A re-examination of the Early Medieval Pottery from Saddler Street, Durham

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As part of a survey of the Anglo-Saxon pottery of northern England, the area once part of the kingdom of Northumbria, funded by English Heritage, the pottery from Site D on the 1974 Saddler Street excavations (Carver 1979) was re-examined and samples taken for thin section and chemical analysis and the dating evidence for the earlier part of the stratigraphic sequence was re-assessed.

The material examined consisted of all the sherds that were present in the Fulling House Museum from Periods 1 and 2.

Wares

The published pottery report is a summary of an unpublished report by L Addis stated to be part of the site archive. This could not be located and no information retained with the pottery allowed the sherds to be assigned to fabric groups or ware types. Therefore, a new fabric classification was employed.

Table 1

Cname	?	BOWL	DISH	JAR	JAR/PTCH	JAR?	JUG	JUG/PTCH	PTCH	PTCH?	SMALL JAR	Grand Total
CMW			1	1								2
DEVS							1					1
DURC		1	1	317	6			4	2	4	1	336
DURC/DOGBANK				1								1
DURCW	1			24	1		2	12	13	3		56
DURF				30		1						31
DURVF				2								2
SNX				1								1
ST									1			1
Grand Total	1	1	2	376	7	1	3	16	16	7	1	431

Coal Measure Whiteware (CMW)

Two sherds of a white-firing ware containing rounded pellets of white-firing mudstone were present. They share characteristics with vessels made from unweathered Coal Measures seat earths and without thin section and chemical analysis it is not possible to identify their source. The sherds come from the complete profile of a dish (155/1696) and a scrap from a jar. The earliest use of Coal Measures whiteware clays in Northern England attested to date appears to be of mid 11th-century date (York Gritty ware) but these vessels are probably of

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north-eastern origin and similar fabrics are known from Prudhoe Castle and Newcastle-upon-Tyne.

Developed Stamford Ware (DEVS)

A single sherd of yellow-glazed Stamford ware of mid 12th-century character (Fabric C) was present. The sherd came from a jug with alternate horizontal and wavy combed lines on the body (1574, Midden 5).

Durham ware (DURC, DURCW, DURF, DUVF)

The majority of the pottery consisted of Durham ware, as described and illustrated by Carver. The fabric was divided visually into four groups: the standard fabric, containing moderate to abundant sand and a light brown-firing body (DURC); a white-firing variant (DURCW), a variant with less sand (DURF) and a variant with no sand (DURVF).

Thin section analysis of 29 samples indicates that the ware was probably made from Coal Measure clays. These clays can be grouped into four distinct texture groups: a) inclusionless red-firing; b) inclusionless white-firing; c) silty, micaceous red-firing; and d) silty, micaceous white firing. Study of ceramics produced on a single production site (for example at Thorner and Baildon in West Yorkshire) as well as of samples of clay from a working potter's clay pit at Mirfield, shows that very different textures can be obtained from clays dug from the same area. Indeed, some of the samples have a variegated groundmass, indicating that differences in colour or texture existed in the raw clay. In a few instances large fragments of mudstone, of similar colour and texture to the groundmass, were present in the section. In these cases it is likely that the clay was dug from unweathered clay in a pit dug into Coal Measures clay. In the other cases, it is quite possible that the clay was re-deposited in head deposits or boulder clay. All of the DURCW samples have either a fine white-firing groundmass or a silty, micaceous white-firing groundmass, but in addition six of the DURC samples have a white-firing groundmass, although the colour was in those cases masked in the hand specimen by the presence of carbon throughout the body. The three samples of DURF have either a fine red-firing groundmass or a white, silty groundmass and the two DURVF samples have a red-firing, silty, micaceous groundmass.

Table 2

groundmass	DURC	DURCW	DURF	DURVF	Grand Total
cm red	6		2		8
Cm white	6	4			10
red silty micaceous	6			2	8
white silty		2	1		3
micaceous Grand Total	17	6	3	2	29

The samples all have a quartzose sand temper. In most cases, the sand is mixed and moderately well-sorted with grains c.1.0mm across. These grains are mostly of quartz

probably derived from the Lower Carboniferous Millstone Grit, together with subangular fragments of chert of similar age. In few cases are any of these grains still cemented and there is little evidence for the kaolinitic cement which often occurs in the Millstone Grit. A small proportion of the grains are of feldspar. Finer-textured sandstones, either of Millstone Grit or Coal Measures origin, and including several with an opaque or dark brown clay/iron cement are sparse and not present in every section. Well-rounded quartz grains, often completely spherical ("millet grain" quartz) are present in small quantities in almost every section. These originated in the Permian Yellow Sand which at present only outcrops well to the east of Durham and south of the Tyne. Finally, a small number of angular fragments of basic igneous rock, of similar size and rounding to the remainder, were present. These characteristics suggest that the ware was tempered with a detrital sand. Most of these inclusions are of types which probably occur throughout the northeast but the incidence of Permian "millet grain" quartz might be a better clue as to the source of the sand. These characteristics are all, however, found in samples from the Dog Bank kiln in Newcastle – upon-Tyne.

Chemical analysis of samples of these wares (e.g. Fig 1) indicates that they are all similar in composition but that the white-firing samples can be distinguished from the remainder by their iron content, as well as by their magnesium and nickel contents. Three samples of DURC, however, have a similar nickel and magnesium content to the white-firing samples, but differ in the frequency of other elements and therefore form a fifth fabric group (coded DURC2 here).

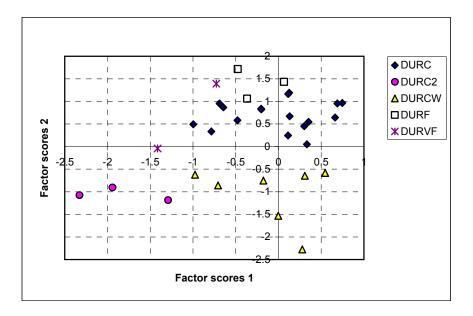


Figure 1 Scatterplot of Factors 1 and 2 from factor analysis of the Saddler St samples

The majority of the sherds of Durham ware (all fabrics) were made by hand (Table 2, HM). Some have wheel-finished rims (WF) and others were wheelthrown.

Table 3

Cname DURC/DURC2	Form BOWL	HM 1	ND	WF RIM	WT	Grand Total
20110/201102	DISH	•		1		1
	JAR	276	3	32	6	317
	JAR/PTCH	6				6
	JUG/PTCH	3	1			4
	PTCH	2				2
	PTCH?	4				4
	SMALL JAR	1				1
DURCW	?	1				1
	JAR	17		1	6	24
	JAR/PTCH			1		1
	JUG	1	1			2
	JUG/PTCH	11			1	12
	PTCH	13				13
	PTCH?	3				3
DURF	JAR	19		7	4	30
	JAR?	1				1
DURVF	JAR			1	1	2
Grand Total		359	5	43	18	425

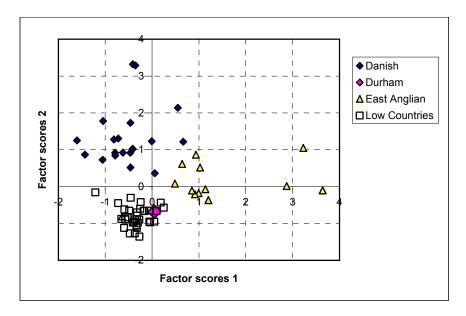
Several different vessel forms were present. The most common is the jar, followed by jugs or pitchers, pitchers (i.e. serving vessels with a wide neck), jugs (i.e. with a narrow neck), a bowl, and a dish. Most of the jars have a globular profile but one (a wheelthrown example) has a cylindrical profile. Thirty-four jar rim sherds were present but these probably come from no more than 18 vessels. The most common form has a rolled-out profile (i.e. a concave neck), sometimes with a squared rim. One vessel has a collared rim whilst other forms include flat-topped, everted and rounded. Single examples with thumbed decoration and finger-tipped decoration were present. The pitcher sherds include two with applied tubular spouts up against the rim. One of the pitcher/jug sherds has deep thumb impressions on the body, probably from the body/handle join, and a narrow strap handle probably also came from a pitcher or jug. Jug sherds include a vessel with a squared rim, one with diagonal combing on the body and a ribbed neck and shoulders, similar to those found on Londontype ware early rounded jugs and one with rectangular roller-stamped decoration.

Body decoration is rare, consisting of two jars with grooved decoration on the shoulder, one jar with wavy grooved decoration

Splashes of lead glaze were present on several vessels and it is not clear whether this was a deliberate decorative technique or the result of the glazing and firing of glazed and unglazed vessels in the same centre. In most cases the glazing consists of spots of colourless glaze but in a few cases it seems that the glaze contains a higher iron content than the body, giving an amber glaze. A similar light brown coloured glaze is found on some Meuse valley glazed wares (Huy-type ware and Andenne-type ware, 1966) and these amber glazed sherds include one with a collar rim and one with rectangular roller-stamping, both features of Andenne-type ware.

Thetford-type Ware

A single sherd of a wheelthrown greyware jar of Thetford-type ware was present. This sherd comes from the lower body of a vessel, probably a large jar, with a sagging base and the beginnings of an applied strip or possibly handle attachment. A thin section indicates that the quartz sand temper includes rounded calcareous grains, fresh angular flint fragments as well as rounded, brown-stained flint grains and is consistent with an East Anglian source. However, this petrology is also consistent with a Danish or Low Countries origin, or parts of the southeast of England. Chemical analysis suggests that the vessel might have a Low Countries origin (Fig 2). The material which groups with the Durham sample includes Low Countries Greyware, Dutch Red Earthenware, and Flemish highly decorated ware (including samples from Bruges, leper and Aardenburg). However, another English find which plots with this group is a Thetford-type ware sherd from Barton-upon-Humber, for which again an East Anglian source was suggested on petrological grounds.



Stamford Ware

A single sherd of Stamford ware, a body sherd from a pitcher or jar with a thin external glaze, was present. The fabric is classifiable as Fabric B, which was used from the mid 11th century onwards whilst the glaze is of a type used from the later 10th to the early/mid 12th century. This sherd probably came from a mid/late 11th to mid 12th-century vessel.

Ceramic Sequence

The pottery comes from a stratified sequence which for convenience of description has been divided here into phases, based on the published site interpretation. Only selected sherds from the final phase were recorded, since by that time there is no doubt that the stratigraphy is post-conquest.

Period 1 Phase 1

The earliest stratified pottery came from the backfill of a storm drain, S14 and its replacement S15. Eleven sherds were recovered from this phase. Seven came from the backfill of S14, all of DURC. They include sherds from a vessel with a wheel-finished rim with fingertip decoration (Carver 1979, Fig 22, 193/1794 and 196/1795) and handmade base and body sherds. The subsequent backfill of S15 produced the Stamford ware pitcher sherd and three Durham ware sherds (DURC: 2 and DURF: 1). These sherds included another jar with a wheel-finished rim (Carver 1979, Fig 22, 171/1752).

Period 1 Phase 2

Midden 1 accumulated over the backfilled drain S15. It produced 147 sherds of pottery, all of them Durham ware (DURC: 132, DURF: 14, DURVF: 1) representing no more than 25 vessels. With the exception of one dish, all the sherds come from jars. Several sherds had splashed glaze but otherwise there is little difference between these sherds and those from Phase 1.

Period 1 Phase 3

Midden 1 was overlain by Midden 2, from which came 5 sherds of pottery, all Durham ware (DURC: 1, DURCW: 2, DURF: 2). The light-firing ware sherds both come from glazed pitchers, one of which has evidence for a tubular spout.

Period 1 Phase 4

Midden 2 was overlain by Midden 3. In addition, the fill of a runnel, F54, was assigned to this phase. Twelve sherds were recovered from this phase, including the Thetford-type jar. The remaining sherds were all of Durham ware (DURC: 8, DURCW: 1, DURF: 1, DURVF: 1). Most of these sherds are of similar character to those from previous phases but one, possibly two, were wheelthrown (DURVF and DURF respectively).

Period 1 Phase 5

The northeast end of trench D was occupied by a series of wattle-walled structures. The earliest of these, S1 and S2, produced no pottery. Pottery was recovered from structures 3 and 4. The earliest of these, S3, seals runnel F54. In total, 12 sherds were recovered from this phase, all of Durham ware (DURC: 9, DURF: 3). The only feature not found on earlier pottery was a squared rim, from a globular jar with a rolled out rim.

Period 2 Phase 1

This phase consists of the construction, use and destruction of S5 and the construction and use of an oven, F6. Forty sherds of pottery were recovered from this phase, representing no more than 26 vessels. Two of the sherds are of Coal Measures Whiteware, a jar and a dish, and the remainder were Durham ware jars (DURC: 29, DURCW: 5, DURF: 4). Four of the

sherds were definitely wheelthrown, one in each fabric, and two further squared rims were present.

Period 2 Phase 3

This phase includes two further wattle buildings, S6 and S8 and a pit, F98. Eighteen sherds were recovered from this phase, all of Durham Ware (DURC: 16, DURCW: 2). Several of these sherds probably came from pitchers, including three from handmade vessels with amber glaze. One of these has a collar rim. Two wheelthrown vessels were present, including one from a cylindrical jar.

Period 2 Phase 4

This phase includes Midden 4, which overlay S8, the fill of vennel S12 and the fill of post pit S9. One hundred and eighty-four sherds were present, representing no more than 168 vessels. All of these sherds were of Durham ware (DURC: 131, DURCW: 46, DURF: 6). The proportion of pitchers to jars is higher in this phase than previously and includes two definite jug sherds. The roller-stamped amber glazed pitcher sherd and another tubular spouted vessel were present. Wheelthrown vessels were again present, but as a small proportion of the total.

Period 2 Phase 5

Only two sherds from Midden 5, which overlay Midden 4, were re-recorded. These were the Developed Stamford ware yellow-glazed jug and the sole example of a Durham ware bowl.

Dating

Non-ceramic finds

Consideration of the published record suggests that none of the non-ceramic finds from Period I need pre-date the conquest and appear to fit comfortably into the second half of the 11th and the 12th centuries. The leather, in particular, provides some independent dating and a scan of the material found nothing to contradict a later 11th-12th century date. The construction, styles and decoration of the shoes seen were compatible with this general dating. The shoes comprised principally of drawstring fastening ankle shoes with one-piece uppers joining with a single side seam, as one would expect for the period. Two shoes came from the earliest deposits Period 1 Phase 1. The first, formerly described as a 'slipper (192/1770), while having the initial appearance of a mule, appears to be the discarded remains of the front part of a shoe, the result of a cobbler salvaging leather for re-use. The second, the 'sandalised' shoe with openwork decoration on the vamp (190/1751), has an outward curving pointed toe suggesting that it can not date earlier than the very end of the 11th century. This toe style has been linked to court fashions in the reign of William II, 1087-1100, on the basis of comments by William of Malmesbury on the long hair, effeminacy and

pointed shoes of the courtiers (William of Malmesbury 1998). In London the style had fallen out of fashion by c. 1150 ({Grew & de Neergaard 1988 #17843}, 11). The openwork decoration on the vamp is an unusual feature at this date and nothing comparable of generally similar date appears to have been found from excavation in this country. It implies the shoe was an expensive item of dress, possibly more likely to derive from a member of the aristocracy or clergy than the tenement dweller. The shoe was recovered from the fill of drain S15, which was sealed by midden 3. This suggests that the shoe dates to the earliest use of this type, in the later 11th century, and possibly later than William II's accession in 1087.

Other aspects of the leather from Period 1 support the later 11th century dating. The shoes have round-seated soles sewn to the uppers with edge/flesh seams. The upper (9/1507/766472), from Period 1.4, originally considered to have belonged to a shoe with a sole with a V-shaped heel extension was subject to re-interpretation. On inspection it could be seen that the one-piece upper of bovine leather could have wrapped around the foot and joined with a side seam. The upper with additional inserts, as seen on several other shoes in the assemblage, making an ankle shoe for a round-seated sole rather than being seamed to a V-backed heel extension of the sole, as previously depicted (see fig 17 and diagram in fig 20 period 1). No shoe soles with tunnel stitched seams or V-shaped heel extensions are present, each being features of shoe construction commonly found at York during the $10^{
m m}$ and early/mid 11th century ({Mould, Carlisle, et al. 2003 #46563} 2003, 3268-70 and table 370; 3274) but rarely found thereafter. In London the tunnel-stitched sole seam and the Vshaped heel extension persisted to the end of the 11th century ({Pritchard 1991 #8453}, 220-229). Comparison with the London material on these criteria, therefore, could push the dating of the Saddler Street shoes slightly further forward into the 12th century. Amongst the shoe parts from Period 1 Phase 2 was a decorated, flat, topband (33/1589) with a series of parallel slits through which a decorative thread had been threaded originally. Decorated top bands, like embroidered toe stripes running down the shoe vamps, are found on shoes of later 11thearly 13th century date. Embroidered toe stripes were present on three shoes, one from Period 2 Phase 6, and two from Period 3. While this type of decoration has a very long history, it appears to have been at its most popular during the first half of the 12th century in London ({Pritchard 1988 #46573}, 77). The amount of shoe uppers of sheep/goatskin was also notable, including both those from Period 1 Phase 1. The increased use of sheep/goatskin in shoemaking is again a feature of late 11th-early 13th century footwear assemblages ({Mould, Carlisle, et al. 2003 #46563}, 3265).

One of the sheaths (177/1741/766500), from Period 1 Phase 5, is of distinctive type recently recognised as being closely dated the second half of the 11th and larger part of the 12th century. Parallels for this sheath come from eleventh–twelfth century contexts at Trondheim, Norway, and Plessenstraße (Schleswig) and Haithabu, Germany (Marstein 1989, fig.47b,c,d; Van der Walle-van der Woude and Groenman-van Waateringe 2001, Abb.30; Groenman-van

Waateringe 1984, Taf.21). This sheath comes from levelling for the floor of S3 and was therefore probably in use at the time of S2. A shoe upper (105/1639) from Period 2 Phase 1 has an edge/flesh seam at the lasting margin rather than the more usual grain/flesh seam. This shoe construction is seen at London and at York where, though never found in large numbers, it appears to date to the early/mid 12th century ({Grew & de Neergaard 1988 #17843}, 48; {Mould, Carlisle, et al. 2003 #46563}, type 3, 3271). This might further support a start date for Period 2 in the 12th rather than the 11th century. (see below)

Martin Carver suggested in 1979 that the Saddler Street sequence started in the later 10th century and that the division between Periods 1 and 2, marked by the establishment of property boundaries which survived until recent times was likely to have taken place in the late 11th century. The leatherwork, however, suggests that this dating is too early and that S3 (and consequently S4) are post-conquest as is the fill of drain S15. It would still be possible for structures S1 and S2 and pit F81 and S14 to be of pre-conquest date, but given the nature of their preservation and the use of wattle walling in both structures and drain S14, it is unlikely that the pre-date the succeeding structures and drain by more than a decade or two. At the earliest, therefore, occupation on Site D appears to have started around the middle of the 11th century. Whilst this does not rule out a pre-conquest date, the likelihood is that occupation started soon after the conquest.

The ceramic sequence at Saddler Street is clearly different from that found in York, and more similar to that seen in East Yorkshire, the midlands, the southeast of England and the Low Countries. At the city of London, for example, handmade globular bodied jars were the norm from the mid 11th century onwards but by the end of the century vessels with squared rims, finished on a wheel, were appearing and by the middle of the 12th century these handmade wares had been almost completely superceded by wheelthrown vessels. Production of pottery by hand continued in several parts of the country throughout the 12th and into the 13th century and its prevalence in Durham ware is therefore a cultural feature rather than a chronological one.

Of more use as a dating indicator is the presence of splash glaze and, in particular, the spouted pitcher in which the spout is fixed to the rim of the vessel. Such vessels were produced throughout the 10th and 11th centuries at Stamford and a few other centres (such as those producing Winchester ware and York Early Glazed ware, the latter of which is probably of lower Seine origin). In the very late 11th or early 12th centuries the production of splash-glazed vessels, mostly spouted pitchers copying the Stamford products, spread to other centres, such as Nottingham, Lincoln and Beverley. This is probably the context for the Durham ware industry and one of the Saddler Street examples has widely-spaced horizontal grooves on the body, a feature of some Stamford ware vessels.

The small number of amber glazed vessels may be an indication of the influence of Andenne-type ware, although this ware is uncommon in the northeast. Andenne-type ware is

mainly found in England on east coast port sites and occurs in mid/late 11th-century to mid mid12th-century contexts, falling out of popularity with the emergence of local wheelthrown glazed wares.

Unfortunately, there are no local northeastern pottery sequences which can be compared with Saddler Street and certainly none that can provide any independent dating. Furthermore, few of the associated finds from Sadder Street can be closely dated. However, the openwork shoe with a pointed toe from context 1751, a fill of Drain S15, is of a type whose introduction has been associated with the court of William II (Pritchard 1991 and pers comm) and this is consistent with the dating suggested by the character of the pottery. Occupation on the Saddler Street site would therefore have begun some time in the second half of the 11th century and the transition between Periods 1 and 2, on this dating, would have been at some unknown date in the later 11th to mid 12th centuries. The appearance of the first jugs in the sequence in Phase 2.4 and the occurrence of a mid-12th-century Developed Stamford ware sherd in Phase 2.5 suggests that the transition from Period 1 to Period 2 was closer to c.1100 than c.1150.

Discussion

If Durham ware started production in the later 10th century, as suggested by Carver, it would be difficult to find any parallels for the range of jar forms. Further south at that time there appears to have been little pottery production and both York and Beverley were supplied almost entirely by the Lincolnshire potteries at Torksey and Stamford. The ware is easier to interpret if it is of later 11th or early 12th century date and handmade splash-glazed glazed wares are found, for example, at Doncaster at this time. A tradition of handmade, wheel-finished pottery production was present in parts of Yorkshire in the mid 12th century and later (Staxton, Potter Brompton, North Newbald and the Beverley area, for example) but these industries did not use glaze and appear to have started production too late to have been an influence on the Durham ware industry.

Even if of post-conquest origin, the Durham ware industry is still of considerable interest and importance for the study of medieval pottery in the northeast of England. It is undoubtedly the earliest proven medieval pottery industry in the region. The only definite Anglo-Scandinavian vessels known from the region are a York A ware vessel and sherds of Stamford ware from Newcastle-upon-Tyne and the current study of the pottery from the castle excavations there by Jenny Vaughan and Andrew Sage have not found any candidates for pre-conquest locally-made pottery.

A glazed vessel (not found in the Fulling Mill Museum collection) was published as a crucible. It had a lead glaze on the exterior of the flat base and a deposit on the interior tentatively identified as a lead-sulphur compound. This, it was suggested, might have been used to prepare glaze for Durham ware, which would suggest that the ware was produced on site. However, none of the sherds were warped, overfired, underfired or showed any other

blemishes and it is possible either that this vessel was a crucible used to prepared lead for use in lead-alloy casting (a fragment of lead melt was found in the excavation) or was the base of a crude lead-glazed vessel. Since it cannot be found neither suggestion can be tested. The evidence for Durham ware having been made at Durham is therefore extremely slight, and was probably based as much on the fact that no other similar pottery was known in the northeast in the 1970s as on evidence for production on the site itself.

Sherds of handmade pottery of similar character to Durham ware have been found at Newcastle-upon-Tyne, Monkwearmouth, Jarrow, Hart and Hartlepool. Furthermore, the potters at Dog Bank in Newcastle were producing handmade vessels. Chemical analysis of a sample of these vessels indicates that the Hart and Hartlepool vessels were made from different raw materials whilst the chemical differences between the more northerly sites might be due to post-burial alteration.

These samples include a vessel with a brown splash glaze from the castle at Newcastle. The only other splash-glazed Durham ware vessels known to the author comes from a site at Bishop Cosin's Hall, Durham. One was a jar and the other a spouted pitcher with the spout freestanding on the shoulder rather than applied against the rim as in the Saddler Street examples. Not all of these samples need be of late 11th/early 12th century date. The Dog Bank kiln is dated by archaeomagnetic dating to the later 12th century and the Monkwearmouth sample comes from a vessel with dimpled decoration on the shoulder, a Staxton-type ware feature. Nevertheless, they indicate that there was a tradition of handmade pottery production north of the Tees and that at least two centres of production were operating there.

It is now over quarter of a century since the publication of the Saddler Street site.

Unfortunately, the intervening years have not produced any stratigraphic evidence to either confirm or refute the dating of the site put forward by Carver and the site retains its importance as the only possible evidence for a pre-conquest secular settlement at Durham. In the light of the suggested re-dating of the pottery, it would be instructive and timely to reassess both the leather and the finds of other materials in light of the discoveries of contemporary assemblages that have been made in the thirty years that have passed since the Saddler Street finds were originally studied.

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Bibliography

Borremans, R and Warginaire, R (1966) La ce'ramique d'Andenne.

- Carver, M. O. H. (1979) "Three Saxo-Norman tenements in Durham City." *Medieval Archaeol*, 1-80.
- Grew, F and de Neergaard, M (1988) *Shoes and Pattens*. Medieval finds from Excavations in London: 2 (HMSO London)
- Groenman-van Waateringe, W. (1984) in K. Schietzel, ed., *Die Lederfunde von Haithabu*, Berichte uber die Ausgrabungen in Haithabu 21 Neumunster.
- Marstein, O (1989) *Sko og andre gjenstander i laer en typologisk analyse*. Fortiden i Trondheim bygrunn: folkebibliotekstomten 23 Trondheim.
- Mould, Q, Carlisle, I, and Cameron, E (2003) *Craft, Industry and Everyday Life: Leather and Leatherworking in Anglo-Scandinavian and Medieval York.* The Archaeology of York 17/16 York, CBA.
- Pritchard, F. (1988) "Embroidery." in F. Grew and de Neergaard, eds., *Shoes and Pattens*, HMSO, London, 75-83.
- Pritchard, F. A. (1991) "Small Finds." in A. G. Vince, ed., *Aspects of Saxo-Norman London:*2, Finds and Environmental Evidence, London Middlesex Archaeol Soc Spec Pap

 12 London Middlesex Archaeol Soc, London, 120-278.
- Van der Walle-van der Woude, T Y and Groenman-van Waateringe, W (2001) *Die Lederfunde der Ausgrabung Plessenstrasse in Schleswig.* Das archäologische Fundmaterial II Ausgrabungen in Schleswig, Berichte und Studien
- William of Malmesbury (1998) in R. A. B. Mynors, ed., *William of Malmesbury: Gesta Regum Anglorum*, Oxford University Press, Oxford.