

Axe Street, Barking, and the supply of medieval Mill Green-type ware to London and south Essex

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Introduction

An excavation was undertaken in 2006 at Axe Street, Barking, by AOC Archaeology Group on behalf of Galliford Try (Fig. 1). The site covers an area of approximately 3,000 sq m, previously a public car park, that was being developed into a 96-unit housing block. It was assigned the site code AXB06. The initial three-trench archaeological evaluation, which identified several late medieval features in the north-west area of the site, was followed by the excavation of a further 10 by 10 m area (Trench 4) targeted on these features (Fig. 2).

The site is situated on Flood Plain Gravels over London Clay.¹ Desk-based research ahead of the fieldwork showed that remains from many periods had been found in the vicinity, although the presence of Barking Abbey 300 m from the site meant the prospect of results of archaeological significance was highest for the medieval period.

Following the post-excavation assessment, samples of Mill Green ware,² which dominated the pottery assemblage, were selected for thin-sectioning and for chemical analysis by ICP-AES (Inductively Coupled Plasma Atomic Emission Spectroscopy). They were compared with samples from production sites in Mill Green and Noak Hill, to identify the source of the Barking finds and provide information about the patterns of supply for this pottery. Macroscopic examination suggested a close similarity between the Mill Green ware from Axe Street and wasters collected at Noak Hill. The Noak Hill data have already been published and were available for comparison.³ Finds from excavations at Mill Green Common⁴ were kindly provided by Colchester Archaeological Trust⁵ and from Hardings Farm, Mill Green, by Chelmsford and Essex Museum.⁶

Medieval remains

The results of the Axe Street investigations relate principally to the medieval period. No earlier features were found; the later features and artefacts contribute little to our understanding of the area during these

periods. Natural gravels were recorded in all the trenches; Trench 3 had suffered extensive late post-medieval or modern truncation to a depth of over 3 m below modern ground level.

In itself, the medieval stratigraphic sequence is only moderately

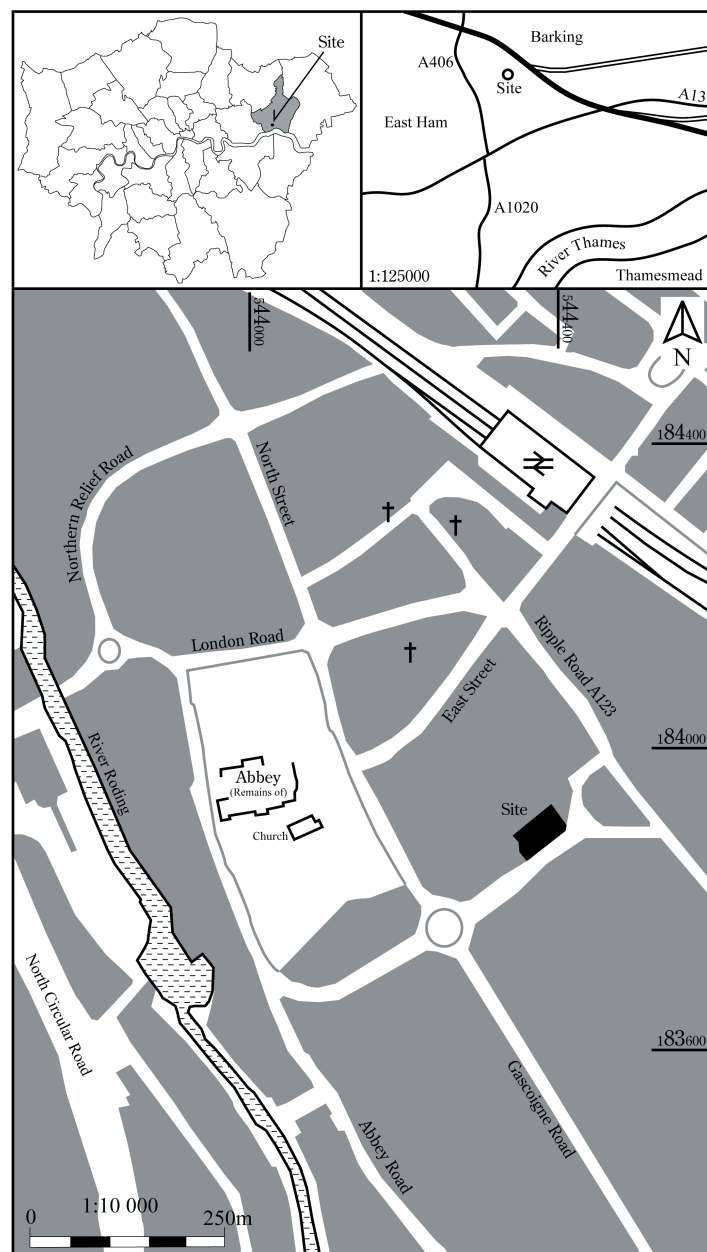


Fig. 1: site location and trench location plan

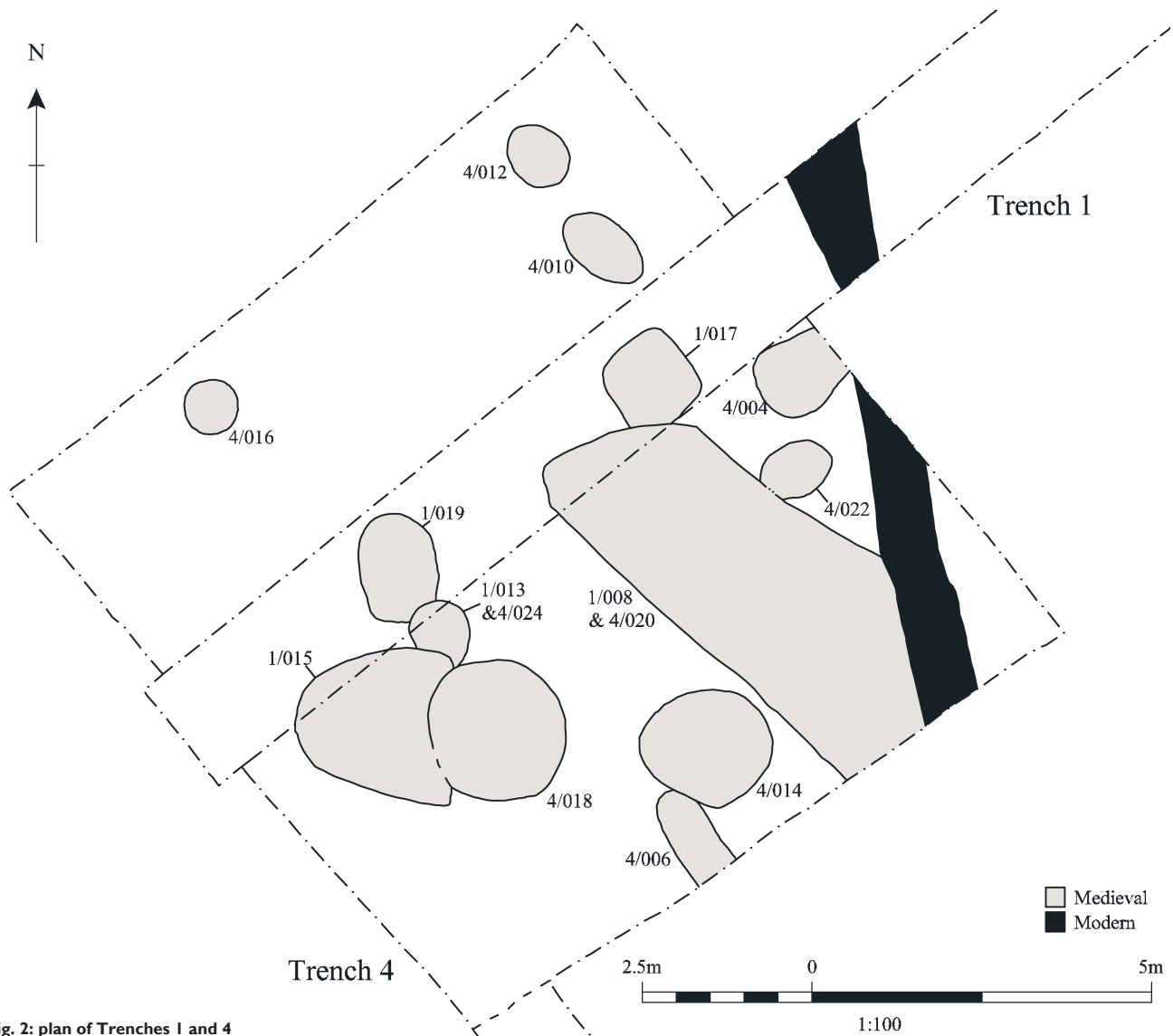


Fig. 2: plan of Trenches 1 and 4

informative, as it consisted of an area of pitting across part of the site. This activity was focused towards the north-west edge of the site, rather than covering the whole of the area that had not been truncated. The medieval remains consisted of 13 features, most being small- to medium-sized pits, but there was also one large pit and a ditch terminus. They contained domestic material, and are likely to have been rubbish pits although some may originally have had other functions. The sequence therefore indicates occupation on the site or close nearby.

The earliest feature, out of a group of inter-cutting pits towards the south-west edge of Trench 4, [1/019], was sub-circular and measured 1.6 by 1.1 m and 1.1 m deep, possibly being the base of a well. The pottery in its fill dates from 1270–1350. A similar date range has been given to the two pits

that followed stratigraphically, [1/013] / [4/024] and [1/015] / [4/027], while the latest in this group, [4/018], dates from 1400–1500. About 4 m to the north-east of this group, there were two medium-sized pits, [1/017] and [4/022], with dates in the 1270–1400 range, both of which were truncated by a large sub-rectangular pit, [1/008] / [4/020], which included slightly later medieval wares dating from 1400–1500.

Ditch terminus [4/006] extended beyond the south-eastern edge of Trench 4, and contained a single sherd of coarse London-type ware (LCOAR), dating from c. 1140–1200. This feature may therefore be earlier than the others around it, but as four other pottery sherds of this date were all residual in later features, this one may also well have been residual. The feature was truncated by a shallow pit [4/014], dating from 1270–1400. Three undated

small shallow pits [4/010], [4/012] and [4/016] were recorded in the north-western part of Trench 4. A fourth undated pit, [4/004], extended beyond the north-east edge of Trench 4. While undated it seems most likely that these pits were also in the range 1270–1400, by association with the surrounding features.

The activity on the site therefore may have started as early as the 12th century, but was at a high point between 1270 and 1400, and continued at a reduced level to the end of the medieval period. Relatively few joining sherds or complete vessel profiles were present, suggesting that the material derived from the dumping of domestic waste over a lengthy period. The large size of one of the later features suggests that the way that the site was being used may have changed over this period.

Medieval pottery (Fig. 3)

Mill Green ware is by far the most common fabric identified on the site, accounting for 58% of all pottery by minimum vessel count (MNV), and the high proportion found is of some interest. As usual elsewhere, jugs and jars or cooking pots are the main forms. Mill Green ware occurs in a fine fabric (MG), with either a coating of white slip under a green glaze, or with white slip decoration under a clear glaze (MG WSD), and there is also a coarse variant (MGCOAR). The fineware fabric is hard and smooth, generally brick-red in colour, frequently with a well-defined dark grey core, a distinctive feature of the firing process resulting from a phase of deliberate reduction in order to strengthen the ware. It is characterised by abundant very fine quartz, with sparse to moderate fine mica and iron-rich compounds. Most examples also have moderate sub-angular and rounded quartz, occurring more frequently in the coarseware variant.⁷ The fineware was mostly used for jugs, while the coarseware was used especially for jars or cooking pots,

which at Axe Street were almost all sooted from use in heating food (hereafter called 'cooking pots').

This pottery is now known to have been made at kilns in and around Mill Green, near Ingatestone, Essex.⁸ Documentary records suggest that pottery production had started in the area at least by c. 1275, when a survey of the manor of Ingatestone mentions two Thomas Potters and a John le Potter.⁹ The evidence of the London waterfront sequence places the introduction of the fineware and coarseware into the capital between c. 1240 and 1270, probably closer to the later date.¹⁰ The fineware appears to have tailed off in London after c. 1350, but the coarsewares are found in reduced quantities in the capital in late-14th-century contexts. It seems likely that Mill Green wares were being used in south and central Essex in the early- to mid-13th century, earlier than their introduction into the London market and their documented production.¹¹ It is also probable that they continued in use locally for longer, and that their period of popularity in the capital was

of relatively limited duration. In east London, Mill Green wares have been found at various locations. For the most part, white-slipped, green-glazed fineware jugs were found at Barking Abbey, but there were also coarseware bowls, jars and dripping dishes.¹²

No kiln remains have been identified, but deposits of kiln waste are known from at least eight locations close to Mill Green, 10 miles to the north-east of Barking.¹³ Excavations were carried out here in 1967,¹⁴ and a large collection of kiln waste excavated in 1963 from a drainage ditch at Harding's Farm, Mill Green, was subsequently published in some detail.¹⁵ The finds consisted chiefly of white slip-painted jugs (MG WSD) and plain cooking pots, and since these are relatively uncommon in London, it appears that a considerable part of the pottery's output was intended for relatively local consumption.

Large quantities of Mill Green-type wasters have also been found at Weald View, Noak Hill, six miles to the north-east of Barking, together with a tile kiln, and were apparently made in the vicinity.¹⁶ The finds include a high proportion of fineware jugs with white slip decoration, and seem to coincide chronologically with the Mill Green ware's main period of use in the 13th century. Barking, Noak Hill, and Mill Green all lie close to the London-Colchester road, which was undoubtedly used for transport of the pottery.

Most of the cooking pot sherds at Axe Street occur in the coarseware fabric, although there are also several in the fineware, which is noteworthy since the great majority of finds from London are in the coarseware.¹⁷ Production at the Noak Hill pottery was principally fineware, including numerous cooking pots,¹⁸ and the Axe Street examples are comparable in form and fabric. It has been suggested that the Noak Hill cooking pots were intended primarily for the local market.¹⁹ The cooking pots are generally thin-walled and hard with a rounded profile and convex base. Rim forms are everted and may be slightly thickened, with a flat or internally bevelled top and rounded profile, above a short straight-sided neck. These forms are also found in the City,²⁰ at Harding's Farm,²¹ and Noak Hill.²² The

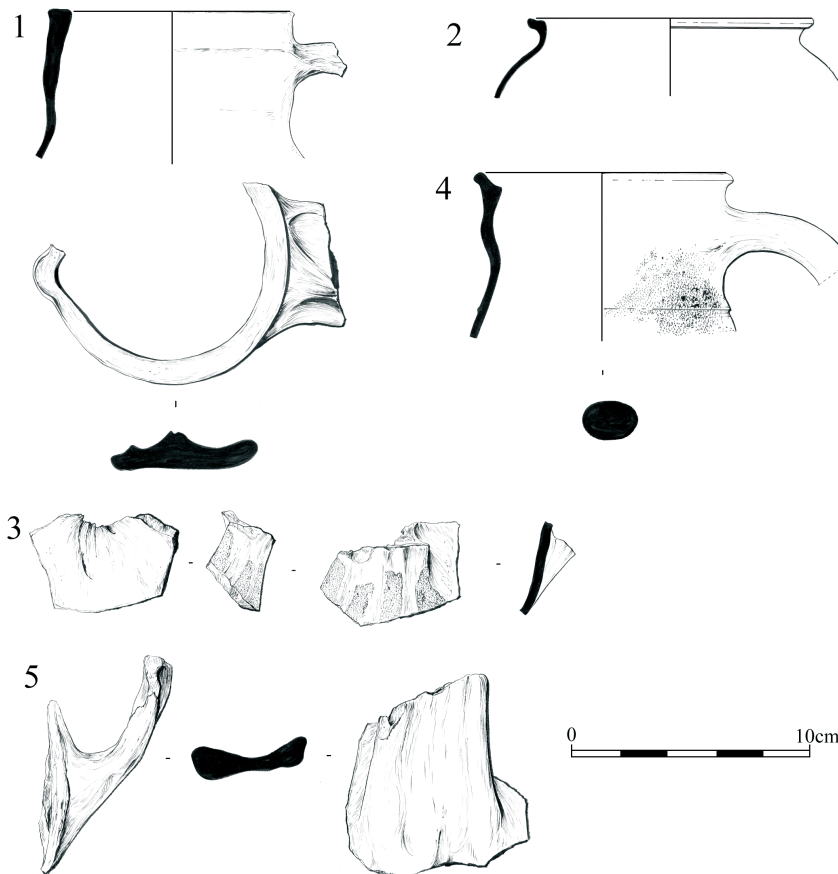


Fig. 3: Mill Green ware. Nos 1, 3: jugs with white slip decoration; no. 2: coarse ware cooking pot; no. 4: flared baluster jug; no. 5: Colchester ware rounded jug.

cooking pots in London-type ware from Axe Street are similar in form.²³

Most of the jugs are in the fineware fabric, coated in white slip with a green glaze, usually with simple vertical combing or *sgraffito* decoration. The white slip-decorated jugs are too fragmentary for the designs to be reconstructed, although there is the suggestion of a simple vertical linear scheme on one sherd. Most jugs appear to be of rounded form, with grouped thumbing around the base and an in-turned collar rim with a pulled and pinched pouring lip. The base of one large jug appears to have thumbing in groups of four impressions at intervals around the base angle.

On one sherd, a broad strap handle displays clear evidence of how it was attached at the upper end. It has impressed thumb stops or 'ears' at the join, and three small neat stab-marks made with a pointed tool can be seen inside the rim of the jug at the point of attachment. They penetrate deep into the handle end through the wall of the jug and were not subsequently covered over or concealed, as was often the case. They would have helped secure the join and in the release of trapped water vapour during firing. This method is unusual but not unique in the potteries of the London region, including the Mill Green industry. Methods of handle attachment can be specific to individual industries, and the usual method favoured by Mill Green potters involved the potter pushing the end of the handle against the body so that the clay partially squeezed through a hole made in the neck. The join was then usually smoothed over inside.²⁴ Lower handle attachments were seldom smoothed over, being hidden from view, so the method is more obvious. The two Axe Street examples show different methods: one retains the impression of the potter's finger or thumb, pushed into the join from inside; the other is a rod handle, which has been 'plugged' or pushed against a hole in the jug body, so that the clay squeezes through and forms a kind of tenon join. The first is the common Mill Green technique, the second is more common on London-type wares. These varied techniques may represent the work of different individual potters, perhaps working at different centres,

or possibly even at the same pottery but with their own particular approaches to making jugs. Alternatively, they may represent different approaches to vessel form and to whether a rod or strap handle was being attached.

London-type wares account for 32% of all medieval pottery from Axe Street by minimum vessel count. For the most part these consist of sherds from jugs and cooking pots. Otherwise the range of 13th- to 14th-century pottery found on the site is very limited, with no imported wares at all. The latest medieval pottery, dated to the 15th century, consists of sherds from a cooking pot and a dripping dish in late London slipped ware (LLSL), sherds from two bowls in coarse Surrey-Hampshire border ware (CBW), and the lower handle join of a Colchester-type ware jug (COLW) (Fig. 3, no. 5).

Fabric analysis of Mill Green ware

Alan Vince

The programme of petrological analysis was undertaken to determine which, if any, of the known kiln sites producing Mill Green-type wares was supplying the site, and by extension the Barking and east London area. Four samples were thin-sectioned, a fineware (MG) and a coarseware (MGCOAR) each from Axe Street and the Mill Green 1967 excavations. This showed that the Axe Street samples differed in composition from the Mill Green samples. The Axe Street samples have a very similar appearance to each other, showing they came from the same

source and that not all the MGCOAR vessels need have added quartz sand. The Mill Green samples differed from each other only in the presence of additional quartzose sand in the coarseware, which must therefore have been deliberately added.

Twenty-eight samples from Axe Street were analysed by ICPS, measuring the major elements and a range of minor and trace elements in the fabric. Factor analysis (a multivariate statistical technique) was applied to the measurements to identify the differences between the samples. Factor analysis of the Axe Street data confirmed that no distinction could be found between the MG and MGCOAR samples, and did not identify any internal grouping of these samples, even when examined macroscopically the added tempering in the coarseware fabrics is quite noticeable. The chemical analysis is therefore consistent with the Axe Street samples having come from a single production centre, and the fineware and coarseware having the same composition.

Factor analysis was also applied to compare the Axe Street samples to groups from three production sites: Noak Hill, and two sites at Mill Green, Mill Green Common 1967 and Harding's Farm (Fig. 4). There was considerable overlap in the composition of the two Mill Green groups (although the 1967 samples all have higher Factor 3 scores than the Harding's Farm samples). The Axe Street samples are closer in composition to the Noak Hill samples than to the

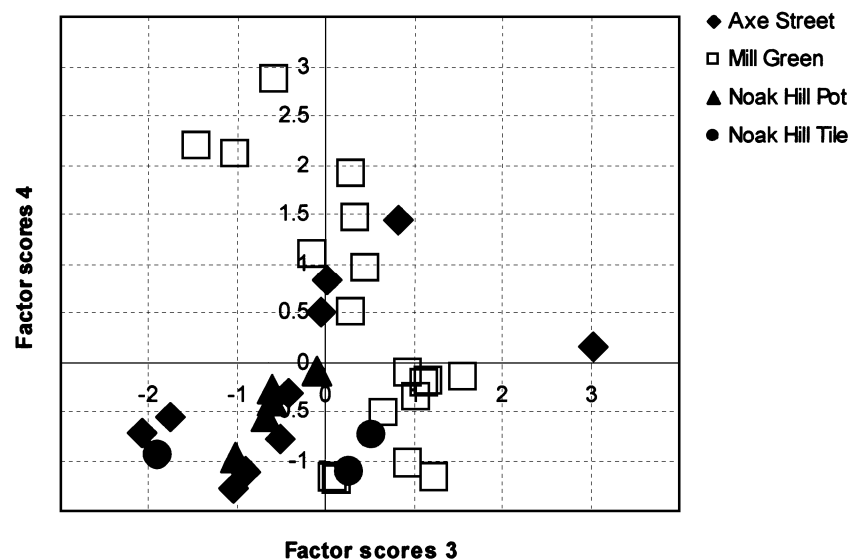


Fig. 4: factor analysis of chemical analysis

Mill Green samples. As with the Axe Street samples, there is no indication of a difference in composition between the MG and MGCOAR samples from Mill Green itself. These results suggest that the Axe Street samples probably came from Noak Hill rather than Mill Green.

Conclusions

The characterisation study of the Mill Green-type ware from Axe Street and three production sites has provided information about the distribution of this pottery in the late 13th and 14th

centuries. The Axe Street wares probably come from a single source, with the same clay being used for the fineware and coarseware. Mill Green itself is probably not the source of the Axe Street pottery, which is more likely to have come from Noak Hill.

It appears that Noak Hill was an important source of the pottery used in Barking during the late 13th and 14th centuries. It is closer than Mill Green and supplied both finewares (principally decorated jugs) and everyday kitchen wares (cooking pots or jars). However, much of the Mill

Green ware in the City came from the production sites at Mill Green.²⁵ This suggests that Noak Hill was supplying a largely local market in south Essex and what is now east London, while the products of the Mill Green sites largely bypassed the local area in favour of the London market.

Acknowledgments

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2. J.E. Pearce, A.G. Vince and R. White 'A dated type-series of London medieval pottery part 1: Mill Green ware' *Trans London Middlesex Archaeol Soc* **33** (1982) 266–298.

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4. E. Sellers 'Ingatstone, Mill Green', *Medieval Archaeol* **12** (1968) 207–208; E. Sellers 'Ingatstone, Mill Green TL643022' *Trans Essex Archaeol Soc* **2** (1970) 337–378.

5. With thanks to Helen Walker.

6. With thanks to Nick Wittenden.

7. *Op cit* fn 2, 277–279.

8. *Op cit* fn 2.

9. *Ibid*, 268.

10. *Ibid*, 268, 272.

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13. *Op cit* fn 2, 268–270; *op cit* fn 11, 11–13.

14. *Op cit* fn 4.

15. *Op cit* fn 11.

16. *Op cit* fn 12.

17. *Op cit* fn 2, 289.

18. *Op cit* fn 12, 34.

19. *Ibid*, 24, 34–35.

20. *Op cit* fn 2, fig. 16.

21. *Op cit* fn 11, fig. 210.

22. *Op cit* fn 12, fig. 18.

23. J.E. Pearce, A.G. Vince and M.A. Jenner *A dated type-series of London medieval pottery part 2: London-type ware*, London Middlesex Archaeol Soc Spec Pap 6 (1985).

24. J.E. Pearce 'Getting a handle on medieval pottery' *London Archaeol* **5** (1984) 17–23.

25. *Op cit* fn 2.

Code	SC	% SC	MNV	% MNV	Wt	% Wt
CBW	3	2.5%	3	3.8%	32	2.3%
COLW	2	1.7%	1	1.3%	121	8.8%
LCOAR	4	3.3%	3	3.8%	22	1.6%
LLSL	2	1.7%	2	2.6%	61	4.4%
LOND	35	29.2%	21	26.9%	228	16.5%
LOND HD	1	0.8%	1	1.3%	1	0.1%
MG	27	22.5%	24	30.8%	312	22.6%
MG WSD	8	6.7%	4	5.1%	193	14.0%
MGCOAR	35	29.2%	16	20.5%	391	28.4%
MGCOAR WSD	1	0.8%	1	1.3%	6	0.4%
SSWX	2	1.7%	2	2.6%	12	0.9%
Total	120	100.0%	78	100.0%	1379	100.0%

Table 1: breakdown of medieval pottery fabrics by sherd count (SC), minimum number of vessels (MNV) and weight in grams

Form	SC	% SC	MNV	% MNV	Wt	% Wt
BOWL	3	2.5%	3	3.8%	35	2.5%
CP	64	53.3%	26	33.3%	527	38.2%
DISH DRIP	1	0.8%	1	1.3%	42	3.0%
JAR	1	0.8%	1	1.3%	13	0.9%
JUG	27	22.5%	30	38.5%	152	11.0%
JUG BAL	1	0.8%	1	1.3%	26	1.9%
JUG FLBAL	2	1.7%	1	1.3%	105	7.6%
JUG RND	10	8.3%	4	5.1%	465	33.7%
MISC	11	9.2%	11	14.1%	14	1.0%
Total	120	100.0%	78	100.0%	1379	100.0%

Table 2: breakdown of medieval pottery forms by sherd count (SC), minimum number of vessels (MNV) and weight in grams

Appendix

Quantified data for the medieval pottery

Jacqui Pearce

A total of 147 sherds from a minimum of 104 vessels were recovered from the evaluation, with a total weight of 3789 g. The finds come from 17 contexts, all of them small, with fewer than 30 sherds, apart from one of medium size, with 46 sherds, mostly small and recovered from the wet-sieved sample (context [4/026]). The pottery was recorded in accordance with standard MoLAS procedure using current fabric, form and decoration codes. Quantification by sherd count, minimum number of vessels (MNV) and weight in grams was also carried out.

The bulk of the pottery excavated on the site is medieval in date (120 sherds from a minimum of 78 vessels, 1379 g). They come from a series of pit fills that can be dated to the late 13th to 14th centuries on the basis of the sherds recovered.

There are 27 sherds of post-medieval pottery from a minimum of 26 vessels (total weight of 2410 g).