to Cologne and then sent downriver to the British Isles). Recent chemical analysis carried out at the British Museum Department of Scientific Research has shown that it is possible to distinguish Langerwehe products from those made in the nearby, but later, industry at Raeren. By eye, it is not possible to reliably distinguish Langerwehe and Raeren fabrics, nor the recently-discovered early 15th-century salt-glazed stoneware waste from Aachen (Wolfram Giertz pers comm). One of these Boston vessels, a large jug with a thumbed base, sherds of which occur in contexts 410, 414 and 415, appears to have a salt glaze, more typical of Raeren, but associated with an iron wash. The remainder are more typical, having a brown iron-rich wash which has caused the surface of the vessel to vitrify but without a salt glaze.

Table 3

Context	cname	Form	Action	TSNO	Description	Part	Weight
402	LANG	large type I jug	ID;ICPS	V3156	ASH GLAZE; HURST 1986. FIG 91 -272;ROULETTED CORDON	BS	28
410	LANG	LARGE JUG	ID		BROWN WASH EXT AND SALT GLAZED INT AND EXT;KT INT;THUMBED FRILL BASE	BS	98
414	LANG	LARGE JUG	ID		BROWN WASH EXT AND SALT GLAZED INT AND EXT;KT INT;THUMBED FRILL BASE	base	259

415	LANG	LARGE JUG	ID;ICPS	V3154	BROWN WASH EXT AND SALT GLAZED INT AND EXT;KT INT;THUMBED FRILL BASE	BS	3
661	LANG	type I jug	ID;ICPS	V3155	COLLARED RIM;BROWN WASH INT AND EXT;HANDLE JOIN	rim	7
670	LANG	small/med jug	ID;ICPS	V3157	FRILLED BASE;IRON WASH	base	165

Low Countries wares

A single sherd of highly-decorated glazed red earthenware (AARD) was also found. Such vessels were produced in Flanders (eg Bruges) and the Netherlands in the later 13th and early 14th centuries and a sample has been taken for chemical analysis for comparison with material from Flemish production and consumer sites (Bruges, Ypres and Aardenburg).

Nine sherds (representing 7 vessels) of glazed red earthenware of Low Countries type (DUTR) were found. They include cooking pots (2) and frying pans of two different sizes (2 each) and a sherd from a frying pan or dripping dish. Such vessels are particularly common on eastern English sites in the later 14th, 15th and early 16th centuries, although at the younger end of this date range it becomes difficult to distinguish the imported vessels from locally-made copies, some of which were probably made by immigrant potters. Earlier on, the vessels can normally be distinguished from English lead-glazed red earthenwares, because they were biscuit fired before glazing, so that the body is completely oxidized. The vessels have few typological features, and in any case it does not seem that there is much variation in the typology of these vessels, either as a result of differences in source or date.

Five sherds (3 vessels) of unglazed wheelthrown greyware are tentatively identified as Low Countries products. One is definitely from a jug, with a base decorated with wide thumb impressions, one from a jar and the other uncertain. Samples of two of these vessels have been taken for analysis, for comparison with vessels of known or suspected Low Countries provenance.

Table 4

Context	cname	Form	Action	TSNO	Description	Part	Weight
122	DUTR	Cooking pot	ID;ICPS	V3145	OVAL-SECTIONED FOOT	BS	45
123	DUTR	Small cooking pot	ID;ICPS	V3146		BS	14
201	DUTR	Frying pan			SOOTED EXT	profile	167
203	DUTR	Large frying pan/dripping dish	ID;ICPS	V3147		handle	56
203	DUTR	Large frying pan	ID;ICPS	V3148	SOOTED EXT	rim with handle	204
411	LCGR	Jar?				BS	2
442	LCGR	?	ID;TS;ICPS	V3159		BS	3

661	DUTR	Large frying pan	ID;ICPS	V3149		handle	231
661	AARD	Jug	ID;ICPS	V3142	COPPER-STAINED GLAZE OVER WHITE SLIP	BS	1
714	DUTR	Frying pan?	ID;ICPS	V3150		BS	34
847	LCGR	Jug	ID;TS;ICPS	V3158	THUMBING AROUND BASE	BS	29

Thin Section Analysis

Two samples of Low Countries Greyware were examined in thin section (V3158-9).

Both have a similar fabric and the following inclusions were noted:

- Quartz. Abundant subangular and rounded grains ranging from c.0.1mm to 0.3mm across. Mostly monocrystalline, unstrained grains but sparse mosaic quartz grains are present.
- Feldspar. Sparse altered feldspar fragments ranging up to 0.3mm across.
- Chert. Sparse rounded grains up to 0.5mm across.

The groundmass consists of anisotropic baked clay minerals, sparse rounded dark brown/opaque grains up to 0.1mm across, sparse muscovite laths up to 0.1mm long and moderate angular quartz up to 0.1mm across.

The thin sections confirm that the two samples probably come from the same source but the range and character of the inclusions does not suggest a source, nor even which side of the North Sea the fabric came from.

Chemical Analysis

The ICPS data from the Boston Low Countries wares was compared with a range of other medieval and post-medieval samples of Netherlandish or Belgian origin. These include samples of highly-decorated ware from a kiln site at Bruges and from consumer sites at Ypres and Aardenburg in Belgium; samples of post-medieval glazed red earthenware from Gateshead which visually look somewhat different from the standard medieval Dutch Red Earthenware; a sample of a medieval wheelthrown unglazed greyware from Gateshead which was analysed by Dr Chenery of the BGS for Derek Hall, SUAT, as part of a project looking at the source of such wares around the North Sea (coded here Gateshead Flem); and samples of Low Countries Greyware from Scarborough, Jarrow and Hartlepool. The results of this analysis show that the Gateshead "Flemish Greyware" is different in composition from the remainder, and that the remainder all have a similar composition (Fig 3). Within this cluster, however, the Boston samples (the highly-decorated sherd, the

unglazed greywares and the plain glazed red earthenwares) all plot in the bottom right hand corner of the graph, alongside some of the Low Countries Greyware whilst the Flemish glazed wares (AARD) and the Gateshead Dutch Red Earthenware-type samples plot towards the centre (i.e. they have lower F3 score and high F4 scores). The Low Countries Greyware samples which are most similar to Boston come from Hartlepool and Scarborough whilst those more similar to the Flemish comparanda come from Newcastle and Jarrow.

The analysis therefore suggests that there may be two or more sources of Low Countries Greyware found on east coast English port sites and that the examples from Boston are likely to come from the same source as the glazed red earthenwares, including the highly-decorated sample. Samples of glazed red earthenwares from sources in the Netherlands are required to take this further.

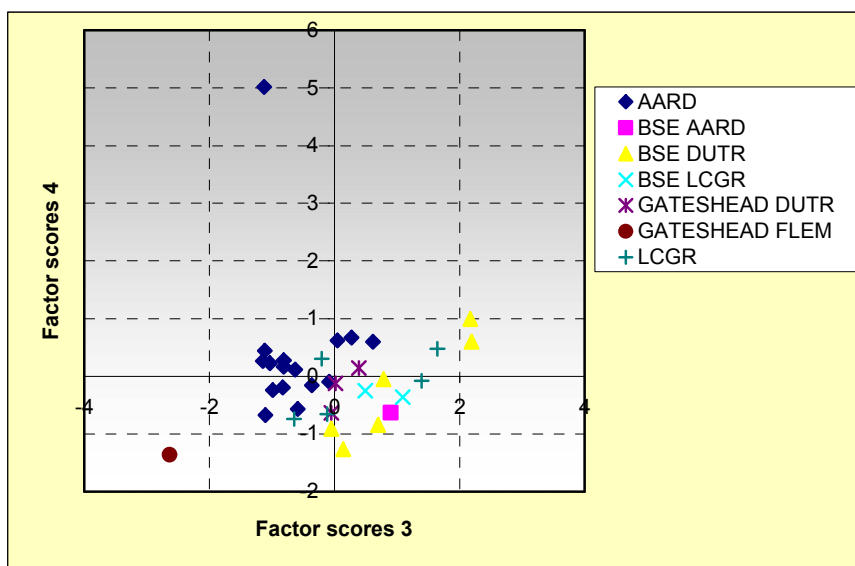


Figure 3

Discussion

The South End medieval pottery assemblage is remarkable in the context of Boston in that the pottery does not include a large proportion of 13th-century and earlier wares and although by no means a large collection it is nevertheless the largest and best collection of later medieval pottery from the town. It is a great shame that no full excavation was carried out on the site, in which case it is quite possible that it might have turned out, regionally, to be as important as the Thames waterfront assemblages have turned out to be (Milne & Milne 1982; Cowgill, de Neergaard & Griffiths 1987; Grew & de Neergaard 1988; Egan & Pritchard 1991; Vince 1985).

Chronology

From the imported pottery, we can say that the collection contains no Saintonge Polychrome or All-over-Green vessels. These occur at sites up and down the east coast and given the high proportion of imports on the South End site their absence is probably significant. It seems that the Saintonge Polychrome industry probably only lasted a single generation, somewhere around c.1300AD. Therefore, it is likely that most of the pottery at South End is of 14th-century or later date.

Only the Rhenish and Meuse valley stonewares can be dated with any precision, the remaining imported types being of long-lived wares where there is little or no typological or fabric progression. The stonewares indicate activity starting in the early to mid 14th century (Siegburg sandy fabric; Siegburg biconical jugs); continuing through the later 14th centuries (Siegburg sand-free fabric Straight-sided and Jacobakanne jugs), and into the early 15th century (Siegburg flaring-necked vessels and bowl).

The lack of Raeren stoneware probably indicates that deposition on the site had ceased before c.1480AD.

Comparison with other sites in Lincolnshire

The South End collection is very different from later medieval pottery elsewhere in Lincolnshire. There, the earlier 14th-century types are rare or absent and the later 14th- and 15th-century ones are found in much lower frequencies. Siegburg stoneware vessels of later 14th and 15th-century types and Langerwehe stonewares both occur in Lincoln, on several sites in all parts of the city, as do Low Countries redware vessels. Low Countries greyware vessels are rare, but it is quite likely that odd body sherds would have been missed alongside residual Romano-British greywares (forthcoming). Therefore, it seems that only a limited subset of the imports found at South End were the subject of inland trade from Boston: later 14th- and 15th-century Siegburg stoneware; Langerwehe stoneware and Low Countries Redware. The remainder presumably arrived in Boston as incidental cargo, either as personal belongings of travellers or souvenirs obtained by sailors or perhaps as the result of private enterprise by the ship's crew who sold the goods locally in Boston but lacked access to the inland trade network.

In the countryside around Boston late medieval imported pottery is uncommon (pers comm J Young). However, several of the wares found at South End have also been found on other sites in the county recorded in the past few years by Jane Young (which we take to be a reasonably representative sample of the medieval pottery in the county). Of these, the most common is Low Countries Red Earthenware, which has been noted on urban sites in Lincoln and Boston but is also present at Stickney, Grimsby, Crowland, Fiskerton, and Whitton. Siegburg stoneware is the next most common, and in addition to being found on other sites

in Boston, and at the towns of Lincoln and Spalding, has been found on a site at Fleet. Langerwehe stoneware has been found at other sites in Boston and Lincoln at on sites at Kirton and Stickney whilst Saintonge ware has only been noted on other sites in Boston. It is remarkably uncommon in Lincoln (Young & Vince forthcoming #44553). Low Countries Greyware has only been recorded on another site in Boston. There is, however, a change in distribution during the 16th century and later 16th-century Frechen stoneware, for example, is found on numerous rural sites in the county. It may be that some of the Low Countries Redware vessels noted here are actually of 16th-century date (although any with white slip trailed decoration have been noted separately).

Comparison with other Ports

Roughly speaking, the imported pottery at South End can be divided as shown in Table 5. By whichever measure one uses, Rhenish stonewares form the majority of the imports, followed by the remainder, whose rank depends on whether we look at the number of vessels present, the number of sherds or their weight. In every method of quantification, the Rhenish stonewares form about half of the imported assemblage.

Table 5

Source	Vessels	Weight	Sherds
Germany	31	909	41
Low Countries	11	786	15
France	10	76	15
Meuse valley	6	560	15
Grand Total	58	2331	86

Similar finds occur in most of the medieval ports on the south and east coasts of the British Isles but it is difficult to find quantified data for comparison. Excavations in medieval Southampton have produced a large collection of late medieval pottery. That from the excavations of Colin Platt has been published but it is difficult to extract quantified data (Platt & Coleman-Smith 1975). However, the pottery from a series of more recent excavations has been analysed by Duncan Brown, who demonstrates that the late medieval period is a period of relative decline in the importation of pottery, and that this reflects the documented history of the port. In total, Brown catalogued 4975 sherds of late medieval type from nine separate excavations, although his late medieval grouping extends to the mid 16th century, which obviously affects comparison with Boston (2002). The pottery was quantified by sherd count and weight and the average proportion of imports to local and non-local English imports across those nine sites was 53% by weight and 54% by sherd count. There was, however, considerable variation between sites, ranging between 24% and 82% by weight and 25% and 87% by sherd count.

Within the late medieval import assemblage, some types can definitely be assigned solely to the 16th century whilst the remainder could date to either the late 14th/15th or the 16th

centuries (Table 6, based on Brown 2002, Table 5). The relative frequency by source area reflects the location of Southampton on the south coast and its traditional links with Normandy and the Iberian Peninsula. Low Countries are the most common late medieval import (measured by sherd count) and most of these are the same red earthenwares as are found at Boston. However, wares from the Iberian peninsula are the next most common type, a group completely absent from South End and uncommon in Lincolnshire in general. Within the French wares, Saintonge Whiteware is the most common but closely followed by Normandy wares, absent from Boston (52% of all French imports come from the southwest of France compared with 47% from Normandy). Italian wares are the next most important group at Southampton, again one that is not represented at all in the Boston assemblage whilst the Siegburg and Langerwehe stonewares form a very small proportion of the late medieval assemblage (but not that in the late 15th./16th century the proportion of Meuse valley wares at Southampton rises to over 40%, as a result of the Raeren stoneware industry).

Table 6

Source	14/15	16	Grand Total
Low Countries	41.22%	5.39%	28.69%
Iberian	30.20%	3.91%	21.01%
French	14.91%	38.15%	23.04%
Italian	9.91%	7.64%	9.12%
Rhineland	3.22%	4.50%	3.67%
Meuse valley	0.54%	40.40%	14.48%

Moving to the east coast, the late medieval pottery of the City of London has been studied in some detail, and the South End site is similar in date to the finds from the Thames waterfront (Vince 1985). Although numerous late medieval deposits have been excavated in the city, often closely datable through associated finds and dendrochronology, only the data from Trig Lane is available in print. There, four dumps were excavated: G7, dated to the early to mid 14th century; G10, dated c.1360; G11, dated c.1380 and G15, dated to the early/mid 15th century. The pottery was quantified by sherd count, weight and EVEs but only the EVE counts are published. The overall frequency of imports is low: 3% in G7; 4% in G10; 8% in G11 and 7% in G15. Given the range of contemporary frequencies seen in the Southampton data no credence should be put upon the apparent doubling in import frequency in the late 14th century. Table 7 shows the composition of the import groups by EVES and here there does appear to be significant patterning: French wares (almost all Southwestern French) decline sharply between c.1360 and c.1380 and do not recover; Spanish wares are too infrequent to quantify; German wares (which in this data includes both Siegburg and Langewehe stonewares) is constant; and the Low Countries wares (mostly red earthenware but with some greyware) rise sharply between c.1360 and c.1380.

Table 7

Ware	G7	G10	G11	G15
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French	40%	73%	7%	5%
Spanish	0%	0%	0%	13%
German	42%	27%	36%	34%
Low Countries	18%	0%	57%	48%

It is quite likely that these figures are inaccurate because of the small size of the import assemblage at Trig Lane and may also only reflect the areas of the city whose rubbish ended up in the Trig Lane dumps but this general pattern, of southwestern French wares being more common in the earlier part of the later medieval period, and the Low Countries wares being more common later, was repeated on other sites in the City.

Finally, we can obtain some data from Hull, where several excavations have taken place in the old town, dating from the 1270s onwards. One of these, 33 Lowgate/12 Bishop Lane, produced two late medieval phases, in which the 114 sherds of pottery from the earlier phase contained little or no Low Countries red earthenware in contrast to the later phase which produced 89 sherds in total, of which 16 were Low Countries red earthenware. Imports form 23% by sherd count of the earlier assemblage and 45% of the later one. French wares (including one sgraffito sherd) form the largest group within the imports, and all other import types were represented by five or less sherds in total. However, these include five Portuguese vessels (Iberian Red Micaceous ware), a type which is not common at the other sites discussed here.

Table 8

Broad source	B	C	Grand Total
England	88	49	137
France	22	18	40
Spain/Portugal	2	3	5
Meuse Valley	1	2	3
Germany	1	1	2
Low Countries		16	16

The contrast in overall frequency of imported pottery and the composition of the import assemblages at these different sites are informative. They indicate that at sites where the port was dominant in the settlement's economy, imported pottery is present as a high proportion of the pottery used in the town but in London, despite the likelihood that its overseas trade outstripped that of the other settlements examined, the overall size of the population and the more varied economic base, lead to a much smaller frequency of imported pottery.

One might imagine that the relative proportion of wares from different sources would reflect the distance of those sources from the port under consideration. This is not borne out by the data presented. Portuguese vessels ought, by that reckoning, be most common at

Southampton and least common at Hull, whereas in fact they were only present in quantity at Hull. Similarly, the port closest to the Low Countries would either be Boston or London, and yet it is Southampton which has the highest proportion of Low Countries imports in the late medieval period. The possible explanations for these patterns are varied. Firstly, none of the collections used in the comparison is large and in most cases they come from specific sites rather than, as at Southampton, reflecting possible variation within the settlement. However, it is the writer's impression that the groups used in the study are typical of the settlements concerned (based on the accumulation of data from other, smaller or unquantifiable site assemblages). Most likely, these patterns reflect complex trade patterns, in which, for example, ships carried out a triangular trade, taking goods from A to B, B to C and then C to A, rather than a simple cross-channel port-to-port trade. We cannot even say for certain that these goods came directly from a foreign port. A study of the port book evidence for the trade in pottery imports along the south coast by John Allan shows that the Rhenish stonewares, which occur in high numbers on sites in southern England, were in the main redistributed from London and do not indicate the presence of foreign ships in southern ports at all (Allan 1984 #12713). It may be, therefore, that we will find out more about the mechanics of seaborne trade at Boston by a study which combines a study of the documentary sources with a comparative study of pottery found on sites throughout Boston, and at other East Coast ports and their hinterlands.

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Appendix 1

TSNO	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O5	MnO
V3142	13.9486	5.8976	1.3095	0.5044	0.3589	2.5317	0.7178	0.2037	0.02231
V3143	20.855	2.7742	0.9021	0.4947	0.2328	2.7742	0.8924	0.1067	0.01552
V3144	19.7104	3.0749	0.8148	0.4656	0.1649	1.9594	0.9797	0.0873	0.02037
V3145	15.1417	6.1304	1.067	0.3007	0.3783	2.6578	0.6887	0.1843	0.01358
V3146	17.0429	5.7909	1.2901	0.2619	0.3783	2.9488	0.7566	0.0679	0.01261
V3147	11.1938	4.0352	0.9797	0.4656	0.5141	2.1728	0.4656	0.1067	0.01164
V3148	12.7555	5.0925	1.358	0.8827	0.4656	2.2601	0.6693	0.0873	0.0291
V3149	10.9998	3.783	1.0379	0.8245	0.582	2.0273	0.5238	0.0582	0.02425
V3150	15.2581	5.5193	1.1058	1.2901	0.388	2.7645	0.7275	0.6111	0.01746
V3151	20.1857	1.7654	0.4559	0.291	0.291	2.2407	1.3095	0.1067	0.01261
V3152	20.7095	2.6966	0.4656	0.3201	0.3104	2.2116	1.4259	0.1261	0.02037
V3153	19.9917	1.5811	0.4462	0.2619	0.2813	2.1922	1.3095	0.097	0.01455
V3154	18.4106	1.3386	0.5626	0.4074	0.2037	1.7751	1.5811	0.0873	0.00388
V3155	19.7783	2.037	0.6693	0.3686	0.1552	1.7654	1.1737	0.0679	0.00582
V3156	18.3524	1.3871	0.5917	0.3686	0.2037	1.7363	1.649	0.0776	0.00388
V3157	20.8162	2.425	0.5141	0.3492	0.1455	1.4065	1.3968	0.0873	0.01358
V3158	14.3463	5.0149	1.3774	0.388	0.4268	2.6869	0.7178	0.0679	0.01455
V3159	12.8913	4.6463	1.2028	0.4074	0.4365	2.3862	0.6305	0.097	0.02037
V3160	19.9529	4.1128	0.5141	0.4947	0.2037	1.6587	1.7363	0.0873	0.01261
V3161	19.5261	2.5511	0.6596	0.388	0.3007	2.8421	0.9215	0.1746	0.01746
V3162	18.4979	2.5802	0.6499	0.4365	0.3007	2.9197	0.9215	0.194	0.02037
V3163	21.2236	3.0555	0.8342	0.5044	0.3298	3.3756	0.97	0.2813	0.02328
V3164	20.3797	2.134	0.6111	0.3104	0.2813	2.9585	0.9506	0.1067	0.0097
V3165	19.0896	1.8818	0.582	0.2813	0.291	2.6966	0.9118	0.0679	0.00873
V3166	20.6222	2.328	0.6208	0.4074	0.3007	3.0749	0.9797	0.1164	0.01261
V3167	21.0684	2.2601	0.6499	0.4171	0.3104	2.9391	1.0088	0.1358	0.01067
V3168	21.0684	2.5317	0.7081	0.4171	0.2813	3.1622	0.9409	0.1552	0.02328
V3169	21.4467	2.1631	0.4074	0.3686	0.2813	1.6199	1.0961	0.0485	0.00485
V3170	20.7095	2.134	0.6111	0.388	0.2716	3.007	0.9603	0.1843	0.01843

Appendix 2

TSNO	Ba	Cr	Cu	Li	Ni	Sc	Sr	V	Y	Zr*	La	Ce	Nd	Sm	Eu	Dy	Yb	Pb	Zn	Co
V3142	327.86	105.73	45.59	61.11	31.04	13.58	92.15	116.4	13.58	63.05	32.01	58.85	32.3689	4.63272	0.789192	2.425	1.746	5580.0414	77.6	17.46
V3143	356.96	123.19	24.25	118.34	36.86	16.49	115.43	152.29	12.61	55.29	41.71	68.453	41.57808	5.18174	1.039064	2.522	1.649	296.335	62.08	21.34
V3144	271.6	128.04	28.13	108.64	43.65	15.52	111.55	150.35	14.55	61.11	42.68	74.855	42.94578	5.09153	1.015008	3.007	1.649	128.6996	61.11	22.31
V3145	325.92	118.34	37.83	55.29	28.13	13.58	88.27	122.22	10.67	58.2	32.01	54.582	31.913	2.81688	0.576568	1.94	1.649	178.8583	63.05	15.52
V3146	328.83	130.95	26.19	79.54	39.77	15.52	86.33	144.53	13.58	67.9	33.95	63.118	34.10132	3.40373	0.797728	2.328	1.746	468.9271	81.48	16.49
V3147	265.78	74.69	13.58	33.95	24.25	9.7	68.87	82.45	9.7	47.53	23.28	44.979	23.43326	3.44544	0.550184	1.649	1.261	144.0062	49.47	15.52
V3148	300.7	86.33	21.34	55.29	52.38	13.58	93.12	106.7	21.34	63.05	32.98	73.788	34.46604	5.65025	1.1446	3.686	2.328	1152.2145	74.69	20.37
V3149	297.79	66.93	31.04	31.04	30.07	9.7	81.48	76.63	16.49	49.47	29.1	59.917	30.36294	3.6181	0.86136	3.201	1.746	160.6902	49.47	17.46
V3150	327.86	101.85	21.34	68.87	34.92	13.58	99.91	113.49	13.58	72.75	33.95	60.984	34.1925	4.35821	0.819456	2.425	1.843	303.8719	77.6	18.43
V3151	388.97	93.12	20.37	114.46	40.74	14.55	123.19	131.92	19.4	130.95	64.02	116.468	63.73482	8.39438	1.604768	3.783	2.134	144.7143	41.71	26.19
V3152	432.62	105.73	28.13	113.49	48.5	15.52	146.47	132.89	23.28	143.56	71.78	137.808	71.75866	10.05502	1.918272	4.559	2.425	150.9805	54.32	31.04
V3153	398.67	129.01	20.37	120.28	44.62	14.55	126.1	124.16	17.46	119.31	63.05	116.468	62.54948	9.90467	1.619512	3.492	1.843	118.7183	43.65	26.19
V3154	291	114.46	18.43	58.2	24.25	12.61	109.61	106.7	17.46	92.15	42.68	67.386	42.76342	4.15742	0.862912	2.813	2.037	130.9694	26.19	29.1
V3155	267.72	130.95	22.31	107.67	35.89	14.55	114.46	139.68	19.4	96.03	45.59	83.391	45.77236	5.0149	1.09804	3.104	2.134	101.4717	48.5	22.31
V3156	291	119.31	17.46	54.32	53.35	13.58	108.64	110.58	17.46	95.06	42.68	65.252	42.67224	4.53087	0.956032	2.716	2.037	97.0776	26.19	103.79
V3157	266.75	154.23	22.31	118.34	34.92	13.58	115.43	158.11	22.31	136.77	45.59	82.324	46.13708	6.4505	1.067	3.492	2.619	62.6038	44.62	20.37
V3158	310.4	105.73	16.49	56.26	32.01	13.58	84.39	125.13	10.67	58.2	31.04	50.314	30.91002	2.86053	0.665808	1.843	1.552	106.9037	60.14	19.4
V3159	300.7	96.03	15.52	39.77	31.04	11.64	77.6	110.58	11.64	57.23	26.19	48.18	26.53338	3.94111	0.695296	2.037	1.552	70.5287	61.11	19.4
V3160	345.32	186.24	28.13	86.33	56.26	19.4	158.11	158.11	9.7	111.55	59.17	89.793	57.53458	5.84716	1.028976	2.037	1.358	78.0171	51.41	24.25
V3161	502.46	111.55	28.13	55.29	25.22	16.49	106.7	139.68	22.31	45.59	65.96	120.736	66.5614	10.97167	1.929912	4.85	2.134	173.5039	52.38	13.58
V3162	511.19	104.76	67.9	53.35	31.04	16.49	102.82	124.16	29.1	44.62	72.75	162.349	74.40288	13.19394	2.412584	6.402	2.522	1654.7521	65.96	12.61
V3163	601.4	112.52	81.48	66.93	30.07	19.4	121.25	157.14	42.68	35.89	95.06	170.885	97.74496	19.74435	3.53856	8.924	3.492	1896.4664	79.54	10.67
V3164	524.77	109.61	39.77	54.32	23.28	17.46	103.79	150.35	36.86	36.86	89.24	170.885	91.45354	20.4088	3.41828	8.051	3.104	1295.9103	52.38	11.64
V3165	445.23	105.73	29.1	55.29	19.4	16.49	91.18	137.74	26.19	39.77	70.81	132.473	71.5763	13.50046	2.468456	5.335	2.231	602.6804	44.62	12.61
V3166	511.19	116.4	33.95	53.35	24.25	17.46	103.79	146.47	22.31	45.59	55.29	113.267	56.44042	11.6206	1.94776	4.753	2.231	535.1878	57.23	11.64
V3167	578.12	106.7	30.07	48.5	18.43	19.4	118.34	144.53	22.31	46.56	135.8	195.426	132.39336	12.02897	2.050192	5.044	2.134	450.3516	44.62	8.73
V3168	552.9	115.43	29.1	60.14	23.28	18.43	111.55	155.2	27.16	40.74	74.69	127.138	75.40586	12.33549	2.125464	5.529	2.522	454.2316	56.26	10.67
V3169	284.21	126.1	15.52	43.65	23.28	17.46	86.33	114.46	13.58	62.08	43.65	64.185	43.03696	5.17107	0.796952	2.134	1.455	939.8233	32.98	10.67
V3170	531.56	116.4	29.1	52.38	24.25	18.43	111.55	137.74	26.19	43.65	65.96	116.468	67.19966	12.4548	2.15728	5.529	2.425	172.3205	56.26	10.67

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