

LINCOLN ARCHAEOLOGICAL STUDIES No. 7

A Corpus of Anglo-Saxon and Medieval Pottery from Lincoln



Jane Young and Alan Vince
with Victoria Nailor

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GENERAL EDITORS: MICHAEL J. JONES AND ALAN VINCE

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Preface

The corpus of Anglo-Saxon and medieval pottery from Lincoln is one of a series of publications which make available to a wider public the results of analysis of all archaeological excavations carried in the city from 1970 until 1987. Research on pottery of this period has a long history within the archaeology of the city, starting with the discovery of medieval pottery kilns during the construction of the railway in the 1840s (ILN 1848; AI 1850). Two face moulds used to decorate late medieval pottery vessels were found at this time and are now in the British Museum (cover). Important work was carried out by Glyn Coppack on material from the Bishop's Palace and other sites in the city (Coppack 1973; 1975; 1980) but real advances in knowledge followed the discovery of 10th-century pottery production at Silver Street in 1973 (Miles *et al* 1989), the large-scale excavations at Flaxengate, which provided a chronological context for this pottery (Adams Gilmour 1988), and the publication of material from excavations at Broadgate East (Adams 1977), The Park and West Parade (Jennings & Jones 1999; Young 1999).

This piecemeal approach had disadvantages, however. As each site was studied so the story became more complex: new types were discovered; previously-described wares required subdivision and initial chronologies were refined, sometimes involving drastic revision of accepted views. Consequently, when the post-excavation project started in 1988 a city-wide classification was devised, created by examining all of the Anglo-Saxon and medieval pottery from Lincoln and studying the sequence of introduction and decline of pottery types through time at numerous sites. Although the classification presented here is also capable of revision it is based on a solid foundation and has been tested on numerous sites. Consequently, it is now possible to recognise a series of ceramic horizons and to date the start and finish of most of these to within a quarter

century. This work underlies the chronological framework of the three volumes of excavation reports which cover the Wigford suburb (Steane 2001), the upper city (Steane forthcoming) and the lower city (Steane in prep). It is also the key to a vast unpublished archive consisting of ceramic assemblages dating from the 9th to the 16th centuries, all of which have been catalogued as part of an integrated digital archive to the physical collections now deposited in Lincoln City and County Museum.

A notable feature of this study is the use of petrological analysis, involving the creation and study of over 600 thin-sections. These have been used to characterise the local clay and temper sources exploited by Lincoln potters and to identify wares made in the vicinity of the city and those made elsewhere in the county of Lincolnshire and to identify regional and foreign imports. These thin-sections, and the vessels from which they were taken, are also deposited in the museum, forming a valuable resource for further work in the city and surrounding areas.

This volume is arranged as a corpus of wares, illustrated by both typical and unusual examples and accompanied by descriptions of their visual appearance, petrological characteristics, source, forms, decoration and dating evidence. It does not include any material published in excavated groups, partly because this would have resulted in a large amount of duplication of the common wares and forms and partly because these groups can be reconstructed from the published and archive data.

A major conclusion resulting from this study is that Lincoln was the centre for a large pottery industry whose products were traded over a large part of the east midlands, and beyond. Lincoln wares occur throughout the county, as well as in Yorkshire, Nottinghamshire, Leicestershire and even Birka in central Sweden. Despite the presence

of this large industry, which flourished with some fluctuations from the 9th to the 15th century, pottery from surrounding areas was also used in quantity. These include: Torksey, whose products mainly occur in a narrow period from the late 10th to late 11th century; Stamford, which supplied most of the finewares used in the city from the 10th to the middle of the 12th centuries; Potterhanworth, the source of much of the shell-tempered cooking pottery used in the 13th to 15th centuries; and potteries in the lower Witham valley; at Toynton and Bolingbroke, which accounted for a large share of the later medieval pottery used in the city. At the

end of the medieval period a high proportion of the wares used were made at Bourne, in the south of the county. The excavations have also produced a sequence of Nottingham products, spanning the entire duration of that industry, from the late Saxon period through to the 15th century. Regional and continental imports are surprisingly rare after the middle of the 13th century, and it is surmised that from that point on Lincoln ceased to be visited by sea-going ships, which instead off-loaded their cargoes at Kingston-upon-Hull and Boston, where later medieval imports from France, the Low Countries and the Rhineland are common.

Acknowledgements

This work would not have been possible without the effort of large numbers of people. In particular, we would like to thank those colleagues who have worked on Lincoln pottery and allowed us access to their research. These include Lauren Adams Gilmour who laid the foundations that this work is built on; Glyn Coppack who loaned us a copy of his thesis and shared his knowledge of Goltho Manor and other local sites in advance of his own publications; Hilary Healey who has been a goldmine for information on medieval pottery in the county; and, of course, John Hurst for sharing his unparalleled knowledge of imported pottery and for his consistent support over such a long gestation period.

Work on Saxon and medieval pottery in the archaeology unit has been assisted over the years by many staff and volunteers too numerous to mention. Staff working specifically on the pottery include the Roman pottery specialists Maggi Darling and Barbara Precious (thanks for sending all those dubious sherds back!), Judy O'Neil, Sarah Jennings, Caroline Kemp, Paul Miles and Lucy Whittingham. However, we prided ourselves on working as a team and would really like to thank *all* those involved in the post-excavation programme from 1988 onwards.

Lincoln Christ's Hospital School and Yarborough School have supplied a continual flow of willing helpers, some of whom were not put off archaeology for good!

The illustrations are by Lauren Adams Gilmour, Sarah Jennings, Rick Kemp, Judy O'Neil, Tig Sutton, Jane Young, Zoe Rawlings and Dave Watt. Page layout was designed by Zoe Rawlings and Jane Young. We should like to thank Mick Jones, John Henidge, and Arthur Ward of the Heritage Section of Lincoln City Council for their help in the final stages of the production of this volume.

Last, but certainly not least, we would like to give a special thanks to Rick Kemp. Rick was not an archaeologist by training and started his archaeological work on an MSC excavation at the Castle West Gate. In 1988, however, he transferred to the post-excavation team as a data inputter. Gradually, his accuracy, speed and general enthusiasm led him to take a much wider role which included production of all the thin-sections used in this project; the setting up of a ceramic building material type series, the primary catalogue of all the ceramic building material from the 1972–87 excavations and an archive report on the medieval and later brick and tile. Rick was an enthusiastic bottle collector and this gave him a wide knowledge of late post-medieval pottery which he used to identify and date the Lincoln material. Hardly a single aspect of the post-excavation work has not benefited from his work. Sadly, Rick died in 1996 and even now, nine years later, he is badly missed. Rick, it gives us great pleasure to dedicate this volume to you.

Summary

The Anglo-Saxon and medieval pottery from the city of Lincoln has been divided into a series of ceramic horizons, spanning the 5th to the 16th centuries. In the main, these horizons are based on evidence from stratified assemblages of pottery, some associated with other dateable artefacts, recovered from controlled excavations in the city. No such deposits have been found for the period before the middle of the 9th century and so evidence from elsewhere in the county has been used instead. These horizons have been assigned codes: ASH1 to ASH14 for those up to the late 11th/early 12th century and MH1 to MH10 for the early 12th century and later. The precise start and finish dates for these horizons may well be refined by future discoveries but the relative sequence and the approximate date are likely to stand the test of time, since they are based on an analysis of large-scale excavations carried out over a period of 17 years.

There is a scatter of sherds of early Anglo-Saxon date from sites across the city, both inside and outside the walls of the Roman town, although none from any site in the Wigford suburb. Petrological analysis suggests that most of these sherds were imported to the area and there is no evidence for production in Lincoln or the immediate surrounding area.

In the Mid Saxon period Lincoln was supplied with shell-tempered pottery, Northern Maxey-type ware. Petrological analysis suggests that the same source of temper was used in this period as in the later medieval period, when production sites in Lincoln and Potterhanworth are known. It is therefore likely that this pottery was being produced close to Lincoln, although the distribution of finds suggests that occupation was scattered, inside and outside the walls, until the very end of this period. There is also a scatter of imported vessels from this period, which are thought in the main to date to the

transitional period in the mid/late 9th century. One of these was found on a Wigford site, of the earliest post-Roman pottery finds from the area.

From the late 9th-century onwards the history of pottery use in the city is based on a large number of stratified assemblages, providing quantified data on the frequency of use. From the start of occupation much of the pottery used in the city was made within the settlement. Wasters or seconds of late 9th-century Lincoln Gritty ware have been found in the southeast quarter of the lower city, followed by the 10th-century production site at Silver Street, in the same general area. Recent finds (mentioned in passing here but deserving full publication at a later date) indicate that the industry then moved to the eastern suburb of Butwerk, where it gave its name to the major medieval street of Pottergate. This 9th- to 11th-century pottery was produced in both shell-tempered and quartz sand-tempered fabrics. It was mainly unglazed cooking ware, but some splashed glazed vessels, pitchers and other finewares were also produced. In the mid/late 11th century there is a hiatus in local production, but the industry was re-established early in the 12th century. However, this medieval industry was not located in Butwerk, which was rapidly growing as a suburb during the 11th century. No evidence for the location of the 12th-century industry has been found. A recent discovery shows that there was small-scale production within the Lower City, on the steep hillside, presumably taking advantage of the exposure of Lias clay at the beginning of the 13th century. Later in that century the first evidence for production on the east side of the High Street in Wigford has been found and from that time onwards this was the location of pottery production in the city. The Lincoln industry survived into the 16th century, but was already in decline in the 15th century, if not even earlier.

Lincoln has also produced a large quantity of pottery from the Torksey, Stamford, Potterhanworth, Toynton/Bolingbroke, Bourne and Nottingham industries. In many cases, the range of vessel types is very wide and is a good type series for those industries. In some cases, such as Nottingham, there are no other modern publications describing and illustrating these wares. The chronology of these local and regional imports in Lincoln is also quite clear, although it must be remembered that the industries may well have existed earlier and continued later than their occurrence in Lincoln would suggest. Nevertheless, for the main periods of production the Lincoln sequence and corpus is probably representative.

The imported pottery from the city has received less attention than the local industries. This reflects the low frequency of imports found in Lincoln excavations and the fact that in most cases they are

of types which are well-known, and better dated, at port sites such as Southampton, London, Boston and Kingston-upon-Hull. However, it does seem significant that there is a sharp decline in imports in the middle of the 13th century, corresponding to the period in which the Gascon wine trade was replacing those of Normandy and the Rhine. There is, nevertheless, a regular supply of imported stonewares and some red earthenware in the city in later medieval deposits and it is likely that these represent actual trade in pottery as utensils rather than as a by-product of trade in other goods.

The 16th-century and later pottery from Lincoln has been summarised in this corpus but excluded from full treatment. By and large, this reflects the character of the archaeological deposits excavated within the city. An exception, the 17th and 18th-century filling of the well at St Paul-in-the-Bail, is the subject of a separate report.

I Introduction

History of the Volume

A three-year programme of archive work on backlog material from excavations carried out in the city from 1972–1987 was initiated in 1988 by the City of Lincoln Archaeology Unit (CLAU) with funding provided by English Heritage. Using the combined information from the pottery database and the site archives created as part of this work, an assessment in 1991 proposed publication of the post-Roman pottery from Lincoln at three levels. First, in the three site volumes; Wigford and Brayford area, Upper City and Lower City, where the use of pottery information would be confined largely to support dating and site interpretation in the site-by-site reports. Second, in a separate corpus, to include primarily a chronologically presented type series in which definitions of fabrics, forms and decoration used in the city and its hinterland could be established. Finally, once an initial definable identification of the pottery had taken place and a chronological framework constructed, the results of the pottery analysis could be used to answer questions on socio-economic patterning, settlement and supply in the city. The results would be included in a synthetic volume covering the results of rescue archaeology in the city. Both the synthesis and the three volumes of site reports are in the process of publication in the *Lincoln Archaeological Studies* series.

Basis of the Corpus

This corpus is based primarily on work carried out on the post-Roman pottery recovered from excavations in the city during the period 1972–1987, although it has also been possible to use information from sites excavated before 1972 (eg. at the Park and West Parade 1970–72; Jennings & Jones 1999; Young 1999) and after 1987 (eg. Castle West Gate

1986–88). Information has been supplemented in a few cases by Lincoln-manufactured material found outside the city. Much of the post-Roman pottery recovered from excavations in the city comes from valid chronological sequences, although when working with the material there has to be a constant awareness of the often very high residual content of most assemblages (see below p10). Development of fabric- and form-type series has led to the definition of valid ceramic horizons for both the city and much of the county from the 5th to the 19th centuries, enabling us for the first time to examine the complex interrelation of the Lincoln pottery industries with others in the county.

Previous pottery work in Lincoln and the county

An excellent summary of previous work both within the city itself and the county of Lincolnshire as a whole has already been presented in an article by John Hurst (Hurst 1984). A somewhat shorter account of work in the city is accordingly presented here. Interest in pottery studies was aroused with the discovery of both Roman and medieval vessels during the intensive building works carried out in the city during the 19th century. One of the most significant finds, that of waste material including the moulds for making both male and female face masks designed to be applied to the side of late medieval jugs, was made by Arthur Trollope during construction work on the railway in 1847 or 1848 (ILN, 1848). These finds were exhibited during the visit of the Archaeological Institute to Lincoln in 1848 (AI, 1850) and the more ornate pieces were subsequently acquired by the British Museum (catalogued BM 67, 3–30, 1–10). It is unfortunate, but typical of the times, that the plainer jugs that would have



Fig 1 Map showing location of Lincoln with inset – detail of Lincoln and its environs

helped place the production into its chronological position were not considered important enough to keep together as an assemblage with the other material. Isolated finds of post-Roman pottery continued to be made throughout the 19th and first half of the 20th century and this material was collected both by private individuals and the City and County Museum (founded in 1907) although it was not always correctly identified. For example, a group of 15th-century jugs found in the upper city, at the corner of Eastgate and Bailgate, in 1884 was published

by O'Neill as cinerary vessels found in a 'Roman crematorium' (O'Neill, 1885).

Discoveries from excavation in the modern sense started with Graham Webster's excavation at Flaxengate between 1945 and 1947 (Coppack, 1973). Here for the first time stratified medieval deposits were excavated and recorded in a scientific manner, subsequently providing Glyn Coppack with the material to construct the first medieval pottery sequence for the city (*ibid*). Although in the light of more recent work the exact dating of this material

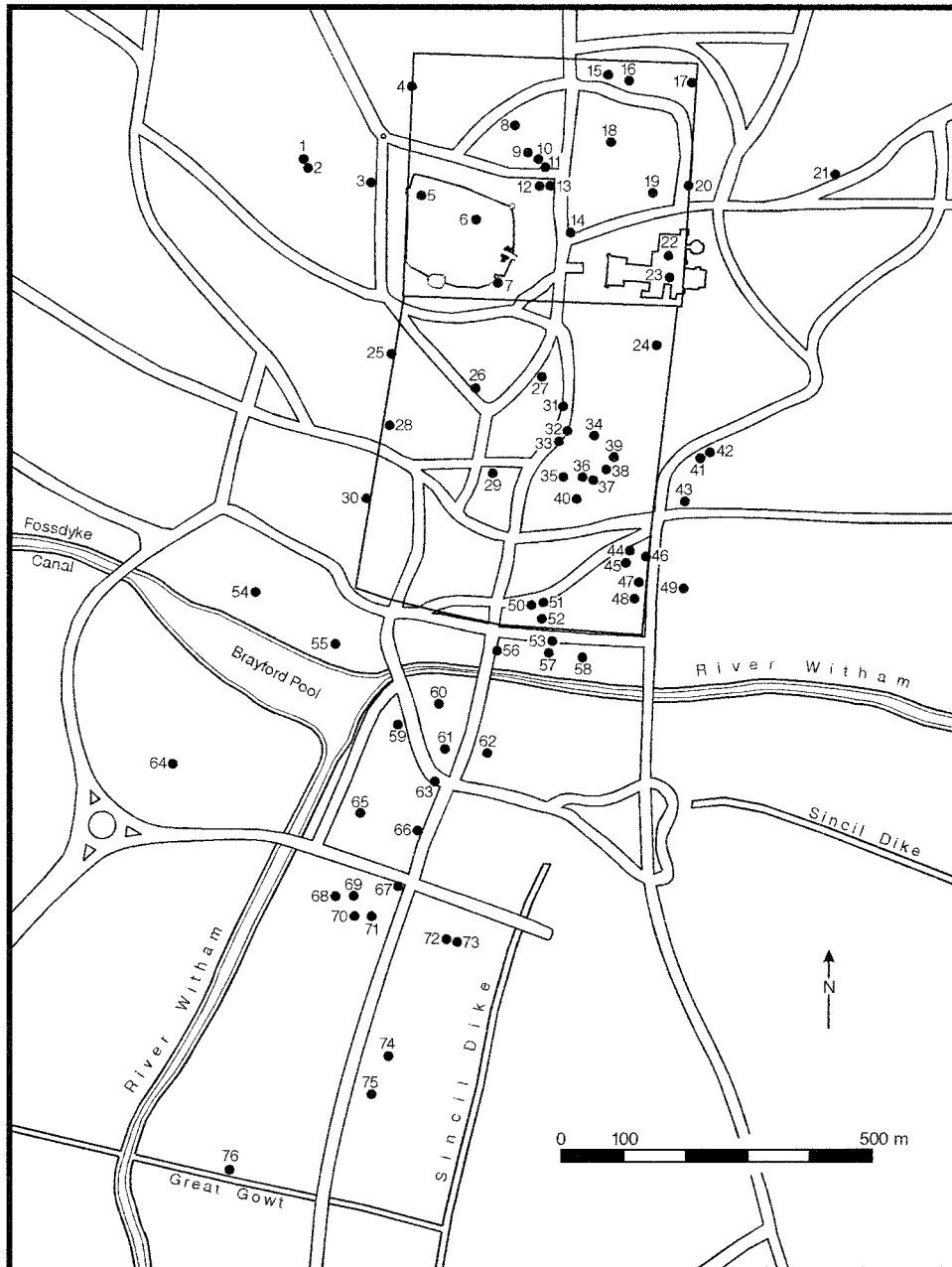


Fig 2 Location map of sites in the city (for key, see Appendix 3)

has now been revised, it is a tribute to both the excavator and to Dr Coppack that the sequencing still remains valid today. Work on the pottery from the Lincoln Bishop's Palace (Coppack, 1975) extended the sequence of medieval material into the 15th century and greatly added to the knowledge of post-medieval pottery in the city. Dr. Coppack's work in the city culminated in a Ph.D. thesis (Coppack, 1980) on the medieval pottery from three main East Midlands urban centres; Lincoln, Nottingham and Derby. Individual groups of material were used

to define a sequence stretching from the late 9th to the 15th century, thus providing the foundations for all further research on medieval pottery in the city.

The appointment in 1974 of Dr. Lauren Adams Gilmour as a permanent Medieval Pottery Researcher to work on material from the numerous excavations carried out by the then Lincoln Archaeological Trust added a new impetus to pottery studies. Major innovative work carried out by Dr. Adams Gilmour on material from sites at Broadgate (Adams, 1977) and Flaxengate (Adams Gilmour, 1988)

established that Lincoln was a main centre for pottery production in the late 9th and 10th centuries and fleshed out much of the ceramic sequence for the 9th to 12th centuries. Other work on material from the city or its surroundings that has influenced the present corpus has also been carried out by John Hurst (Hurst 1966, Hurst 1991), Sarah Jennings (Jennings and Young 1986, Jennings and Jones 1999), Paul Miles

(Miles *et al* 1989; Miles forthcoming), Steve Moorhouse (Moorhouse, 1971) and Andrew White (White 1989). This present volume has built on all the previous work carried out in the city. The authors have had one major advantage not enjoyed by anyone working previously – the opportunity to lay out stratigraphically, compare and analyse the material from over 70 sites in the city (Fig. 2).

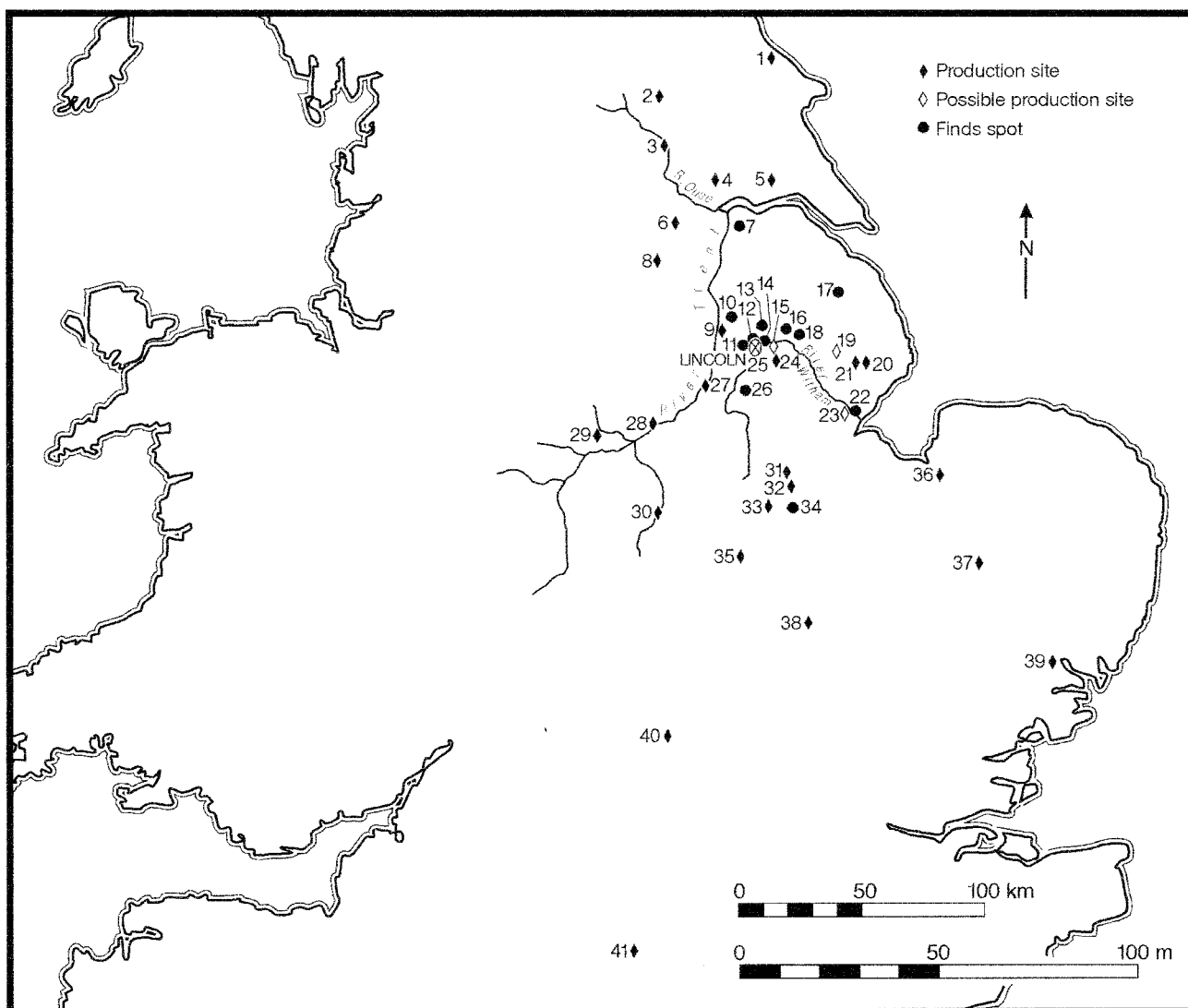


Fig 3 Location map of the main sources of Anglo-Saxon and medieval pottery found in Lincoln and places mentioned in the text

II Methodology

Archive Data

When the archive of backlog material was started in 1988, work at varying stages of completion had already taken place on a large number of sites from the Wigford and Lower City areas. As time did not permit a complete re-working of this material a system of recording had to be based around it. It was decided that in order to produce a systematic basic archive of all pottery from post-Roman deposits (c. 273, 387 sherds) in the time available, it was only feasible to use a sherd count and to concentrate on recording attributes that could primarily be used in site interpretation (dating, site usage, and status). New recording methods, including standardised ware type codes, were designed to enable a rapid basic record to be made. Selective recording of form types was carried out with the assumption being made that a sherd came from the usual form for that ware unless it was otherwise indicated, ie., for Lincoln Kiln Type the main form would be a jar, so only evidence for forms such as bowls, pitchers, lamps, etc., was recorded. Details of sub-form and decoration were only noted where they were known to affect dating: ie, inturned rims on Lincoln Kiln Type bowls, or the presence of roller-stamping on Torksey ware. As much of the previously studied pottery had not always been systematically recorded, only a very basic record was created for the new active database (called SPOT) using the new ware types and noting unusual forms and other attributes (viewing as little as possible of this previously recorded material), whilst leaving a copy of the old, more detailed record in an archive file. A slightly more detailed record was made of newly viewed material allowing for information on site distribution and relative numbers of vessels to be estimated. On one site (sp72 – St Paul-in-the-Bail: see Appendix 3), all of the pottery found stratified in deposits earlier than the late 18th century was

weighed as a test sample. This showed that weighing material more than doubled the time taken for archiving. Wherever possible pottery was viewed stratigraphically, with earliest and latest dates for the pottery groups being assigned to each context. It soon became apparent that previously used dating needed to be revised, and dating horizons were devised to overcome constant revision of dating evidence.

Almost all pottery at this stage was divided macroscopically into one of a number of ware codes (Appendix 1), with little use of a microscope for fabric subdivision, unless it was necessary for dating purposes or to separate local from non-local fabrics. If fabric subdivisions were immediately apparent, however, details were entered into the comments field to prevent later duplication of work. Several non-specific codes had to be devised, especially for the post-medieval period where little fabric analysis had previously taken place. Vessels were selected at this stage for drawing, with those of typological interest being noted separately from those of possible stratigraphic note. All of the basic non-dating archive information is stored by site, in a directory called SPOT, on a Unix-based system. Basic initial dating by original estimated date is contained by site for each context in a directory called SPOTDATE.

Quantified Data

During the 1991 Assessment, assemblages suitable for further quantification were identified. These mainly spanned the period covered by the 12th to the early 16th centuries, as it was felt that the Flaxengate sequence adequately covered the late 9th to early 12th centuries, and the pottery, with the exception perhaps of the very high number of cruci-

bles, was shown to be fairly typical of sites of this period. The material to be quantified was re-assessed and details of fabric, form sub-types, rim types, decoration and glaze were noted. The basic pottery record was by estimated vessel count within each context and both EVEs (Estimated Vessel Equivalents: Orton 1980) and weight were noted. Both form and fabric type series were constantly updated during quantification work, resulting in some re-working of the basic database files. At this stage all non-identified sub-fabrics were viewed microscopically under x20 magnification and sherds were chosen for thin-section analysis, carried out to determine final classification and attribution of material. The Nottingham-produced pottery was extracted and studied by Vicky Nailor whose work is included in this volume (p 73, 123 and 172). All of the imported and non-local pottery from the city was also extracted for further identification. Following an initial sorting, John Hurst kindly viewed and commented on the imported material and the database was updated. Much of the non-local material and some of the possible Continental imports remain unattributed and are classified by period (See Dating, p10) wherever possible. Quantified data for sites other than Flaxengate (f72) is stored by site in a directory called 'PQUANT', that for Flaxengate is stored by published period in a directory called FLAXPOT. The SPOT directory was updated with all new identifications of fabric and form. One of the main outcomes of the quantification programme was the re-identification of ware types for some of the previously archived Lower City sites. The most common mis-identification of material on old records was as LFS (Lincoln Fine-Shelled ware) instead of LEMS (Local Early Medieval Shelly ware, see Fig. 18b-c), and as LSW1 (Twelfth- to Thirteenth-century Lincoln Glazed ware) instead of NSP (Nottingham Splashed ware, see Fig. 18b-c). To enable the reader to see where this may affect interpretation, quantified data for MH1 (Medieval Ceramic Horizon 1, see Dating p. 17) to MH10 has been given alongside SPOT data (Figs. 16–19, 21–24).

Presentation

Following a discussion of dating evidence the material is presented by broad overlapping periods. Within each period individual types are discussed by source: Lincoln produced, local, regional, and then imported fabrics. Only Lincoln-made and some of the local wares are presented in great detail and the reader is referred to previously published reports for much of the late Saxon and Saxo-Norman wares as well as for non-local material.

Code-names used at CLAU for defined pottery

types are used throughout this report, and are listed alphabetically together with their basic definitions in Appendix 1. Since work commenced on this corpus, several new pottery types have been found in the city. These are not described or discussed here (by definition, they are numerically unimportant, although they add detail to the picture of the city's contacts in the medieval period). They are, however, listed together with the other pottery codes in Appendix 1 so that this appendix is up-to-date at the time of publication of this volume.

For illustrative purposes few assemblages are sufficiently large or discrete enough to warrant publication of the Lincoln material group by group. Illustrated pottery is therefore presented by ware type and uses material drawn by a number of people over the last 25 years. Both Glyn Coppack and Hilary Healey have kindly permitted illustration of some of their previously drawn material where examples from the city were too fragmentary to illustrate. Constraints of finance and time have meant that new drawing for this volume has been limited to the products of the local pottery industries.

The reworking of site sequences following pottery analysis has inevitably meant that some of the data quantified by weight and EVEs is now invalidated (in that the interpretation of their stratigraphic context has changed). The decision was made to present all percentages and statistics in the main pottery text, unless otherwise stated, by sherd count which is fully available for the whole sample (SPOT). Although this is not an ideal solution (Orton 1982, 156–178; Blake and Davey 1983, 24) this brings the report into line with published material from other regional centres such as York (Mainman 1990, Mainman 1993, and Brooks 1987) and Exeter (Allan 1984), where publishing quantification by sherd count has been fully argued. Quantification by weight and EVEs on the originally chosen sample is available in the archive.

Drawing Conventions

To keep within available resources, illustration of previously unpublished pottery has concentrated on the Lincoln and other locally produced wares. The drawings used from previously published reports were produced by a number of people over the past quarter century. An attempt has been made to standardise the illustrations. The selected pottery has been chosen to represent the typical range of form and decorative types found. In some cases, a larger number of examples has been illustrated, to reflect the wide range of specific rim types, or size differences. The colour conventions used for applied

or slipped decoration and other non-standard conventions are shown in Fig. 4.

Petrological Analysis

The Anglo-Saxon and later pottery from Lincoln has been the subject of intensive petrological study. In general half a dozen samples of each major ware or visually-defined subfabric were thin-sectioned. The internal variation within wares and subfabrics is therefore now established. In some cases, it is clear that further petrological work would be of little value, since the samples showed no variation, but in many cases they showed appreciable variation and would repay further study. Within the catalogue, we have concentrated on those features of the wares and subfabrics which have been used in their classification and those which appear to indicate the source of the raw materials. What is lost by this approach is any patterning in the choice of raw materials or their preparation.

The only chemical analysis to be carried out on Lincoln's Anglo-Saxon and medieval pottery is that of MacAlister (MacAlister 1984), who undertook Neutron Activation Analysis of samples of sand-tempered Lincoln products of the late 9th to 11th centuries (eg LG, LSLS, SNLS) and compared them with samples of clay obtained from sources in and around the city.

The pottery produced in the Lincoln area has several distinctive petrological traits. In isolation none of these are sufficient to indicate a local source, but taken together they can strongly suggest local production of a ware. These features, if accompanied by locally known typological traits, have been used in this corpus to suggest a local origin for certain wares (classed as -LOC, as in LSAXLOC, SNLOC etc). Despite the large number of samples thin-sectioned, there are still wares which could probably be characterised through further thin-sectioning. Chemical analysis has hardly been used at all to study medieval pottery in the Lincoln area and early results show the potential of this approach.

Clays

Two basic clay types were used for pottery made in the Lincoln area. The first contains very few inclusions of silt grade and the second contains moderate to abundant silt. The first clay type was used exclusively until the later 12th century, after which time the second fabric was used, albeit infrequently.

Rounded iron-rich pellets with diameters in the order of 40–50 microns were noted where present in thin-section. They tended to be either moderate

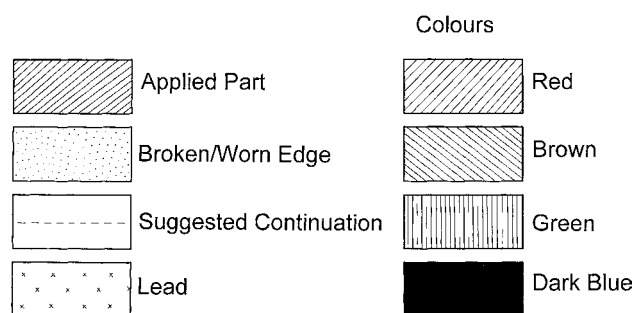


Fig 4 Drawing conventions

or abundantly common, or to be absent. It is possible that they are faecal or bacterial in origin. Similar pellets occur in the Lincolnshire Limestone where they occur in the calcitic matrix. In these potting clays, however, the pellets might have either been present in the clay itself or introduced through the weathering of limestone. In addition to being present in each of the Lincoln Late Saxon Shelly ware subfabrics (LSH), these pellets occur in Lincoln Gritty ware (LG), Lincoln Late Saxon Pale Sandy ware (LSPLS) as well as in one late medieval ware (15th- to 16th-century Lincoln Glazed ware LSW4).

Larger laminated clay pellets are also common in some fabrics but not others. They are present in some of the earliest pottery made in the city (LG and some LSH) as well as in high and late medieval wares. In one subfabric of Lincoln Late Saxon Sandy ware (LSLS subfabric C), the laminated clay was organic. Observation in the Lincoln area has shown that bands of shale occur within the Middle and Upper Lias clays which outcrop on the city hillside (for example at Spring Hill) and presumably at a similar position elsewhere along the Jurassic scarp. It is likely that prolonged weathering would remove both the organic content of the shale and the shale structure itself and that the incidence of laminated clay pellets reflects the use of freshly dug, unweathered clay.

Variations in the iron content of the potting clay are visible in several thin-sections, including two Lincoln-made wares, of late 9th – 10th century and 12th-century date (LSLS and some of LSW1). These appear in thin-section, and in close examination in the hand specimen, as streaks of different coloured clays. The lighter coloured clays are not sufficiently light to be classified as white-firing, nor do they have the high quartz silt content which characterises the Upper Estuarine Beds clays used at Stamford and, probably, also exploited at Lincoln in the late medieval period (LMF – Late Medieval Fine ware).

A notable feature of several of the fabrics in this group is the presence of silt-sized muscovite (white

mica) in moderate quantities.

The silt in the silty clay is composed mainly of quartz with minor quantities of muscovite, biotite and accessory minerals. It is found in LSW1 and in sherds which might be of this group or of the later glazed ware, 13th- to 14th-century Lincoln glazed ware (LSW2). Only one other sample containing this silt was sectioned, one of the Lincoln Glazed ware, subfabric A (LSWA) samples. Similar silts occur both in locally-produced wares and in Beverley ware (BEVO). They are probably typical of recent (Quaternary) estuarine silts reworking boulder clays containing igneous rocks. In the Lincoln area such silts probably occur on the Witham floodplain, on either side of the river. However, LSW1 also has traits which indicate the use of Jurassic clays (such as laminated clay pellets) and it is thus unlikely that LSW1 vessels were made from pure Witham alluvial clay, which would in any case be expected to contain much more silt than is present in the samples.

Certain traits in the clays tend to occur together: for example the faecal/bacterial iron pellets, moderate muscovite and high birefringence. Two of these associations may, however, be due to the fact that the presence of mica and birefringence would be affected by firing temperature and thus would be less common in the later medieval wares, which tended to be fired to higher temperatures than the earlier ones.

Tempering

Four main tempering agents were used in the Lincoln pottery industries. The earliest was a coarse quartzose sand, used only in the late 9th century. Although there seems little doubt that this ware was locally produced (and the characteristics of the clay matrix are typical of Lincoln products), no source for the sand temper has been found.

The second tempering material was shelly limestone. There is no discernible difference in the character of the shell temper used in the Silver Street kilns (LKT), that used in the potteries situated on the east side of the Lower City (LSH) and that used at Potterhanworth, on the fen edge to the southeast of Lincoln. Petrological evidence suggests that the shell was obtained from a disaggregated shelly limestone composed almost solely of oyster-like (nacreous) bivalve shells. There are differences in texture between the various shelly wares – Lincoln Kiln Type is finer textured than LSH, for example, but coarser than LFS – but these are as likely to be brought about by variations in preparation as to be due to the use of different limestone outcrops. In Lincoln itself shelly limestone was used from the late 9th to the early 11th century, but outside the

city it continued to be used much later, perhaps into the 15th century.

The third tempering material was a fine quartz sand, consisting predominantly of quartz with minor amounts of sandstone and chert. The grains are rarely more than 0.5mm across and are usually subangular or subrounded. Similar sands occur widely in Lincolnshire and the East Midlands and have been recorded in pottery produced in the Trent valley at Torksey, Newark and even Nottingham. Grain size analysis of blown sand from Flixborough, carried out by English Heritage, shows that this too has a similar grain size. Distinct components such as Greensand quartz, flint and basic igneous rock are rarely seen in section although they are sometimes noted using a binocular microscope. This sand is ubiquitous in the Lincoln area but gives way north and west to coarse, sandstone-derived sands, whilst to the south Jurassic components (oolite, shelly limestone) tend to be present, and to the west Cretaceous components become more common.

The fourth and final inclusion type was iron-rich compounds which occur frequently in certain strata in the Jurassic of the Lincoln area. In the Northampton Sands, which outcrops between the Lincolnshire limestone and the Upper Lias clay, iron occurs in commercially-exploitable quantities. Despite this, iron-rich compounds are not present in notable quantities in most Lincoln pottery. They do, however, occur in the Lincoln tile fabric. This may be due to differences in clay sources, since the tile industry used clay pits on and around South Common in the post-medieval period and probably from its inception in the 12th century. It might also be due to differences in preparation, since the iron-rich compounds in the tiles are often several millimetres across and could probably be reduced in quantity either by sieving or removal by hand.

Stratigraphy

At various points in this volume the excavations which produced the pots under discussion are mentioned. Some of these sites have accepted names (such as The Park, or Holmes Grainwarehouse) but in many cases there are several sites with similar addresses and for each of these site codes are used instead (Appendix 3).

These codes correspond to Lincoln City and County Museum Accession Numbers and thus can be used to locate items or assemblages mentioned here. They are also used in the three volumes of site reports which accompany this corpus (Steane *et al* 2001, forthcoming, and in preparation; see Appendix 5).

The contexts recorded during excavation (and

marked upon the potsherds) were grouped together during post-excavation analysis into Context Groups (CG). For any site code, the CG numbering starts at 1 so that a CG number has to be qualified by a site code. All CGs are either described or shown on plan in the site volumes. Summaries of wares by sherd count for each CG were prepared for inclusion in the site volumes, together with an assessment of the date of the ceramics in each group (which might be earlier than the deposition date). In the end these have been omitted from the present volume but can be consulted with the excavation archive, along with the digital archive from which the raw tables can be reconstructed.

The Context Groups for each site were further grouped into Land Use Blocks (LUB). A LUB consists of a discrete area of land and a discrete period of time during which a similar land use was practised. Like the CGs, LUB numbers were assigned on a site-by-site basis starting at LUB 1 (or, in the case of natural strata, LUB 0). Whilst the LUBs were in general numbered from the earliest to the latest there are cases where a high LUB number refers to an earlier block than a lower one. This happens, for example, where the stratigraphy consists of isolated blocks which could not be inter-related.

Phasing

For each site, LUBs were assigned to a period. Rather than choose site-related events to subdivide the stratigraphic sequence the Anglo-Saxon and medieval strata were assigned to broad periods or, if this was not possible, into phases based on a combination of these broad periods. The following periods were used:

Period	Dating
Anglo-Saxon	450–650
Middle Saxon	650–850
Late Saxon	850–1000
Saxo-Norman	1000–1120
Early Medieval	1120–1220
Medieval	1220–1350
Late Medieval	1350–1500
Early Post-Medieval	1500–1600
Post-medieval to Early Modern	1600–1770

These broad periods are also used in this volume to form the basic division of the wares. In addition, the post-medieval wares are subdivided into early and late post-medieval. Neither of these periods is described in detail here although summaries are included.

III Dating

Previous Ceramic Dating

There is an almost complete absence of independent dating for much of the pottery sequence in the city. Previous work on the 12th- to 16th-century material had relied on dating by association, or on form or fabric typologies within individual groups or contexts. This factor, coupled with the lack of recognition of residual types and the assumption that sequences were continuous, had led to attributed dates for some types being inaccurate by up to 200 years. To enable groups to be compared chronologically across the city, it was considered that the use of ceramic horizons was the best method to approach dating of the Lincoln material. The case for ceramic horizons or phases where there is no doubt about the chronological positioning of the material has previously been argued for by several authors (eg, Allan 1984, Vince and Jenner 1991). Horizons were established independently of dating evidence, using overall patterns that, within a broad range, repeated themselves from group to group across the sites in the city. In practice, it is not always possible to attribute a group of pottery to a single horizon; for example, a group of four small, undiagnostic, 13th/14th-century Lincoln Glazed ware jug sherds can only be given a date span of Ceramic Horizons MH4 to MH6. Obviously, the larger the group, the greater chance of narrowing the date to a single horizon. Using this method of dating it has been possible to compare the content of similarly dated groups across the city. A list of context groups found on sites within the Upper City and the Wigford suburb that are datable to a single horizon is presented in Appendix 4.

The Horizon Codes

The horizon codes were developed during work with long stratified sequences for the dating assessment

of sites in Lincoln. Initially a continuous numbering sequence from the Anglo-Saxon to the modern period was envisaged, but it became apparent that evidence for the ceramic sequence was particularly weak at two main points (the transitions from the Saxon-Norman to the early medieval, and from the late medieval to the post-medieval periods). It was therefore decided to break the numbering sequence at these points to enable later expansion of the horizons without the complications of re-numbering or sub-phasing. The code ASH was used to refer to Anglo-Saxon to Saxo-Norman horizons, MH to cover early to late medieval horizons, and PMH for post-medieval horizons.

Residuality

The problems of residuality in pottery assemblages have been discussed by several authors (eg, Brooks 1987, Mainman 1990, Allan 1984, and Watkins 1987), and Lincoln is no exception. It became apparent soon after the start of the quantification programme that the high amount of variable residual material present in almost every deposit would preclude meaningful detailed statistical analysis, especially using Estimated Vessel Equivalents (EVEs). In many of the fully quantified medieval deposits the only measurable EVEs present were residual. Weight and sherd counts overall gave roughly the same proportions, but exact percentages of any one ware vary from deposit to deposit because of the residuality factor. Almost all of the groups containing little or no material considered to be residual were in the tiny (10 sherds or less) to small (less than 50 sherds) range. For those groups dating to the beginning of the late Saxon period (ASH7), detection of the residual element (mainly Roman and Anglo-Saxon) was straightforward, but by the next horizon not quite so

simple, as a few late Saxon types had joined the Roman material as residual elements. By the end of horizon ASH11, when it is suspected that LKT was no longer being produced, it had become difficult to establish a residual factor, as so much of this fabric had been used and discarded during the previous 100 or so years. The practice of discarding rubbish on the surface before levelling it out (more common in pre-conquest deposits in the city), rather than by disposal in pits, has caused an estimated residuality level of LKT as high as *c.*10% even as late as 200 years after production is thought to have ceased. An attempt has been made to overcome the distortions caused by the over-representation of residual ware types, by presenting the proportions of residual Roman and post-Roman material thought to be present in each horizon group (Fig. 6a – 10a, Fig. 12a – 14a, Fig. 16a – 19a and Fig. 21a – 26a). In the section on detailed ware type descriptions (p27), however, unless otherwise stated the percentages quoted are those of the entire assemblage for each horizon, based on groups that can be dated to within a single horizon. This is intended to give a closer picture of what might be expected in an average horizon group anywhere in the city. Significant differences are discussed for the relevant ware types.

Period terms used in this volume

Each excavation report is structured using period categories that are based on the ability to recognise and date phases of activity on a regular basis in Lincoln. The ceramic periods referred to in this report are based on this terminology (see Appendix 2) and differ only in the expanded descriptions used to cover the post-medieval and modern periods.

The Ceramic Horizons

Horizon ASH1

It has proved impossible to subdivide Horizon ASH1, owing to the absence of long stratified sequences of this date in the county.

Main wares	Local Anglo-Saxon fabrics (ESAXLOC) Non-Local Anglo-Saxon fabrics (ESAXX) Charnwood-type fabrics (CHARN) Sandstone-tempered fabrics (SST)
Other wares	Chaff-tempered fabrics (ECHAF) Anglo-Saxon Greensand fabrics (ESGS) Sparry Calcite-tempered fabrics (SPARC)

Typological features: Handmade vessels; stamped, bossed and incised decoration; the main forms are urns/jars, bowls and bottles.

Dating evidence: None within the city. Use of Early

Anglo-Saxon period pottery (Blake and Davey 1983) in the area extends into the Middle Saxon period.

Date: 5th to 8th century

Horizon ASH2

Main wares	Northern Maxey-type ware – fabrics A and B (MAX)
Other wares	Charnwood-type fabrics (CHARN) Chaff-tempered fabrics (ECHAF) Sandstone-tempered fabrics (SST) Local Mid-Saxon fabrics (MSAXLOC)

Typological features: Northern Maxey-type ware (MAX) vessels have straight or slightly curved sides and flat-topped rims; forms are either jars or bowls.

Dating evidence: None within the city. Forms are comparable with those at Maxey in Group III assemblages (Addyman 1964). Anglo-Saxon types are still contemporary. This Horizon pre-dates the introduction of Ipswich ware.

Date: late 7th to early 8th century

Horizon ASH3

Main wares	Northern Maxey-type ware – Fabric B (MAX)
Other wares	Local Mid-Saxon fabrics (MSAXLOC)

Typological features: straight or slightly curved sided vessels mostly with flat-topped rims. Bowls may have upright or rolled rims.

Dating evidence: None within the city. Anglo-Saxon type wares are not usually stratified with groups of this Horizon date. Ipswich ware is not present.

Date: early to mid 8th

Horizon ASH4

Main wares	Northern Maxey-type ware (MAX)
Other wares	Local Mid-Saxon fabrics (MSAXLOC) Ipswich-type ware (IPS)

Typological features: Vessels are more curved in profile. Ipswich ware jars and pitchers may occur.

Dating evidence: The presence of Ipswich indicates a mid to post 8th-century date (Blinkhorn forthcoming).

Date: mid to late 8th century

Horizon ASH5

Main wares	Northern Maxey-type ware (MAX)
Other wares	Local Mid-Saxon fabrics (MSAXLOC) Ipswich-type ware (IPS) Early Fine-Shelled ware (ELFS) ?
Imports	Black Burnished wares (BLBURN)

Typological features: Large vessels are very common. Some Maxey-type rims may be everted.

Dating evidence: Sites with everted-rimmed jars tend to also have late Saxon wares present in later deposits.

Date: early to mid 9th century

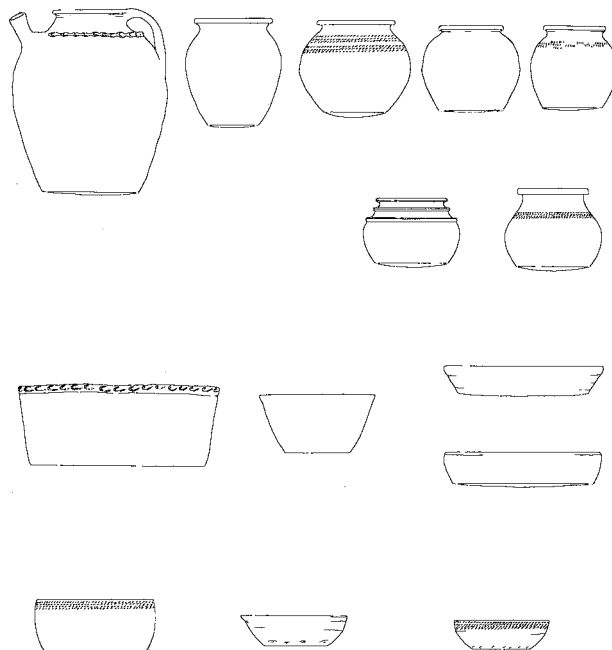
Horizon ASH6

- Main wares Early Fine-Shelled ware (ELFS)
- Other wares Northern Maxey-type ware (MAX)
Local Mid-Saxon fabrics (MSAXLOC)
Ipswich-type ware (IPS)
- Imports Black Burnished wares (BLBURN) ?
Grey Burnished wares (GRBURN) ?
Brown Burnished wares (Brown Burnished wares (BRBURN)) ?
Black Surfaced wares (BLSURF) ?
Oxidised Red-Painted ware (ORP) ?

Typological features: Some simple decoration on Early Fine-Shelled ware (ELFS). Rolled rims on bowls. Northern Maxey-type ware (MAX) vessels may have wheel-turned rims, and narrower wall thickness.

Dating evidence: Early Fine-Shelled ware (ELFS) survives into the late Saxon period to be stratified with ASH7 vessels but is also found on county sites in pre-late Saxon levels.

Date: mid to late 9th century



Horizon ASH7 fig 5, fig 6a and 6b

- Main wares Lincoln Gritty ware (LG)
Lincoln Kiln-type Shelly ware (LKT)
Lincoln Late Saxon Sandy ware (LSLS)
- Other wares Early Fine-Shelled ware (ELFS)
Early Stamford ware (EST)
Early Lincoln Glazed ware (ELSW)
Late Saxon Crucible fabrics (LSCRUC)
Lincoln Late Saxon Pale-Bodied Sandy ware (LSPLS)
Lincoln Late Saxon Shelly ware (LSH)
Leicester-type ware (LEST)
Local Late Saxon fabrics (LSLOC)
Thetford-type fabrics (THETT)
York ware (YW)
- Imports Black Burnished wares (BLBURN) ?
Grey Burnished wares (GRBURN) ?
Brown Burnished wares (BRBURN) ?
Black Surfaced wares (BLSURF) ?
Oxidised Red-Painted ware (ORP) ?
Huy-type ware (HUY)
- Forms JARS
PITCHERS
BOWLS
LAMPS
CRUCIBLES

Typological features: Local vessels are very well made and finished. Use of simple templates gives standard rim and vessel shapes. Most Lincoln made and local wares are decorated with roller-stamping on shoulder and/or rim edge; square stamping only on sand-tempered vessels and both triangular and square on shell-tempered wares. Some glazed wares, but these are rare. Many vessels copy continental styles. Main form types are jars, bowls, pitchers, lamps and crucibles.

Dating evidence: Flaxengate pre-period I. Earliest Late Saxon Horizon to be found in the city (Perring 1981, 5-6).

Date: mid/late to late 9th century

Fig 5 Assemblage of typical ASH7 vessels. Scale 1:16

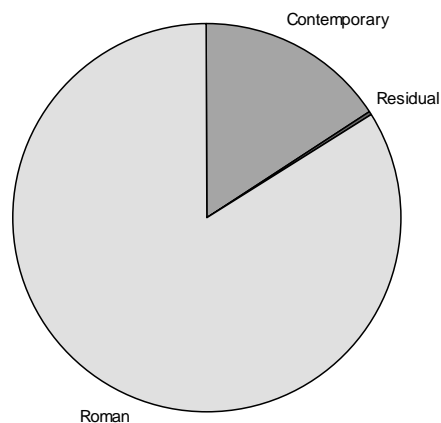


Fig 6a The relative frequency by sherd count of contemporary, Roman residual, and other residual material in well stratified horizon ASH7 deposits

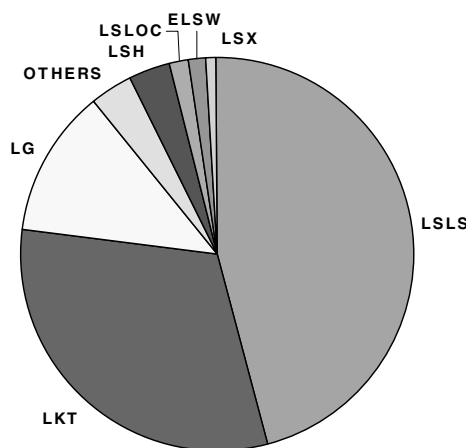


Fig 6b The relative frequency of contemporary types in well stratified horizon ASH7 deposits

Horizon ASH8 fig 7a and 7b

Main wares	Lincoln Gritty ware (LG) Lincoln Kiln-type Shelly ware (LKT) Lincoln Late Saxon Sandy ware (LSLS)
Other wares	Early Fine-Shelled ware (ELFS) Early Stamford ware (EST) Early Lincoln Glazed ware (ELSW) Late Saxon Crucible fabrics (LSCRUC) Lincoln Late Saxon Pale-Bodied Sandy ware (LSPLS) Lincoln Late Saxon Shelly ware (LSH) Leicester-type ware (LEST) Local Late Saxon fabrics (LSLOC) Thetford-type fabrics (THETT) York ware (YW)
Imports	Black Burnished wares (BLBURN) ? Grey Burnished wares (GRBURN) ? Brown Burnished wares (BRBURN) ? Black Surfaced wares (BLSURF) ? Oxidised Red-Painted ware (ORP) ? Huy-type ware (HUY)
Forms	JARS PITCHERS BOWLS LAMPS CRUCIBLES

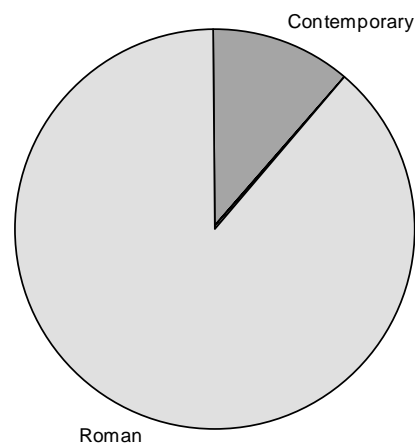


Fig 7a The relative frequency by sherd count of contemporary and Roman residual material in well stratified horizon ASH8 deposits

Typological features: Glaze and fabric experimentation. Most vessels are still well made and decorated with roller-stamping. Range of both form and ware types is still quite diverse.

Dating evidence: Flaxengate site (F72) LUB31 pit cgT260 contained a silver St Edmund memorial penny (F76 (BNI) <C127>), minted no earlier than AD905 (Blackburn *et al* 1983, 12). Flaxengate site (F72) LUB32 levelling cgT19; although the latest pottery dates to ASH9 it also contains a high ASH7–ASH8 element together with a silver penny of Alfred Two-line type, of c.890–9 (F76 (BSH) <C218>). Blackburn *et al* (1983,11) note that this issue could have continued in circulation well into the early 10th century, but the freshness of the Flaxengate specimen underneath its corrosion ‘makes it unlikely to have been lost much later than the 890s.’ Flaxengate period I (Perring 1981, 6–8).

Date: late 9th to early 10th century

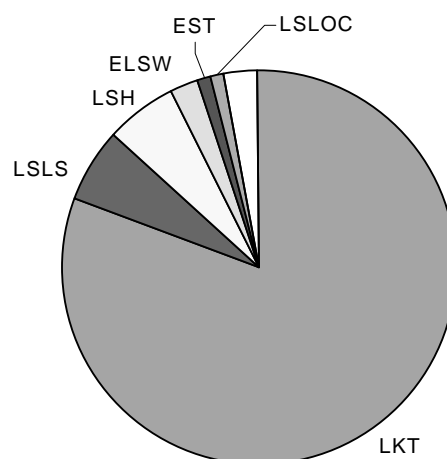


Fig 7b The relative frequency of contemporary types in well stratified horizon ASH8 deposits

Horizon ASH9 fig 8a and 8b

Main wares	Lincoln Kiln-type Shelly ware (LKT) Lincoln Late Saxon Shelly ware (LSH)
Other wares	Local Late Saxon fabrics (LSLOC) Early Stamford ware (EST) Stamford ware-type crucibles (STCRUC) Torksey ware (TORK)
Imports	Pingsdorf-type ware (PING) (white fabric)

Typological features: Little else but Lincoln-made shell-tempered wares. Lincoln Late Saxon Shelly ware (LSH) continues to increase. Roller-stamping mostly square from this Horizon onwards and becomes rare on rims. First inturred rim bowls occur. Glazed wares very rare. Vessels are still quite

well made, although some piece forming is evident and bases become more sagging.

Dating evidence: Flaxengate period II (Perring 1981, 9–10).

Date: early/mid to mid 10th century

Horizon ASH10 fig 9a and 9b

Main wares	Lincoln Kiln-type Shelly ware (LKT) Lincoln Late Saxon Shelly ware (LSH)
Other wares	Local Late Saxon fabrics (LSLOC) Nottingham-type ware (NOTS) Stamford ware (ST) Torksey ware (TORK)
Imports	Pingsdorf-type ware (PING) (white fabric)

Typological features: A decline in quality in Lincoln Kiln-type Shelly ware (LKT) and Lincoln Late Saxon Shelly ware (LSH). Vessels more likely to be un-

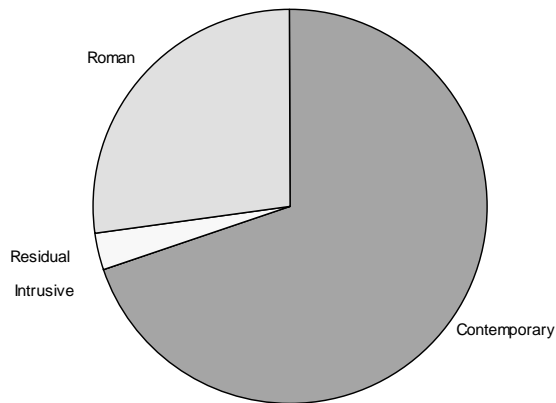


Fig 8a The relative frequency by sherd count of contemporary, intrusive, Roman residual, and other residual material in well stratified horizon ASH9 deposits

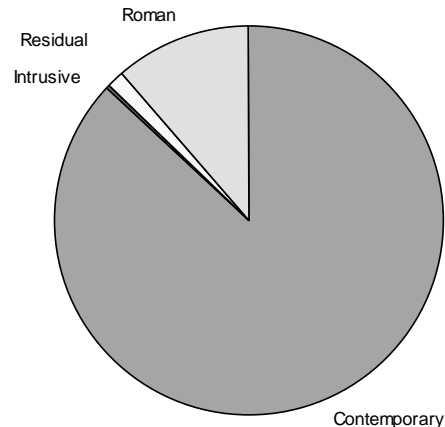


Fig 9a The relative frequency by sherd count of contemporary, intrusive, Roman residual, and other residual material in well stratified horizon ASH10 deposits

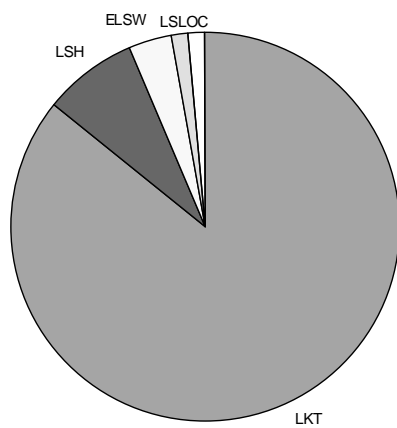


Fig 8b The relative frequency of contemporary types in well stratified horizon ASH9 deposits

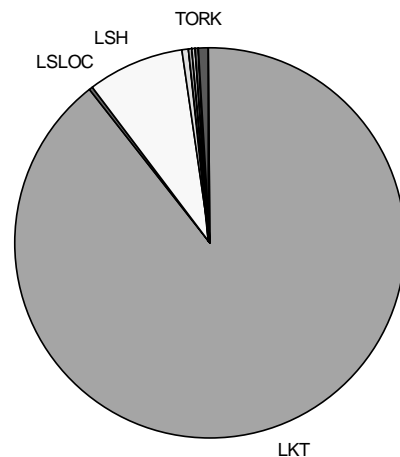


Fig 9b The relative frequency of contemporary types in well stratified horizon ASH10 deposits

decorated. Only a few non-Lincoln-made vessels occur. Glazed vessels very rare.

Dating evidence: Flaxengate period III (Perring 1981, 11–12).

Date: mid to late 10th century

Horizon ASH11 fig 10a and 10b

Main wares	Lincoln Kiln-type Shelly ware (LKT) Lincoln Late Saxon Shelly ware (LSH) Lincoln Saxo-Norman Sandy ware (SNLS) Torksey ware (TORK)
Other wares	Early Stamford ware (EST) Lincoln Fine-Shelled ware (LFS) Local Late Saxon fabrics (LSLOC) Stamford ware (ST) Stamford ware-type crucibles (Stamford ware (STCRUC) Thetford-type fabrics (THETT)

Imports	Andenne-type ware (ANDE) Huy-type ware (HUY) Early Glazed ware (ESG) Pingsdorf-type ware (PING) (white fabric)
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Typological features: Introduction of Lincoln Saxo-Norman Sandy ware (SNLS) and Lincoln Fine-Shelled ware (LFS) and increase of Torksey ware (TORK), although Lincoln Kiln-type Shelly ware (LKT) still major ware type. Quality of Lincoln Kiln-type Shelly ware (LKT) completely declines. New ware type Lincoln Saxo-Norman Sandy ware (SNLS) has no roller-stamping but if decorated has pressed rim. First pie-crust type pressed rims occur on Torksey ware (TORK) vessels. Glazed wares still very rare.

Dating evidence: Flaxengate period IV (Perring 1981, 12–13)

Date: late 10th century

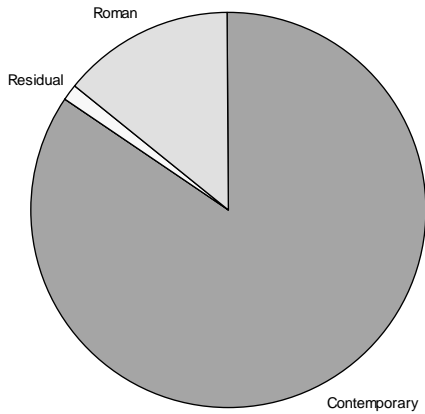


Fig 10a The relative frequency by sherd count of contemporary, Roman residual, and other residual material in well stratified horizon ASH11 deposits

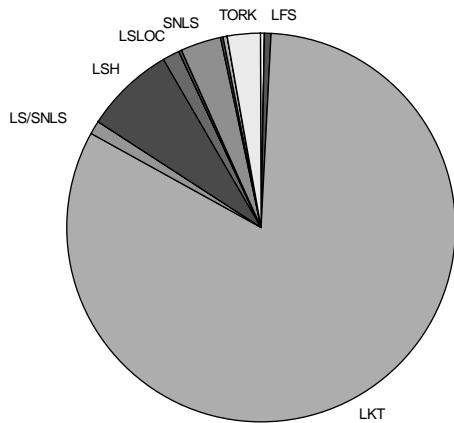


Fig 10b The relative frequency of contemporary types in well stratified horizon ASH11 deposits

Horizon ASH12 fig 12a and 12b

- Main wares
 - Lincoln Saxo-Norman Sandy ware (SNLS)
 - Torksey ware (TORK)
 - Lincoln Fine-Shelled ware (LFS)
 - Lincoln Late Saxon Shelly ware (LSH)
- Other wares
 - Crowland Abbey-type Bowls (CROW)
 - Early Stamford ware (EST)
 - Local Late Saxon fabrics (LSLOC)
 - Newark-type ware (NEWS)
 - Stamford ware (ST)
 - Stamford ware-type crucibles (STCRUC)
 - Thetford-type fabrics (THETT)
 - Lincoln Kiln-type Shelly ware (LKT)?
- Imports
 - Pingsdorf-type ware (PING)

Typological features: This period is characterised by a diversity of ware types. Lincoln Kiln-type Shelly ware (LKT) is probably completely residual by this phase, although until an uncontaminated group of the date is found this cannot be confirmed. The sand-tempered Lincoln Saxo-Norman Sandy ware (SNLS) and Torksey ware (TORK) now form the main wares to be found in the city together with a growing amount of Lincoln Fine-Shelled ware (LFS). Decoration mainly consists of thumbled rims and incised wavy lines. Early Lincoln Saxo-Norman Sandy ware (SNLS) vessels are thin walled, mainly reduced and well made. Glazed wares are still rare.

Dating evidence: Flaxengate period V (Perring 1981, 13–16).

Date: early to early/mid 11th century

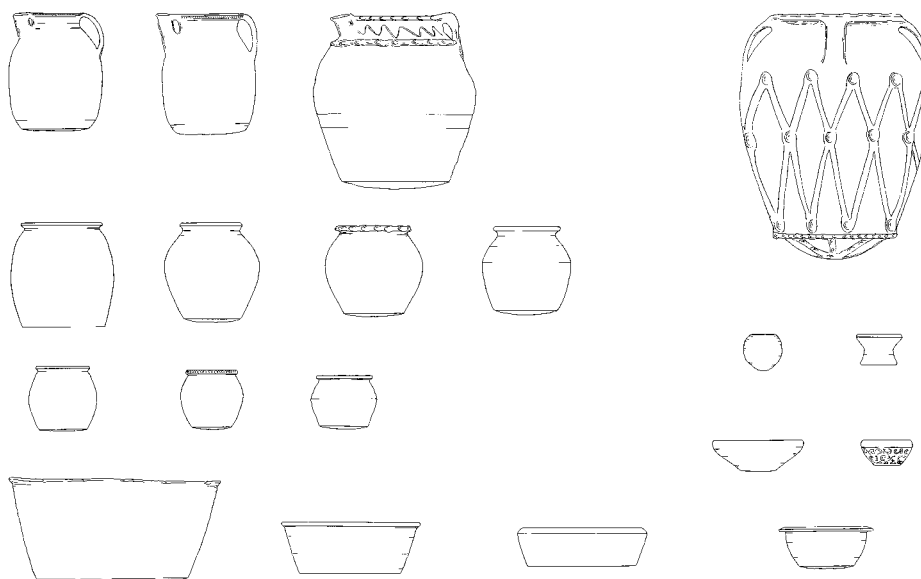


Fig 11 Assemblage of typical ASH12 vessels. Scale 1:16

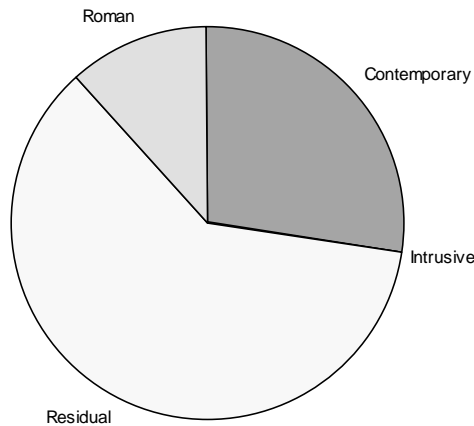


Fig 12a The relative frequency by sherd count of contemporary, intrusive, Roman residual, and other residual material in well stratified horizon ASH12 deposits

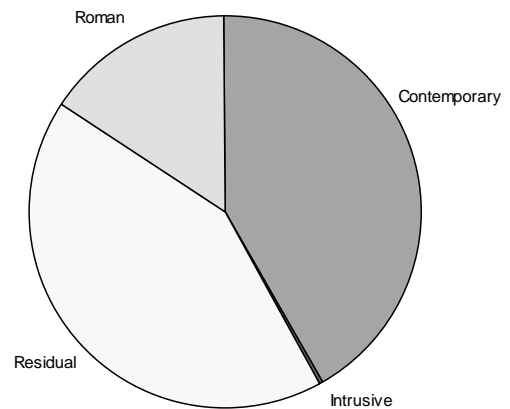


Fig 13a The relative frequency by sherd count of contemporary, intrusive, Roman residual, and other residual material in well stratified horizon ASH13 deposits

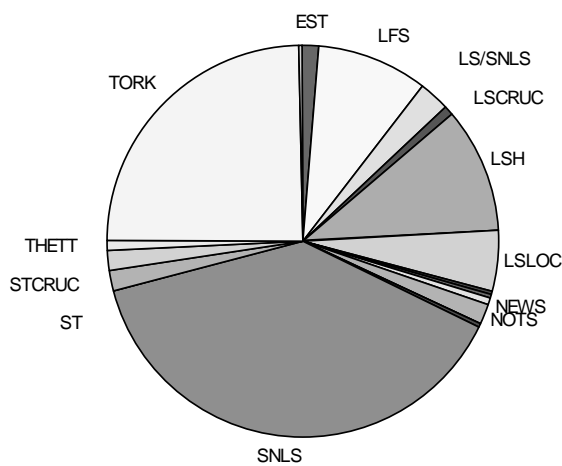


Fig 12b The relative frequency of contemporary types in well stratified horizon ASH12 deposits

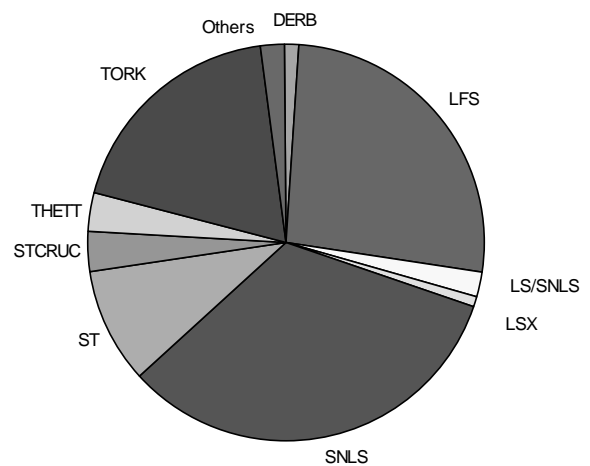


Fig 13b The relative frequency of contemporary types in well stratified horizon ASH13 deposits

Horizon ASH13 fig 13a and 13b

Main wares	Lincoln Saxo-Norman Sandy ware (SNLS) Lincoln Fine-Shelled ware (LFS) Torksey ware (TORK) Stamford ware (ST)
Other wares	Derby-type ware (DERB) Stamford ware-type crucibles (STCRUC) Thetford-type fabrics (THETT) Early Stamford ware (EST)
Imports	Andenne-type ware (ANDE) Pingsdorf-type ware (PING)

Typological features: Although Lincoln Kiln-type Shelly ware (LKT) is almost certainly residual by this period, it can still form up to 70% of the total sherd count of deposits on sites with underlying 10th-century occupation. An increase in Lincoln Fine-

Shelled ware (LFS) is evident and this is the first Horizon since ASH8 in which glazed vessels are not a rarity. There is an increase of vessels from Stamford (Early Stamford ware (EST), Stamford ware (ST) and Stamford ware-type crucibles (STCRUC)) and this period marks the change over in Lincoln from Kilmurry's fabric A to the finer fabrics A and G (Kilmurry 1980). Thetford-type (THETT) large storage jars become more common.

Dating evidence: Flaxengate period VI (Perring 1981, 16–18). Stamford wares of mid 11th-century type (Perring 1981, 34) in Flaxengate groups.

A pre-conquest iron knife (DM72 IBO <Fe 7>) was associated with a ASH12–ASH13 group of pottery on the Dickinson's Mill (DM72) site (LUB 11 cg9).

Date: early/mid to mid/late 11th century

Horizon ASH14 fig 14a and 14b

Main wares	Lincoln Fine-Shelled ware (LFS) Stamford ware (ST)
Other wares	Early Medieval Handmade fabrics (EMHM)? Stamford ware-type crucibles (STCRUC) Thetford-type fabrics (THETT) Unglazed Greensand-tempered fabrics (UNGS) Gritty ware (YG) York-type Splashed wares (YORKSPL)
Imports	Pingsdorf-type ware (PING)

Typological features: The typical Saxo-Norman reduced sand-tempered wares Lincoln Saxo-Norman Sandy ware (SNLS) and Torksey ware (TORK) are residual by this phase, as is shown by a few small groups in the Upper City where neither 10th- nor earlier 11th-century material is present residually. The Lincoln Fine-Shelled ware (LFS) jars are developing into the traditional medieval wide-based cooking pot of the area, and rims are becoming more complex. The first Stamford ware (ST) collared pitchers appear in this phase. Two traditionally early medieval type wares, Early Medieval Handmade fabrics (EMHM) and York-type Splashed wares (YORKSPL), may be contemporary with this period.

Dating evidence: Flaxengate periods VII–VIII (Perring 1981, 18–21). Early Norman deposits inside the West Gate of the Castle (CWG86) contain groups of this Horizon. This is also the earliest post-Roman pottery Horizon to occur on the 1995 excavation site in the grounds of Bishop Grosseteste College (BGB95; Wragg 1997), near to the northern limit of the Newport suburb, traditionally the area settled by those displaced by the building of the Castle in 1068. Stamford ware (ST) collared jars begin to be common in this Horizon. Stamford ware on Flaxengate is comparable to material from late 11th- and early 12th-century deposits at Stamford Castle (Perring 1981, 34).

Date: late 11th to early 12th century

Horizon MH1 fig 15, fig 16a and 16b

Main wares	Lincoln Fine-Shelled ware (LFS) Stamford ware (ST) Nottingham Splashed ware (NSP fine fabric)
Other wares	Developed Stamford ware (DST) Early Medieval Handmade fabrics (EMHM) Local Early Medieval Shelly ware (LEMS) 12th/13th-century Lincoln Glazed ware (LSW1) Lincoln Glazed ware Fabric A (LSWA) Sparsely Glazed ware (LOCC) Stamford ware-type crucibles (STCRUC) Thetford-type fabrics (THETT) York-type Splashed wares (YORKSPL)
Imports	Pingsdorf-type ware (PING) Andenne-type ware (ANDE)

Typological features: Thumbing, incised wavy decoration, nail decoration, sparse splashed glazes with no use of copper. Pitchers have collared necks similar to Stamford ware (ST) vessels. Early jugs in Stamford ware (ST) and possibly Nottingham Splashed ware

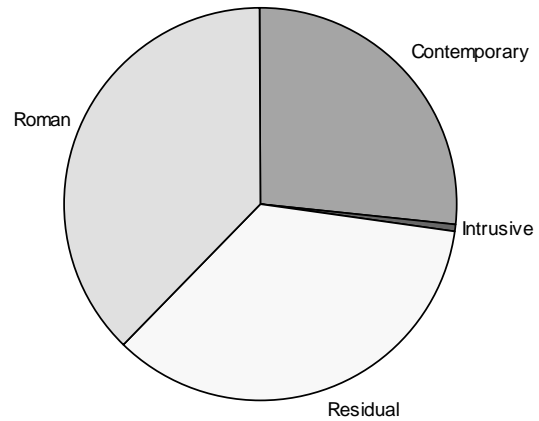


Fig 14a The relative frequency by sherd count of contemporary, intrusive, Roman residual, and other residual material in well stratified horizon ASH14 deposits

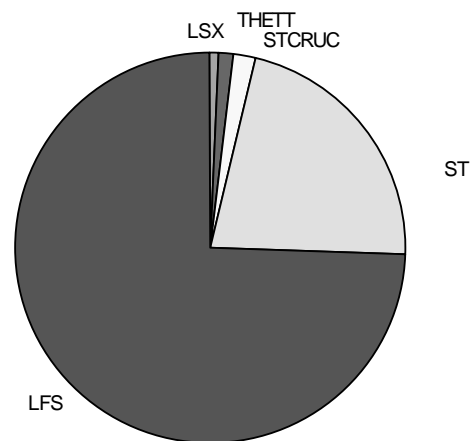


Fig 14b The relative frequency of contemporary types in well stratified horizon ASH14 deposits

(NSP) first appear in this Horizon. Both pitcher and jug handles join at the top of the rim.

Dating evidence: Flaxengate periods IX–X (Perring 1981, 21–35). A residual group of material of this Horizon was incorporated in metallurgy along with two silver coins of Henry I c.1122–1124 (BGB95 (220) <34, 35) on the Bishop Grosseteste College 1995 site (BGB95; Wragg 1997). Nottingham splashed ware is thought to have started production in the early to mid 12th century.

Date: early/mid to mid 12th century

Horizon MH2 fig 17a, 17b and 17c

Main wares	Local Early Medieval Shelly ware (LEMS) Lincoln Fine-Shelled ware (LFS) Nottingham Splashed ware (NSP fine and fine/sandy fabrics) 12th/13th-century Lincoln Glazed ware (LSW1) Stamford ware (ST)
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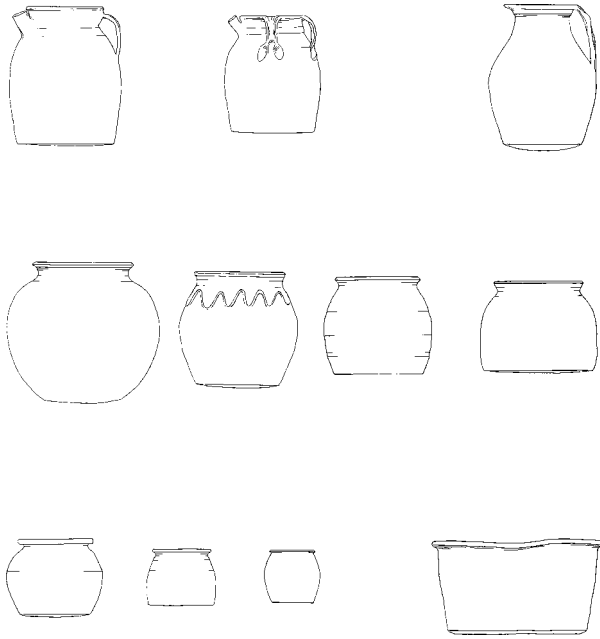


Fig 15 Assemblage of typical MH1 vessels Scale 1:16

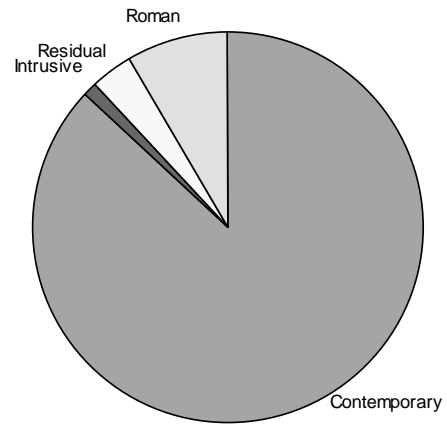


Fig 17a The relative frequency by sherd count of contemporary, intrusive, Roman residual, and other residual material in well stratified horizon MH2 deposits

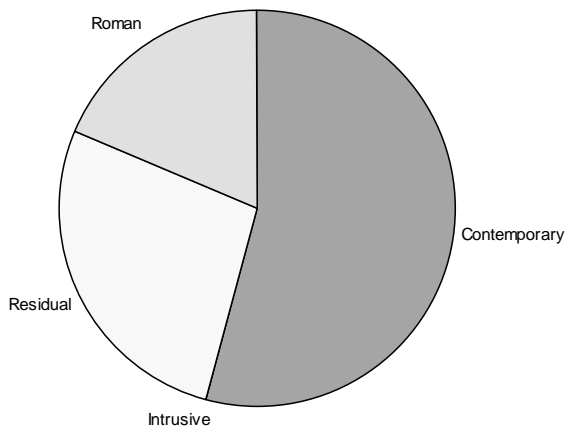


Fig 16a The relative frequency by sherd count of contemporary, intrusive, Roman residual, and other residual material in well stratified horizon MH1 deposits

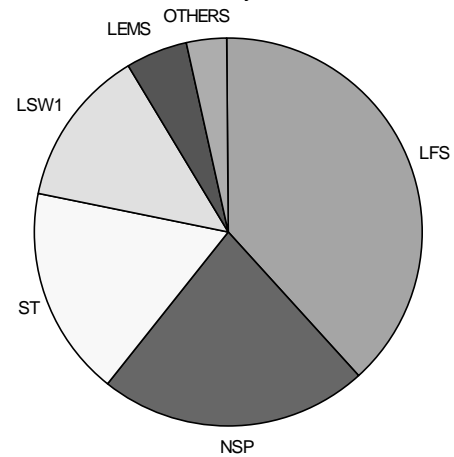


Fig 17b The relative frequency of contemporary types in well stratified horizon MH2 deposits

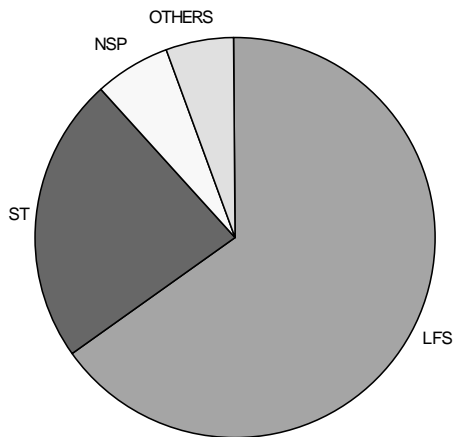


Fig 16b The relative frequency of contemporary types in well stratified horizon MH1 deposits

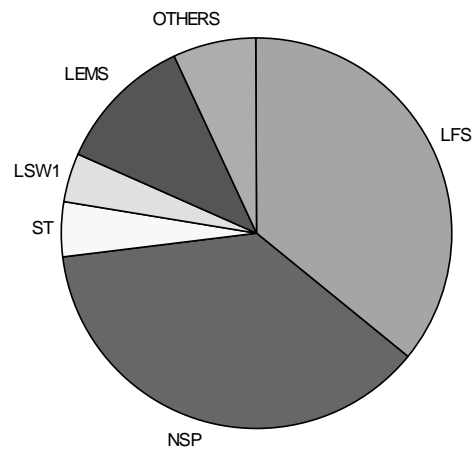


Fig 17c The relative frequency of contemporary types in quantified horizon MH2 deposits

Other wares	Beverley ware Type 1 (BEVO) Sparsely Glazed ware (LOCC) Lincoln Glazed ware Fabric A (LSWA) Doncaster Hallgate-type ware (DONC) Developed Stamford ware (DST) Early Medieval Handmade fabrics (EMHM)
Imports	Brunnsum-type flasks (BRUNS) Pingsdorf-type ware (PING) Andenne-type ware (ANDE)

Typological features: Incised parallel decoration, nail decoration, splashed glaze with no use of copper. Jug rims are of the square or triangular everted type. Bowls become shallower and smaller. This is the first Horizon for which glazed wares outnumber coarsewares. Fig. 7c shows that the presence of Nottingham Splashed ware (NSP) and Local Early Medieval Shelly ware (LEMS) had been underestimated in earlier archiving (Fig. 7b), and that much of the Stamford ware (ST) present would have been residual.

Dating evidence: Flaxengate site (F72) LUB95 pit cgT233 contained a silver Cross Moline cut-farthing of Stephen (F72 (AMM) <C32>), issued c.1135–42; Marion Archibald notes (1995) that this had probably been lost by c.1150 but may have survived until later, providing an absolute terminus post quem of 1158 for the fill of the pit. Flaxengate period XI.

A 12th/13th-century Lincoln Glazed ware (LSW1) jug of this period was found in the rubble core of the Observatory Tower at Lincoln Castle (Lincoln Castle 1974) (Reynolds 1975, Fig. 79), thought to have been constructed c.1151 (Reynolds 1975, 204–5).

Date: mid 12th to mid/late 12th century

Horizon MH3 fig 18a, 18b and 18c

Main wares	Local Early Medieval Shelly ware (LEMS) Nottingham Splashed ware (NSP sandy fabric) Lincoln Fine-Shelled ware (LFS) 12th/13th-century Lincoln Glazed ware (LSW1) Stamford ware (ST) Developed Stamford ware (DST)
Type 1 wares	Beverley ware (BEVO) Doncaster Hallgate-type ware (DONC) Early Medieval Handmade fabrics (EMHM) Sparsely Glazed ware (LOCC) Lincoln Glazed ware Fabric A (LSWA) Thetford-type fabrics (THETT) Gritty ware (YG) York Glazed ware (YORK) York-type Splashed wares (York Glazed ware (YORKSPL))
Imports	Paffrath-type ware (BLGR) Brunnsum-type flasks (BRUNS) North French wares (NFREM) Pingsdorf-type ware (PING)

Typological features: Incised wavy decoration, thumb-ed strips, combed strips, stabbing on handles, splashed glaze with some use of copper. This is the Horizon in which the highly decorated Stamford ware (ST) pitchers and jugs occur, and also the first modelled decoration on 12th/13th-century Lincoln

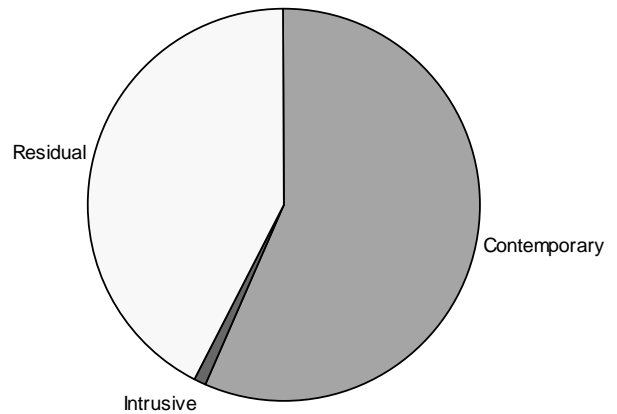


Fig 18a The relative frequency by sherd count of contemporary, intrusive, and residual material in well stratified horizon MH3 deposits

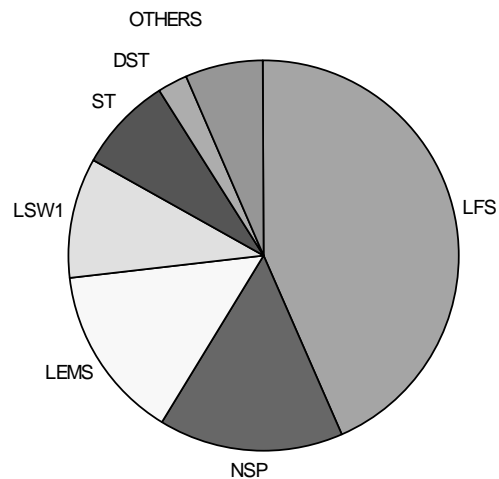


Fig 18b The relative frequency of contemporary types in well stratified horizon MH3 deposits

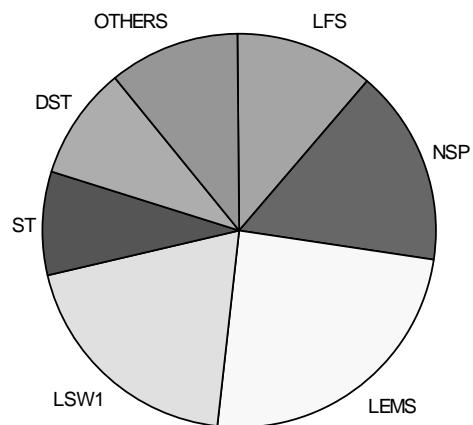


Fig 18c The relative frequency of contemporary types in quantified horizon MH3 deposits

Glazed ware (LSW1) and Local Early Medieval Shelly ware (LEMS). The most important change in this Horizon is the introduction of inturned rims on jugs from several centres (Lincoln Glazed ware Fabric A (LSWA), 12th/13th-century Lincoln Glazed ware (LSW1), Nottingham Splashed ware (NSP sandy fabric), Doncaster Hallgate-type ware (DONC), Beverley ware (BEVO), and Developed Stamford ware (DST)). Curfews and pipkins are first found in this Horizon. Fig. 18c shows that much of the Lincoln Fine-Shelled ware (LFS) found is residual.

Dating evidence: Lincoln Cathedral (LC84) LUB 14 cg206. cg207 and cg210 are considered to be layers associated with the construction of St. Hugh's Choir, begun in 1192 and completed soon after 1200 (Stocker 1987, Steane *et al* forthcoming). These deposits contained no 13th/14th-century Lincoln Glazed ware (LSW2) but did produce late-looking 12th/13th-century Lincoln Glazed ware (LSW1) jugs, one of which had an inturned rim. The West Parade site (WP71), context I AT (Young 1999, 212) contained a small group of pottery of this Horizon associated with a coin of Richard I *c.*1192–1194 (WP71 (IAT) <c9>) probably lost before *c.*1204 (Archibald 1999, 206). A short cross penny dated to *c.*1196–1199 from group A (layer 35), at the Bishops' Palace, Lincoln (LBP72) was stratified with pottery of this Horizon (Chapman *et al* 1975, 15–18 and 29).

Some of the Beverley ware (BEVO) jug sherds are comparable to material in Phase 6C at Lurk Lane, Beverley (Watkins 1991, 66 and Fig. 53) thought to date to *c.*1180–1188.

Date: mid/late 12th to early 13th century

Horizon MH4 fig 19a, 19b and 19c

Main wares	Developed Stamford ware (DST) Local Early Medieval Shelly ware (LEMS) 12th/13th-century Lincoln Glazed ware (LSW1) 13th/14th-century Lincoln Glazed ware (LSW2) Lincoln Glazed ware Fabric A (LSWA)
Other wares	Beverley ware (BEVO) Bourne-type ware (BOUA) Early Medieval Handmade fabrics (EMHM) 12th/13th-century Lincoln Glazed ware (LSW1/2) Medieval Local fabrics (MEDLOC) Fabric A Nottingham Glazed ware (NOTG) Nottingham Splashed ware (NSP) Potterhanworth-type ware (POTT) Scarborough ware (SCAR) Stamford ware (ST) Tile fabric (TILE)
Imports	Paffrath-type ware (BLGR) North French wares (NFREM) Rouen-type ware (ROUEN)

Typological features: Thumbled bases, incised decoration, Rouen-type decoration, scales including iron-stained, strips including iron-stained, combing, spots, cordons, copper splashed glaze, developed splashed

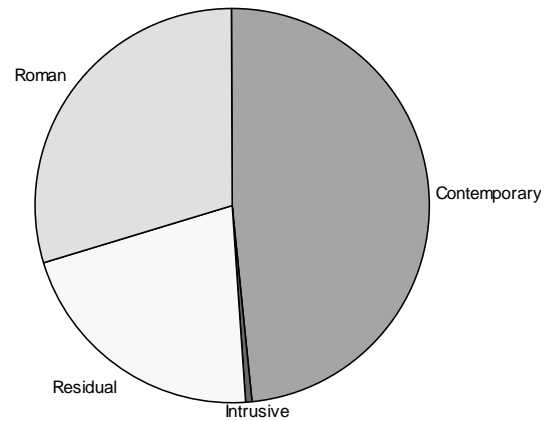


Fig 19a The relative frequency by sherd count of contemporary, intrusive, Roman residual, and other residual material in well stratified horizon MH4 deposits

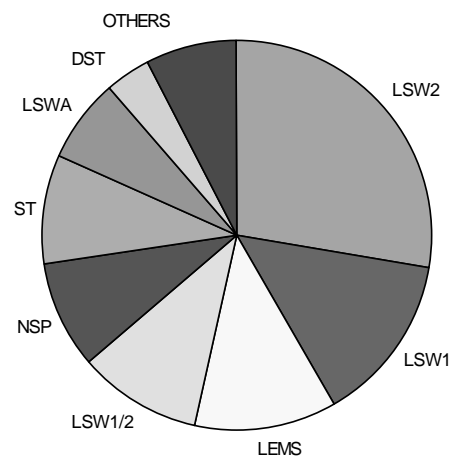


Fig 19b The relative frequency of contemporary types in well stratified horizon MH4 deposits

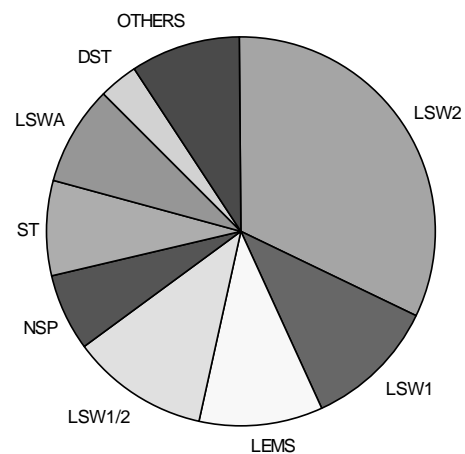


Fig 19c The relative frequency of contemporary types in quantified horizon MH4 deposits

glaze, copper suspension glazes. Inturned jug rims are still common at the beginning of this Horizon and can be found on some of the earliest 13th/14th-century Lincoln Glazed ware (LSW2) jugs, although most of the 13th/14th-century Lincoln Glazed ware (LSW2) jugs have a collared rim. Three successive groups from the West Parade site (WP71): (Young 1999, 212–13) show the change from splashed-type to suspension-type glazes on Lincoln and local wares taking place during this Horizon. The first Potterhanworth-type ware (POTT) vessels occur in this Horizon and include a squat jug with an inturned rim. Curfews, pipkins and tubular spouted pitchers become more common and the first dripping dishes occur. Although Fig. 19 shows a significant proportion of both ST and Nottingham Splashed ware (NSP) fabrics, few of the vessels are late types contemporary with this Horizon.

Dating evidence: Lincoln Cathedral site (CAT86) LUB 3 cg1 and LUB 4 cg2 are deposits that pre-date the 13th-century chapel LUB 5, the history of which is laid out and discussed in a paper by David Stocker (1987) where he suggests that the reason for the construction of the chapel was to receive the body of Hugh on his canonization in 1220, twenty years after his death. Documentary evidence suggests that his body was originally buried in the north-east apse of the northern transept, which would have been only just completed on his death in 1200. The architectural details of chapel LUB 5 (recorded in post-medieval engravings) suggest that it replaced the north-east chapel within 20 to 30 years of its construction, involving a major remodelling of the north end of the relatively new transept (ibid 110–124). Both these deposits contain early 13th/14th-century Lincoln Glazed ware (LSW2) copper-glazed jugs.

Date: early to early/mid 13th century

Horizon MH5 fig 20 and fig 21a-c

Main wares	13th/14th-century Lincoln Glazed ware (LSW2)
	Lincoln Glazed ware Fabric A (LSWA)
	Potterhanworth-type ware (POTT)
Other wares	Scarborough ware (SCAR)
	Nottingham Glazed ware (NOTG)
Imports	North French wares (NFREM)
	Rouen-type ware (ROUEN)
	Saintonge ware with a mottled glaze (SAIM)

Typological features: Thumbled bases. Most jugs have self-coloured applied decoration including horse-shoes, faces, modelled figures, animals, roller-stamping, scales, strips, and multiple cordons. Iron-stained or white clay decoration includes bows, scales and strips, but occurs rarely, being present only in early groups. Almost all glaze is of the suspension type with most being coloured with a copper addi-

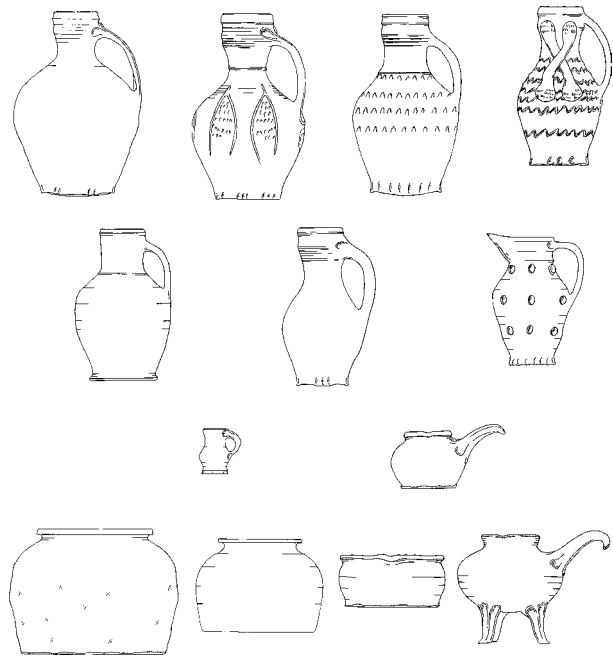


Fig 20 Assemblage of typical MH5 vessels. Scale 1:16

tive. This is the period of well-made, thin-walled, highly-decorated jugs. Except for Potterhanworth-type ware (POTT), material manufacture outside of the city is rare.

Dating evidence: Lincoln Cathedral site (LC84) LUB 2 contained a small group of this Horizon in deposits considered to be associated with the construction of the Angel Choir in c.1255–1266 (see report in Steane *et al* LAS 3 forthcoming).

A class 3b long-cross penny of Henry III dating to c.1248–50, little worn and thought to have been lost c.1250–1255, came from deposits in the Kitchen Courtyard at the Bishops' Palace, Lincoln (LBP72), where a large amount of Horizon MH5 pottery was used to infill a pathway along the west wall of the East Hall (Chapman *et al* 1975, Group C, 18–21, and Young forthcoming).

Date: early/mid 13th to late 13th century

Horizon MH6 fig 22a, 22b and 22c

Main wares	13th/14th-century Lincoln Glazed ware (LSW2)
	14th/15th-century Lincoln Glazed ware (LSW3)
	Lincoln Glazed ware Fabric A (LSWA)
	Potterhanworth-type ware (POTT)
Other wares	Beverley ware (BEVO)
	Humberware (HUM)
	Nottingham Glazed ware (NOTG)
	Scarborough ware (SCAR)
	Toynton Medieval ware (TOY)
Imports	Low Countries Red Earthenwares (DUTR)
	Rouen-type ware (ROUEN)

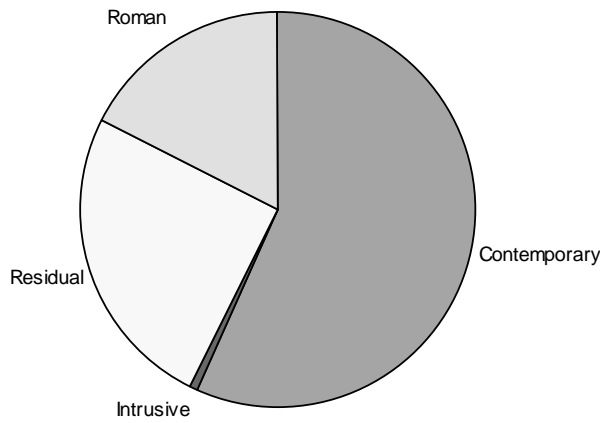


Fig 21a The relative frequency by sherd count of contemporary, intrusive, Roman residual, and other residual material in well stratified horizon MH5 deposits

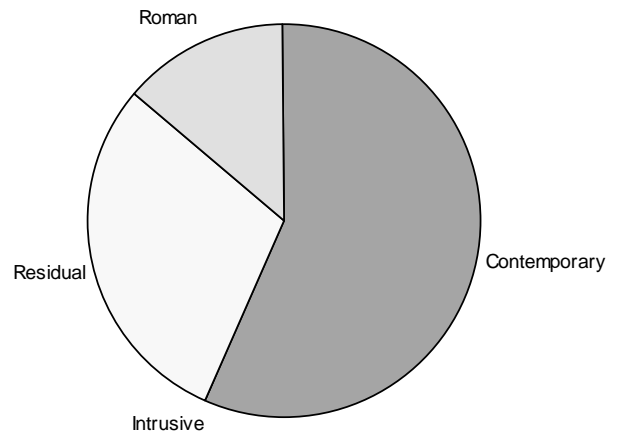


Fig 22a The relative frequency by sherd count of contemporary, intrusive, Roman residual, and other residual material in well stratified horizon MH6 deposits

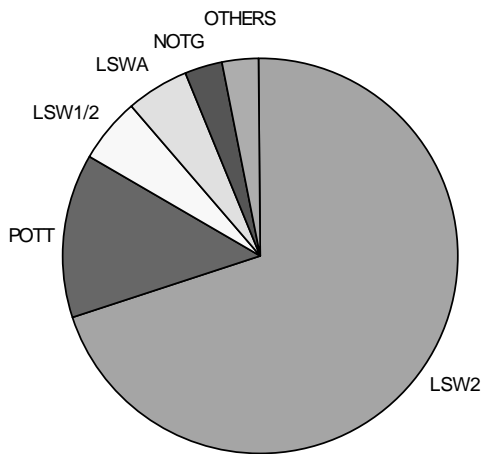


Fig 21b The relative frequency of contemporary types in well stratified horizon MH5 deposits

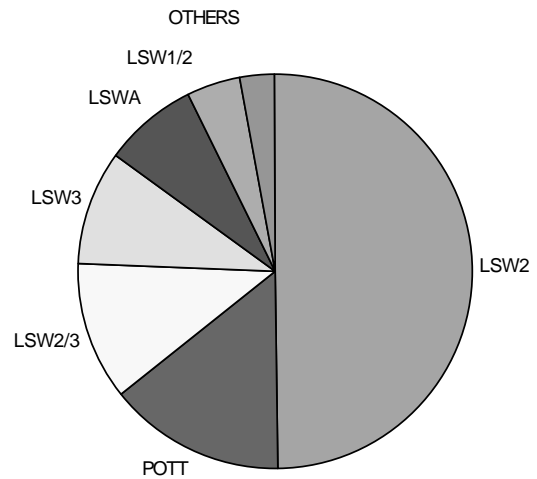


Fig 22b The relative frequency of contemporary types in well stratified horizon MH6 deposits

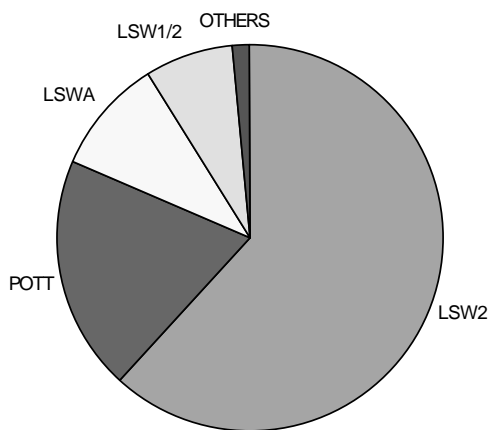


Fig 21c The relative frequency of contemporary types in quantified horizon MH5 deposits

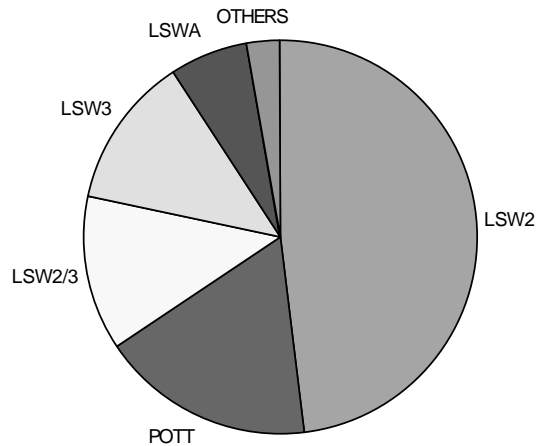


Fig 22c The relative frequency of contemporary types in quantified horizon MH6 deposits

Saintonge ware with a mottled glaze (SAIM)
 Saintonge Polychrome ware (SAIP)
 Siegburg-type Stoneware (SIEG)

Typological features: Thumbed bases, no iron-stained decoration in early groups but is present in later ones. Decoration includes horseshoes, faces, unusual applied decorative motifs, fleur-de-lis, scales, leaves, cartwheels and strips. Motifs are often randomly placed on the vessel. Suspension glazes mostly with copper colourant; Lincoln Glazed ware Fabric A (LSWA) and 13th/14th-century Lincoln Glazed ware (LSW2/3) oxidised vessels have an orange glaze mottled with copper which seems to typify this Horizon. Rod handles become more popular although both rod- and strap-handles can be found on the same jug type in early groups.

Dating evidence: This is the first Horizon to contain Toynton Medieval ware (TOY) with iron-stained decoration, similar to material from the Roses kiln (kiln 1), Toynton All Saints, thought to have been in use during the late 13th and early 14th centuries (Aitken and Hawley 1966, 190–1, and a coin of c.1302–1310 in flue infill).

Date: late 13th to early/mid or mid 14th century

Horizon MH7 fig 23a, 23b and 23c

Main wares	14th/15th-century Lincoln Glazed ware (LSW3) Lincoln Glazed ware Fabric A (LSWA) Potterhanworth-type ware (POTT)
Other wares	Humberware (HUM) Medieval Local fabrics (MEDLOC) Toynton Medieval ware (TOY)
Imports	Low Countries Red Earthenwares (DUTR) Siegburg-type Stoneware (SIEG)

Typological features: Thumbed bases, decoration becoming coarser and more abstract with multiple motifs placed randomly around jugs. Glaze is of the suspension type, mostly with copper colourant; handles are all of the rod type and some are ribbed. Vessels are heavier and more clumsily made than in Horizon MH6. The first definite bunghole jugs/jars occur in this Horizon.

Dating evidence: Humberware vessels found in this Horizon are similar to those from Period II at the Augustinian Friary Garden site, Hull (Watkins 1993, Fig. 94–99) dated to c.1317–1375.

Date: early/mid or mid 14th to late 14th century

Horizon MH8 fig 24a, 24b and 24c

Main wares	14th/15th-century Lincoln Glazed ware (LSW3) Lincoln Glazed ware Fabric A (LSWA) Potterhanworth-type ware (POTT)
Other wares	Bransby-type ware (BRANS) Late Glazed Lincoln ware (LLSW) Humberware (HUM) Late Medieval Local fabrics (LMLOC) Fabric A

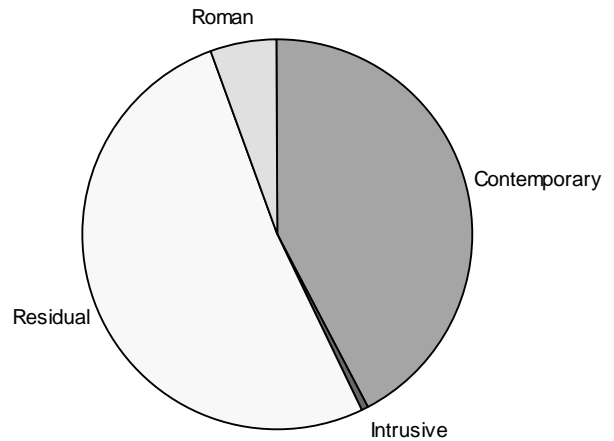


Fig 23a The relative frequency by sherd count of contemporary, intrusive, Roman residual, and other residual material in well stratified horizon MH7 deposits

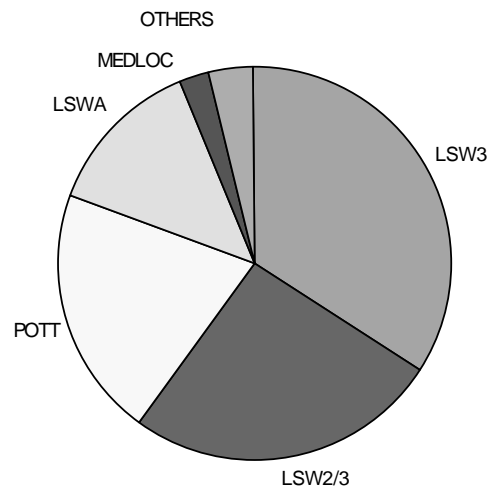


Fig 23b The relative frequency of contemporary types in well stratified horizon MH7 deposits

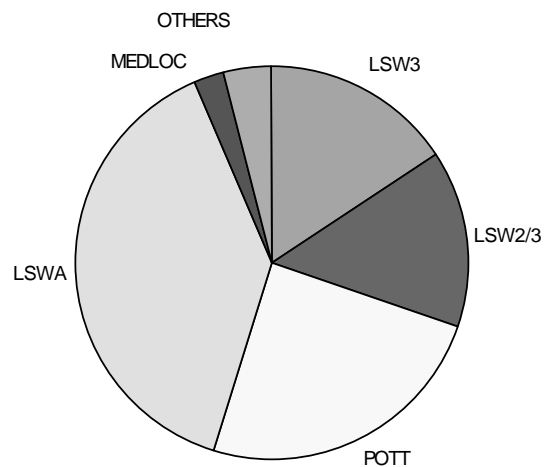


Fig 23c The relative frequency of contemporary types in quantified horizon MH7 deposits

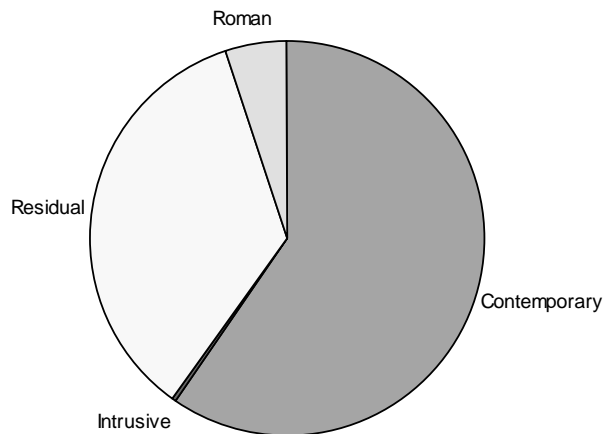


Fig 24a The relative frequency by sherd count of contemporary, intrusive, Roman residual, and other residual material in well stratified horizon MH8 deposits

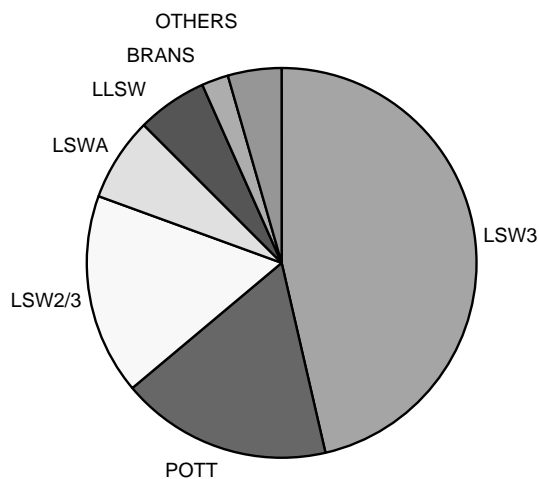


Fig 24b The relative frequency of contemporary types in well stratified horizon MH8 deposits

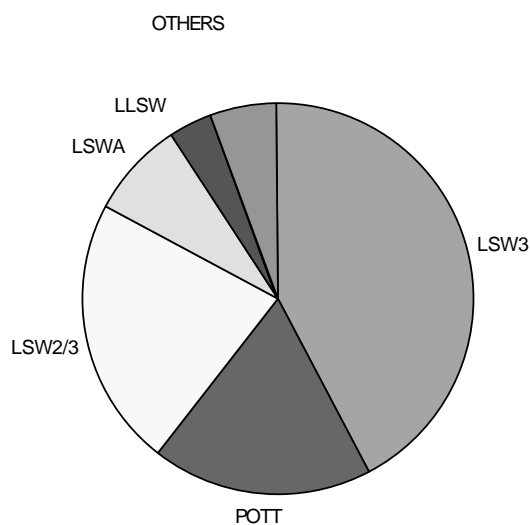


Fig 24c The relative frequency of contemporary types in quantified horizon MH8 deposits

Imports
 Toynton Medieval ware (TOY)
 Archaic Maiolica (ARCH)
 Low Countries Red Earthenwares (DUTR)
 Langerwehe-type Stoneware (LANG)
 Siegburg-type Stoneware (SIEG)

Typological features: Thumbed bases, decoration becoming generally less common and cruder, often with multiple motifs. Glaze is suspension type with most not having copper colourant. Handles are rod or oval and some handles are ribbed. This Horizon marks the introduction of Late Glazed Lincoln ware (LLSW).

Dating evidence: On the St Mark's Yard East kiln site (ZE87), a Horizon MH8 deposit (LUB 19 cg177), containing both 14th/15th-century Lincoln Glazed ware (LSW3) and also Late Glazed Lincoln ware (LLSW) wasters, contained a pre-Treaty penny of Edward III (ZE87 (728) <37>), minted between 1356 and 1361, that was corroded but unclipped, and showed little sign of wear; this suggests that it was probably lost before c.1400, and almost certainly before 1413 (Archibald 1994).

Date: late 14th to early 15th century

Horizon MH9 fig 25a, 25b and 25c

Main wares
 14th/15th-century Lincoln Glazed ware (LSW3)
 Potterhanworth-type ware (POTT)
 Late Glazed Lincoln ware (LLSW)
 Lincoln Glazed ware Fabric A (LSWA)

Other wares
 Humberware (HUM)
 Late Medieval Local fabrics (LMLOC) Fabric A
 Midland Purple-type ware (MP)
 Late Medieval Finewares - St. Marks type (LMF)

Imports
 Langerwehe-type Stoneware (LANG)
 Langerwehe/Raeren-type Stoneware (LARA)
 Low Countries Red Earthenwares (DUTR)
 Siegburg-type Stoneware (SIEG)

Typological features: Thumbed bases, coarser decoration including multiple motifs, although decoration generally is less common. Glaze is suspension type with little copper colourant on 14th/15th-century Lincoln Glazed ware (LSW3) vessels and none on Late Glazed Lincoln ware (LLSW); handles are rod or oval and some handles are ribbed. Late Glazed Lincoln ware (LLSW) becomes more common although the proportion may vary considerably from site to site; Late Medieval Finewares (LMF) produced in Lincoln first appear. New forms include lobed bowls and cups.

Dating evidence: Pottery group D at the Bishops' Palace site (LBP72) (Chapman *et al* 1975, 21–3), thought to have been deposited in c.1457–1458, contains material that dates to MH9 and MH10.

Date: early to mid 15th century?

Horizon MH10 fig 26a, 26b and 26c

Main wares
 Late Glazed Lincoln ware (LLSW)

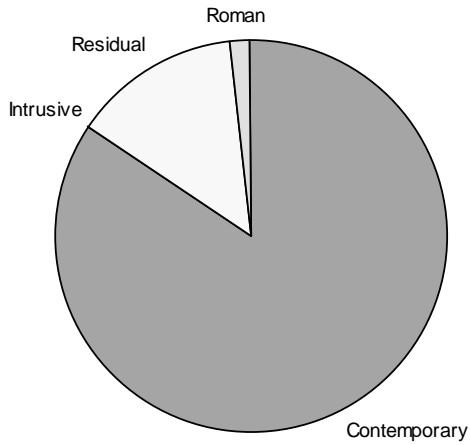


Fig 25a The relative frequency by sherd count of contemporary, intrusive, Roman residual, and other residual material in well stratified horizon MH9 deposits

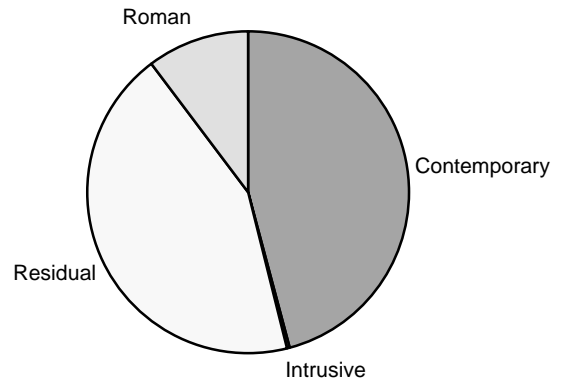


Fig 26a The relative frequency by sherd count of contemporary, intrusive, Roman residual, and other residual material in well stratified horizon MH10 deposits

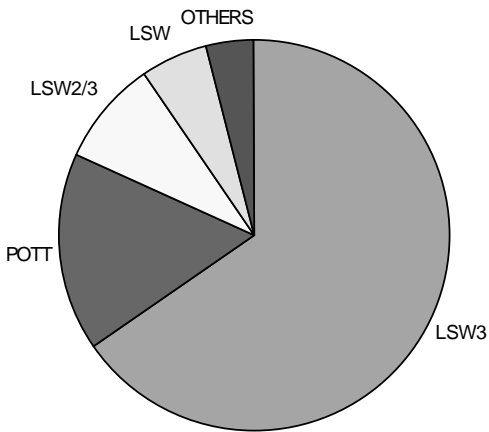


Fig 25b The relative frequency of contemporary types in well stratified horizon MH9 deposits

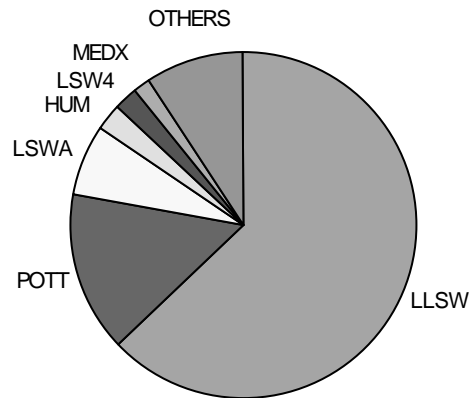


Fig 26b The relative frequency of contemporary types in well stratified horizon MH10 deposits

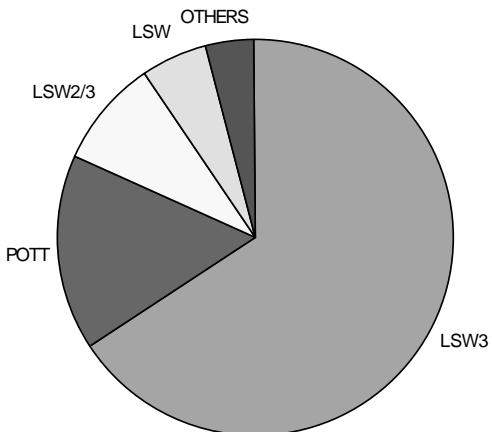


Fig 25c The relative frequency of contemporary types in quantified horizon MH9 deposits

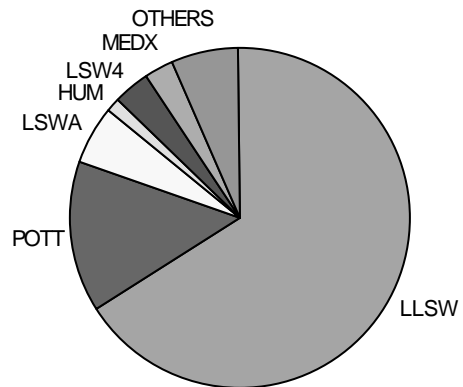


Fig 26c The relative frequency of contemporary types in quantified horizon MH10 deposits.

Other wares	Potterhanworth-type ware (POTT)
	Lincoln Glazed ware Fabric A (LSWA)
	Cistercian-type wares (CIST)
	Humberware (HUM)
	15th/16th-century Lincoln Glazed ware (LSW4)
	Toynton Late Medieval ware (TOYII)
	Bourne-type wares Fabric D (BOU)
	Late Medieval Local fabrics (LMLOC) Fabric A
	Midland Purple-type ware (MP)
	Late Medieval Finewares (LMF)
Imports	Langerwehe-type Stoneware (LANG)
	Langerwehe/Raeren-type Stoneware (LARA)
	Low Countries Red Earthenwares (DUTR)
	Raeren Stoneware (RAER)
	Siegburg-type Stoneware (SIEG)

Typological features: Thumbed or plain bases, overall less decoration, although some Late Glazed Lincoln ware (LLSW) jugs are highly decorated. Glaze is mostly suspension type with no copper colourant, handles are rod or oval and some handles are ribbed. This Horizon is marked by the end of the traditional glazed Lincoln ware (14th/15th-century Lincoln Glazed ware (LSW3)) and the domination of Late

Glazed Lincoln ware (LLSW). The shell-tempered Potterhanworth-type ware (POTT) appears to still be in use although it has become less common. Raeren Stoneware (RAER) is first found in groups dating to the end of this Horizon.

Dating evidence: Group D at the Bishops' Palace site (LBP72)(Chapman *et al* 1975, 21–23), thought to have been deposited in c.1457–1458, contains material that dates to MH9 and MH10, including a single Cistercian-type ware (CIST) vessel.

Deposits associated with rebuilding at the White Hart, Newark, in c.1462 contained sherds of Cistercian-type wares (CIST), Late Medieval Finewares (LMF) and Late Medieval Local fabrics (LMLOC) of similar types to those found in MH10 deposits in Lincoln (Samuels and Field forthcoming).

The presence of sherds of Raeren Stoneware (RAER) in late Horizon MH10 deposits indicates that this Horizon continues into the last quarter of the 15th century, as this pottery type would not be expected to occur before c.1485 (Hurst *et al* 1986, 194).

Date: mid to late 15th-century

IV The Pottery

Roman

There are three broad categories of material from Lincoln that cannot be conclusively classified either as Roman or post-Roman. Only one of these, that of the Mediterranean-type amphora, has any impact on the overall picture of post-Roman pottery in the city.

Possible Saxon Fabrics (RESAX and RMSAX)

A few sherds from excavations in the city, at Steep Hill (SH74), The Lawn Hospital (L86 and LH84), West Bight (WB80), Waterside North (WN87) and Waterside north west (WNW88) have been tentatively identified in earlier records as either Roman or possibly Anglo-Saxon or Middle Saxon fabrics. These sherds have been mislaid and so no firm attribution can be made. Even if they were found to be of post-Roman date, they would not alter the general distribution pattern of Saxon pottery.

Possible Local Post-Roman Fabrics (RLG, RLSAX, RMED and RSN)

The similarity of some Roman and post-Roman oxidised and reduced local sandy fabrics has inevitably led to a small number of featureless sherds remaining unclassified.

East Mediterranean-type Amphorae (AMPH)

The six sherds of East Mediterranean-type amphorae recovered from the Flaxengate (F72) site and formerly considered as possible post-Roman imports (Adams Gilmour 1988, 167) have now been identified positively as Roman types (Darling and Precious forthcoming). A further three sherds from the site, also identified as possible post-Roman amphorae, are now

lost, so it cannot be determined if these also are of Roman date. A single amphora sherd from a medieval deposit on the West Bight site (WB80) cannot be paralleled amongst other Roman amphorae found in the city and may prove to be of a post-Roman type.

Early Anglo-Saxon (c.450–c.650)

Introduction

National Context

Early Anglo-Saxon pottery was produced by hand and fired in a bonfire or clamp. Thus, vessels usually have a dark, carbon-rich core and margins and surfaces which can be variable in colour but are mainly dark brown or black. External and sometimes internal surfaces were often covered with burnishing and decoration added in the form of grooved lines and stamp impressions. Other decorative methods, such as fingernail impressions and deliberate roughening of the surface, are absent, although found further south in East Anglia and the Thames Valley. It is notoriously difficult to date early Anglo-Saxon pottery with any precision but a South Lincolnshire cremation cemetery, at Baston, has been dated to the 5th century, and this provides an indication of the range of wares present at the beginning of the period. At the other end of the period, pottery made in the same tradition has been found in association with shell-tempered Maxey-type ware whose appearance is the ceramic marker for the start of the mid-Saxon period.

Lincoln Production

There is no evidence for pottery production in Lincoln or its immediate environs in the early Anglo-Saxon

period, and the absence of a single, predominant ware amongst the collection of early Anglo-Saxon pottery from the city suggests that there was no pottery manufacture in or close to the city.

Local Production

Production of pottery in West-Central Lincolnshire in the late 5th to early 7th centuries is not proven, although there is one fabric group, ESAXLOC, which is tempered with a "Trent Valley" sand and which might therefore have been locally made. On the other hand, this ware might have been made much further afield, perhaps even as far south as Nottingham, where similar sands were used in later periods. Likewise, some of the undiagnostic pottery dated to this period might have been locally made (ESAX). The majority, however, was either certainly or probably imported to the area.

Regional Imports

The most distinctive regional import is CHARN, vessels tempered with Mountsorrel Granodiorite, ultimately derived from the Charnwood Forest area of north-west Leicestershire. Vessels with sandstone-sand tempering (SST) are also common and these too are likely to have been produced elsewhere, although it is not possible on present evidence to say precisely where. A single vessel containing abundant organic temper, probably as a result of dung-tempering, is also likely to have been a regional import since this technique is much more common in the South Midlands and further south than it is in the Lincoln area. Finally, a collection of fabrics which contain rocks and minerals not present in wares of known local origin, ESAXX, is also certainly composed of vessels imported from outside the area.

Continental Imports

No vessels of continental or Mediterranean origin have been recognised despite a determined search through residual Roman wares for potential Merovingian or Byzantine vessels.

Vessel Forms

Most of the early Anglo-Saxon vessels found in Lincoln were undecorated jars or urns of unknown function. They include decorated vessels but also some which are plain and may have been used in cooking. Other forms include a lid and a small bowl or lamp.

New Forms

In comparison with the late Roman period, there is a very restricted range of vessel forms used in the early Anglo-Saxon period, nor is there any clear correspondence between the vessel classes used in the late 4th and early 5th centuries and those used later.

Undiagnostic Anglo-Saxon fabrics (ESAX)

Description

All vessels are represented by small featureless body sherds with a grey to dark grey fabric that is tempered with undiagnostic quartz sand grains for which no source is indicated. Five vessels of this type have been recovered from excavations in Lincoln, three of which came from excavations on the East Bight sites (EBS70) in the Upper City.

Local Anglo-Saxon fabrics (ESAXLOC) (Fig. 27, 1)

Fabric and technology

This is a loosely associated group of fabrics containing sand temper of probable local origin. The surface texture of the fabrics is mainly sandy, although a few examples have been slightly smoothed. Colours are typically reduced greys, often with very dark grey or black surfaces. All fabrics are tempered with moderate to abundant quartz sand. Sherds tend to contain either abundant subangular quartz grains of up to 1mm, or moderate rounded grains of up to 0.3mm. Other inclusions are sparse to moderate muscovite, sparse chert fragments up to 1mm, occasional chaff and, in one vessel, sparse limestone.

Vessel types

With the exception of the illustrated lid (Fig.27, 1) and one shoulder fragment from a medium-sized jar/urn, none of the sherds is diagnostic of any vessel type. The lid has been hand-formed, simply by pressing a ball of clay into a shallow bowl shape. The exterior surface has then been stamped all over with a simple circular stamp. Two c.10mm holes have been pierced through either side of two centrally applied bosses. The lid is partially sooted and may have formed a cover for a cremation vessel.

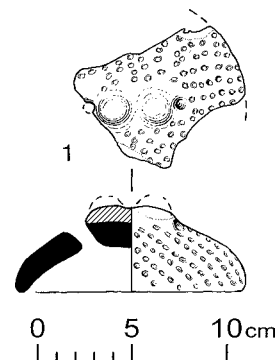


Fig 27 Local Anglo-Saxon fabrics. Scale.1:4

Source

Thin-section analysis suggests a source in the Trent Valley or Witham Valley (west of the Witham gap).

Dating and frequency

Only eight vessels are known from the city, all occurring in residual contexts. These fabrics were particularly common on the Newark Castle site (Young 1996a) and are also found on sites in Lincolnshire including Quarrington (Young 1996b), where they mainly seem to date to the 6th and 7th centuries.

Sandstone-tempered fabrics (SST) (Fig. 28, 2–5)*Fabric and technology*

Colours are mostly reduced greys, although some vessels have oxidized bright orange or red surface patches due to poor firing control. Surface texture varies from smooth to gritty depending on the coarseness of the fabric. Only one of the vessels from the city shows any sign of a burnished finish. Vessels include those tempered with fine, medium and coarse sandstones. As few fabrics contain only aggregated material, not all of the quartz sand inclusions are immediately obvious as being derived from sandstones. In some of the fabrics the actual amount of sandstone visible under magnification is often quite small. There is considerable variation in the other inclusions that occur along with the sandstone, indicating several production sites. These other inclusions include chaff, calcareous grains, iron-rich grains, and muscovite. At the coarse end of the fabric range the quartz sand grains are about 1.5mm–2.5mm and at the finer end 0.2mm–0.4mm.

Vessel types

Only one of the vessels found in the city provides any evidence for form. This is the rim of a funnel-necked jar (Fig. 28, 2) with a semi-burnished exterior surface. Three vessels are decorated, two (Fig. 28, 3 and 4), with simple stamped motifs and incised lines, and one (Fig. 28, 5) with a row of broad grooves above a zone of burnishing.

Source

Sandstone-tempered fabrics are widespread in early-to-mid Anglo-Saxon pottery assemblages in the East Midlands and north of the Humber, but only three can be provenanced: a coarse fabric found mainly on sites in the Peak District or those parts of the Trent Valley closest to the Peaks; a coarse fabric found on sites in Yorkshire (eg, Wharram Percy and Fishergate, York) and a micaceous fabric found on sites in the Lincolnshire fens (eg, Gosberton). The coarse fabrics are undoubtedly tempered with sand

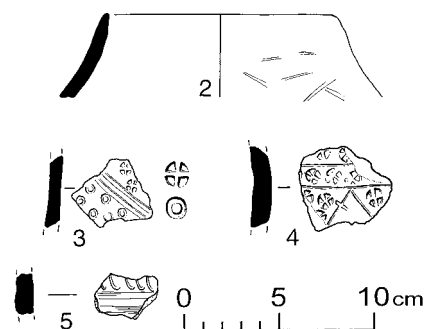


Fig 28 Sandstone-tempered fabrics. Scale. 1:4

derived from the weathering of Carboniferous sandstones, such as the Millstone Grit. There is no indication as yet as to whether there are petrological differences between the Yorkshire and Derbyshire finds but neither is similar to the material from Lincoln. Similarly, the Gosberton micaceous sandstone-tempered ware is distinct and clearly not represented amongst the Lincoln finds.

Sandstone is often the major inclusion in the Leicestershire granodiorite tempered ware and it is possible that some of the Lincoln sherds are from the same source area, but for some reason have little or no granodiorite inclusions. Sparse fragments of sandstone occur in the Trent Valley sands and in the glacial sands of Lincolnshire, but not in the quantities found in the Lincoln sherds.

The source of this ubiquitous fabric group is therefore unknown and would repay further study.

Dating and frequency

Six vessels have been recovered from excavations in Lincoln; all occur in residual or unreliable contexts.

Chaff-tempered fabrics (EChAF)*Fabric and technology*

Sherd surfaces are typically soft and powdery when underfired, or cracked and brittle when overfired. The few vessels in the region that do seem to have been fired to an optimum temperature have smooth to lumpy, often burnished inner and outer surfaces. Colours range from light greys through to dark greys and even black, often with an oxidized outer surface. The most prominent inclusion is abundant to common organic material. Often this has been burnt out in the more highly-fired vessels where the organic material is only represented by voids. Other inclusions include sparse to moderate rounded quartz fragments up to 1mm, sparse rounded fragments of calcareous material up to 2mm, and moderate muscovite.

Vessel types

The sherds from the Lincoln vessel are too fragmentary to suggest anything other than a large vessel.

Source

Thin-section analysis of the Lincoln example suggests a source in the Wolds or a similar area of Cretaceous rocks.

Dating and frequency

Only a single vessel has been found in the city, with sherds spread across three trenches on the West Bight site (WB80), intrusively in a presumed Roman context and in robbing deposits of the latest Roman features, in which other sherds were associated with Late Saxon and later material. Dating of chaff-tempered pottery generally has been discussed in relation to finds in London (Vince and Jenner 1991, 48), where a long time span (5th to 8th century) is proposed for the tradition.

Non-Local Anglo-Saxon fabrics (ESAXX)

(Fig. 29, 6–9)

Fabric and technology

This is a loosely amalgamated group of fabrics containing inclusions that do not appear to have been obtained from local sources. They are extremely varied in temper content and appearance. Only three major groups of fabrics could be discerned and these have been called Fabric A, Fabric G and Fabric M. Other fabrics contain a variety of inclusions such as various quartz sands, limestone, shell, chalk, flint/chert, clay pellets and micas.

Fabric A

This group has a slightly gritty or pimply surface. The fabric tends to be dark grey, is flecked with occasional white inclusions and often has a red-brown outer surface. Although not always apparent from the surface of the sherd, this fabric contains sparse to moderate rounded chalk and other calcareous inclusions up to 1mm, together with abundant subangular quartz up to 0.5mm.

Fabric G

The fabric of this group is not particularly distinctive under binocular x20 examination, but has been shown to contain glauconite under thin-section analysis. Exterior surfaces are heavily burnished over a fine sandy fabric. Sherd colour is grey with very dark grey to black surfaces and a brown outer margin. The fabric contains abundant subangular and rounded quartz up to 0.6mm and sparse chert/flint up to 0.6mm, along with occasional voids from organic material.

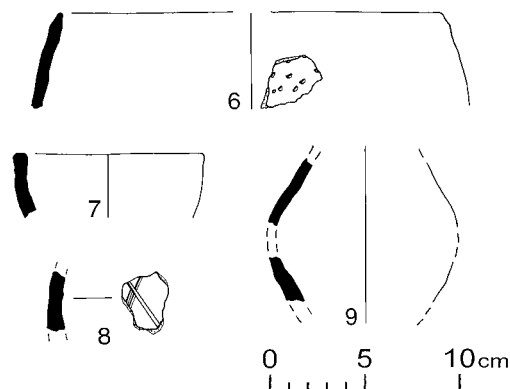


Fig 29 Non-local Anglo-Saxon fabrics: Fabric M (6); miscellaneous fabric (7); Fabric A (8); and Fabric G (9). Scale 1:4

Fabric M

This grouping is characterised by the presence of moderate to abundant flakes of muscovite that are clearly visible by eye. The fabric can be smooth to gritty depending on the size of the mica flakes. Sherds are grey to dark grey, sometimes with an oxidized outer surface. Under microscopic examination sparse subangular quartz and a sparse angular rock, both up to 0.5mm, can also be seen with the muscovite, which ranges up to 1.0mm. A similar fabric is found at Newark Castle (Young 1996a) associated with pottery thought to date to the 6th century.

Vessel types

Although most of the sherds are too small to allow recognition of their form, at least three different vessel types are represented. The rim of the vessel in Fabric M (Fig.29, 6) seems to be from a medium-sized jar and is decorated with random rectangular stabbing. The two body fragments of a bottle (Fig.29, 9) in Fabric G have a highly burnished exterior surface. The flat-topped rim in a miscellaneous quartz and iron-rich pellet tempered fabric (Fig.29, 7) is from a small bowl or lamp. One vessel in Fabric A (Fig.29, 8) is decorated with incised diagonal lines in a pattern similar to that found on some Middle Saxon Maxey-type vessels.

Source

The chalk inclusions in Fabric A indicate a non-local source. Potential source areas include the Yorkshire Wolds, the Lincolnshire Wolds and the Chilterns. The closest of these, the Lincolnshire Wolds, c.30km to the east, is the most likely. The glauconite and chert/flint in Fabric G are also

indicative of a source in an area of Cretaceous rocks and, again, the Lincolnshire Wolds is the most likely source area. Although muscovite is a common detrital mineral, its presence in quantity and in large flakes is unusual. No source area can be suggested for this fabric.

Dating and frequency

Eleven vessels have been recovered from excavations in Lincoln, five of which came from excavations at the Lawn Hospital in the Upper City. With the possible exception of one Fabric A vessel, found in a disused hypocaust on the Saltergate site (LIN73E) (LUB 51, cgE30), all occurrences were in residual or unreliable contexts.

Charnwood-type fabrics (CHARN) (Fig. 30, 10–11)

Fabric and technology

The surface texture and colour of these fabrics varies considerably, both with the frequency and coarseness of acid igneous rock fragments added as temper, and with the firing temperature. Surface texture ranges from smooth to gritty and colour from bright oxidized through pale reduced to dark reduced. All vessels are tempered with very sparse to abundant, coarse to fine, fragments of acid igneous rock. Other inclusions are diverse and can include in varying amounts: sandstone, calcite, oolitic limestone, shell, ironstone and chaff.

Vessel types

The only rim sherd found indicates a small vessel (Fig.30, 10), although the size and thickness of the other sherds suggest larger and more substantial vessels. The only decorated sherd (Fig.30, 11) has simple triangular impressions, along with what are possibly combed lines.

Source

This fabric grouping has been recognised since its first study by John Walker in the mid-1970s (Walker 1976). This study showed that the most likely ultimate source of the temper was the Charnwood Forest inlier, immediately to the north-west of Leicester. However, the immediate origin of the temper could not be determined at that time, and the possibility of widespread movement of granitic rock fragments through glacial and post-glacial action could not be refuted. Thus, the extensive distribution of "Charnwood" ware might be due to the movement of pottery vessels from a single source area, but might equally have been due to the exploitation of drift deposits of sand or clay containing erratic granitic rock fragments.

Samples of glacial and alluvial sands, gravels, and clays were collected from the Charnwood Forest

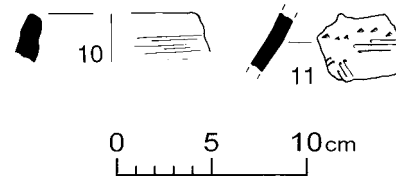


Fig 30 Charnwood-type fabrics. Scale 1:4

area to ascertain whether glacial deposits containing almost exclusively fragments of igneous rock did exist in Leicestershire, and whether there had been any reworking of glacial deposits giving rise to a northward movement of igneous rock fragments into the Soar and Trent valleys. This sampling, undertaken by Greg Phillips, then of the University of Nottingham, with the assistance of members of the Department of Geology at Nottingham University, showed that fragments of Mountsorrel granite are to be found over a wide area to the south and south-west of Charnwood Forest, but are not found in the boulder clay in the Forest itself (which contained erratics from deposits further to the north-east, such as rounded pebbles from Triassic sandstone). Furthermore, samples of terrace sands and post-glacial alluvial sands from the Soar valley did not contain Mountsorrel granite in significant quantities, demonstrating that there is little likelihood of the Anglo-Saxon clay or temper source being to the north or north-east of Charnwood Forest.

This new data shows that there is a strong likelihood that the igneous rock-tempered pottery of the early Anglo-Saxon period found in the East Midlands does contain inclusions ultimately derived from the Mountsorrel granite in the Charnwood Forest. It also suggests that the actual source or sources utilised by the Anglo-Saxon potters lay to the south or south-west of the Forest.

In Lincoln there is the further possibility that clays containing erratics of Scandinavian origin might have been used. Such erratic-tempered vessels are known from various periods in Yorkshire and Lincolnshire. They almost always contain, however, a high proportion of basic igneous rock fragments, absent from the "Charnwood" fabric. Therefore, despite the considerable distance between Leicestershire and Lincoln, it is thought that the Lincoln finds were actually produced in Leicestershire.

A distribution map showing the incidence of early to mid Anglo-Saxon acid igneous rock-tempered wares confirmed by petrological analysis illustrates the very wide and unusual character of this ware's use (Williams & Vince 1997, 214–219).

Dating and frequency

Eight vessels have been recovered from excavations in Lincoln. All occur in residual or unreliable contexts.

Sparry Calcite-tempered fabrics (SPARC)
(Fig. 31, 12–13)

Fabric and technology

Surface texture is smooth to slightly lumpy and surface colour is variable from black to pale orange with a grey core. The fabric is tempered with calcite crystals that are not always visible on the vessel surface. The crystals may have dulled to a greyish-white powder or have been entirely leached out. In a fresh break the crystals appear clear or occasionally opaque and range from 0.1mm to 5.6mm in length. Other inclusions are rare but can include siltstone, quartz grains, flint and chalk.

Vessel types

The thickness and size of the sherds suggest medium to large sized vessels. The single rim found in the city (Fig.31, 12) gives no clues as to the shape of the rest of the vessel. The other illustrated vessel (Fig.31, 13), however, indicates a sharply-shouldered cooking pot/urn, with simple incised horizontal decoration.

Source

There are many potential sources of sparry calcite but the accessory rocks and minerals associated with this fabric in thin-section show that, in this instance, the sherds originated close to an outcrop of chalk. Whilst this source could be the Lincolnshire Wolds, the similarity of the fabric to that of coarsewares produced in the Roman period in the Vale of Pickering, in and around Malton, and the use of similar fabrics in the early-to-mid Anglo-Saxon period at West Heslerton (Powlesland *et al* forthcoming), suggest that these sherds may be imports from north of the Humber. The calcite appears to occur naturally as veins in the chalk of the Yorkshire Wolds. Whether similar calcite veins occur in the Lincolnshire Wolds is not known. There is, however, no concentration of sparry calcite-tempered wares in Anglo-Saxon pottery assemblages from the Lincolnshire Wolds. For both these reasons, therefore, a Yorkshire origin is proposed for the Lincoln finds.

Dating and frequency

Seven vessels have been recovered from excavations in Lincoln, all occurring in residual or unreliable contexts. Neither of the two features sherds are certainly of Anglo-Saxon date and there are a small number of late Roman calcite tempered vessels, originating in the Vale of Pickering, found in Lincoln.

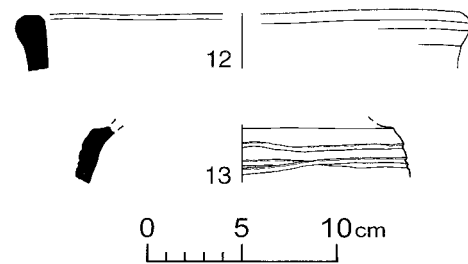


Fig 31 Sparry calcite-tempered fabrics. Scale 1:4

It is possible therefore that all of the sherds here identified as SPARC are actually residual late Roman vessels. In surveys of Anglo-Saxon pottery fabrics in Lincolnshire and East York carried out as part of the Flixborough and West Heslerton post-excavation projects calcite tempered wares of definite Anglo-Saxon date were found as far south as Sancton but not south of the Humber.

Anglo-Saxon Greensand-tempered fabrics (ESGS)
(Fig. 32, 14–15)

Fabric and technology

Surface texture is lumpy to gritty, and colour ranges from grey to dark grey with occasional oxidized brown patches. Fabrics include sparse to moderate rounded grains of Greensand quartz, often with a background of finer subangular quartz. Other inclusions are sandstone, calcareous grains, flint/chert and chaff.

Vessel types

The two illustrated sherds indicate a medium-sized, sharply-shouldered vessel (Fig.32, 15) and a larger round-shouldered vessel (Fig.32, 14). The neck of the larger vessel has been pressed upwards from the shoulder and, although the exterior has been wiped to mask this, it is still visible internally.

Source

The principal characteristic of this fabric is a rounded quartz sand in which the sand grains appear to have originated in a sand or sandstone of Cretaceous age (colloquially 'Greensand quartz'). The East Midlands Anglo-Saxon Pottery Project survey found that this ware was most common on sites in and around the Lincolnshire Wolds. The three thin-sectioned sherds (L1238, L1239 and L1431) from Lincoln each contained rocks or minerals of Cretaceous age: glauconite in two cases and a ferroan calcite-cemented sandstone in the third. Pottery with similar characteristics is also found further south; it has been noted, for example, on sites

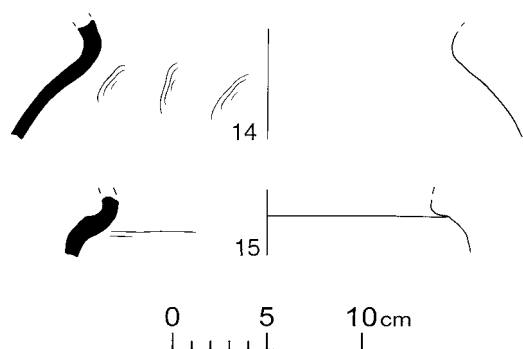


Fig 32 Anglo-Saxon greensand-tempered fabrics.
Scale 1:4

in Bedfordshire and Northamptonshire, as well as in the Cambridgeshire Fens. Nevertheless, the region immediately to the south of Lincoln has produced few sherds of this ware, nor has it been found in quantity to the north of the Humber (where there is a similar geological strata outcrop), and it is very likely that the Lincoln sherds were produced in East Lindsey.

Dating and frequency

Four vessels have been recovered from excavations in Lincoln, all occurring in residual or unreliable contexts.

Mid-Saxon (c. 650–c. 850)

Introduction

National Context

Mid-Saxon pottery was either produced by hand or perhaps with the aid of a tournette. The latter method is sometimes known as a slow-wheel, and is defined as the use of a wheel for rotating the vessel during manufacture but without the use of centrifugal force in forming the vessel. Four main zones of ceramic use are recognised in Mid-Saxon England. In the west, and north-west, pottery was not regularly used. Further east, wares identical, or very similar, to those used in the Early Anglo-Saxon period were in use. It is surmised that this was probably also the case in parts of Yorkshire, Derbyshire, and Nottinghamshire. In the East Midlands, including Lincoln, shelly wares, known collectively as Maxey-type ware, were common whilst in East Anglia, and on coastal and riverine sites accessible by water from East Anglia, Ipswich ware was in use. Continental imports are known from a number of sites on the coast, as at Ipswich and Southampton, or on major river valleys, as at London

and York, but also from those on inland, landlocked sites, such as Wharram Percy and Bedford.

Although traditionally the Mid-Saxon period is dated from the middle of the 7th to the middle of the 9th centuries, there is evidence that the ceramics typical of this period appear later than c.650 on some sites (c. 730 at Lundenwic, apparently), and continue in use into the first years of Scandinavian control at York and in Lincoln. In London, however, Mid Saxon pottery types had been replaced by later, wheelthrown wares by c.890.

Lincoln Production

There is no archaeological evidence for the production of pottery in Lincoln or its immediate area in the Mid Saxon period. Nevertheless, the majority of the pottery used in and around the town has petrological characteristics which are very similar to those of the Late Saxon shelly wares which replaced the Mid Saxon wares in the late 9th century. It remains a strong possibility that Maxey-type wares were being produced in the Lincoln area, but how much of the variation seen in Mid-Saxon pottery is due to differences in source and how much to differences in date, or individual preference by groups of potters, remains to be determined.

Local Production

The petrology of the shell-tempered pottery found in the Lincoln excavations suggests that it was mainly produced at a site or sites on the eastern side of the Lincoln Edge. Since the strata concerned run north–south from Lincoln there is a possibility that we are looking at a number of sources utilised by potters with a shared tradition, but it is more likely that the wares come from a single source area. This conclusion is supported by the results of a programme of Neutron Activation Analysis carried out by M J Hughes of the British Museum on finds from Lincoln, York (Fishergate), Flixborough, Goltho Manor and Normanby-le-Wold (Hughes forthcoming). The products of this 'local' industry have been classified as Northern Maxey ware (MAX), subdivided according to the amount and texture of the shell inclusions. At the end of the period pottery with a very similar shell temper occurs (ELFS). This ware is interpreted here as the forerunner of the main shell-tempered ware found in 11th -and 12th-century contexts in the City, LFS. To the south of Lincoln, at Quarrington, near Sleaford, a different type of Maxey-type fabric has been found (MAXQ); its fabric is distinctively tempered, with fine crushed shell, in a greyish limestone matrix. Also found on this site are sherds in a shell-tempered fabric, that contains possible fragments of Brachiopod (MSAXLOC Fabric A) and a high number of oolitic limestone-tempered (LIM) vessels.

Regional Imports

Ipswich-type ware (IPS) is found in small quantities on many Mid Saxon sites in Lincolnshire but only one sherd is tentatively identified from Lincoln. The absence of this ware from sites in the city appears to have a bearing on the function and importance of Mid-Saxon Lincoln.

Continental Imports

Sherds of continental imports, GRBURN, BLSURF, ORP, MAY and BLBURN, have been found in Lincoln. Their stratigraphic position and their distribution within the city suggest that they may have been imported during the early years of Anglo-Scandinavian settlement, in the later 9th century. The sources represented in this small collection were probably in the Rhineland and northern France.

Vessel Forms

The locally produced wares were mainly vessels of straight or convex sides and flat bases used for cooking. Bowls and lamps (or small bowls) were also used. Where the form can be determined, it seems that the continental imports were mainly jars or pitchers with one possible bottle.

Local Middle Saxon fabrics (MSAXLOC)

(Fig 33, 16–17)

Fabric and technology

Although vessels in these fabrics are all handmade and tempered with local fossil shell, they do not fit into either of the main local Middle Saxon shell-tempered traditions (Northern Maxey-type ware and Early Lincolnshire Fine-shelled ware). Surface colours are reddish browns with core colours varying from dark brown to grey. The vessels are quite highly-fired and much of the surface shell is masked by a finishing technique that appears to be the result of wiping, possibly with a cloth. The frequency of

the shell temper in a fresh break, where shell fragments up to 1mm in size are visible, is variable between abundant and moderate. Under x20 examination, a background of sparse to moderate, poorly-sorted rounded quartz of up to 1mm is visible, together with sparse elongated voids that indicate the presence of burnt out organic inclusions. All of the vessels are coil built and neatly finished with wiping and finger-smoothing.

Vessel types

Most sherds seem to be from wide-mouthed, straight-sided jars (Fig.33, 16) with the occurrence of one simple small bowl (Fig.33, 17).

Source

Thin-section analysis shows that the abundant bivalve shell fragments originated in a shelly limestone. The shell itself is composed of non-ferroan calcite and a ferroan calcite matrix is also found, both attached to the shell fragments and as loose fragments. The shelly limestone is similar to that found in other local shell-tempered pottery such as Lincoln Kiln-type Shelly ware (LKT), but the smaller grain size and the presence of more ferroan calcite may indicate a different weathering process, and therefore a different, but still local source.

Dating and frequency

There are nine vessels from the city in this fabric group. All come from the Flaxengate site (F72) where they first occur in deposits dating to the mid to late 9th century (horizon ASH7). As similar fabrics and forms elsewhere have been found stratified with Maxey-type wares (Young 1996b), either sherds are being found residually in the city or Local Middle Saxon fabrics continued in use into the early part of the Late Saxon period.

*Northern Maxey-type ware (MAX) (Fig.34, 18–31)**Introduction*

Whenever possible, Northern Maxey-type wares from Lincoln are subdivided into one of three fabric groups (A to C) on the basis of visual fabric characteristics and manufacture. A handful of sherds cannot be subdivided and are classified simply as Northern Maxey-type ware (MAX).

*Fabric A**Fabric and technology*

The fabric of this first grouping is often quite hard and the external surfaces are smoothed, masking the dense fine shell. The core is always reduced and surface colour ranges from patchy reddish-browns to black. A fresh break reveals abundant fine fragments of bivalve shell, most of which range up to

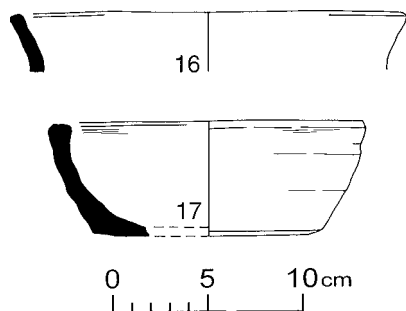


Fig 33 Local Middle Saxon fabrics. Scale 1:4

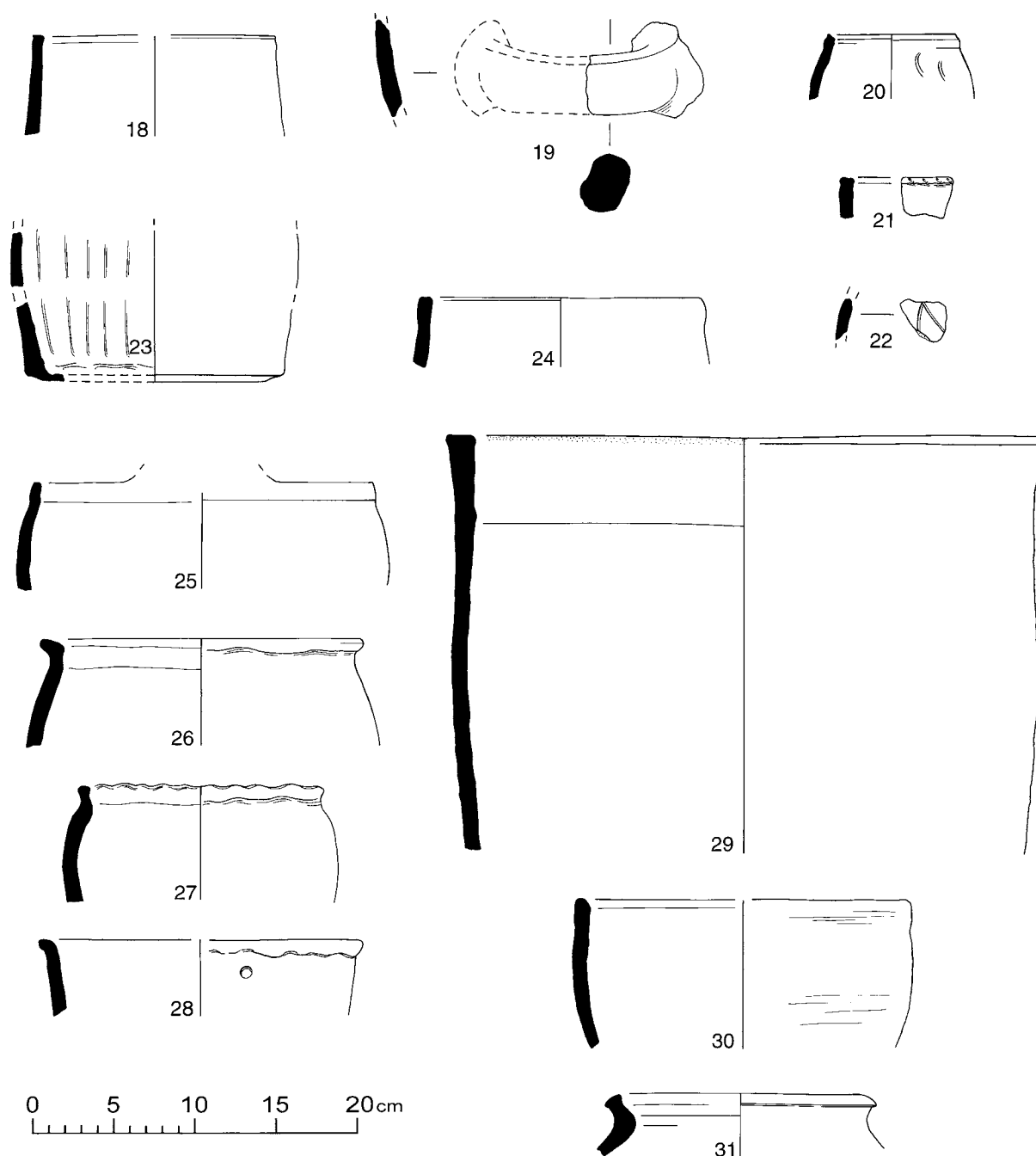


Fig 34 Northern Maxey-type ware: Fabric A 18–23; Fabric B 24–28; Fabric C 29–31. Scale 1:4

0.5mm, although some fragments are up to 1.5mm. Microscopic examination shows that sparse sub-angular quartz of up to 0.2mm is also present. The vessels are all coil-made and much care has been taken with their finishing; coils are 10 to 20mm high and are visible in section only. The flat-topped rims appear to have been cut with a tool, leaving a characteristic inner and sometimes an outer lip to the upright flat top.

Vessel types

The most common form is of thin-walled, competently made bucket- or barrel-shaped vessels (eg, Fig.34, 18 and 23), similar in shape to those found at Maxey (Addyman 1964, fig. 14). These vessels are almost always sooted and seem primarily to have been used as cooking vessels. Very few of these vessels show traces of an upright lug; decoration is extremely rare, and, when it occurs, is confined to notches on the rim

(eg, Fig.34, 21) or simple circular stamps. Bowls and small globular vessels (eg, Fig.34, 20), possibly used as lamps (which are often heavily sooted), are both rarely found. A diagonally-incised decoration (eg, Fig.34, 22) is occasionally found on some bowls. The side handle or lug (Fig.34, 19) is unique and obviously from a very large vessel.

Fabric B

Fabric and technology

This fabric grouping is the most variable. While Fabric A visually appears to be homogeneous, there is a much greater variety of inclusions in Fabric B. Further petrological analysis is needed to determine how real these distinctions are before the group is sub-divided. The fabric is almost always reduced to a medium to dark grey colour, although sometimes a dark brown occurs. Surface colours range from bright orange through light red to a more common red-brown. Although the surfaces are smoothed, the shell is not always as successfully masked as in Fabric group A, and abundant, dense, medium to coarse, fossil bivalve shell up to 2mm is visible. Microscopic examination shows a range of other minor inclusions such as subround to subangular quartz grains up to 0.2mm, as well as limestone, iron-rich grains and organic material. This fabric grouping seems to be less well made: vessels are thicker walled, coils are 15 to 25mm and are sometimes visible on the surface of sherds, especially on larger vessels. The flattening of the rims appears on some vessels to have been executed with the fingers. Occasionally vessels may have a burnished exterior surface especially towards the base.

Vessel types

Vessels in this group tend to have a more rounded profile (eg, Fig.34, 25–27) and are less easily separated into jar and bowl forms. Rims are more often slightly everted, although most are still flat. The more straight-sided vessels (eg, Fig.34, 24), that are more typical of Northern Maxey-type Fabric A and of early Southern Maxey-type, seem to belong early in the sequence. Upright lugs with a simple upright pierced rounded or triangular shape are quite common, although a 'Bar-lip' type has also occasionally been found in the county. Several vessels simply have a pre-fired hole c.20mm below the rim (eg, Fig.34, 28 bowl) while others have post-firing holes drilled into the upper body of the vessel often alongside a pre-fired hole. Decoration is uncommon and consists only of finger tip pressing on the rim top giving a frilled appearance (eg, Fig.34, 27). Specific bowl forms are rare and may be of plain (eg, Fig.34, 28), or lugged type.

Fabric C

Fabric and technology

This group includes much coarser shell of up to 3mm that is less densely packed in the matrix. Vessel surfaces are hard and lumpy with some occasional smoothing. Under microscopic examination, sparse, subround quartz grains of up to 0.4mm and a background of very fine shell fragments are visible along with the larger fossil shell inclusions. Although basically the vessels are still coil-built, some of the rims appear to have been well finished, possibly on a turntable.

Vessel types

Although this fabric is uncommon a range of form shapes is known. The most common is a rounded vessel with a simple rim, similar to those typical of Fabric B. A few jar rims (eg, Fig.34, 31) show signs of turntable finishing, possibly an attempt at copying Ipswich types. Two types of bowl have been found; the most common is a medium-sized rounded shape (eg, Fig.34, 30) which is occasionally lugged. The other bowl type (Fig 34, 29) is more unusual and heralds the shape of the large Early Lincolnshire Fine-Shelled and Lincolnshire Fine-Shelled bowls; this bowl has a wear mark on the inner face of the rim, possibly made by a lid.

Source

Thin-section analysis has shown that essentially there are no geological differences between Fabrics A, B and C. The material is tempered with fragments of bivalve shell, sometimes in association with quartz, chert/flint and oolitic limestone. The ware seems to have been made in a number of centres in Lincolnshire, probably in areas close to the Lincolnshire Limestone with nearby outcrops of glacial sands.

Dating and frequency

More than a hundred sherds have been found so far in the city; all, with the exception of a few sherds on the Saltergate site (LIN73D), are from residual or unreliable contexts. Most of the sherds (c. 68%) are in Fabric B, with c.25% in Fabric A, and c.7% in Fabric C. Although at present there is no direct dating evidence for the groups, tentatively Fabric group A appears to be earlier than group B. It is more common to find Fabric A on sites where Early Anglo-Saxon material also occurs. Conversely it is less common to find it on sites that are entirely Middle Saxon in date or where there is a continuum into the Late Saxon period. On the Lawn Hospital site in Lincoln where both fabric groups occur (unfortunately in residual contexts), there are a small number of Early Saxon sherds but no mid or late 9th century material. Thermoluminescent dating of the pottery at Maxey (Addyman 1964) gave dates of 780

and 830 (+ or – a standard deviation of 15%), confirming a Middle Saxon date for the tradition. Elsewhere Northern Maxey-type ware has been found in 8th-century contexts at York (Mainman 1993, 565–567) and Flixborough (Didsbury *et al* forthcoming).

Since this section was drafted, analysis of the pottery at Flixborough has shown that Late Saxon Local Fabric M can now be considered to be classified as Maxey-type ware. Most Lincoln finds of this are from the Flaxengate site (F72), and not previously thought to be of Middle Saxon date. This adds an additional 66 sherds to the total recovered in the city, 58 of which were found at the Flaxengate site.

Early Lincolnshire Fine-shelled ware (ELFS) **(Fig.35, 32–40)**

Fabric and technology

A new shell-tempered tradition emerges towards the end of the Middle Saxon period. Some features of the Maxey-type tradition are retained, including coil building, occasional finger-tipped or simple stamped decoration, flat bases and similar basic form shapes. The rim shapes, however, are now a simple, round, everted shape, with no attempt to flatten them. The vessel surfaces are no longer smoothed but are wiped with grass, leaving faint, but characteristic, horizontal, parallel striations around the vessels. The fabric has a fine, dense, shell-temper visually very similar to Northern Maxey-type ware Fabric Group A (p34) and almost identical to the later Lincolnshire Fine-shelled ware (p81). Vessels are usually reduced to a dark grey and have oxidized surfaces that range from light orange-brown to dark red-brown. Occasional vessels may be completely oxidized, usually to a light orange-brown. Microscopic examination shows abundant fossil bivalve shell up to 1mm together with sparse subround to subangular quartz grains up to 0.3mm and occasional calcareous inclusions up to 0.2mm.

Vessel types

Vessel types consist of simple jars (eg, Fig.35, 32–33) with rounded rims and a variety of both large (eg, Fig.35, 35 and 37) and small (eg, Fig.35, 38–39) bowls. Small jars are occasionally found (eg, Fig.35, 34) and a single pedestal lamp (Fig.35, 40) is known from the Goltho Manor site (GM74) (Coppack 1987, Fig.141, 366). The small bowl with a large pre-fired hole below the rim, also from the Goltho site, is unique (Coppack 1987, Fig.144, 507); the vessel is well sooted and appears to have been used for some sort of cooking activity. Occasional larger lugged vessels, possibly bowls, also occur.

Source

Samples of Early Lincolnshire Fine-shelled ware from the Goltho Manor excavations were examined in thin-section. The shell inclusions are of the same type as those found in Northern Maxey-type ware, bivalve shell fragments with a ferroan calcite matrix present as a coating on the shell and as separate fragments. The clay matrix too is very similar to those used for Northern Maxey-type ware (and later Saxon and medieval shelly wares), and is interpreted as being either a Jurassic clay or a more recent clay formed by the weathering of Jurassic rocks and/or clays. The grain-size distribution of the shell fragments, however, distinguishes Early Lincolnshire Fine-shelled ware from Northern Maxey-type ware since it typically contains a finer-grained shell sand. This difference could be cultural – created by the selective sieving out of larger shell fragments or choosing a finer shell sand – or geological – due to the use of sands of differing taphonomy.

Dating and frequency

This group is not very common in Lincoln, with only 27 vessels having been found so far. The earliest occurrence of the ware in the city is in the mid to late 9th century (horizon ASH7), although on other sites in the county it is this ware type that characterises late Middle Saxon (horizon ASH6) deposits. The ware seems to represent a transitional phase between the Middle Saxon and the handmade Saxo-Norman wares. Although rarely found in Lincoln, it is common on rural sites until the beginning of the 10th century when it becomes submerged during the period of domination of the Lincoln wheel-thrown shell-tempered wares. The ware re-emerges as Lincolnshire Fine-shelled ware (LFS) by the end of the 10th, becoming a major ware type on all sites until the last quarter of the 12th century.

Non-local Middle Saxon fabrics (MSAXX) **(Fig.36, 41)**

Fabric and technology

Miscellaneous fabrics containing non-local inclusions are grouped together under this ware type. All known sherds are tempered with fossil shell as the main tempering agent, but may also include limestone, calcite, quartz grains, oolite, iron-rich grains, sandstone and organic material. The fossil shell includes examples of brachiopods along with the more common bivalve type. Other fossils include echinoid shell and ostracods. All vessels are handmade and include a variety of finishing techniques. The illustrated bowl (Fig.36, 41) has highly burnished surfaces that mask the shell inclusions; other vessels have rough, unfinished surfaces. Colours are mostly reduced greys and black with orange or red-brown surfaces.

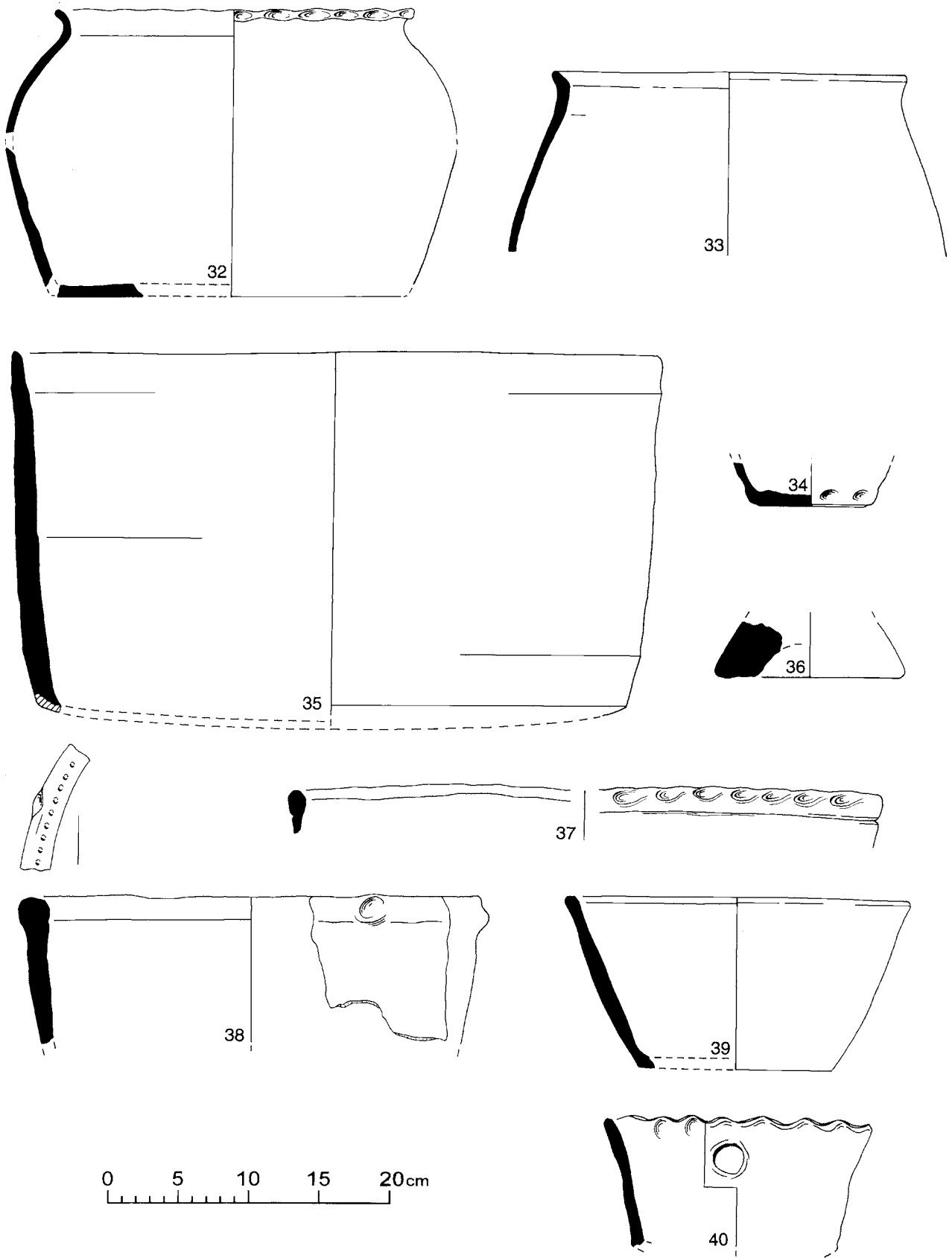


Fig 35 Early Lincolnshire Fine-Shelled ware: jars 32-35; bowls 36 and 37-40; lamp 36. Scale 1:4

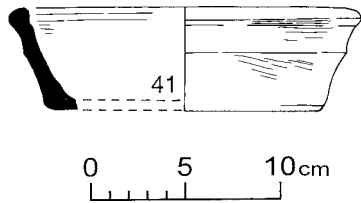


Fig 36 Non-local Middle Saxon fabric. Scale 1:4

Vessel types

Few vessels are represented by more than small, undiagnostic body sherds, so that with the exception of the illustrated small bowl (Fig.36, 41), it is impossible to postulate form shapes for these fabrics.

Source

None of the fabrics form cohesive groups and seem to represent occasional occurrence from a number of production centres rather than deliberate trade. Thin-section analysis of the illustrated bowl indicates that it is similar to examples of Roman shelly ware (thought to be of Bourne origin) from the Bourne area of Lincolnshire.

Dating and frequency

Only three examples occur in the city, all in disturbed or residual contexts.

Ipswich-type ware (IPS)

Description

This term covers vessels that conform to the description of products made at the Ipswich ware kilns in Ipswich itself (Hurst 1957 and 1959, Blinkhorn 1989, 12–16), although some vessels have fabrics that cannot be conclusively identified as having been produced there.

A wide range of vessel types is known in Ipswich-type ware but the single sherd from Lincoln tentatively identified is from a medium-sized jar or pitcher, probably the most common exported form. This sherd, from the Flaxengate (F72) site, was found in a residual context. Ipswich-type ware is found on several sites in the county, particularly those easily accessible by water.

Source

Ipswich-type ware has recently been the subject of an overview by Paul Blinkhorn (forthcoming), which involved both petrological analysis and chemical analysis (ICPS). The study showed that most 'Ipswich-type' ware vessels were in fact products of the Ipswich kilns. This conclusion is supported by Blinkhorn's study of die-links on stamped vessels.

Black Burnished wares (BLBURN) (Fig.37, 42)

Fabric and technology

This group includes fine, wheel-thrown wares that have a black burnished exterior surface and were imported from the continent. The single Lincoln example has a flaking, burnished, black external surface over a red-brown margin with a grey core where the vessel is thicker. The fabric includes abundant, ill-sorted, rounded quartz grains of up to 0.4mm and sparse brown pellets that may be shale. Thin-section analysis shows that sparse chert or altered lava is present.

Vessel types

The sherd from Lincoln (Fig.37, 42) is from a small vessel with a hollow handle, possibly a bottle.

Source

The source of black-burnished wares has been discussed elsewhere (Hodges 1981; Coutts 1991; Mainman 1993) and does not need repeating here. Thin-section analysis of the Lincoln sherd (L1947) shows a similar fabric to the Grey (GRBURN) and Brown Burnished (BRBURN) vessels. However, none of the inclusions is distinctive and cannot be used to provide a provenance for the vessel. If a source in the Rhineland or Meuse valley is indicated on typological grounds, then the sparse dark brown shale fragments and very clean, light-firing, birefringent clay matrix probably indicate the use of a seat-earth from a coal or lignite deposit.

The absence of 'shale' fragments in the thin-section of BLSURF might suggest a different source, although the sparse brown clay pellets seen in the hand specimen might simply show that these fragments were present in too low a frequency to be seen in thin-section. Chemical analysis of samples of these fine-textured wares from various English sites indicates as many as four chemical groups, but there is a need to correlate the various independent research initiatives. Coutts has shown that the simple visual classification by intended colour, used for the Lincoln finds, is a simplification (1991, 150–7), and work in progress on

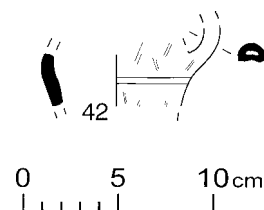


Fig 37 Black Burnished Ware. Scale 1:4

finds from Flixborough indicates that there are at least two distinct sources of Grey Burnished ware. The Lincoln find belongs to the most common of the Flixborough groups (as do the majority of sherds from Fishergate, York, and *Lundenwic*).

Dating and frequency

A single sherd has been found residually in the city, although Black Burnished ware has been found at a few sites elsewhere in the county (eg, Cherry Willingham and Gosberton) associated with Maxey-type wares.

Grey Burnished wares (GRBURN) (Fig.38, 43)

Description

This group includes fine wheel-thrown wares imported from the continent. The only vessel found in the city has a vertically burnished dark grey exterior surface over a hard, light grey fabric. The interior of the vessel has an odd, striated colouring of alternate grey and light grey bands horizontally around the vessel. The fabric includes abundant ill-sorted rounded quartz grains of up to 0.4mm and sparse dark brown pellets that may be shale. Thin-section analysis shows that sparse chert or altered lava is present. The vessel is thin walled and very well thrown. The sherds from Lincoln represent a single vessel: the base and lower body of a pitcher (Fig.38, 43) with a slight footring. This vessel was found residually in the city and appears to be the only occurrence of this type so far in the county.

Source

The source of grey burnished wares has been discussed elsewhere (Hodges 1981; Coutts 1991, 150–7; Mainman 1993) and does not need repeating here. Thin-sections of the Lincoln vessel (L1292 and L1950) show similar characteristics to those found in the Black and Brown Burnished wares (see Black Burnished ware – BLBURN for comments).

Brown Burnished wares (BRBURN) (Fig.39, 44)

Description

This group includes fine wheel-thrown wares that were imported from the continent. The Lincoln vessel has a vertically burnished brown exterior surface over a hard, light grey fabric with buff margins. The interior of the vessel has an odd, striated colouring, of alternate brown and buff horizontal bands. The fabric includes abundant, ill-sorted rounded quartz grains of up to 0.4mm and sparse dark brown pellets that may be shale. Thin-section analysis shows that sparse chert or altered lava is present. The sherd from Lincoln represents the upper body of a thin-walled and very well

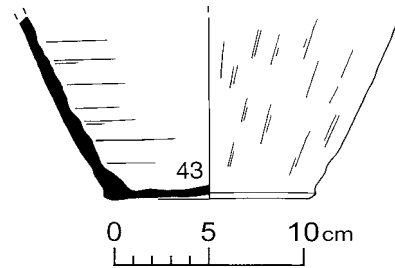


Fig 38 Grey Burnished Ware. Scale 1:4

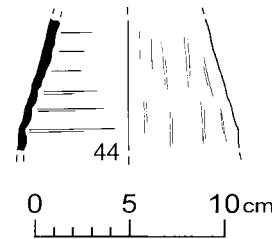


Fig 39 Brown Burnished Ware. Scale 1:4

thrown small pitcher (Fig.39, 44).

A single vessel has been found in the city on the Flaxengate site (F72). The vessel was found in a large sub-circular feature (cgR80) cut into late Roman levels, together with two other continental imports (Oxidised Red-painted ware – ORP and Black Surfaced ware – BLSURF), a handmade Anglo-Saxon sherd, five sherds of Lincoln Late Saxon Sandy ware, and more than a thousand Roman sherds. The feature is sealed by mid to late 9th century (horizon ASH7) deposits that may have intruded into it.

Source

The source of similar burnished wares has been discussed elsewhere (Coutts 1991, 154–7) and does not need repeating here. A thin-section of the Lincoln sherd (L1943) indicates a very similar fabric to those of the Black and Grey Burnished vessels (see Black Burnished ware – BLBURN for comments).

Black Surfaced wares (BLSURF) (Fig.40, 45)

Description

This group includes fine wheel-thrown wares that are thought to have been imported from the continent. The Lincoln sherds have smooth, black surfaces over a fine, very light grey fabric. The external surface is not burnished, but has horizontal wiping, or throwing marks that give the surface a sheen. The fabric includes abundant, well-sorted subangular quartz grains of up to 0.1mm and sparse dark brown

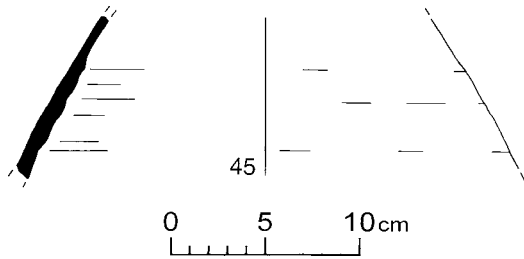


Fig 40 Black Surfaced Ware Scale 1:4

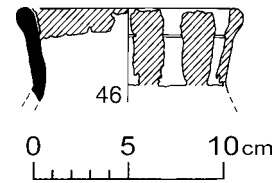


Fig 41 Oxidized Red-Painted Ware Scale 1:4

pellets. The sherds from Lincoln represent a single vessel: the upper body of a jar or pitcher (Fig.40, 45) found in the city on the Flaxengate site (F72) in the same context as the Brown Burnished ware (BRBURN) and the Oxidised Red-painted ware (ORP) vessels.

Source

Thin-section analysis of the Lincoln sherd (L1948) indicates a similar clay matrix to that of the Black, Grey and Brown Burnished wares but with a very different texture, an abundant fine sand/coarse silt and without the dark brown shale pellets of the Burnished wares. Without comparative material there is little that can be said of the source of this vessel.

Oxidized Red-painted wares (ORP) (Fig.41, 46)

Description

This grouping includes vessels thought to be wheel-thrown continental imports with red-painted decoration. The single Lincoln sherd has painted decoration in a red-brown colour, over a pinkish orange fabric. Under microscopic examination abundant ill-sorted subangular quartz of up to 0.3mm is visible together with sparse round quartz of up to 1mm, sparse muscovite and moderate, rounded dark-brown pellets. The sherd (Fig.41, 46) is a collared rim from a small pitcher, painted with a design that is reminiscent of the tin-foil decoration on Tating-type ware (eg, Selling 1955, Fig.78). The Lincoln vessel was found on the Flaxengate site (F72) in the same context as the Brown Burnished wares (BRBURN) and the Black Surfaced wares (BLSURF) ware vessels.

Source

This vessel has previously been published as a possible Mediterranean-type ware (Adams Gilmour 1988, fig.58, 32). More recently, excavations at Saint-Denis (Lefevre 1993, 288, with fig.41) have provided more likely comparanda. Thin-section analysis of the Lincoln vessel (L1944) revealed no diagnostic

inclusions. The overall characteristics of the fabric were similar to those of the Black, Grey and Brown Burnished wares but without the chert/altered lava and with the addition of muscovite. Without comparative material, there is little that can be said about the provenance of the vessel.

Mayen-type wares (MAY)

Description

Both Lincoln sherds are highly fired and have brick-red fabric colours with reddish-purple surfaces. Abundant rounded quartz of up to 0.4mm is visible along with dark grains that thin section analysis suggests are chert or altered lava of up to 0.4mm. Other minor inclusions are sparse rounded vesicular opaque grains and tiny white fragments below 0.2mm. Nothing can be said about the form of these two small sherds and the identification is tentative. Both vessels were found residually.

Source

Thin-section analysis was only possible on one sherd and this neither confirms or discounts a Mayen source. For discussion of this type see Hodges 1981 (19 and 84).

Late Saxon / Anglo-Scandinavian (c.850–c.1000)

Introduction

National Context

In the second half of the 9th century a number of new pottery production centres began production in Eastern England. Unlike their predecessors, the potters at these centres used the potter's wheel to throw their wares and in several cases used lead glaze, at least experimentally. Outside of the area served by wheelthrown wares, hand-made pottery

continued to be used and in some cases the two techniques were used side by side, as at Gloucester (Vince 1979). There is little doubt that the techniques of wheelthrowing and glazing were introduced from continental Europe but the precise chronology and pattern of diffusion are arguable. Most authors follow Dunning in suggesting that the earliest wheelthrown wares occur at Ipswich, since this was the major production site of the mid 9th century (Dunning 1959, 34–43). However, a re-examination of the evidence shows that an alternative hypothesis should also be considered, that York and the East Midlands were the earliest areas to use the wheel (Vince 1993). There is no doubt that Stamford was the earliest English pottery to use glaze (Kilmurry 1980).

Continental imports are rare during this period, as can be seen from the findspots of Vorgebirge wares from the middle Rhine. 8th- and 9th-century finds are common at a number of coastal and riverine sites in England, as are 11th-century wares from the same source. However, late 9th and 10th-century products are extremely rare, perhaps occurring on three or four English sites in total. Alongside the introduction of new techniques, new forms are found but the majority of vessels were used for cooking (cooking pots and bowls) or carrying liquids (pitchers).

Lincoln Production

Pottery production in Lincoln is attested from the beginning of the Anglo-Scandinavian period. A dump containing wasters of sand-tempered vessels was found at Flaxengate underlying the first road surface. Production of shelly ware was probably equally early, although it is just possible that there was a phase in which only sandy wares were being produced. Glazed wares, and wares with splashes of glaze perhaps applied experimentally, or as a result of the firing to glazed and unglazed vessels in the same kiln, were also present in early deposits. Production is at present thought to be concentrated in the area inside and outside the Lower east gate (Clasketgate). Lincoln products of this period were widely marketed in the East Midlands.

Local Production

A large number of wares have been defined which might have been produced in the city, but for which there is as yet no positive evidence (LSLOC). Only one of these, Fabric M, is distinguishable on petrological grounds from known Lincoln products. It is therefore possible that there was little pottery being brought into the city from the surrounding countryside.

Regional Imports

A large number of regional imports has been recog-

nised in late 9th and 10th-century deposits in Lincoln. Most can be assigned with greater or lesser degrees of certainty to known production sites: at Stamford, Leicester, Nottingham and York. However, there are also examples of vessels which can be shown not to be locally produced but whose sources are not known (LSX).

Continental Imports

Only two positively-identified continental import types have been found in late Saxon/Anglo-Scandinavian contexts in Lincoln. The first of these is an Early Glazed ware (ESG) vessel and the second is Huy ware (HUY), whose products were previously classified as Andenne-type ware. A handful of unsourced but probably imported vessels is also known. This pattern varies somewhat from previously published information from Lincoln, mainly as a result of the petrological examination of possible imports and the realisation that Lincoln area potters were able to call upon supplies of low-iron clay with a very similar texture and colour to that used in the middle Rhine. Sherds previously published as Islamic imports (Adams Gilmour 1988) are now recognised as locally-produced metalworking vessels, possibly of late Roman date.

Vessel Forms

Rounded jars are by far the most common form found in Lincoln at this time. Pitchers, both glazed and unglazed, are the next most common form, and other forms, such as dishes, bowls and pedestal lamps, are much rarer. Most of the jars have sooting traces which show their use in cooking but there is a wide range of sizes, including large jars which were probably used for storage.

Lincoln Gritty ware (LG) (Fig. 42, 47–59)

Fabric and technology

This fabric has been described in detail elsewhere (Adams Gilmour 1988, 98) and is only summarized here. Surface texture is gritty and the fabric is fired to between a soft and medium hardness. Most vessels are within a grey to very dark grey range, although colour variation around a single vessel can change from light grey to white to pink. Occasionally, sherds are found that have been oxidized to a bright orange colour. The ware is tempered with moderate to abundant subround to sub-angular quartz up to 0.8mm, moderate iron-rich grains, sparse clay pellets and occasional shell fragments. The upper part of most vessels appears to be completely turntable- or wheel- thrown, whereas the lower body and base commonly exhibit signs of coil building. The lower body is often knife-trimmed, sometimes causing a slight surface burnishing. Rims

appear to have been made using a simple tool as a former, and this has left sharp edges to them. Decoration is limited to square roller stamping and very occasionally incised wavy lines below the neck.

Vessel types

Vessel types are mainly medium-sized, squat, rounded to globular jars with two rows of square roller stamping on the shoulder (eg, Fig. 42, 47–51). A variety of impressions indicates that several roller stamps were in use; bands with two, three, four or five deep squares are known. A jar with applied shoulder cordons (Fig. 42, 52) is unique. No pitchers are known in this fabric, although two thick coil-made sherds indicate that a much larger vessel other than the standard-sized jar was also being made. A few small rims (eg, Fig. 42, 53) and bases are from very small jars or beakers.

Bowl forms are quite common: all are small- to medium-sized and are found with or without decoration. They seem to fall into three distinctive types. The first type consists of shallow, almost straight-

sided bowls (eg, Fig. 42, 55). A straight-sided bowl similar to the one found on the Flaxengate (FLAX45–7) site (Fig. 42, 55, and Coppack 1973, fig.14, 40) was found at kiln 2 at Torksey (Barley 1964, fig.7, 6). Bowls of the second type are similar, but have flaring sides (eg, Fig. 42, 56–57). Both of these bowl types have flat-topped rims that appear to have been cut with a tool. The third bowl type (eg, Fig. 42, 58–59) also has a cut rim, although here, the rim is angled inwards and the bowl sides are rounded. The bases of this type are thick and are heavily trimmed. Several of this type of bowl are (eg, Fig. 42, 58). The small roller stamped bowl (Fig. 42, 54) may be from the upper part of a pedestal lamp.

Source

Eighteen samples of Lincoln Gritty ware were thin-sectioned by Fiona MacAlister (1984, 3). They have a different sand temper from that found in other Lincoln area products: i) less chert, ii) a coarser sandstone, and iii) significant quantities of fresh feldspar (some present as grains in the sandstone).

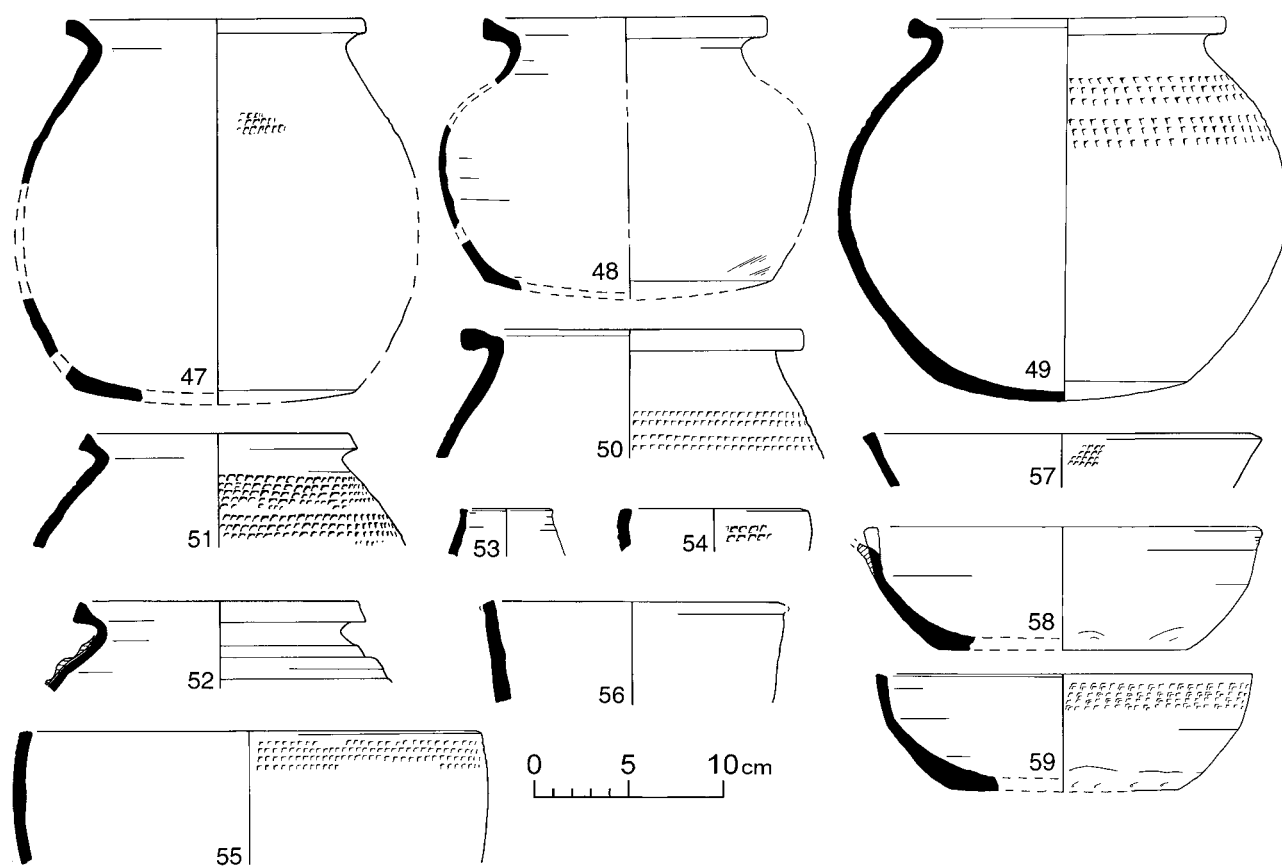


Fig 42 Lincoln Gritty Ware: jars 47–52; tiny jar or cup 53; lamp or small bowl 54; bowls 55–59. Scale 1:4

The sand is, in fact, much more similar to that found in York area products. However, there are features which are typical of Lincoln area products: iv) rounded bivalve shell (not stained but very likely to be shelly limestone); v) either a very clean matrix or one with abundant iron-rich inclusions (probably of biogenic origin – faecal pellets); vi) laminated clay pellets (ie. ‘shale’) There is a possible relationship between the shell inclusions and the matrix type – the three shelly samples are all in the clean matrix. The sandstone and feldspar fragments occur equally in each matrix type. There is little doubt that these vessels were produced locally (see below), but exploiting a different source of temper from that used in 10th-century and later local wares. During excavations by Webster on the east side of Flaxengate (FLAX45–7) between 1945 and 1948 (Coppack 1973, 88–9), a quantity of this fabric was recovered that included a number of overfired and wasted sherds.

Dating and frequency

More than 500 sherds of Lincoln Gritty ware have been recovered from the city to date. Their distribution is, however, limited to 15 sites. All, with the exception of a single vessel from the HG72 site in the Wigford suburb, come from sites concentrated in the Lower City. Only the two Flaxengate sites (F72: 326 sherds, FLAX45–7: at least 120 sherds) and the Saltergate (LIN73F: 20 sherds) sites produced well-stratified material. The ware is concentrated in mid to late 9th-century horizon ASH7 deposits and may indeed have only been produced for a very short period of time, possibly as little as one season. In ‘well stratified’ deposits, Lincoln Gritty ware forms about 12% of the pottery in ASH7 deposits (mid to late 9th century) falling to below 1% by horizon ASH8 (late 9th to early 10th century). The fabric is rarely found outside the city.

Lincoln Late Saxon Sandy ware (LSLS) ***(Fig. 43, 60–84)***

This ware has been described in detail elsewhere (Young 1989, 222) and is only summarized here. There are two main fabric groups (Fabric A and Fabric B) and one minor group (Fabric D).

Fabric A

Fabric and technology

This fabric is fired to a medium hardness and has a harsh, sandy texture. Colours range from light grey through pinkish greys to grey. Some sherds have a thin dark grey surface and buff-grey margins. Under microscopic examination moderate to abundant rounded quartz up to 0.6mm is visible, along with sparse iron-rich grains and sparse rounded chert.

Several vessels have streaks of low and high iron clay. The vessels are all wheel-thrown and well finished, with the exception of a few very thick coil-made sherds that belong to large pitchers or storage vessels. Decorative techniques are usually confined to square roller stamping, although there are rare examples of incised wavy decoration and thumb-pressed applied strips. The unique zoomorphic sherd (Fig. 43, 84) is certainly of Lincoln manufacture and probably of this ware type, although as it was found unstratified and as a fresh break is not visible, the possibility remains that it may be a later SNLS product. Undiagnostic sherds of this fabric are often difficult to distinguish from the later SNLS ware and these are listed as LS/SNLS on the database and in any tables.

Vessel types

Vessel forms are mainly small- to medium-sized rounded jars with plain everted rims (eg, Fig. 43, 60–61). Only a few handles indicate that pitchers were part of the potter’s repertoire (eg, Fig. 43, 71), although several large, partly handmade bases (eg, Fig. 43, 73) are probably also from pitchers. Bowl forms are fairly common in this fabric, with the most distinctive type being a flanged rim bowl (eg, Fig. 43, 75–79) that sometimes has a spout. Plain wide bowls (eg, Fig. 43, 74) and smaller dishes (eg, Fig. 43, 80) are rarer. The illustrated small dish from the Hungate site (H83) (Fig. 43, 80) appears to have been used for melting glass. A few pedestal lamps have been found (eg, Fig. 43, 83).

Fabric B

Fabric and technology

Fabric B is fired to a high temperature, with some sherds showing signs of vitrification. Colours vary from grey to dark grey, often with a metallic sheen. Sherds have a sandy to pimply texture where they have not been tool-smoothed. Abundant sub-round to round quartz sand up to 0.6mm, sparse rounded iron-rich grains, and sparse rounded chert are visible under magnification. All vessels are competently wheel-thrown and well finished with smoothing and knife-trimming. Decoration usually consists of one or more rows of square roller stamping on the shoulder (eg, Fig. 43, 67), although occasionally this is combined with incised wavy lines (eg, Fig. 43, 66). Lattice burnished decoration is found very occasionally and there is a single example of a stamped sherd (Fig. 43, 68).

Vessel types

Most vessels are small- to medium-sized rounded jars with overhanging everted rims and slightly sagging bases (eg, Fig. 43, 62–65). Evidence for pitchers is more common than in Fabric A (eg, Fig. 43, 72) and includes multi-handled types (eg, Fig.

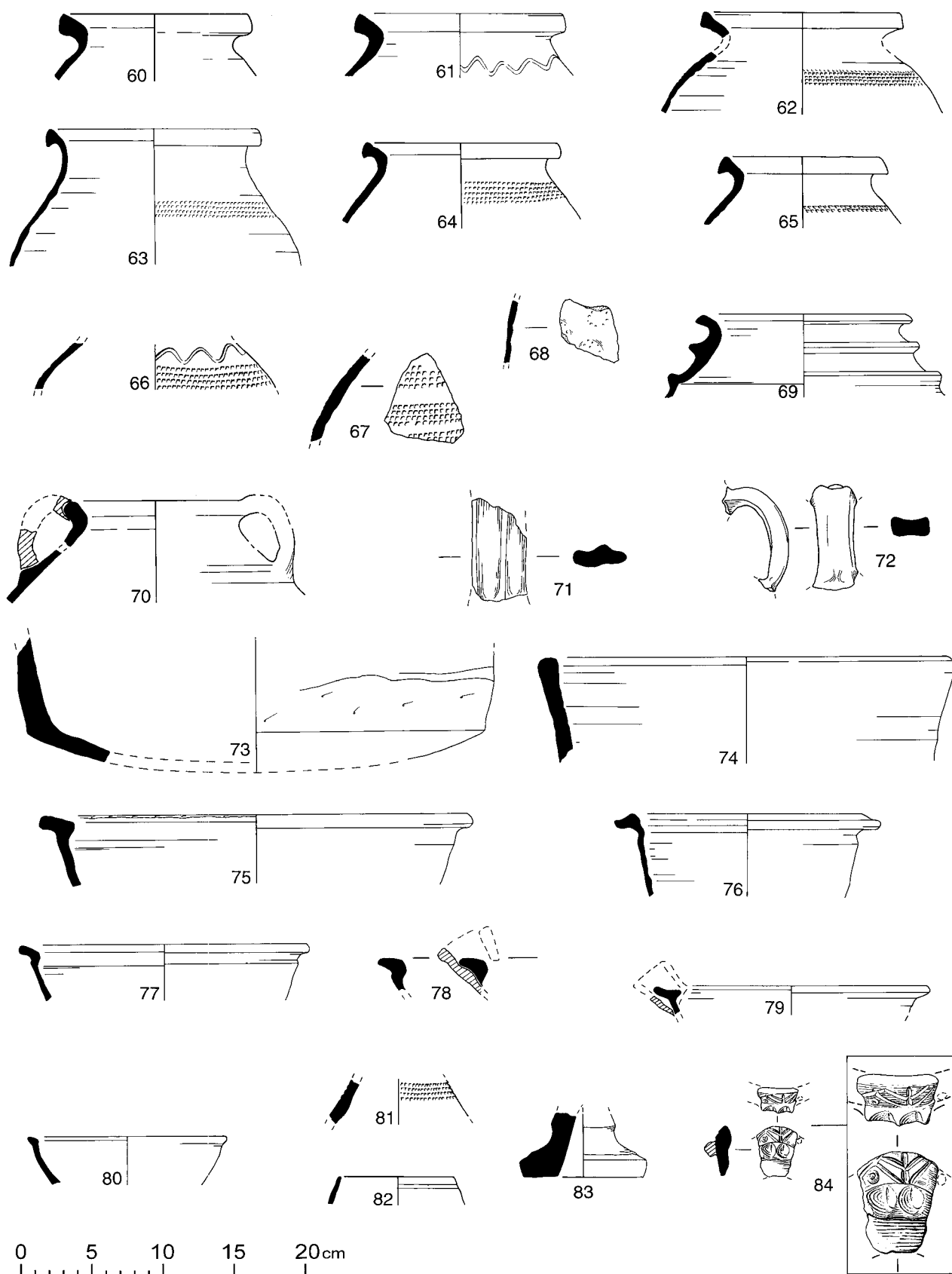


Fig 43 Lincoln Late Saxon Sandy Ware: Fabric A – jars 60–61; pitchers 71 and 73; bowls 74–80; pedestal lamp 83; Fabric B – jars 62–67; pitchers 68–70 and 72; bottle 81; hemispherical lamp 82. Scale 1:4. Applied zoomorphic decoration 84, Scale 1:2

43, 70). An unusually-cordoned vessel (Fig. 43, 69) and the stamped sherd (Fig. 43, 68) are probably also pitchers. Other forms that occur more rarely include small hemispherical vessels that may function as lamps (eg, Fig. 43, 82), bottles (eg, Fig. 43, 81), pedestal lamps and bowls.

Fabric D

Fabric and technology

All vessels in this fabric had previously been identified as imports. Subsequent thin-section analysis has shown them to be of local manufacture. Surface texture is smooth with fabric colour ranging from light to dark grey. All sherds have a black external surface and some also have darkened internal surfaces. Microscopic examination shows moderate rounded quartz up to 0.6mm together with sparse iron-rich grains and sparse clay pellets. The vessels are well wheel-thrown and finished with wiping. Decoration is with one or more rows of small, square, roller stamping.

Vessel types

The only diagnostic sherds found to date have been from the shoulders of small to medium jars or pitchers.

Source

Four thin-sections of Fabric A, five of Fabric B, and four of Fabric D were examined. There are differences in petrology between the three fabrics, suggesting the use of different clay sources as well as differences in firing and clay preparation. All three fabrics contain a similar quartzose sand, composed mainly of quartz with some chert (sandstone was not noted in any of the 13 sections, which is unusual for Trent Valley sands). Fabric A was low-fired (as shown by the highly-birefringent clay matrix) and composed of a variegated clay. In other words, the clay source itself must have contained lenses or strata varying in their iron content. Rounded opaque inclusions in Fabric A may have been present in the clay or the sand. Fabric B contained no evidence for a streaky clay matrix and was more highly fired than Fabric A. No opaque inclusions were noted in any of the five sections. Finally, Fabric D contained rounded opaque inclusions, as in Fabric A, but in three of the four samples the main characteristic of the clay matrix was the presence of rounded, organic clay pellets and organic streaks in the clay matrix. Several of the Jurassic clay formations have a high organic content, notably the Kimmeridge shale, and it seems that the clay used in Fabric D was obtained from such a Jurassic clay. The fact that traces of the organic content remain must indicate either reduced firing conditions or a short duration for the firing. Since similar pellets were not present in either of the other fabrics it is likely that different clay sources

were used. All three clays and tempers would have been obtainable in and around Lincoln and it is likely that all three fabrics were produced locally.

Wasters were found on both the Flaxengate site (F72) (eg, Adams Gilmour 1988, fig.30, 11) and excavations on Flaxengate 1945–48 (FLAX45–7) (Coppack 1973).

Dating and frequency

The ware has been found on 39 sites in the city and is most common on those excavated in the eastern part of the Lower City. Fabric A is the fabric more commonly found on sites away from the centre of the Lower City. All three fabrics are found in horizon ASH7 and ASH8 deposits (mid 9th to early 10th century). From the evidence at Flaxengate, Fabrics B and D are more common in horizon ASH7 (mid to late 9th century) and may be residual by the end of the 9th century (part way through horizon ASH8). Lincoln Late Saxon Sandy ware forms c.46% of the pottery in horizon ASH7 (mid to late 9th century), c.6% in horizon ASH8 (late 9th to early 10th century), and c.3% in ASH9 (early/mid to mid 10th century) by which time it was probably residual.

Lincoln Late Saxon Pale-bodied Sandy ware (LSPLS) (Fig. 44, 85–90)

Fabric and technology

This ware is produced using a lighter firing clay than that used for LSLS. Surface texture varies from slightly sandy to sandy, and colour from pale to light grey on reduced vessels and from pink to light orange on oxidized examples. The fabric reveals moderate to abundant subangular to subround quartz up to 0.6mm, sparse iron-rich grains, sparse sandstone and sparse subangular chert together with occasional streaks of low-iron clay in a matrix that includes sparse fine brown specks and muscovite. Vessels are competently wheel-thrown. Decorative techniques include square and diamond roller stamping (eg, Fig. 44, 87), applied thumb strips (eg, Fig. 44, 88–89) and lattice burnished lines (eg, Fig. 44, 90).

Vessel types

Vessels produced include small to medium jars (eg, Fig. 44, 85–86) and large pitchers that may be multi-handled (eg, Fig. 44, 88). Rim types are much more similar to those of the shell tempered wares LKT and LSH than they are to the other sandy wares.

Source

Twelve thin-sections of Lincoln Late Saxon Pale-bodied Sandy ware vessels were examined. All shared the same characteristics of temper and clay matrix. The quartzose sand temper is composed of quartz with minor quantities of chert, sandstone,

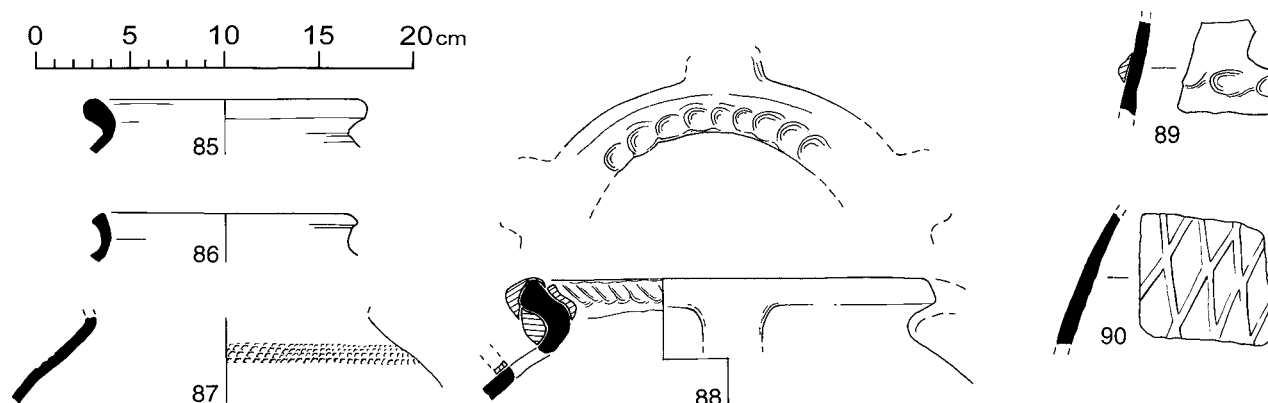


Fig 44 Lincoln Late Saxon Pale-bodied Sandy Ware: jars 85–86; pitchers 87–90. Scale 1:4

and rounded opaque grains. This sand has an identical appearance to those found in wares of known Trent Valley origin. The clay matrix contains few inclusions except for small laths of muscovite (less than 0.05mm long) and dark brown specks, and is highly birefringent. Despite the lack of diagnostic characteristics, a local origin is suggested, since both sand and clay characteristics can be matched with known local products.

Dating and frequency

Only 32 vessels have so far been found and all except three of these were from the Flaxengate site (F72). Vessels found in horizons ASH7 and ASH8 (mid 9th to early 10th century) appear to be stratified whereas those found in horizon ASH9 (early/mid to mid 10th century) or later deposits are probably residual.

Lincoln Kiln-type Shelly ware (LKT) (Figs. 45–52)

This ware has been described in detail elsewhere (Young 1989) and is only summarised here.

Fabric and technology

The pottery is generally oxidized, with surface colour varying from light red to reddish-yellow. A higher proportion of the earlier vessels (mid/late 9th to mid 10th century) have reduced cores. Shell inclusions are visible as small white specks on the surface. The pottery is tempered with sparse to frequent fragments of fossil bivalve shell, usually 1mm to 3mm in size (but they do occur up to 6mm) and common iron-rich grains. Occasional rounded chert and quartz grains up to 0.5mm are also sometimes present. Technologically the manufacture of the early pottery (mid/late 9th to mid 10th century,

horizons ASH7–ASH9) is of a very high standard. Vessels are consistently well thrown and even the handles and spouts are made on the wheel. Use is made of templates to standardize the vessel and rim shapes. Deterioration in potting standards starts in the mid 10th century (horizon ASH10), when an increasing number of vessels appear to be piece-made; vessels are thicker walled and not as well centred (eg, Fig. 46, 131) and decoration becomes less common. The main decoration consists of diamond or square roller stamping in bands on the rim and shoulder of the pots, although use is also made of finger-pressed strips and of bosses. Diamond roller stamping is more common in the period between the late 9th and the early/mid 10th century. Vessels with roller stamping on the rims are unlikely to date to later than the mid 10th century. A few Lincoln Kiln-type Shelly ware vessels are even glazed, although it is not possible to be sure that it was intentional.

Vessel types

Lincoln Kiln-type pottery is found on almost every site of late 9th- to late 10th-century date in the region. Within this period there is considerable variation, especially in rim shape; a large number of vessels (from well stratified groups where possible) have therefore been illustrated to aid identification.

The range of forms being made at Silver Street was quite diverse. A vessel typology has been fully discussed elsewhere (Young 1989, 207–210). Jars were the main form produced and these were made in varying sizes from very small (c.50mm rim diameter), possibly used as beakers (eg, Fig. 45, 91–92), through to very large, decorated examples (up to 300mm rim diameter) used for storage (eg, Fig. 47, 147–150). The small- (eg, Fig.45, 93–97), medium-

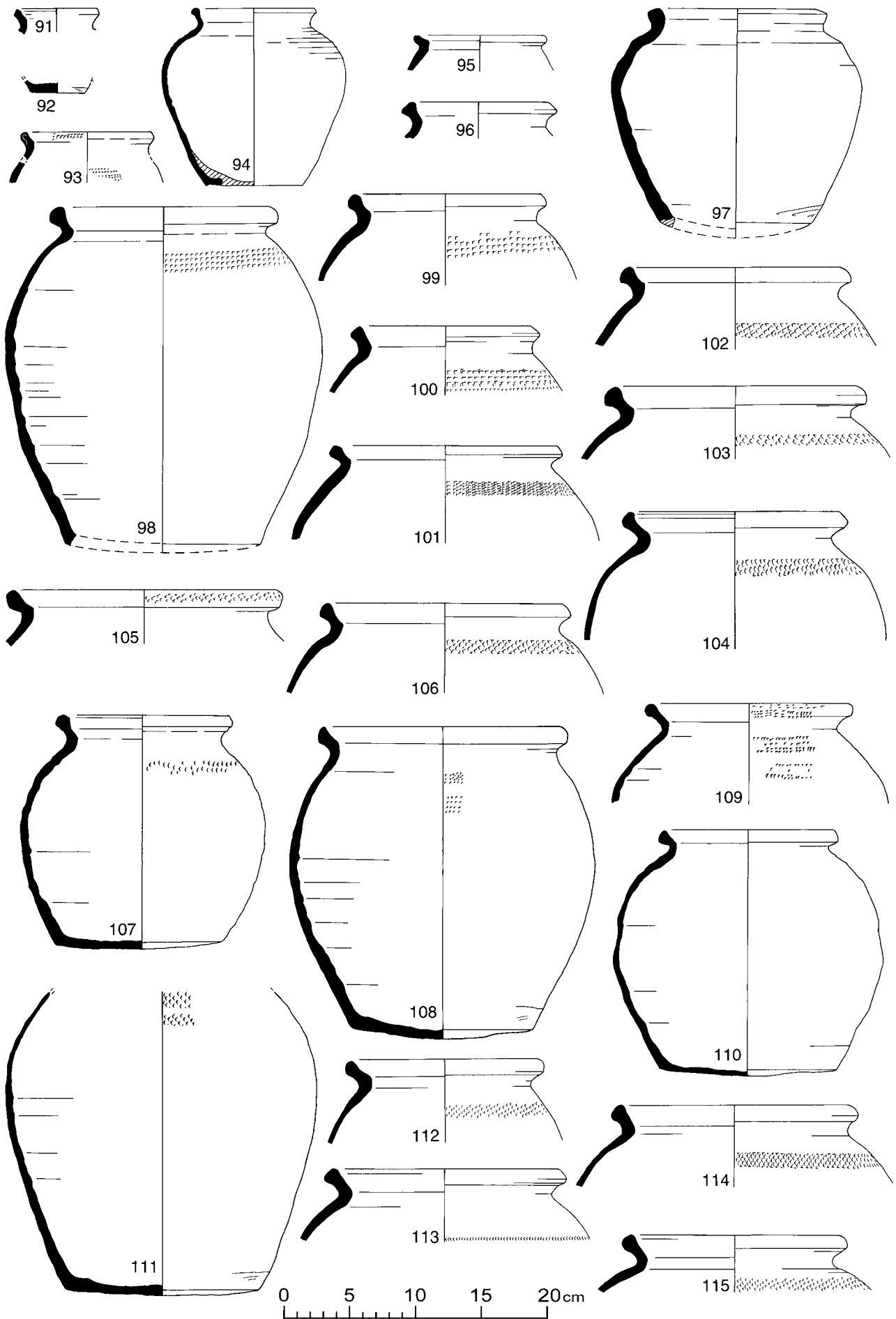


Fig 45 Lincoln Kiln-type Shelly ware: tiny jars or cups 91-92; small jars 93-97; medium jars 98-115. Scale 1:4

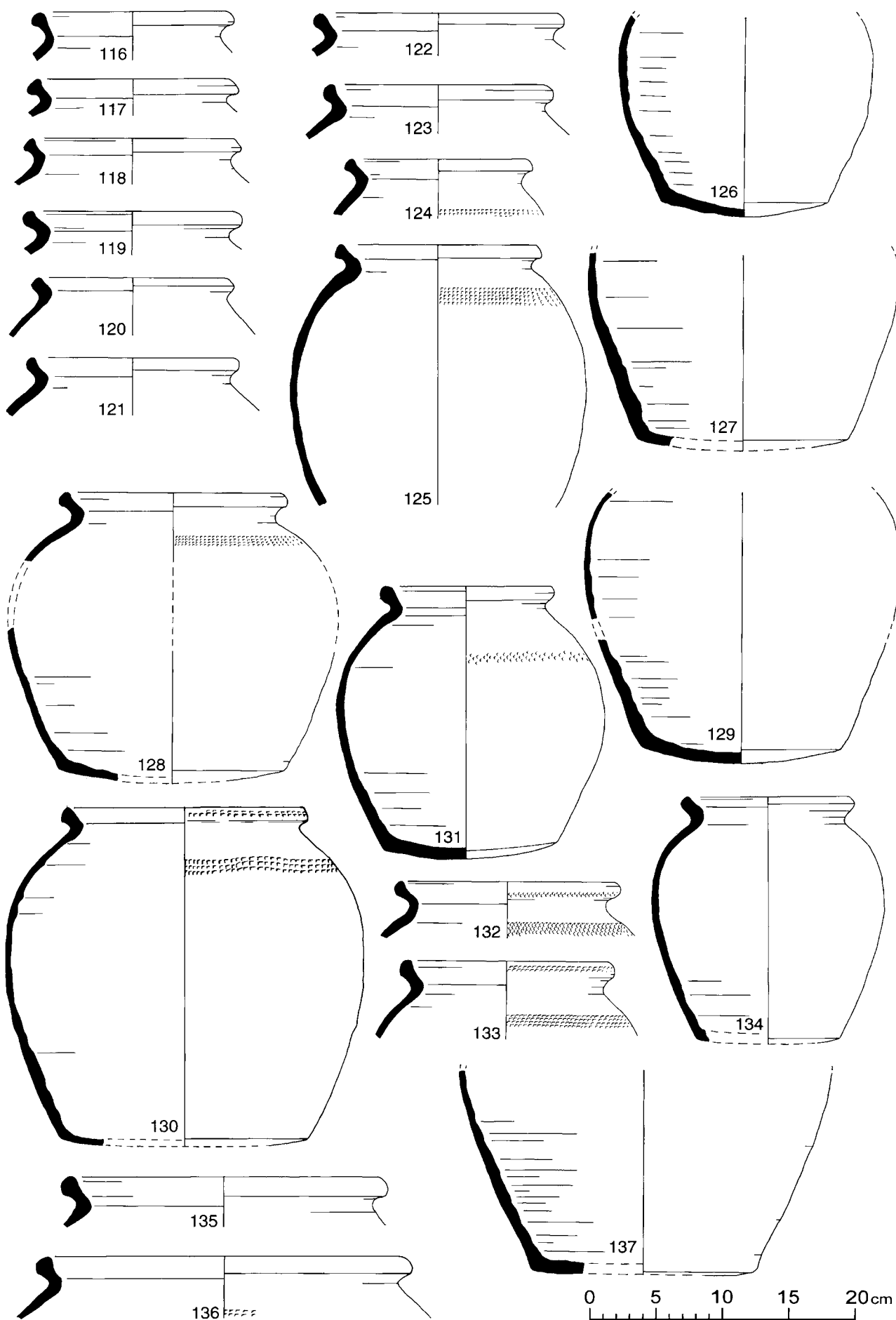


Fig 46 Lincoln Kiln-type Shelly ware: medium jars 116-134; large jars 135-137. Scale 1:4

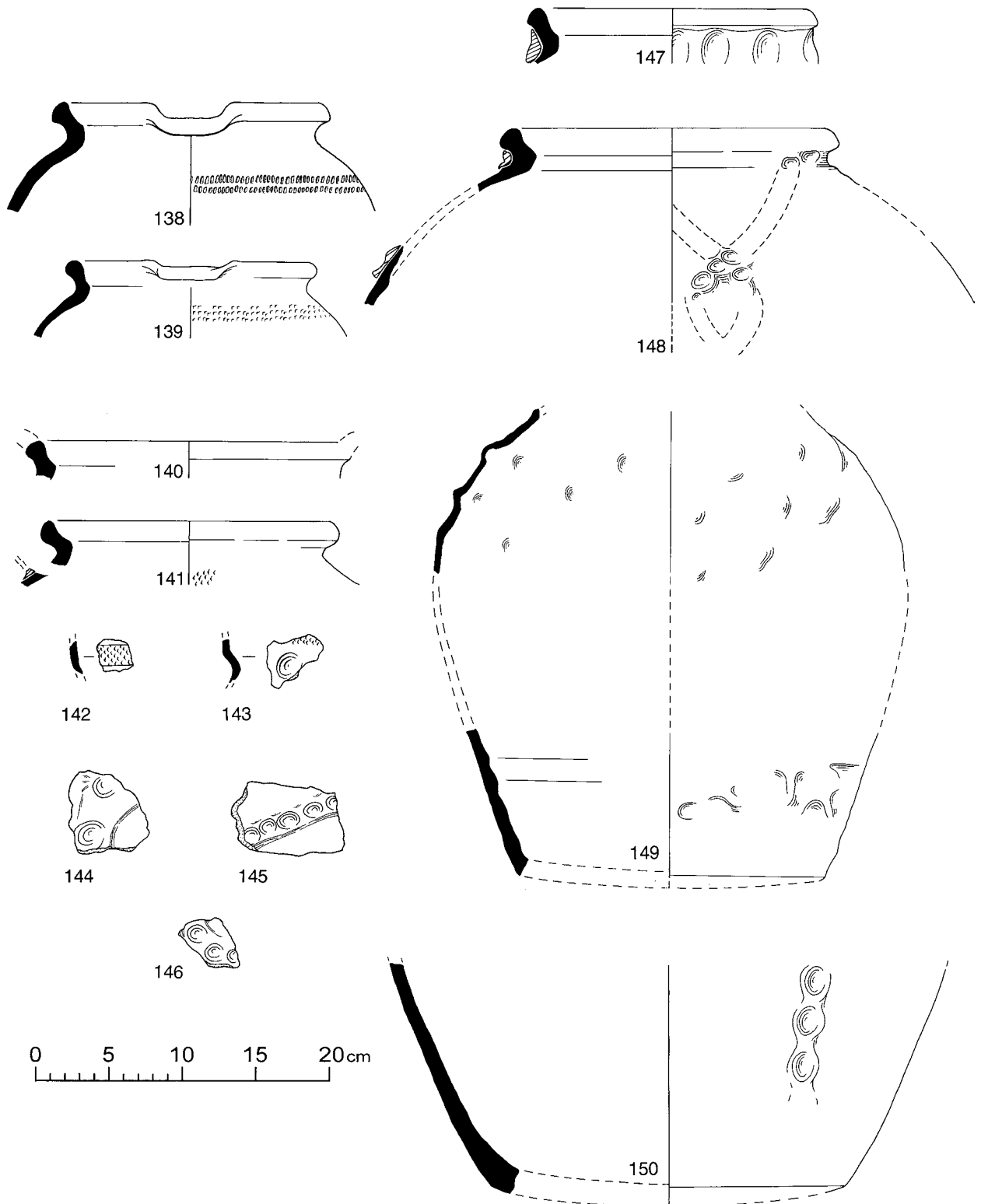


Fig 47 Lincoln Kiln-type Shelly ware: lipped jars 138–139; small pitchers 140–141; decorated sherds from storage jars or pitchers 142–146; storage jars 147–150. Scale 1:4

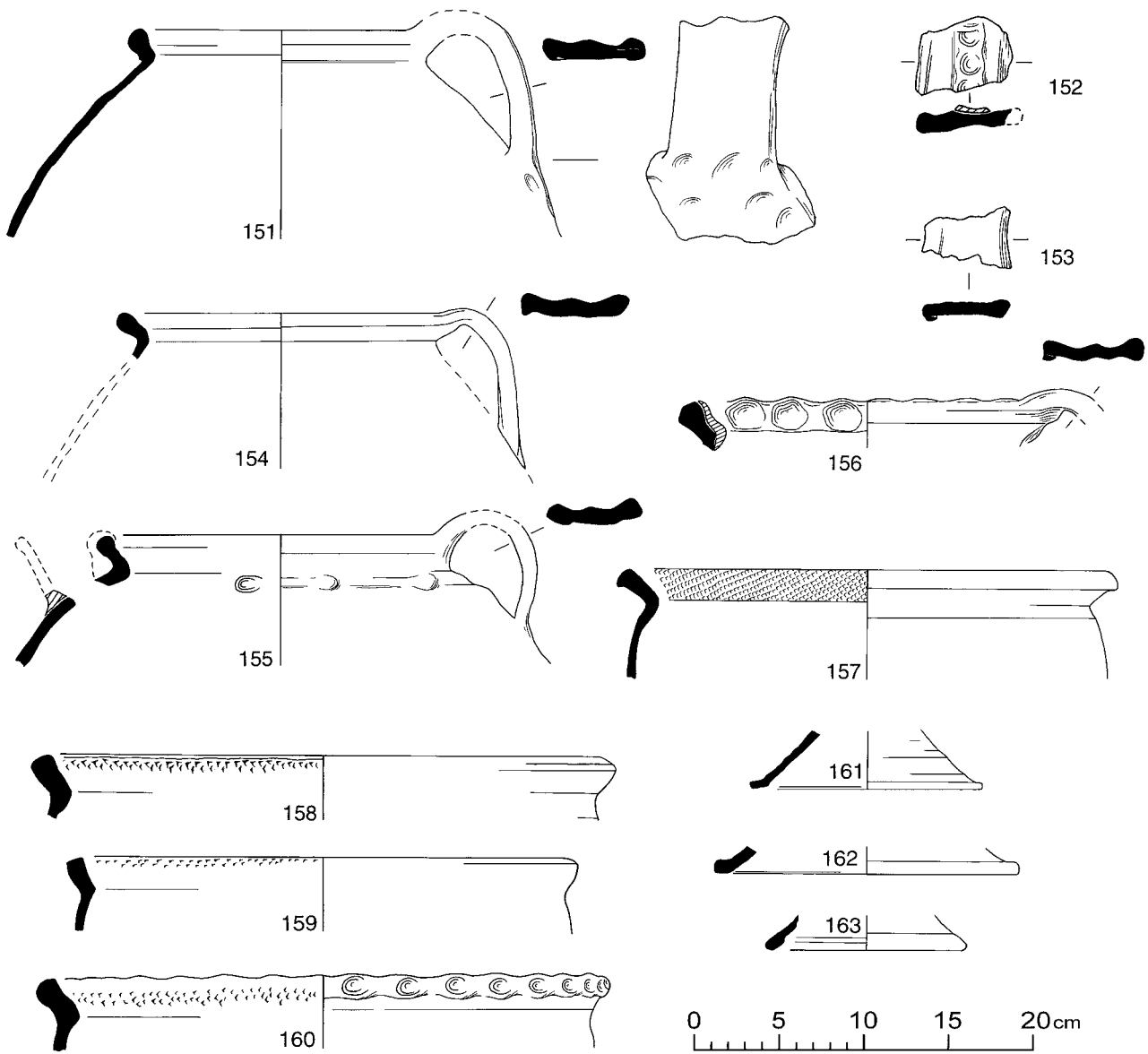


Fig 48 Lincoln Kiln-type Shelly ware: large pitchers 151-156; wide jars 157-163; lids 161-163. Scale 1:4

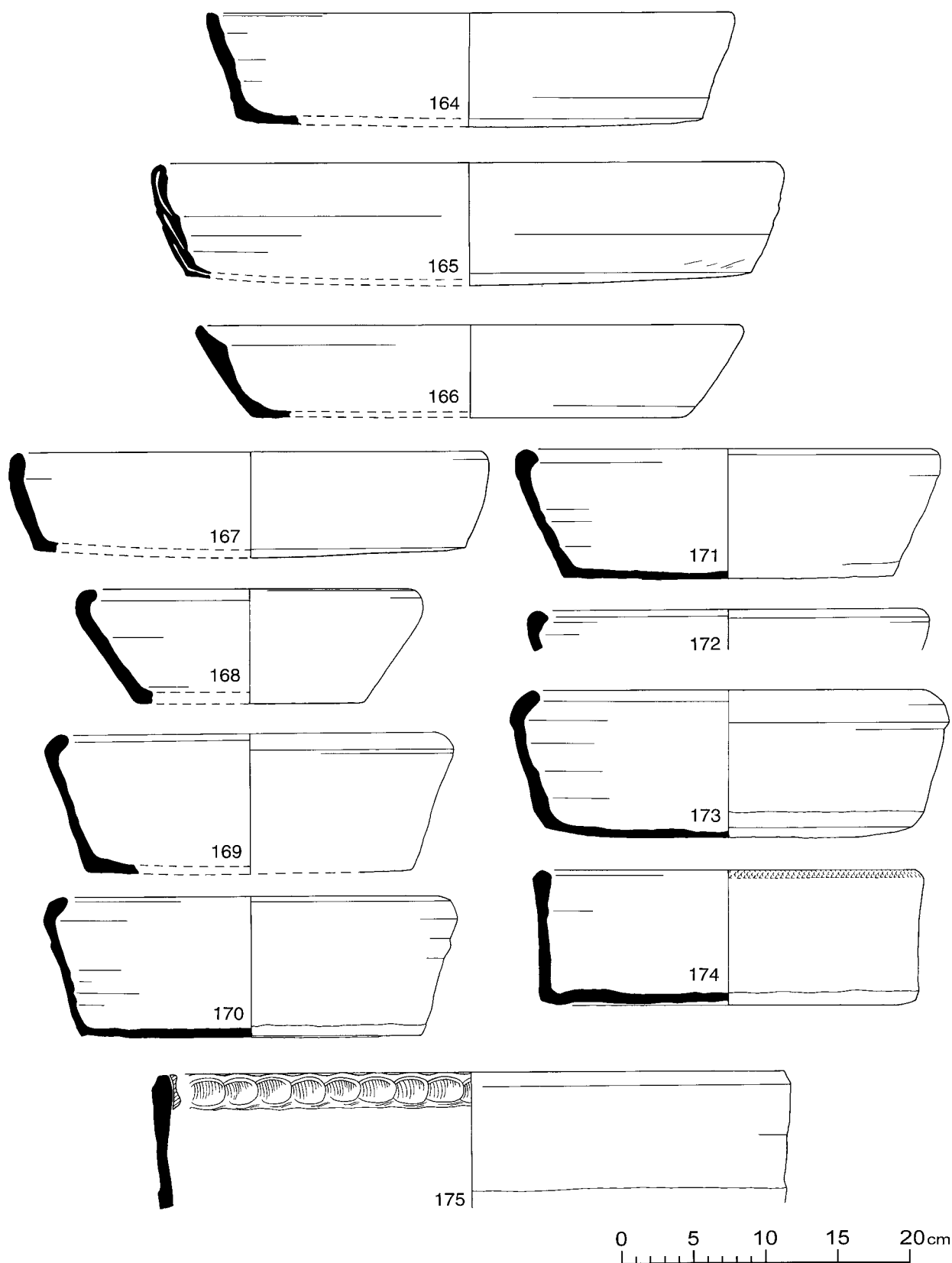


Fig 49 Lincoln Kiln-type Shelly ware: dishes 164–167; shallow bowls 168–175. Scale 1:4

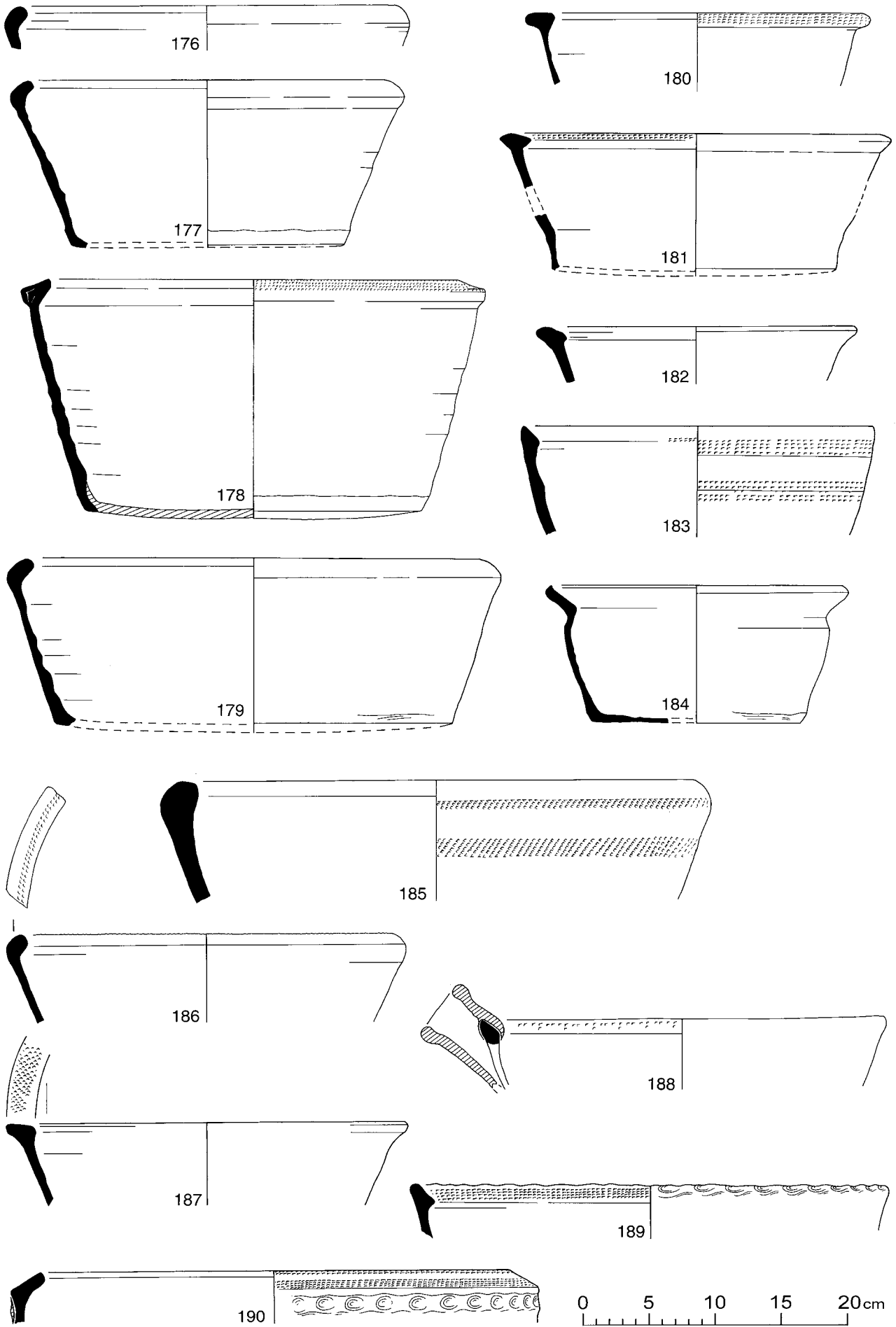


Fig 50 Lincoln Kiln-type Shelly ware: bowls 176-190. Scale 1:4

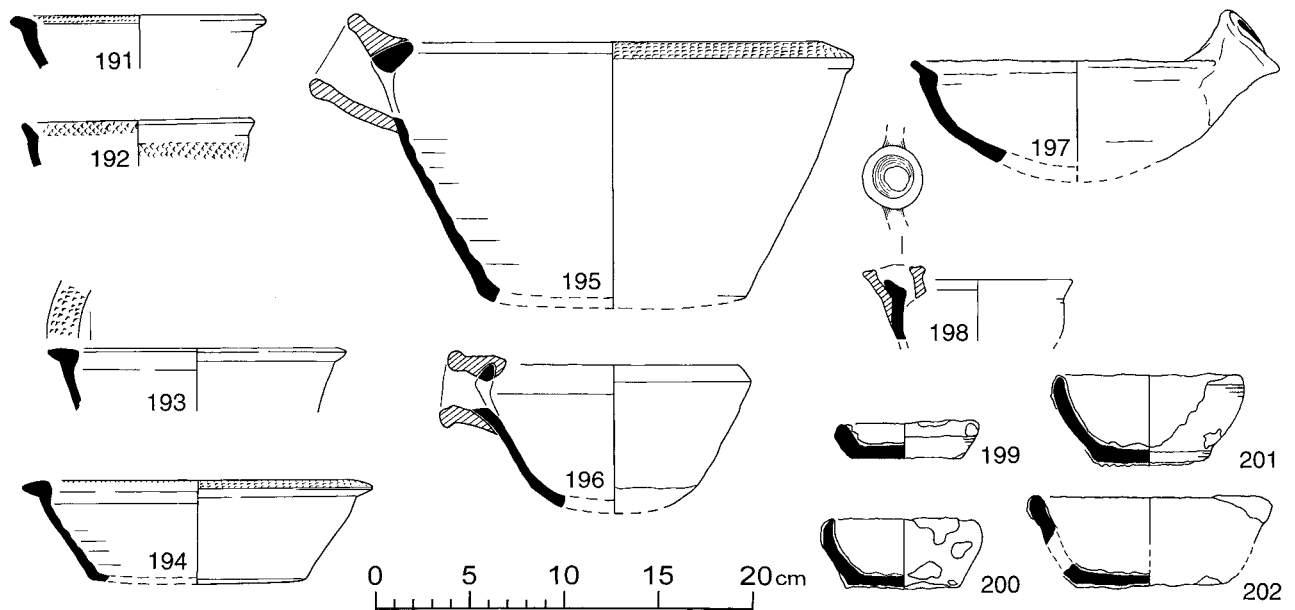


Fig 51 Lincoln Kiln-type Shelly ware: small dishes 191–194; small spouted inturned rim bowls 195–196; small spouted round based bowls 197–198; crucibles 199–202. Scale 1:4

(eg, Fig. 45, 98–115, and Fig. 46, 116–134) and large-sized jars (eg, Fig. 46, 135–137) were used for a variety of activities including cooking, industrial use, and for storage. Both these jars and the large storage jars were adapted for use as small (Form 6) and large (Form 8) pitchers, by the addition of a tubular spout and one or more handles (eg, Fig. 47, 140–141 for Form 6, and Fig. 48, 151–156 for Form 8). Wide-mouthed jars were made, possibly for table use, as they are always highly decorated and carefully finished (eg, Fig. 48, 157–160). Other jars were made with pouring lips (eg, Fig. 47, 138–139).

Bowls and dishes were apparently made in every shape and size (Fig. 49–51). Some types group together and seem to have been designed for specific uses; however, most appear to fall into a medium-sized range and be multi-functional (Form 3; eg, Fig. 50). Very small dishes were for use as glass crucibles (Form 6: eg, Fig. 51, 199–202), small, highly-decorated ones for table use (Form 4; eg, Fig. 51, 191–194) and small spouted inturned rim bowls for cooking (Form 5; eg, Fig. 51, 195–196).

Other forms such as pedestal lamps (eg, Fig. 52, 215–221), pedestal cups (eg, Fig. 52, 222–224), costrels (eg, Fig. 52, 225), lids (eg, Fig. 48, 161–163) and decorated necked and cordoned pitchers copying continental examples (eg, Fig. 52, 203–213) were also produced. Since the publication of the Silver Street kiln, a few new forms have been noted

and these include small spouted hemispherical bowls (eg, Fig. 51, 197–198) and a miniature vessel (possibly a beaker) with a footring (eg, Fig. 52, 214).

Source

In 1973 excavations at Silver Street in Lincoln (LIN73B) (Miles 1989) revealed the remains of three kilns producing Lincoln Kiln-type Shelly ware pottery. Substantial amounts of this pottery, including wasters, were found in the kiln and associated features indicating large-scale production. Fourteen samples of Lincoln Kiln-type Shelly ware from sites in Lincoln were examined, six of which were from Silver Street. All had the same characteristics in thin-section: a shell sand composed of bivalve shell and sparry calcite derived from a shelly limestone; sparse rounded quartz and a highly birefringent clay matrix with no inclusions or notable characteristics. Despite knowing that this ware was produced in Lincoln there is no evidence for the precise source of either the clay or shell sand. Very similar sand was available in the medieval period at Potterhanworth, where it is likely to have been obtained from the Cornbrash which outcrops locally. Lincolnshire Limestone in the Lincoln area is an oolitic limestone and therefore cannot be the source of the shell. We are left with the surprising implication that in the late 9th and 10th centuries the potters of Lincoln were importing their temper. The clay is clearly of Jurassic origin but cannot be more closely provenanced.

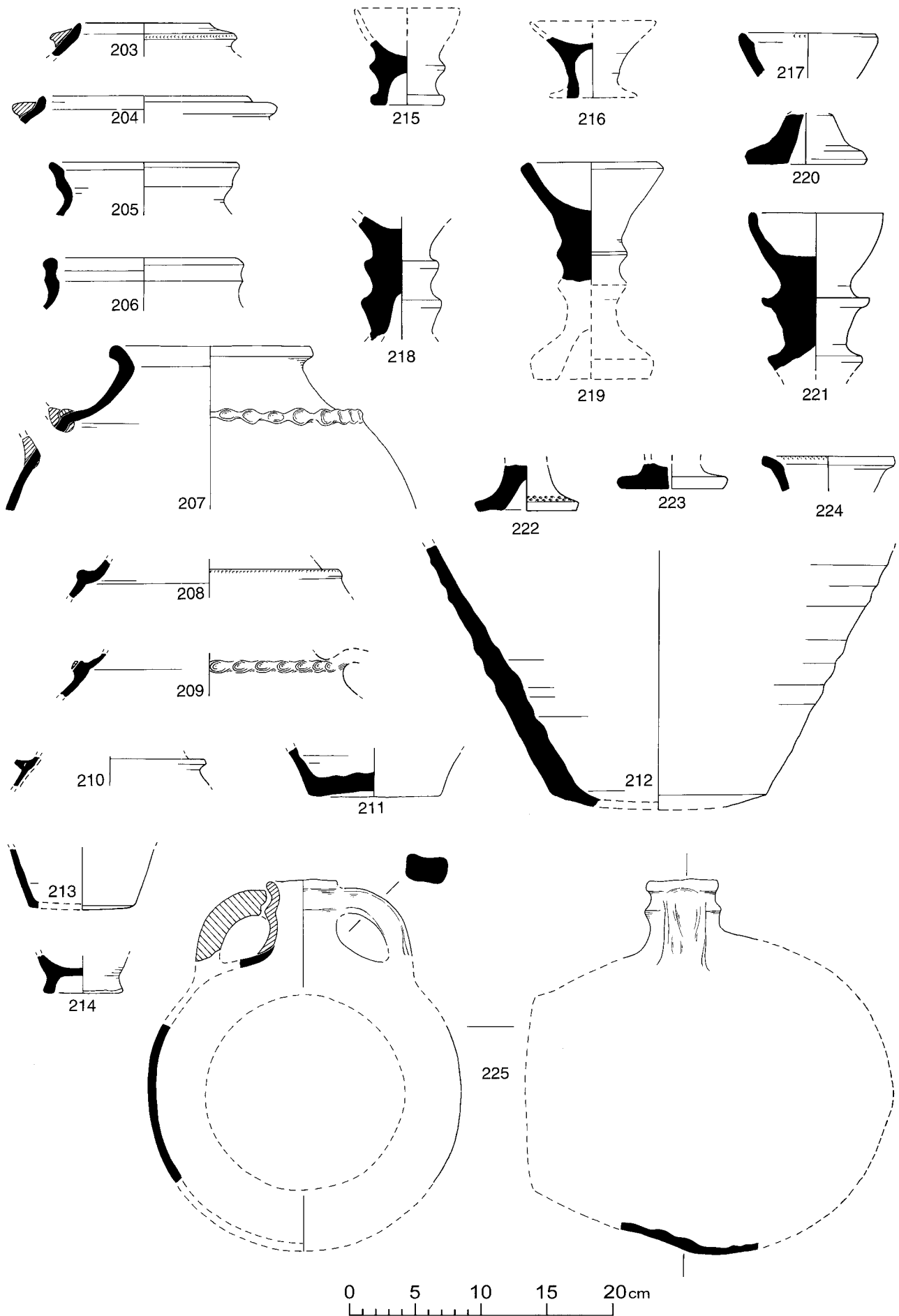


Fig 52 Lincoln Kiln-type Shelly ware: necked and cordoned pitchers 203–212; bottle? 213; miniature vessel 214; costrel 225; pedestal lamps 215–221; pedestal vessels 222–224. Scale 1:4

Dating and frequency

Lincoln Kiln-type Shelly ware is first found in horizon ASH7 deposits (mid to late 9th century) where it forms *c.*31% of pottery assemblages. This increases to *c.*80% in horizon ASH8 (late 9th to early 10th century), *c.*83% in ASH9 (early/mid to mid 10th century), and as much as *c.*89% in ASH10 (mid to late 10th century). Lincoln Kiln-type Shelly ware still forms *c.*80% of the overall ASH11 assemblage (late 10th century), although much of this material often belongs to an earlier phase of production. Individual groups often show a much lower percentage (eg, *c.*53% in cg128 LUB 30 at the HG72 site). Dating the demise of Lincoln Kiln-type Shelly ware is still very difficult owing to the enormous amount of residual material on most sites with ASH12 and ASH13 horizons (early to mid/late 11th century). On the Flaxengate site (F72), Lincoln Kiln-type Shelly ware still forms up to 50% of some deposits in the 13th century. Residuality from horizon ASH12 (the early 11th century) onwards can be shown in three ways; first, Lincoln Kiln-type Shelly ware found in horizons dating later than horizon ASH11 is rarely of fresh appearance; second, if examined in detail, a high proportion of the vessels can be shown to belong to the earlier production phase and in many cases sherds join back to vessels stratified earlier on the site; and third, the high number of Lincoln Kiln-type Shelly ware sherds is often accompanied by other residual pottery types such as Lincoln Gritty ware, Lincoln Late Saxon Sandy ware and Early Lincoln Glazed ware. Only in groups (unfortunately small) on a few uncontaminated sites (Dickinson's Mill (DM72), Spring Hill/Michaelgate (SPM83), St Paul in the Bail (SP72) and Grantham Street/Swan Street (SW82), can the amount of Lincoln Kiln-type Shelly ware in 11th-century deposits be shown to have dropped to between *c.*10% and *c.*12%. To date, more than 91,000 sherds of Lincoln Kiln-type Shelly ware are recorded on the CLAU database from Lincoln and its environs, and from other sites in Derbyshire, Leicestershire, Lincolnshire, Nottinghamshire, Staffordshire and Yorkshire.

Lincoln Late Saxon Shelly ware (LSH) Figs. 53–57*Introduction*

This ware has been described in detail elsewhere (Young 1989 and Adams Gilmour 1988) and is only summarised here. There are three main fabric groups and two minor ones.

*Fabric A (Fig. 53)**Fabric and technology*

Sherds have a smooth to slightly bumpy texture and are quite soft. Colours range from reddish-yellow to

reddish-brown, with a light grey to grey core. Carbonized organic material and laminated clay pellets are often visible in fresh breaks along with the moderate to abundant bivalve shell of up to 2.0mm that forms the main tempering agent. Under the microscope, sparse rounded quartz and sparse rounded iron-rich grains are visible. The pottery is mainly manufactured using a combination of coil/ring building and wheel/turntable finishing with little attempt to tidy up the completed vessel, although a few small jars appear to be completely wheel-thrown. Decoration includes both square and diamond roller stamping, thumb-pressed applied strips and incised horizontal lines.

Vessel types

The main vessel form is an rounded jar (eg, Fig. 53, 226–232) with sizes ranging from small (*c.*100mm diameter) to large (*c.*220mm diameter). A wide range of other forms is produced including large storage jars (eg, Fig. 53, 235), pitchers (eg, Fig. 53, 236), lipped jars (eg, Fig. 53, 234), several bowl types (eg, Fig. 53, 237–240) and pedestal lamps (eg, Fig. 53, 241–244). Some sherds are from unusually shaped forms (eg, Fig. 53, 245).

*Fabric B (Fig. 54, 246–256)**Fabric and technology*

Fabric B is fired to a high temperature, sometimes causing the shell inclusions to blow and spall the surface. Colours are predominantly in the light red to red range with a thick grey core, although completely reduced examples do occur. The moderate to abundant bivalve shell of up to 2.0mm is often masked on the surface of the sherd by finishing techniques. Fine sparse subangular quartz, sparse rounded iron-rich grains and sparse laminated clay pellets can be seen under the microscope. Vessels are wheel-thrown and are neatly finished. Decoration is by diamond and square roller stamping or occasional incised wavy lines on the shoulder.

Vessel types

The main form is the medium-sized rounded jar (eg, Fig. 54, 248–249) with both small (eg, Fig. 54, 246–247) and large jars (eg, Fig. 54, 250) being uncommon. Most bowls are of the wide shallow type (eg, Fig. 54, 251), although other small bowls are also found (eg, Fig. 54, 252). Small bowl-type crucibles for glass melting (eg, Fig. 54, 253) and pedestal lamps (eg, Fig. 54, 254–256) are also produced.

*Fabric C (Fig. 54, 257–260)**Fabric and technology*

This fabric group includes sherds that have an almost equal amount of shell and quartz used as a temper. All known vessels are in the LKT tradition and appear

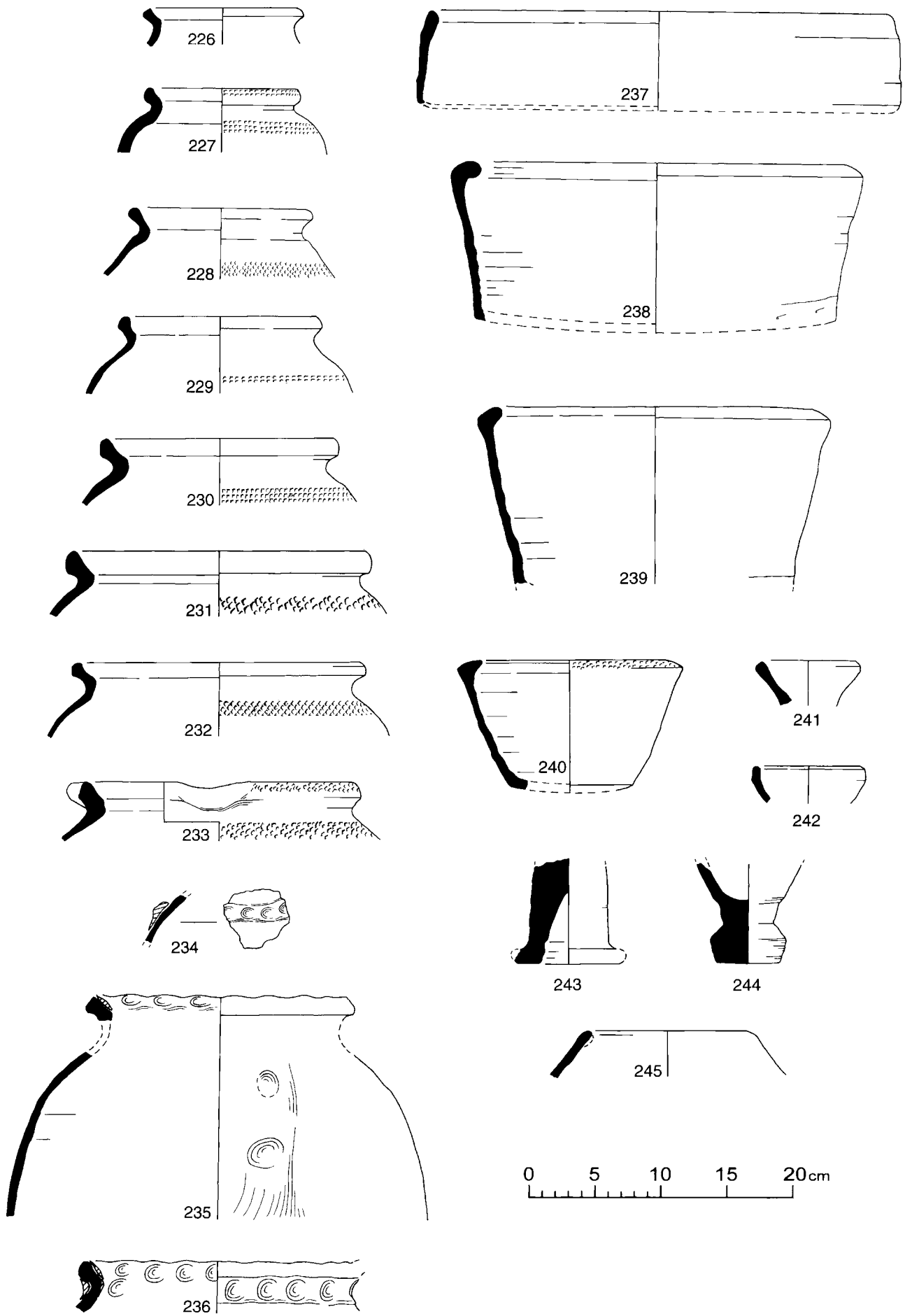


Fig 53 Lincoln Late Saxon Shelly Ware: Fabric A; jars 226–236; bowls 237–240; pedestal lamps 241–244; unknown form 245. Scale 1:4

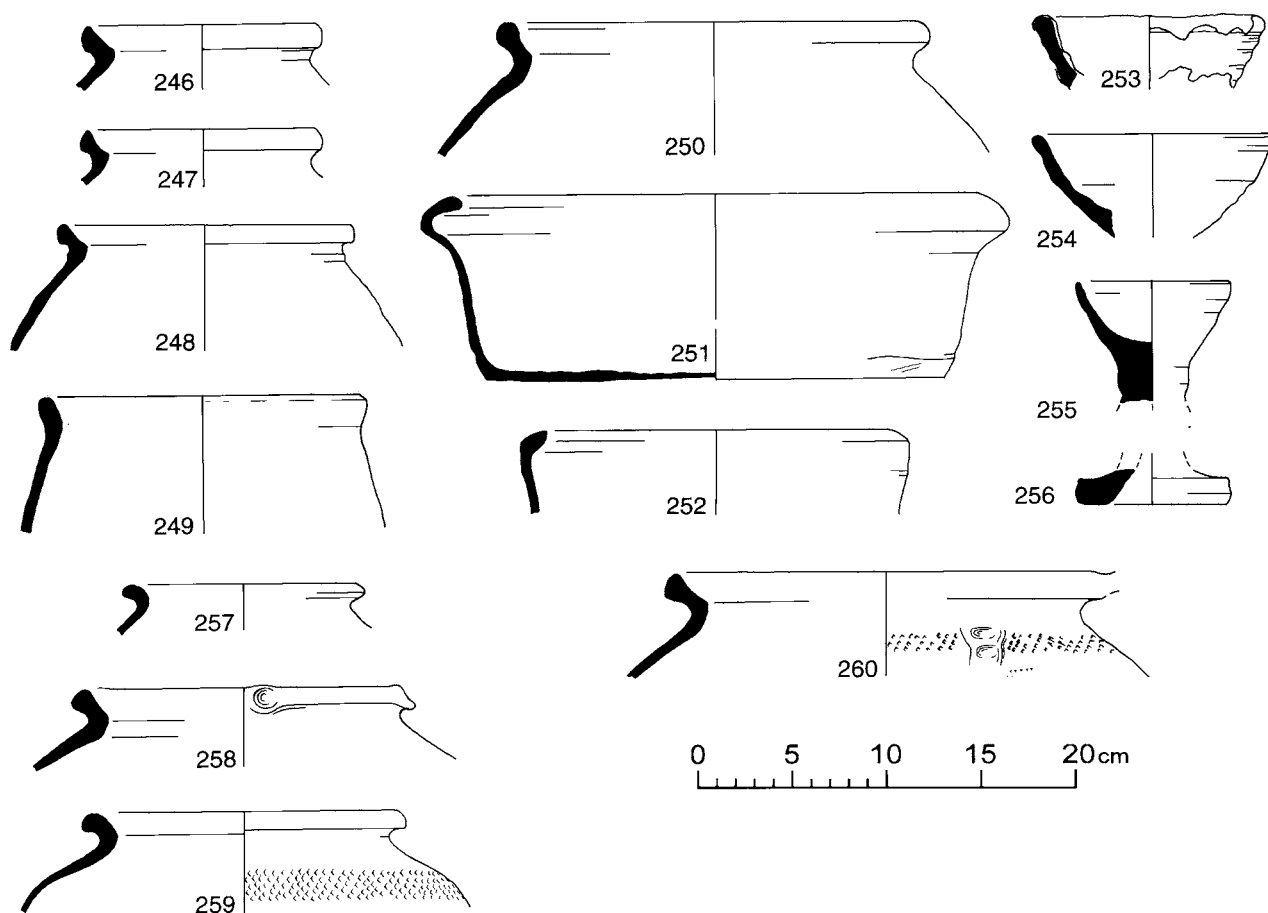


Fig 54 Lincoln Late Saxon Shelly Ware: Fabric B; jars 246–250; bowls 251–252; crucible 253; pedestal lamp 254–256; Fabric C; jars 257–259; pitcher 260. Scale 1:4

to be the result of experimentation or perhaps accidental mixing of clays and/or temper. Vessels have a slightly sandy surface texture, with prominent flecks of shell. Microscopic examination shows the presence of sparse to common bivalve shell up to 2mm and moderate subangular quartz of up to 0.5mm, together with sparse chert, sparse iron-rich grains and sparse sandstone. Vessels are wheel-thrown and often well finished. Decoration is variable and includes diamond and square roller stamping, thumb-pressed applied strips and direct thumbing to the rim edge, often mixed together on the same vessel.

Vessel types

Small and medium sized jars (eg, Fig. 54, 257–9) and small pitchers (eg, Fig. 54, 260) are known.

Fabric E (Fig. 55–57)

Fabric and technology

Vessels in this fabric are of soft to medium hardness with a smooth surface texture. Many vessels have a distinctive, thick external slip or slurry that masks

the surface shell and often readily peels off. On some vessels this thick clay layer has been applied over the roller stamping (eg, Fig. 55, 278). Surface colour is usually pink, or occasionally light grey, with a grey to dark grey core. Carbonized organic material is often visible in a fresh break, along with moderate to abundant bivalve shell of up to 2.0mm. Occasional vessels have prominent laminated clay pellets, also visible by eye. Under magnification sparse subangular quartz, sparse iron-rich grains, sparse chert and sparse sandstone are visible. Vessels are manufactured by both coil/ring building and wheel throwing, often both used together on a single vessel. Both diamond and square roller stamping are used on the shoulder and rim. A variety of thumb-pressed and plain applied strips is also used to decorate pitchers and large jars.

Vessel types

The main vessels produced are medium-sized rounded jars (eg, Fig. 55, 267–75). Tiny jars/beakers (eg, Fig. 55, 261–3), small jars (eg, Fig. 55, 264–6), large

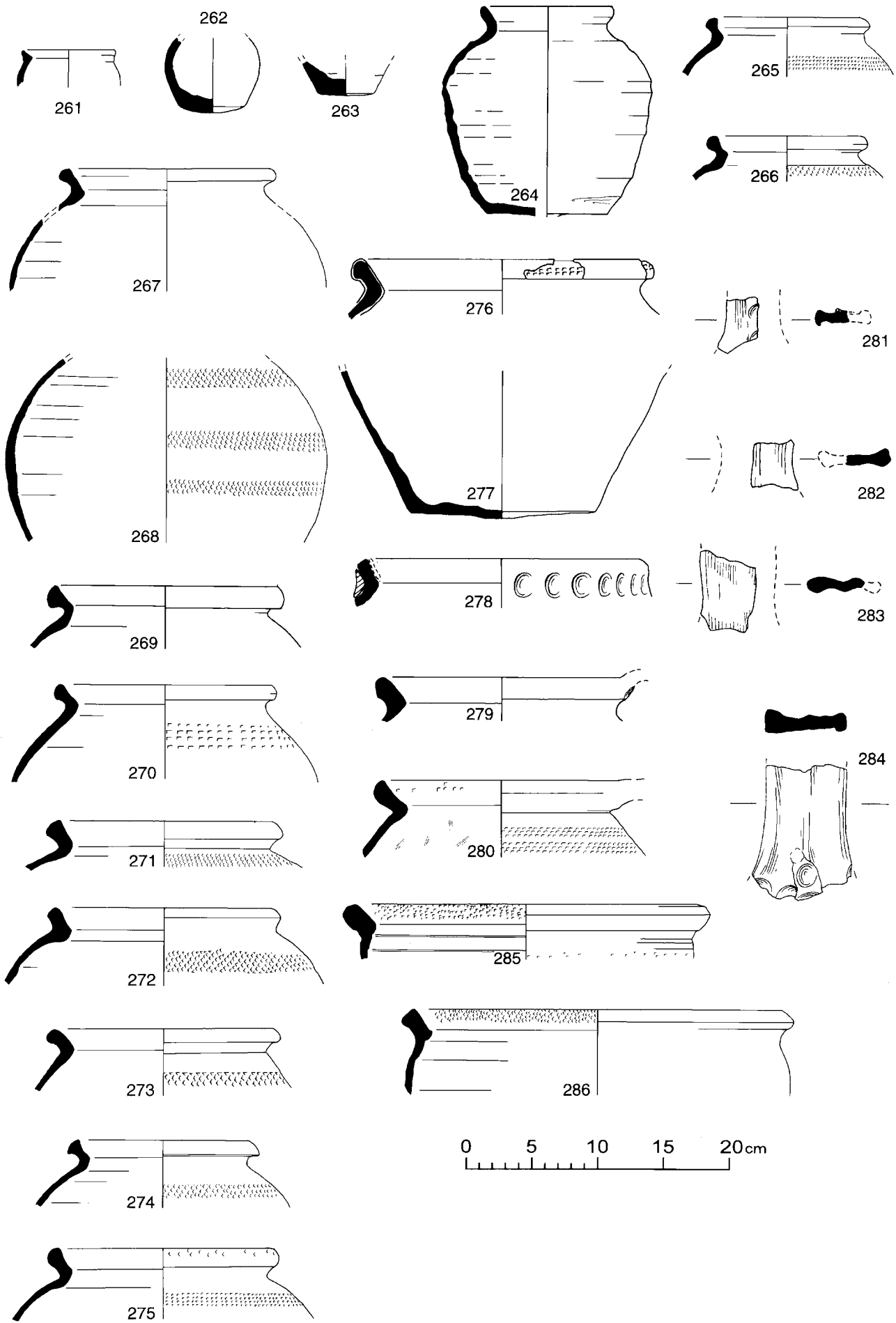


Fig 55 Lincoln Late Saxon Shelly Ware: Fabric E; tiny jars or cups 261-263; jars 264-277; storage jar 278; pitchers 279-284; wide jars 285-286. Scale 1:4

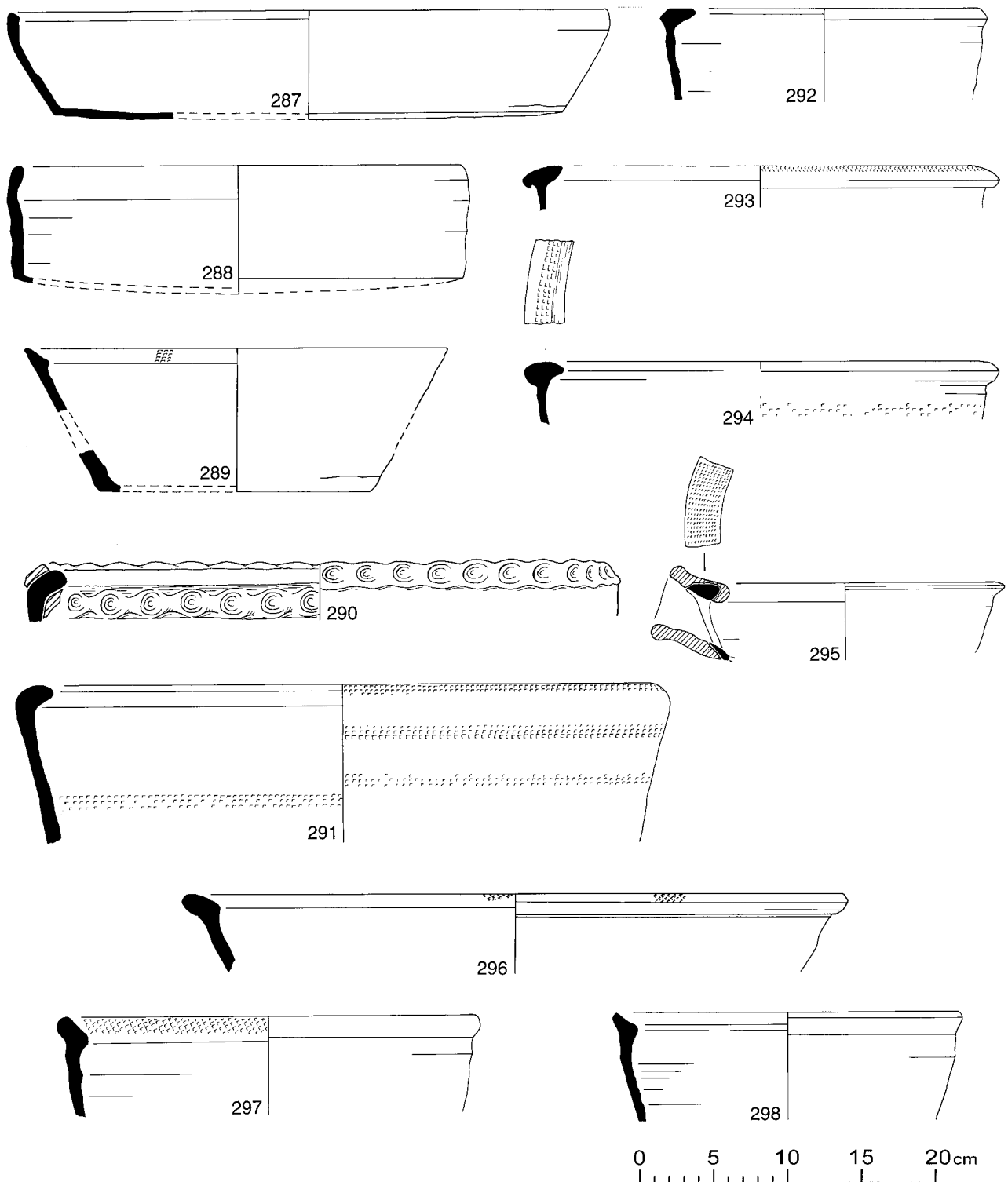


Fig 56 Lincoln Late Saxon Shelly Ware: Fabric E; bowls and dishes. Scale 1:4

jars (eg, Fig. 55, 276–7) and wide jars (eg, Fig. 55, 285–6) occur less commonly. The early vessels from horizons ASH7 and ASH8 have flat or nearly flat bases while those from later horizons have sagging bases. Storage jars (eg, Fig. 55, 278) and pitchers

(eg, Fig. 55, 279–84) are less common, as are pedestal lamps (eg, Fig. 57, 306–11). The illustrated free standing tubular spout (Fig. 57, 313) is unique and is likely to have come from a pitcher. A wide range of dishes and bowls is found (eg, Figs. 56, 287–98,

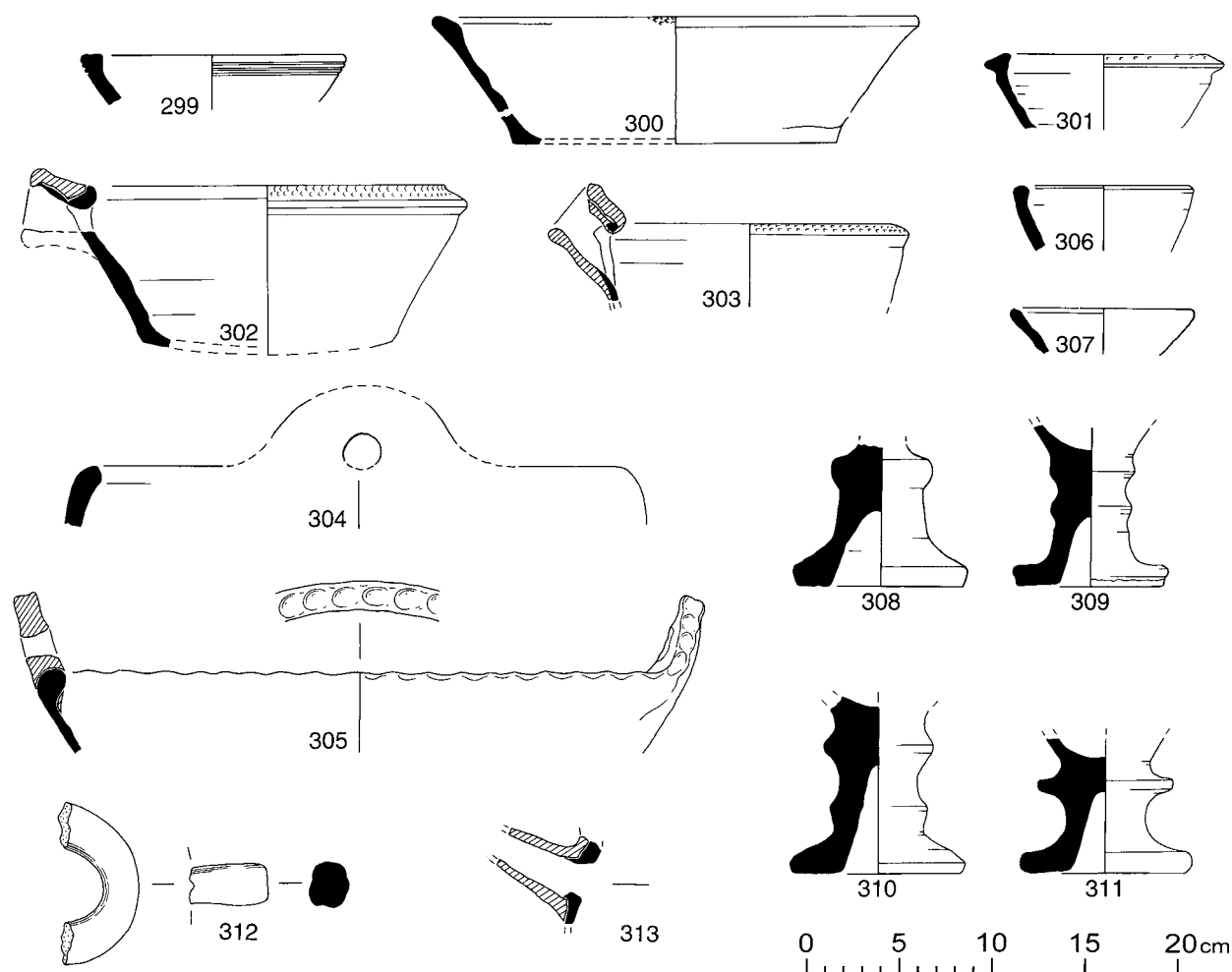


Fig 57 Lincoln Late Saxon Shelly Ware: Fabric E; bowls and dishes 299–305; pedestal, lamps 306–311; ? bowl handle 312; ? pitcher spout 313. Scale 1:4

and 57, 299–305). A horizontal side handle (Fig. 57, 312) may also be from a large bowl.

Fabric F

Description

A single sherd recovered from the Flaxengate site (F72) may be an unusual Lincoln product. The bright orange fabric is tempered with sparse fragments of shell (up to 10mm), limestone and iron-rich grains in a calcareous matrix. The flat base sherd is trimmed and probably comes from a jar.

Source

Twenty sherds of Lincoln Late Saxon Shelly ware from Lincoln were examined in thin section, six of Fabric A, four of Fabric B, four of Fabric C, five of Fabric E, and one of Fabric F.

There are differences between several of the fabric groups in thin section: Fabrics A and B contain

laminated clay pellets absent from the remaining fabrics. Fabric A contains more quartz sand than Fabric B, and Fabrics C and E contain sparse chert and sandstone grains as well as quartz. Finally, Fabric F has a calcareous matrix whereas the remaining fabrics have a highly-birefringent clay matrix containing sparse muscovite and abundant dark brown specks. It seems that at least four different clay/temper mixtures were used (Fabrics C and E are not distinguishable in thin-section). The main difference between these fabrics and that of Lincoln Kiln-type Shelly ware is the size of the shell fragments and their quartz content but the same arguments given above as to the source of raw materials used for Lincoln Kiln-type Shelly ware apply equally to Lincoln Late Saxon Shelly ware.

Recent excavations on the hillside to the east of the Lower City (at North Lincolnshire College, site codes TC93, TCA94, and SES97), have produced a

number of wasted sherds all of Lincoln Late Saxon Shelly ware fabrics except Fabric F. A kiln found at the SES97 site contained wasted Lincoln Late Saxon Shelly ware sherds within the clay make-up, although the kiln itself was backfilled with quartz-tempered vessels (Lincoln Saxo-Norman Sandy ware).

The four samples of Fabric C (L1585–8) all contained abundant fragments of bivalve shell derived from a shelly limestone, together with fragments of the ferroan calcite matrix of that limestone. All the samples contained moderate quantities of rounded quartzose sand, composed of quartz and minor quantities of chert and sandstone. The samples could, however, be divided into two groups on the basis of their clay matrices. Three had matrices composed of highly birefringent clay with sparse to moderate, rounded, opaque grains, interpreted as faecal pellets. The fourth sample (L1588) contained sparse muscovite flecks in addition to the rounded opaques noted in the other three samples. Both of these matrix types have been noted in samples of known Lincoln origin.

Of the five samples of Fabric E (L1589–93), one was very similar to L1588 (Fabric C), containing moderate quartz sand and a micaceous matrix. The remaining samples all contained sparse quartzose sand with two types of clay matrix. Three of the samples had similar matrices to those of the majority of the Fabric C samples (highly birefringent clay with sparse to moderate, rounded, opaque ?faecal pellets). The fourth sample (L1593) had a calcareous, micaceous, clay matrix and fragments of laminated relict clay also containing specks of carbonate and muscovite. With the exception of L1593, the characteristics seen in these samples can be matched with those found in pottery of known Lincoln origin.

Dating and frequency

All Lincoln Late Saxon Shelly ware fabrics except Fabrics C and F are commonly found on 10th-century sites in the city. Although the fabrics all occur from horizon ASH7 to ASH11 (mid/late 9th to late 10th century), Fabric E is most common in horizons ASH7 to ASH9 (mid/late 9th to mid 10th century) and Fabric B from ASH9 to ASH11 (mid to late 10th century). Overall Lincoln Late Saxon Shelly ware forms about 3% of the pottery in horizon ASH7 (mid to late 9th century), 6% in ASH8 (late 9th to early 10th century), 7% in ASH9 (early/mid to mid 10th century), 8% in horizons ASH10 (mid to late 10th century) and ASH11 (late 10th century) and may still be in use in early ASH12 deposits (early 11th century), although it only forms about 3% overall of assemblages of this period.

Fabrics A, B and E are commonly found on 10th-century sites throughout Lincolnshire as well as being found in York, Nottingham and Leicestershire.

Early Lincoln Glazed ware (ELSW) (Fig. 58)

Introduction

This ware has been described in detail elsewhere (Young 1989, 222, and Adams Gilmour 1988, 102) and is only summarised here. There are three discernible fabric groups, although within each group there is considerable variation in the frequency of each inclusion. Most vessels in Fabrics B and C are only partially glazed, so a large number of sherds in these fabrics may show no signs of glazing.

Fabric A (Fig. 58, 314–317)

Fabric and technology

This fabric group is almost always fired to semi-vitrification. Colours on the unglazed surfaces range from orange to a dull purple. The core is grey where sherds are thicker than 3mm, with an abrupt surface-to-core colour change, unlike on other oxidized Lincoln sand-tempered fabrics where there is usually some grading of colour. Microscopic examination shows moderate to abundant rounded quartz up to 6mm together with sparse iron-rich grains, sparse laminated clay pellets, sparse sandstone, sparse chert and sparse rounded calcareous inclusions that thin-section analysis shows to be non-ferroan calcite. Vessels are wheel-thrown and well finished. A thick, lustrous glaze that has small pock marks under the surface covers most of the vessel externally. Occasional vessels are also glazed internally. Only one vessel has been found with any form of decoration and this consists of small applied nodules (Fig. 58, 316).

Vessel types

With the exception of one pitcher (Fig. 58, 317), all sherds appear to be from a small globular jar/beaker that has a small tubular spout (Fig. 58, 314–6). Similar vessels were found at Coppergate, York, in Early Glazed ware type 3 (Mainman 1990, fig. 193, 2233–5).

Fabric B (Fig. 58, 318–322)

Fabric and technology

This fabric is oxidized to a pink to pale orange colour and is fired to a medium hardness. Where the sherd is thicker than 5mm there may be a reduced light-grey to grey core. Sparse specks of calcareous material are visible in the fabric and these are shown by thin-section analysis to be of nonferroan bivalve shell. Apart from these shell inclusions, the fabric is identical to that of Fabric A. The vessels are wheel-thrown and are well finished. Only a few sherds have a thick covering of glaze; most only have areas or runs of the 'splashed' type of glaze. Decoration includes square roller stamping, bosses and lattice burnished lines on the lower body.

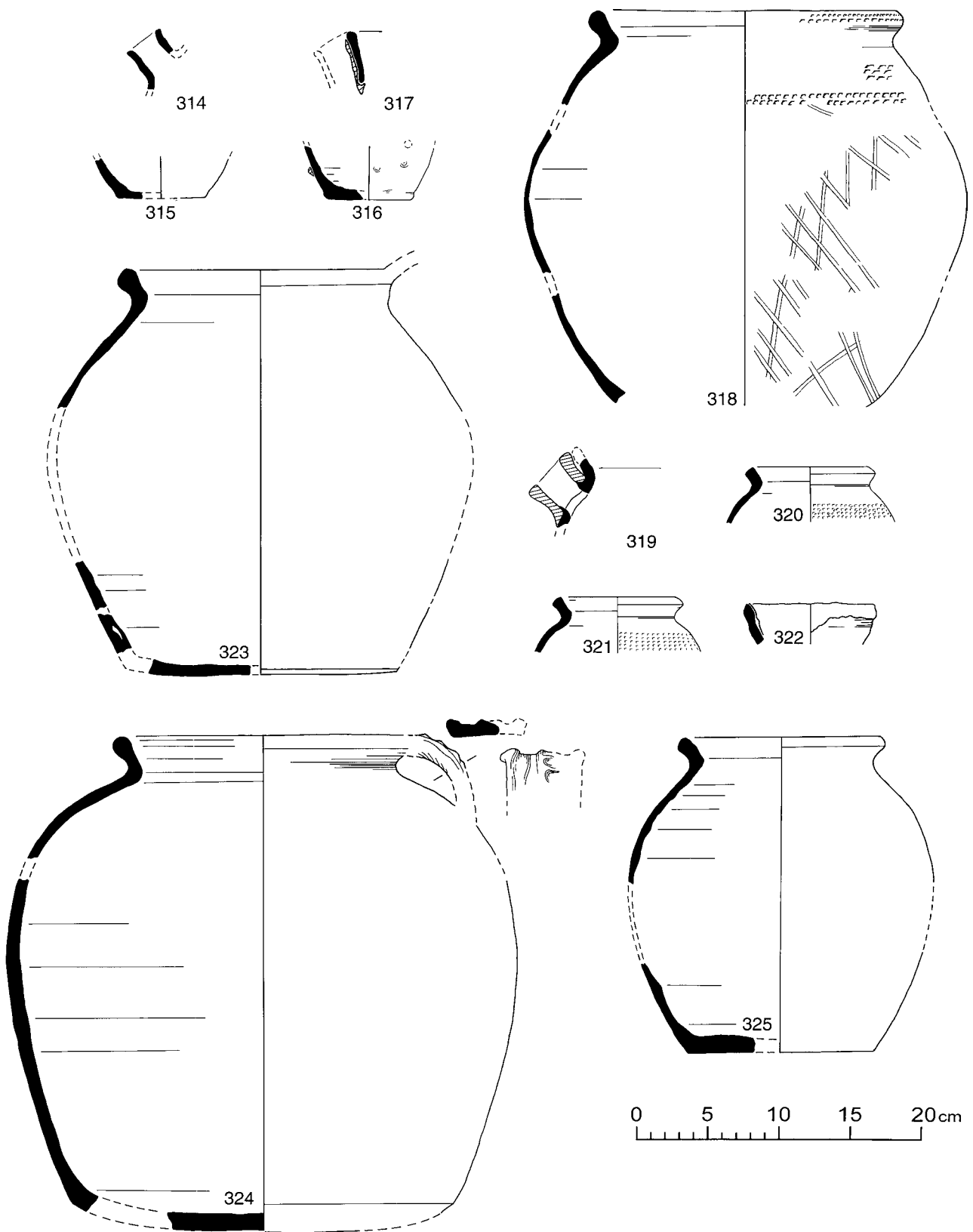


Fig 58 Early Lincoln Glazed Ware: Fabric A 314–317; Fabric B 318–322; Fabric C 323–325. Scale 1:4

Vessel types

Vessels in this fabric are mainly medium-sized, flat-based jars (eg, Fig. 58, 318) or pitchers (eg, Fig. 58, 319) that have a similar profile and identical rim types to LKT vessels. A few small jars (eg, Fig. 58, 320–1) have been found, all with a minimal amount of glaze applied. The most unusual form is that of a small bowl crucible used for glassworking (eg, Fig. 58, 322).

Fabric C (Fig. 58, 323–5)

Fabric and technology

This is the most variable fabric group within Early Lincoln Glazed ware. Some vessels are semi-vitrified while others are soft. Both oxidized (light to bright orange) and reduced (grey to dark grey) vessels are found. Calcareous inclusions are more common than in Fabric B, with the frequency varying between sparse and abundant. Thin-section analysis shows that these inclusions are of non-ferroan bivalve shell and ferroan matrix. Except for the shell inclusions, the fabric is similar to that of Fabric A and B. With the exception of some large pitchers (eg, Fig. 58, 323) that are partially hand-built, all vessels are wheel-thrown and well finished. All glazing is of the 'splashed' type. Decoration includes square roller stamping, thumb-pressed strips and lattice bur-nishing.

Vessel types

All vessels are medium- to large-sized pitchers (eg, Fig. 58, 323–4) or jars (eg, Fig. 58, 325), similar to those in Fabric B. Medium-sized vessels have flat bases while those from larger ones are slightly sagging.

Source

Fourteen samples of Early Lincoln Glazed ware were examined in thin section. Of these, four were of Fabric A, five of Fabric B and five of Fabric C. The three fabrics have very different appearances: Fabric A is highly fired and has no shell inclusions (at least, none that survives); Fabric B is more lowly fired and there is shell in three of the five samples, whilst Fabric C contains moderate shell fragments. There may be a difference in the origin of the shell in Fabrics B and C since those in Fabric C are fresh, unweathered fragments and those in Fabric B are rounded. This is not simply a matter of firing conditions, since one of the Fabric C samples has an isotropic clay matrix (ie, relatively highly fired) but still contains moderate shell fragments. All of the samples include laminated clay pellets, as in Lincoln Gritty ware, and Lincoln Late Saxon Shelly ware Fabrics A and B. It is likely that the same clay source was used for all these fabrics and that the potters were responsible for the differences between the fabrics through the addition of shell and their

control over firing conditions. A few of the vessels recovered from the Flaxengate site (F72) were quite obviously wasters. A further small jar/beaker in Fabric A from the St Mark's Church site (SM76; Jennings and Young 1986, fig. 29, 1) has glaze across a break. The affinities for this ware are much stronger with the shell-tempered Lincoln Kiln-type Shelly ware industry than they are with other contemporary quartz-tempered fabrics (Lincoln Late Saxon Sandy ware); for example, shared vessel- and rim-shapes and the crucible bowl form-type. Other indications that they are connected include the occurrence of partially-glazed Lincoln Kiln-type Shelly ware bowls (from the sites at Grantham Place (GP81), Hungate (H83), Saltergate (LIN73E), Grantham Street/Swan Street (SW82) and Flaxengate (F72)), the use of Lincoln Kiln-type Shelly ware vessels as stands or containers in the kiln for Early Lincoln Glazed ware vessels, and the presence of Lincoln Kiln-type Shelly ware jars containing lead carbonate that may have been used in the glazing process (on the Flaxengate site, F72).

Dating and frequency

Although 870 sherds of Early Lincoln Glazed ware have been found in the city, 820 of these came from the F72 site and a further eight sherds from other sites on Flaxengate. It is possible, considering the presence of wasters on F72, that rather than an increased use of the ware, the number of vessels is exaggerated due to production in the immediate vicinity. Other sites where Early Lincoln Glazed ware is found are mainly in the Lower City, but there are also examples from the suburbs of Wigford and Butwerk (Broadgate East site (BE73)) and one in the Upper City. In well-stratified deposits (mainly found on F72), Early Lincoln Glazed ware forms 1% of the pottery in ASH7 horizons (mid to late 9th century), 2% in ASH8 (late 9th to early 10th century), and 3% in early horizon ASH9 deposits (early/mid 10th century), although the composition of most of the ASH9 deposits indicates that this is likely to be residual. On other sites Early Lincoln Glazed ware is only a rare find.

Late Saxon Crucible fabrics (LSCRUC) (Fig. 59, 326–33)

Introduction

This ware has been described in detail elsewhere (Adams Gilmour 1988, 70–3) and is only summarised here.

Fabric and technology

No crucibles have yet been found without traces of slag, although mould fragments are made in a similar fabric and these rarely show signs of usage. The reduced grey fabric is soft and granular, with

preservation being poor. Most sherds can readily be rubbed between the fingers into a clay powder and loose quartz grains. All that can be seen of the fabric is abundant, rounded quartz up to 0.4mm and occasional organic material. Some vessels show evidence of a second layer of clay on the external surface and one vessel (Fig. 59, 331) has a lining. Vessels are all handmade, usually by the pinching method but occasionally by coiling (eg, Fig. 59, 329 and 331).

Vessel types

So far the range of forms includes small crucibles (eg, Fig. 59, 327–31), cupels (eg, Fig. 59, 332–3) and a cuboid crucible possibly used as a parting vessel (Fig. 59, 326).

Source

Two samples of Late Saxon Crucible fabrics were examined in thin-section. Although both were quartz-tempered fabrics there were significant differences in texture between the two. Both contained abundant rounded quartz sand but one also contained abundant angular quartz silt. The thin sections give no evidence for the source of the clay or temper and, based on comparative work carried out in the City of London, it would not be surprising to find that refractory clays and finished crucibles were being traded over long distances by the Late Saxon period.

Dating and frequency

More than 150 sherds have been found in the city; 106 of these came from the Flaxengate site (F72). The

fragmentary nature of the fabric is a problem highlighted by the Woolworth's basement site (WO89), where only one crucible sherd was recovered during excavation; during sieving of soil samples under x20 magnification, however, numerous tiny fragments of Late Saxon Crucible fabrics with adhering slag were apparent. At F72 c.0.5% of all of the pottery found in ASH7 horizons (mid to late 9th century) was of Late Saxon Crucible fabrics; after this and on all periods on other sites, the ware forms a negligible amount of the material recovered.

Local Late Saxon fabrics (LSLOC) (Figs. 60–1)

Introduction

Although the pottery included in this ware type has already been described in detail elsewhere (Adams Gilmour 1988, 133–44), a certain amount of re-classification has taken place subsequently. Five major groups of shell-tempered pottery (Fabrics A, B, C, D and M) and two quartz-tempered groups (Fabrics F and S) are included in this grouping, along with a number of loosely grouped fabrics that do not belong in any one of the other major fabric groups, but whose inclusions fall into a range that is to be expected locally. These miscellaneous fabrics are loosely grouped into those that are handmade and shell-tempered (Fabric H), wheel-thrown and shell-tempered (Fabric W, eg, Fig. 61, 378–80), those with both quartz and calcareous inclusions used together as a tempering agent (Fabric QC), miscellaneous shell-tempered fabrics each represented by a single sherd (Fabric MISCS, eg, Fig. 61, 381) and miscellaneous quartz-tempered fabrics (Fabric MISCQ, eg, Fig. 61, 382). Many of these small and miscellaneous fabrics probably represent unusual fabric mixes or experimentation by the main local, or even Lincoln city workshops, as it is unlikely that so many production centres were operating at one time within such a small area.

Fabric A (Fig. 60, 334–45)

Fabric and technology

Vessels have a smooth to soapy texture with fabric hardness varying from soft to hard. Surface colours range from red-brown to reddish-purple with a thick grey to very dark grey core. The moderate to frequent fossil shell of up to 3mm can be masked on the exterior surface of the vessel by wiping. Under the microscope, sparse subangular quartz, sparse iron-rich grains, sparse sandstone, sparse laminated clay pellets and occasional echinoid spines can be seen. Most vessels are well wheel-thrown, although there is some evidence of larger vessels being coil/ring built and wheel finished. All vessels are neatly finished with wiping and trimming. Decoration includes square and diamond roller stamping that

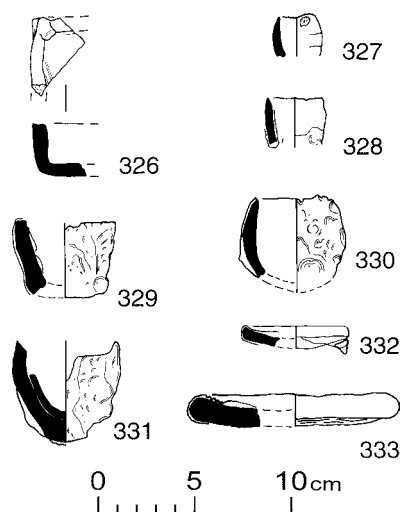


Fig 59 Late Saxon crucible fabrics: parting vessel 326; small crucibles 327–331; cupels 332–333 Scale 1:4

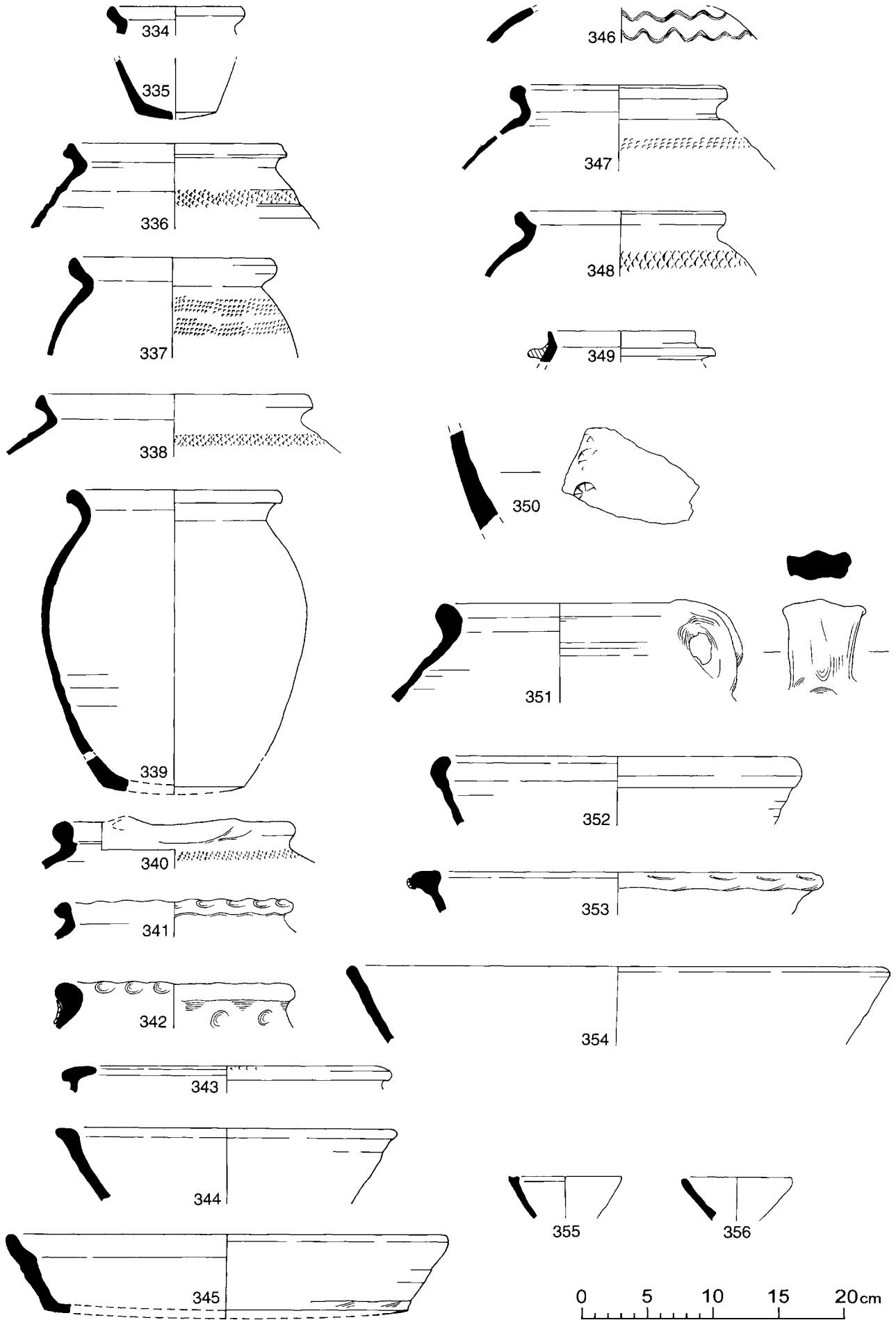


Fig 60 Local Late Saxon Fabrics: Fabric A jars 334–339; lipped jar 340; storage jars 341–342; bowls and dishes 343–345; Fabric B jars 346–348; pitchers 349–351; bowls and dishes 352–354; pedestal lamps 355–356. Scale 1:4

is usually executed in small sweeps around the shoulder or on the rim edge as well as the occasional use of thumb-pressed strips.

Vessel types

The main vessel types are plain rounded jars (eg, Fig. 60, 334–9) although bowls and dishes are quite common (eg, Fig. 60, 343–5). Lipped jars (eg, Fig. 60, 340) and storage jars (eg, Fig. 60, 341–2), the only other forms known, are rare.

Source

Fabric A has very similar characteristics to those of LSH: abundant shelly limestone sand; rounded laminated clay pellets and sparse quartzose sand (quartz, chert and sandstone), sparse rounded opaque inclusions and an anisotropic clay matrix containing sparse muscovite and, in three cases, sparse ferroan calcite and dark brown specks. A source close to Lincoln is likely.

Fabric B (Fig. 60, 346–56)

Fabric and technology

This fabric has a smooth to slightly bumpy texture with surface colours ranging from a salmon red to a reddish orange and core colours from light to dark bluish-grey. The moderate bivalve shell temper of up to 3mm occurs with sparse laminated clay pellets, sparse iron-rich grains, sparse carbonised organic material and occasional sparse rounded quartz. Vessels are both fully wheel-thrown and piece-formed, with occasional larger vessels being coil/ring built and wheel-finished. Decoration includes diamond and square roller stamping, thumb-impressed strips, combed wavy lines (eg, Fig. 60, 346) and a cartwheel stamp (eg, Fig. 60, 350).

Vessel types

A variety of forms are made in this fabric including small to medium sized jars (eg, Fig. 60, 346–8), large jars adapted for use as short spouted pitchers (eg, Fig. 60, 351), necked pitchers (eg, Fig. 60, 349), bowls (eg, Fig. 60, 352–3), dishes (eg, Fig. 60, 354), and pedestal lamps (eg, Fig. 60, 355–6).

Fabric C (Fig. 61, 357–8)

Fabric and technology

Surface texture is smooth to slightly sandy and surface colours are reds and reddish browns with dark grey to very dark grey cores. The bivalve shell tempering is variable between moderate and abundant and is up to 3mm. Other inclusions are sparse rounded quartz, sparse iron-rich grains and carbonised organic matter. Vessels are both wheel-thrown and handmade/wheel-finished. Decoration is uncommon but includes square roller stamping and thumb-pressed strips.

Vessel types

Most vessels are small to large sized rounded jars (eg, Fig. 61, 357–8) with bowls and large storage jars only occurring rarely.

Fabric D (Fig. 61, 359–66)

Fabric and technology

Sherds have a smooth to slightly bumpy texture and surface colours range from dark grey to very dark grey with a black core. The abundant bivalve shell temper of up to 2mm leaves little clay visible; under magnification, however, sparse rounded quartz, sparse iron-rich grains, sparse carbonised organic material and occasional chert can be seen, in a matrix that has a background of white flecks shown by thin-section analysis to be of shell and ferroan calcite. Vessels are coil/ring built and wheel/turntable finished. The only form of decoration is square roller stamping.

Vessel types

Forms include small to medium sized rounded jars (eg, Fig. 61, 359–61), bowls (eg, Fig. 61, 364–5), dishes (eg, Fig. 61, 366) and pedestal lamps (eg, Fig. 61, 362–3).

Fabric F (Fig. 61, 367–9)

Fabric and technology

Vessels are hard fired with a sandy surface texture and have a light grey fabric that has thin light orange to greyish-brown surfaces, occasionally reduced to a grey externally. A fresh break reveals sparse rounded dark brown clay pellets up to 1mm and sparse white calcareous inclusions up to 0.6mm; both are visible by eye. Microscopic examination also reveals abundant, ill-sorted rounded quartz up to 0.6mm, sparse sandstone, sparse iron-rich grains and streaks of low iron clay. All vessels are wheel-thrown. Decoration is limited to diamond roller stamping.

Vessel types

Only medium- to large-sized rounded jars are known (eg, Fig. 61, 367–9).

Source

Fabric F contains no shell sand, and has an abundant quartzose sand (consisting mainly of quartz with chert and sandstones). Three of the six samples had variegated clay matrices, a feature of some pottery definitely made in or around Lincoln.

Fabric M (Fig. 61, 370–1)

Fabric and technology

The slightly sandy surface texture of this fabric differentiates it from MAX Fabrics A–C. Vessels tend to be completely oxidized to a brick red colour

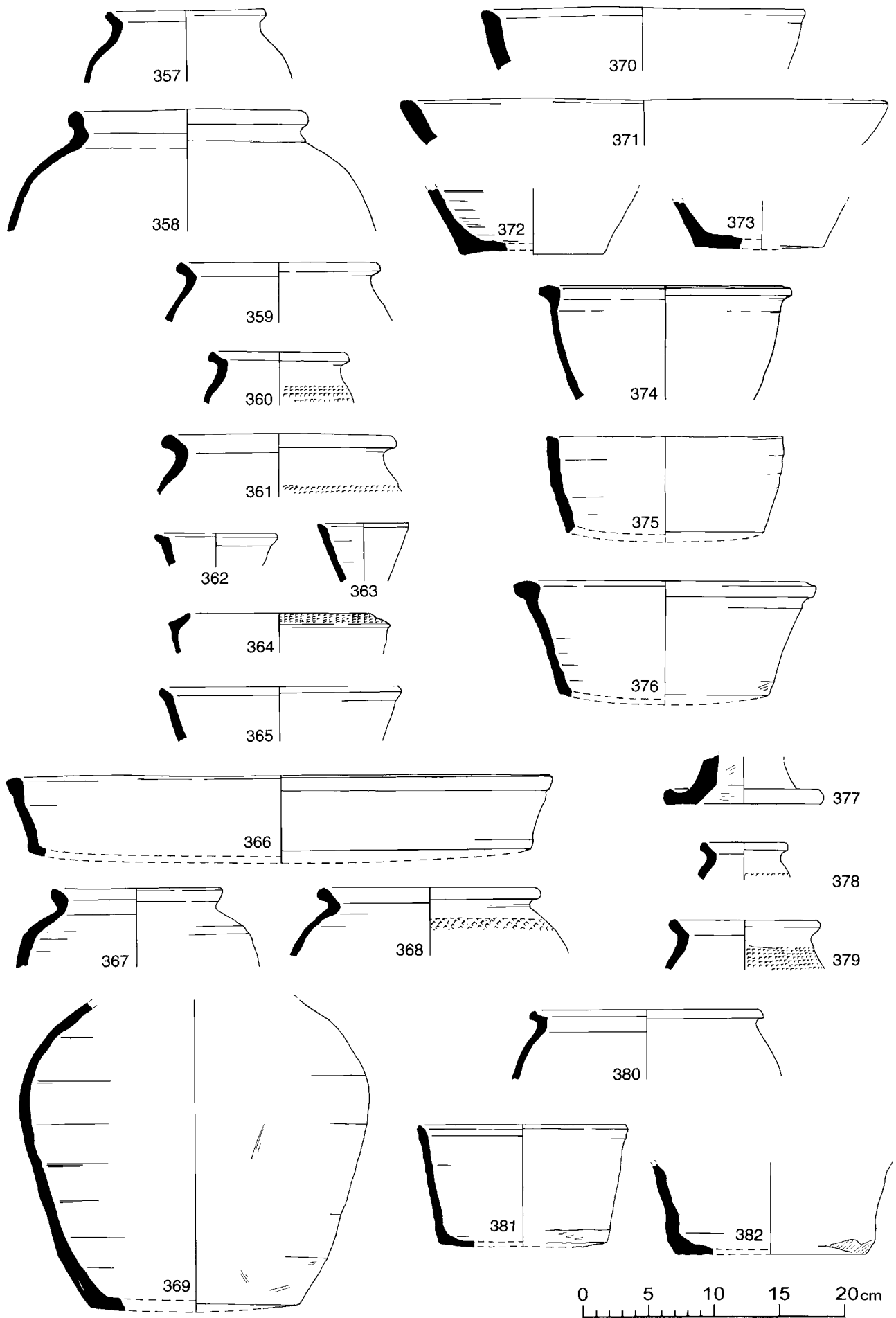


Fig 61 Local Late Saxon Fabrics: Fabric C jars 357–358; Fabric D jars 359–361; pedestal lamps 362–363; bowls and dishes etc 364–366; Fabric F jars 367–369; Fabric M bowls and dishes 370–371; Fabric S jars 372–373; bowls 374–76; pedestal lamp 377; Fabric W 378–380; Fabric MISC S 381; Fabric MISC Q 382. Scale 1:4

sometimes with a brown core. The bivalve shell temper of up to 2mm is abundant, leaving little clay visible. Under magnification the shell can be seen to be very ill-sorted, and sparse rounded quartz and occasional sandstone are also visible. All vessels are coil/ring built and no decoration is known.

Vessel types

Forms are limited to jars, bowls (eg, Fig. 61, 370) and dishes (eg, Fig. 61, 371).

Source

Fabric M is tempered with a shell sand derived from a shelly limestone. The limestone temper, however, is distinctive, since it contains a high proportion of matrix to shell and a high proportion of fine-grained inclusions. Sparse quartzose sand is also present with some sandstone but no chert. Given the total quantity of quartzose inclusions is so low, this may not be significant. The fabric's characteristics seem to indicate that Local Late Saxon Fabric M utilised different resources from Fabrics A to D, Lincoln Late Saxon Shelly ware, and Lincoln Kiln-type Shelly ware: this fabric is now considered to be a Maxey ware.

Fabric S (Fig. 61, 372–7)

Fabric and technology

Surface texture ranges from slightly sandy to sandy. Almost all vessels are reduced to a dark grey fabric with black surfaces, although occasional light-fired examples in a white to pinkish grey range do occur. Vessels often have patchy exterior colouring indicating a bonfire firing. Microscopic examination shows abundant rounded quartz mainly in the 0.2–0.4mm range with some as large as 0.7mm, together with sparse iron-rich grains, sparse laminated clay pellets and sparse rounded chert. Vessels are both wheel and hand formed with some early vessels (eg, Fig. 61, 372–3) having wire cut bases. No decoration is known.

Vessel types

Vessels include small to large rounded jars (eg, Fig. 61, 372–3), small bowls (eg, Fig. 61, 374–6) and occasional pedestal lamps (eg, Fig. 61, 377).

Source

Fabric S is tempered with a Trent Valley sand (quartz, some chert and sandstone), but the matrix itself is almost quartz-free and contains moderate muscovite. Laminated clay pellets were present in all of the samples. The Middle and Upper Lias clays of the Lincoln area share these characteristics – a tendency to shale-like texture and a moderate muscovite silt content – and it is possible that this fabric was produced from clay dug or exposed along Lincoln

Edge and tempered with sand from one of the Trent Valley terraces that lap up to the Edge. However, similar sand-tempered wares occur throughout the length of the valley, as do the Middle and Upper Lias outcrops.

Dating and frequency

All of these local wares are definitely residual by horizon ASH13 (early/mid to mid/late 11th century) with most ending by ASH11 (the late 10th century). Fabrics A, D and M are confined to ASH7 and ASH8 horizons (the mid 9th to early 10th centuries). The main fabric groups are found on a number of sites in the city, with a concentration of Fabric B on the St Mark's Church site (SM76) in the Wigford suburb, but individually they never form more than a fraction of a percentage except in early ASH7 horizons (mid to mid/late 9th century) at Flaxengate (F72), where Fabric M forms 0.5% of the post-Roman pottery found. Local Late Saxon fabrics is found on a number of sites in the Lincoln area with Fabric A also being found at Repton and Newark. Fabric M is now known to be a Middle Saxon product (see Maxey-type ware).

Non-local Late Saxon fabrics (LSX) (Fig. 62)

Introduction

Fabrics containing inclusions that are likely to be non-local are grouped together under this ware type. There are only four discernible and discrete fabric groupings included in this section. The remaining sherds are tempered mainly with quartz, but also with non-local fossil shell and other minerals not found locally. Vessels are on the whole wheel-thrown; a few are probably hand-formed.

Fabric A (Fig. 62, 383–5)

Fabric and technology

The fabric texture varies from smooth to slightly gritty and although most vessels are reduced to a dark grey colour, reddish-brown surfaces or margins are sometimes also found. Firing temperature is variable, with most vessels being hard. The fabric is composed of abundant, ill-sorted, rounded quartz up to 0.6mm, sparse rounded chert, sparse rounded iron-rich grains and occasional shell and other calcareous material. Jars are wheel-thrown and storage vessels are hand built. Most vessels have had their external surfaces smoothed and a characteristic of this fabric is the wiping and fettling of the internal surface on the lower body of large pitchers and storage jars. This inner surface commonly flakes off, leaving spalled areas on the vessel interior. Decoration includes the use of bosses (eg, Fig. 62, 384), thumb impressed strips and burnished wavy lines (eg, Fig. 62, 383).

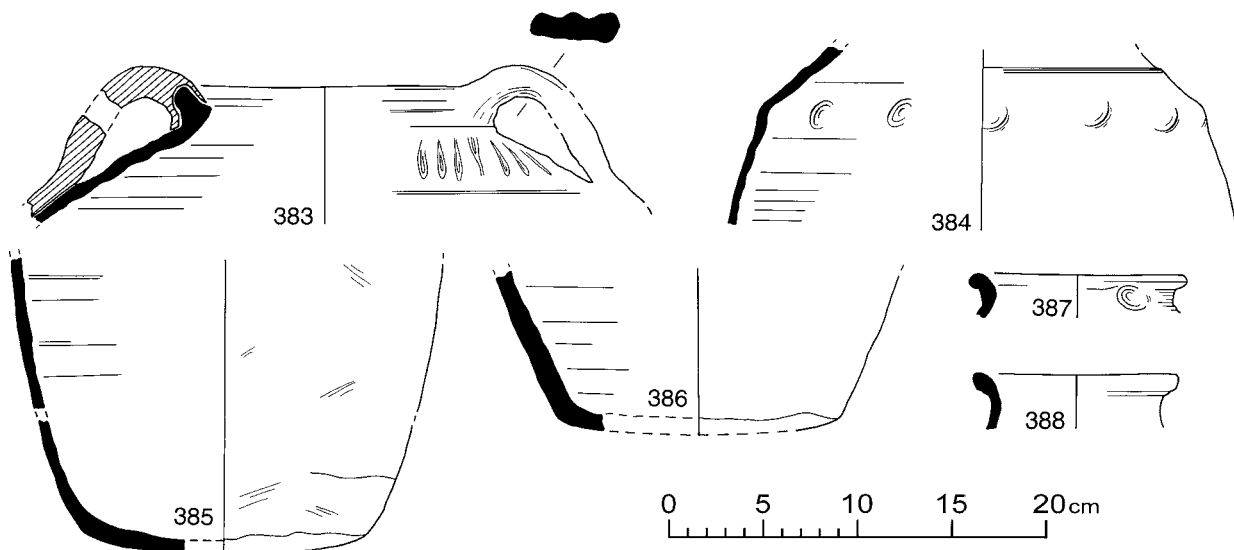


Fig 62 Non Local Late Saxon fabrics: Fabric A 383–385; Fabric L 386; Fabric B 387–388. Scale 1:4

Vessel types

All known vessels are medium-sized pitchers or jars (eg, Fig. 62, 384–5) or larger storage vessels (eg, Fig. 62, 383).

Fabric B (Fig. 62, 387–8)

Fabric and technology

Surface texture is smooth to slightly sandy and fabric colour is very dark grey with black surfaces. Under the microscope, abundant, ill-sorted rounded quartz mostly below 0.4mm but up to 0.6mm, sparse iron-rich grains and sparse chert are visible. All vessels are handmade by coil/ring building and externally smoothed. Finger impressions are often found below the rim where it has been drawn up (eg, Fig. 62, 387).

Vessel types

All known vessels are jars, most of them small and similar to those illustrated (Fig. 62, 387–8).

Fabric I

Description

This fabric has a smoothed surface texture that appears to have been wiped. Surface colours are dark greys with oxidized red-brown margins and a light grey core. Small sherds of this fabric can be mistaken for Ipswich ware. The fabric includes sparse rounded quartz up to 0.3mm and sparse iron-rich grains together with occasional carbonised organic material. Vessels are possibly formed on a turntable or they may be hand-made and wheel-finished. No decoration has been found. Only small-

to medium-sized jars with hollow everted rims have been found (eg, Adams Gilmour 1988, Fig.44, 24–7).

Fabric L (Fig. 62, 386)

Fabric and technology

This group consists of pottery thought to have been made in Lincolnshire, but from sources away from the city. All vessels are quartz-tempered, mostly with rounded quartz, although a few vessels have subangular quartz. The surface texture of the sherds varies from sandy to gritty and colouring from grey to reddish-brown. Apart from the quartz, other inclusions found are: iron-rich grains, chert, bivalve shell, sandstone, muscovite, and carbonised organic material. Both hand-made and wheel-thrown vessels are found. The only decoration to have been found is direct thumbing to the rim of a jar.

Vessel types

All vessels are jars of medium to large size (eg, Fig. 62, 386) or storage vessels.

Source

Twenty-five samples of Non-local Late Saxon fabrics were examined in thin-section, comprising six of Fabric A, one of Fabric B, one of Fabric I, five of Fabric L, and twelve ungrouped samples. The Fabric A thin-sections contain a quartzose sand (quartz with some chert and, rarely, sandstone) with sparse calcareous inclusions, both bivalve shell and rounded, pelletal limestone. The clay matrix in two cases is variegated with streaks of light-firing clay. There is nothing in this suite which need not be obtained

locally, but similar sands occur widely in the Trent Valley.

The single thin-section of Fabric B also contained a quartzose sand (quartz and some chert) in a low-fired, inclusionless clay matrix. That of Fabric I contained less quartz sand than Fabrics A or B, and sparse biotite was present in the clay matrix alongside muscovite. The four examples of Fabric L also contained a quartzose sand (quartz and some chert, but no sandstone). In comparison with some of the other fabrics above, the clay matrices contain more muscovite and quartz silt. Sparse fragments of bivalve shell and ferroan calcite (limestone matrix?) were present. These characteristics are not sufficiently distinct to allow a source area to be determined. A further nine sherds were examined in thin-section. Each had a separated petrological description but only four were sufficiently distinctive to warrant comment: Sample L1135 was noted under binocular microscopic study to contain flint, although none was present in thin-section. However, sparse fragments of a micaceous siltstone up to 1.5mm long were present. No suggestions as to its source can be made. Sample L1138 contains angular flint and a fine-grained limestone, almost certainly chalk. A source in an area of Cretaceous geology is indicated. Sample L1139 contains abundant bivalve shell (composed on non-ferroan calcite) but no indication of a ferroan calcite shell matrix. The shell may therefore have come from a shell sand component in the parent clay. Furthermore, bryozoa fragments were seen under the binocular microscope. A source in the south of Lincolnshire is likely. Sample L1313 contains fragments of shelly limestone, as in the Lincoln area shelly wares, but with sparse punctate brachiopod shell, echinoid spine and bryozoa. Again, a source to the south of Lincoln is indicated (similar fabrics occur in the Roman period at Bourne, for example).

Dating and frequency

This group of fabrics is mainly found on the Flaxengate site (F72) (*c.*85 vessels) where it forms nearly 1% of the post-Roman pottery in horizon ASH7 deposits (mid to late 9th century). A few other isolated vessels have been found in late 9th- to 11th-century deposits on other sites in the city (*c.*22 vessels). Fabric B vessels have been found at sites at Crowland and Stow in the county, associated on both sites with other Late Saxon material.

Early Stamford ware (EST) (Fig. 63)

Fabric and technology

This grouping is used to cover Kilmurry's (1980) Fabrics E/F, H, and A/D as discussed by Leach (Leach 1987, 69–74). Individual fabric types as

defined by Kilmurry (1980, 8–9) were only recorded on a few sites and this information was recorded in the database under 'comments'. The recorded fabric information shows that the E/F fabrics are rare and that Fabrics A and D are equally common in late 9th- to early 11th-century deposits. No sherds in Fabric H have been noted from the city. Pottery from Flaxengate (F72) (Adams Gilmour 1988, 123–33) shows that the earliest stratified fabric is Fabric D, followed by Fabric A sometime before the end of the late 9th century. Fabrics E and F only occurred residually. Although Fabrics A and D are of equal importance throughout the period between the late 9th and early 11th century, Fabric D is more commonly used for high quality glazed vessels such as bowls, cups, pitchers and storage vessels.

Vessel types

In Lincoln, sherds from unglazed jar vessel Forms 2/3 (Kilmurry 1980, 13–20) constitute *c.*30% of the material identified and those from glazed pitcher Forms 5/8 (eg, Fig. 63, 391–2 for Form 8: 390 and 393–6 for Form 5) constitute *c.*52%. Almost all the glazed pitchers are decorated with diamond or square roller stamping, incised lines or thumb pressed strips. Two red-painted Form 5 rims are known from the city (eg, Fig. 63, 395). Bowl Forms 7/12/14/15, both glazed and unglazed, constitute *c.*5% of the Early Stamford ware reaching Lincoln (eg, Fig. 63, 397–399). Other rarer Forms found are the globular cup Form 9 (eg, Fig. 63, 389), the large storage vessel Form 21 (eg, Fig. 63, 400–1) and glazed pedestal vessel Form 10.

Source

Eight examples of Early Stamford ware from Lincoln were examined in thin-section. Some were assigned Kilmurry fabric letters but others were not. They occur in a variety of textures, of which the six finer examples match Kilmurry's published petrological descriptions, but two coarser ones, containing quartz sand with rounded grains between 0.6mm and 1mm across, do not. In addition to the early production at Stamford, white-firing pottery of similar character is known from Northampton (Williams 1974, 46–56). However, the scale of the latter production is unknown and it would be reasonable to assume that of the two known sources it was Stamford which was supplying Lincoln.

Dating and frequency

This ware has been found on 37 sites in the city, mainly on those with late 9th- to early 11th-century occupation. Early Stamford ware forms about 0.5% of ASH7 horizons (mid to late 9th century), 1% of ASH8 horizons (late 9th to early 10th century), and falls to, and remains below, 0.2% after this. The ware

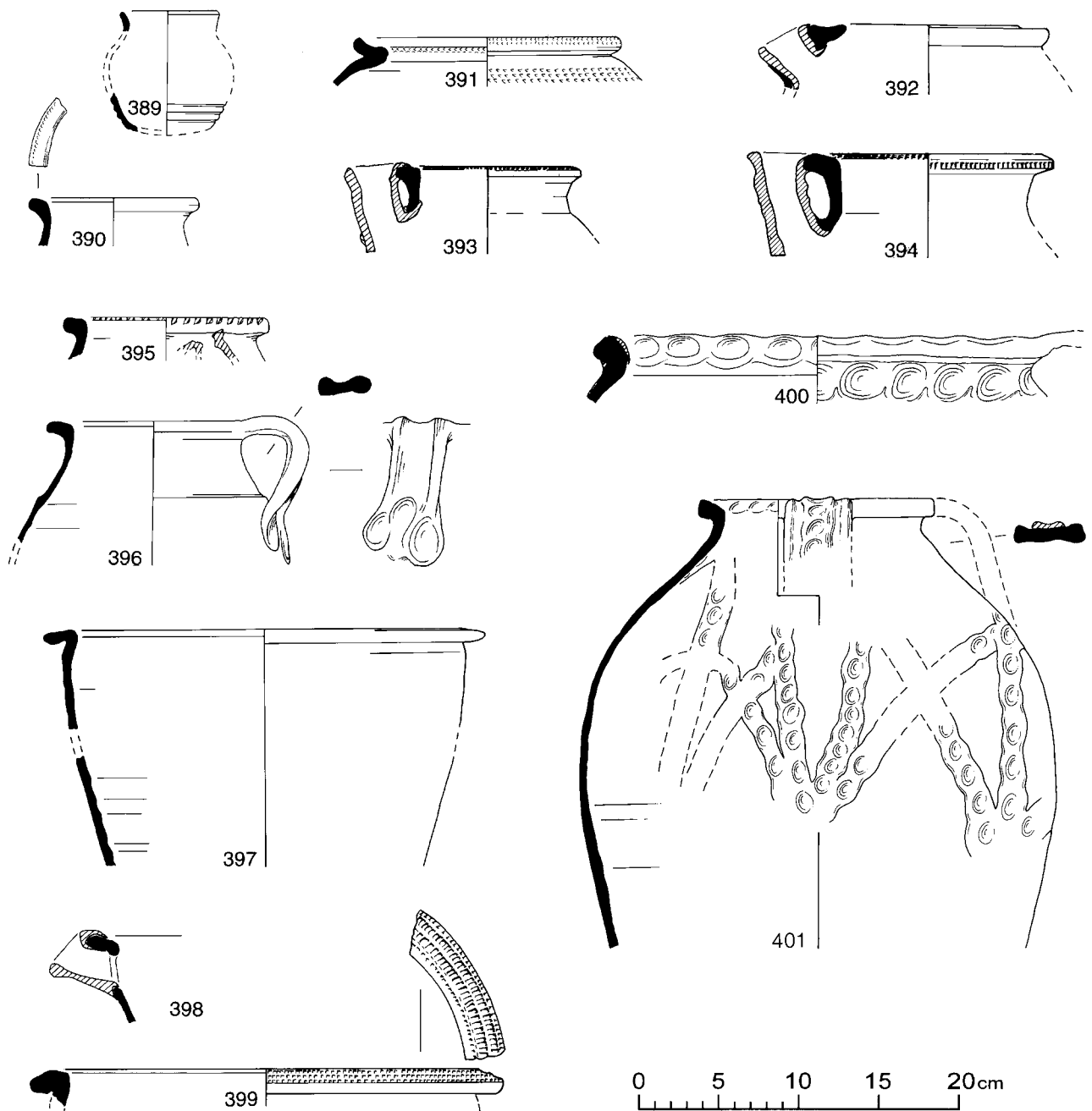


Fig 63 Early Stamford Ware: cup 389; pitchers 390–396; bowls 397–399; storage jars 400–401. Scale 1:4

is probably residual after horizon ASH12 (the early/mid 11th century).

Leicester-type ware (LEST) (Fig. 64, 402–3)

Description

This ware has been described in detail elsewhere (Hebditch 1967–8, 4–9; Adams Gilmour 1988, 157) and is only summarised here. Vessels are wheel-thrown and both oxidized and reduced examples

occur. All the sherds from Lincoln are from small to medium sized jars (eg, Fig. 64, 402–3).

Source

Two samples of Leicester-type ware were examined in thin-section. The first is visually identical to the material from the Leicester kiln and contains, in addition to moderate subangular quartz, sparse rounded quartz and moderate ?altered glauconite. The second sample was lower fired and contained

only the subangular quartz. Without comparative samples from the Leicester kiln it is impossible to say anything further about the source of these sherds.

Dating and frequency

Only five vessels from the Flaxengate site (F72) have confidently been identified as Leicester-type ware, with the earliest vessel coming from a ASH7 horizon (mid to late 9th century). One rim sherd from an exact parallel with a vessel from the Southgate Street kiln, Leicester (Hebditch 1967–8; Fig.64, 402) was found in a make-up dump of mainly residual ASH7 and ASH8 material (mid 9th to early 10th century), but not deposited until horizon ASH9 (early/mid to mid 10th century).

Nottingham-type ware (NOTTS) (Fig. 65)

by V. Nailor

Introduction

Prior to thin-section analysis, two fabrics identified in Lincoln during work on the Flaxengate material as being of probable Nottingham origin were of dubious attribution, as much of the pottery was not directly comparable with the known waster material from the Halifax Place kiln, Nottingham (Nailor 1984). One of the two original fabrics identified (fabric Q/6/M/9, Adams Gilmour 1988, 144–5), was felt to be more closely related to the kiln wasters from Nottingham and has been retained as a Nottingham type, although this must not be taken as evidence that vessels were

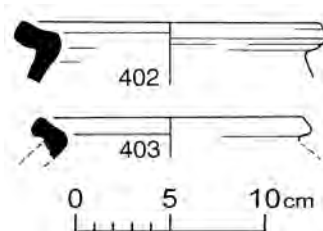


Fig 64 Leicester-type Ware. Scale 1:4

actually produced in Nottingham. The remaining fabric (Q/6/M/53) appears to be more visually similar to sherds recovered from a kiln at Newark and sherds of this type have now been termed Newark-type ware (NEWS). Until more work takes place on this type of Late Saxon sand-tempered ware, no definite attributions can be made, as thin-section analysis shows both the Lincoln fabrics, sherds from the Halifax Place kiln, and the Newark pottery have a similar temper and clay source. Indeed, a similar type of sandy ware may have also been produced in Lincoln (sherds of Lincoln Saxo-Norman Sandy ware, recovered from a kiln in the city (SES97), are visually similar to Nottingham-type ware and Newark-type ware).

Fabric and technology

Sherds are fairly hard-fired, tempered with medium sand (usually moderate to common), sparse iron, and cream-coloured anhydrite. With the exception of bowls, vessels are normally reduced, ranging from

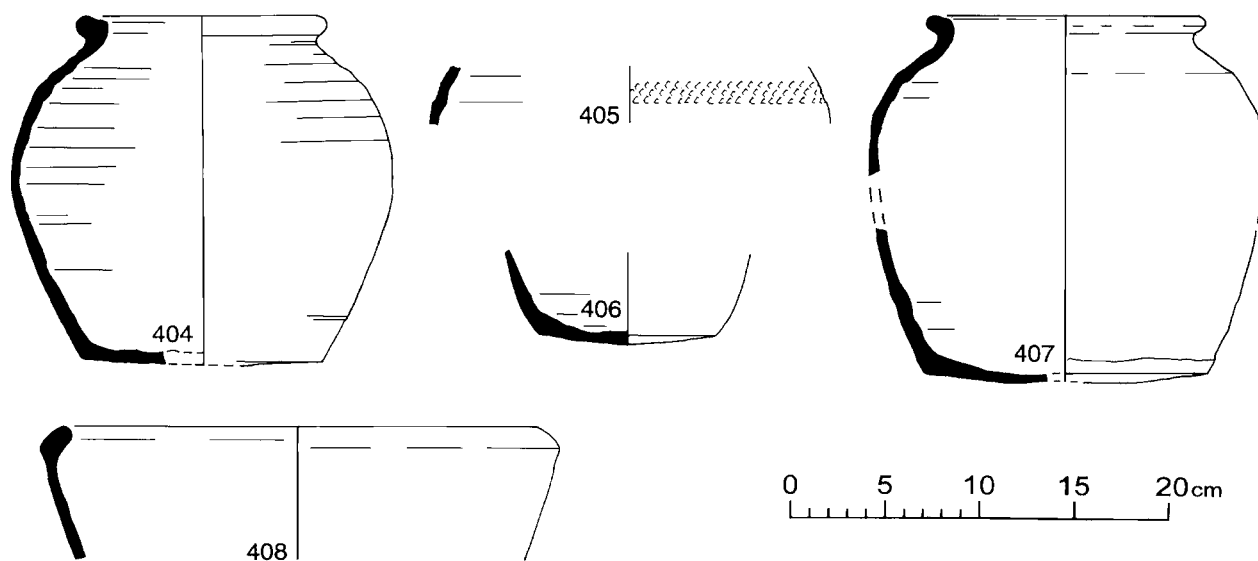


Fig 65 Nottingham-type Ware. Scale 1:4

grey, grey-brown to dark grey, with predominantly orange-pink or red-brown margins and a grey core. The jars are all wheel-thrown and well-finished, bowls are probably coil-built and wheel-finished, and a few storage vessel sherds appear to be coil-made. Jar rims appear to have been made using a simple tool as a former, with bases externally trimmed. Decoration consists of bands of either square or diamond roller-stamping (eg, Fig. 65, 405), incised horizontal lines, or vertical applied thumbed strips on storage vessels (Nailor 1984).

Vessel types

With the exception of one possible handle or spout (a form not found amongst the Nottingham waster materials), all known vessels from Lincoln were rounded jars with thickened, everted rims (eg, Fig. 65, 404–7). Only a few vessels had an internally hollowed rim, which was the most common rim from the Halifax Place waster group. The inturned bowl rim from Lincoln (Fig. 65, 408) did not occur in the Halifax Place waster group, in which thickened, triangular rims were common. There were examples of storage vessels in the Nottingham waster assemblage, although none was found in Lincoln.

Source

Two samples of Nottingham-type ware were examined in thin-section (L2221–2). The sand temper is similar in both samples and has the same size range and composition as other Trent Valley sands. One of the samples has a variegated clay matrix with streaks of both lower and higher iron content. The low-iron clay is never present as clay relicts and the streaks are thin. Nottingham Glazed ware was probably manufactured using Coal Measure white-firing clays but the light-coloured clay in Nottingham-type ware is probably from a different source. During the course of the excavation of Halifax Place, Nottingham (1978–80), a group of Late Saxon pottery was found in association with fragments of a fired clay “fire-arch” or “fire-bar”. The material exhibited characteristics associated with wasters, and was located in the possible stoke-hole of a kiln (Nailor 1984).

Dating and frequency

Nottingham-type ware has been found in relatively small amounts, a total of 177 sherds, most of which (133 sherds) came from the Flaxengate site (F72). It also occurs in small numbers on 18 other sites in the city. Vessels found in mid-10th-century deposits (horizon ASH10) may be stratified, whereas material found in later contexts is probably residual. The kiln waster group from Halifax Place, Nottingham, was previously considered to date to the late 10th or early 11th centuries (Nailor 1984), subsequent discussion about specific pottery characteristics indicate that a

date early in the 10th century is more likely (Nailor & Young 2001). Features to support this include the use of ‘diamond’ roller stamping, thickened, triangular bowl rims, and the use of a former in producing jar rims. Sherds of Nottingham-type ware have also been found associated with late 9th- or early 10th-century Lincoln wares at a site in Old Leake (Palmer-Brown 1996).

York ware (YW) (Fig. 66)

Description

York ware has been described in detail elsewhere (Mainman 1990, 400–11) and its occurrence in Lincoln is summarised here. All the Lincoln sherds are wheel-thrown and conform to the fabric description given by Mainman (op. cit., 406). Only seven small jars have been found in the city (eg, Fig. 66, 409–11), all on the Flaxengate site (f72), the earliest in ASH7 and ASH8 horizons (mid 9th to early 10th century).

Source

The three examples of York ware examined in thin-section are typical of products of the York area, containing abundant sand and sandstone fragments. The sand includes quartz, sheaves of muscovite and feldspar grains, indicating its probable origin in a feldspathic sandstone such as the Millstone Grit.

Late Saxon Miscellaneous Imported fabrics (LSIMP) (Fig. 67)

Description

With the exception of two vessels all these fabrics are tempered with fine quartz below 0.5mm and have a smooth external texture. All are hard-fired, wheel-thrown and, with one exception, fall into a colour range of very light grey to cream. Only one vessel has any form of decoration (Fig. 67, 413) and this consists of red painted smears. The vessel is a large pitcher similar to one in Ipswich ware from Lurk Lane, Beverley (Watkins, 1991, Fig. 56). Other identified forms are jars (eg, Fig. 67, 412) and a bottle.

Source

Four samples of Late Saxon Miscellaneous Imported fabrics were examined in thin-section. The first, probably a jug/pitcher with internal flange, L1946, contains moderate quantities of quartz sand, containing rounded ‘Greensand’ quartz grains and some chert in a groundmass of anisotropic light-coloured clay minerals with abundant angular quartz silt, moderate muscovite, and sparse reddish clay pellets. None of these inclusions are particularly diagnostic, although they would exclude a Rhenish or Meuse valley source and point to the Seine valley or a similar area of northern France. L1535 contained a quartzose

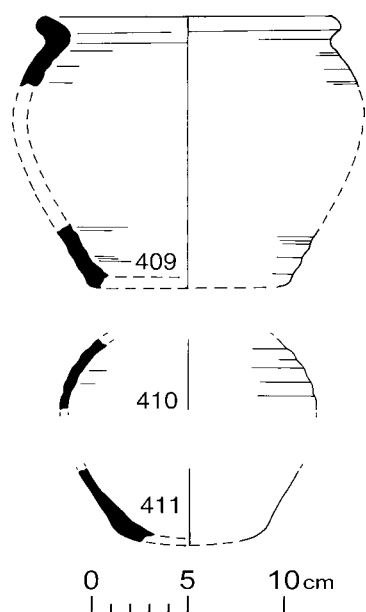


Fig 66 York Ware. Scale 1:4

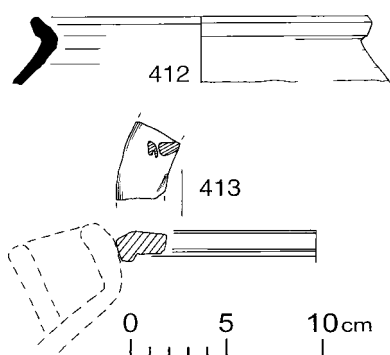


Fig 67 Late Saxon Miscellaneous Imported Fabrics.
Scale 1:4

sand (quartz and some sandstone) in a low-fired, inclusionless clay matrix. Nothing can be said of its source from this petrology. L1536 and L1980 contained abundant quartz silt with sparse larger sand grains in a high-fired clay matrix. The latter sample also included sparse rounded calcareous inclusions, which although heat-altered included a possible fragment of bivalve shell, pierced by fungal boreholes.

Dating and frequency

Only seven vessels have been found in the city in deposits of the late 9th to the 11th century. A number of vessels previously thought to have been imported (Adams Gilmour 1988, 165) have now been shown by thin-section analysis to be of local or Stamford manufacture.

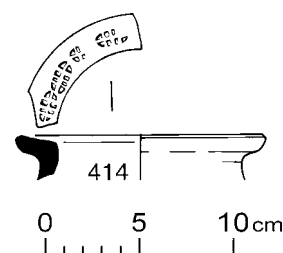


Fig 68 Early Glazed Ware. Scale 1:4

Early Glazed ware; York Type 1 (ESG) (Fig. 68)

Description

A single jar or pitcher rim sherd (Fig. 68, 414), similar to Early Glazed ware group 1 found at York (as described by Mainman 1990, 445–50), was recovered from the Holmes Grainwarehouse site (HG72) in the suburb of Wigford in a ASH11 horizon (late 10th century). A thick yellow crazed glaze covers the rim both internally and externally. An indistinct oval grid stamp has been impressed into the rim top.

Source

The source of these vessels has recently been discussed by Coutts (1991, 167–9, pl 5, 19).

Examples of Early Glazed ware of visually similar type have been found at York, London and sites along the south coast. The use of oval-sectioned applied strips sometimes combined with diamond roller-stamping and sometimes with individual stamps (as with the Lincoln sherd) is paralleled in the contemporary Rouen industry, although the use of individually-stamped applied bands is of course also a feature of Badorf *reliefbandkeramik*. Chemical analysis of Early Glazed ware from York by Daniel Dufournier at Caen does not rule out a Rouen origin, but indicates a greater similarity with samples of whiteware produced from the Estuarine Beds of the East Midlands (samples of Developed Stamford ware from the Bryggen in Bergen). Related light-firing clays occur to the north-east of York. A Stamford source, which is also chemically possible, is unlikely given the absence of examples from Stamford itself and its rarity in Lincoln.

Huy-type ware (HUY) (Fig. 69)

Description

Pottery production at or near Huy, in the Meuse valley, has been known about for sometime (Giertz 1996, 33–61), although it was only brought to the attention of English researchers at the 1995 MPRG conference as a possible source for unusual glazed Andenne-types that were found in 10th-century or

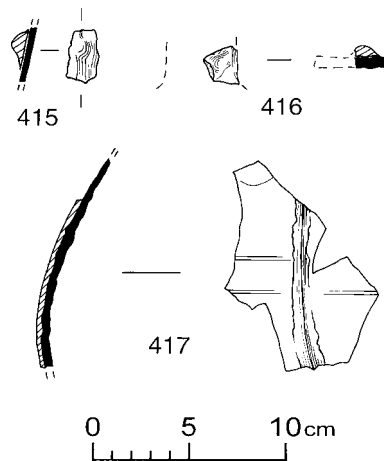


Fig 69 Huy-type ware. Scale 1:4

earlier contexts in England. Wolfram Giertz has identified the Lincoln samples as probably being products of Huy kilns. All five Lincoln vessels are finely thrown and have a thick lustrous yellow glaze. Three vessels are decorated, two with applied nodules (Fig. 69, 415–6) and one with vertical applied triangular section strips (Fig. 69, 417). There is not enough of the Lincoln vessels to be sure of their vessel type but they are probably all pitchers.

Source

Three samples of Huy-type ware were examined in thin-section. One of these had inclusions typical of Cretaceous deposits: well-rounded quartz sand and sparse rounded chert or flint in a low-fired matrix containing few inclusions. The other two had almost identical fabrics with variegated clay matrices containing streaks of white-firing clay and abundant well-sorted subangular quartz sand. Without comparative material it is impossible to say how similar these fabrics are to material from Huy itself.

Dating and frequency

There are five vessels from four different sites in the city. The two vessels with nodules from the Flaxengate (F72) and Saltergate (LIN73E) sites (Fig. 69, 415–6) are of an earlier type probably of late 9th- or early 10th-century date, whilst the other vessels are of late 10th century or later date (pers comm Wolfram Giertz, 1996). The early F72 vessel was found scattered in horizon ASH9 deposits (early/mid to mid 10th century) that are composed of mostly residual ASH7 and ASH8 material (mid 9th to early 10th century). The later type, LIN73D/E vessel (Fig. 69, 417) comes from horizon ASH11 (late 10th century) deposits. Other vessels occur residually.

Saxo-Norman (c.1000–c.1120)

Introduction

National Context

Ceramics of the 11th and early 12th centuries in England are of two main traditions. Wheel-thrown and glazed wares similar in form and fabric to those used in the preceding period are found over much of England, although they are much more common in the Danelaw than further south or west. Throughout England, on either side of the Danelaw boundary, handmade wares of medieval form made their first appearance at this time. In London, they completely replaced the earlier wheel-thrown shelly ware sometime between c.1039/40 and c.1055 (Vince and Jenner 1991). Further north, it seems that wheel-thrown industries survived better and the proportion of “early medieval” wares is lower. Continental imports re-appeared during this period and originated either at Rhenish or Meuse valley centres or in sites in North-West France. Sites in Eastern England normally received Rhenish and Meuse valley imports whilst those along the south coast received French wares. Despite the resurgence of handforming as a production technique, there is little innovation in the range of vessel classes used at this period, except in Southern and Western England where globular, glazed tripod-pitchers made their appearance in the second half of the 11th century. Elsewhere, glazed, wheel-thrown pitchers continued to be used, but were more common than in the preceding period.

Lincoln Production

There is evidence for the production of one Saxon-Norman ware in Lincoln, SNLS, a sandy ware.

Local Production

Two wares of local origin are found in Lincoln at this time. Lincoln Fine-shelled ware products were mainly hand-made jars, and supplied the majority of cooking vessels used in the city. The other ware is possibly the product of more than one centre and consists of wheel-thrown shelly and sandy types, none of which is common.

Regional Imports

Pottery from a variety of known and unknown sources is found in Lincoln in the 11th and early 12th centuries. The most common in the 11th century is Torksey ware (TORK), but similar vessels were also being obtained from Newark (NEWS), possibly Derby (DERB), and probably other centres in the Trent Valley (TORKT). Thetford-type wares are present and occur in several fabrics, some of which may be provenanced, and others, whilst distinctive,

are not yet sourced. Stamford was the main supplier of glazed wares, but also provided unglazed cooking wares, and Winchester-type ware from southern Hampshire may also be present.

Continental Imports

Rhenish and Meuse Valley wares are relatively common imports (ANDE and PING) and a few unsourced imports (SNIMP and CROW) were also used.

Vessel Forms

Jars, probably mainly used for cooking, are the more common form used in 11th- and early 12th-century Lincoln, although bowls form a sizeable minority of the vessels used. Pitchers, both glazed and unglazed, are also common. Other forms, such as pedestal lamps and storage jars, occur but are not common.

Lincoln Saxo-Norman Sandy ware (SNLS) **(Fig. 70–2)**

Introduction

This ware has been described in detail elsewhere (Young 1989, 223) and is only summarised here.

Fabric and technology

Vessels are fired to a medium hardness and have a sandy surface texture. They occur both fully reduced (light grey to dark grey) and fully oxidized (light orange to reddish-brown). Oxidized examples are unusual before horizon ASH13, by which time they can be more common than reduced examples. The fabric is tempered with moderate to abundant rounded quartz up to 0.5mm, along with sparse iron-rich grains, sparse rounded chert, sparse sandstone and occasional calcareous material. All vessels are wheel-thrown, although some of the larger pitchers are piece made. There is less attention to finishing detail than on the earlier, main Lincoln-produced, sand-tempered ware (LSLS), although this is not always helpful with individual small body sherds when trying to distinguish between the two ware types. Decoration, other than the use of direct thumb/finger pressing on the rim edge, is rare and consists of thumb-pressed strips and incised wavy lines.

Forms

The principal form is a medium-sized jar (Fig. 70, 427–39) whose basic shape is similar to that of the Late Saxon shell-tempered wares (LKT and LSH) and does not appear to change much throughout the currency of the ware. Small jars (Fig. 70, 420–6) occur quite commonly and here there is more variety in shape than within the medium-sized jars (eg, biconical 423, and squat 425). Large jars (eg, Fig. 71,

440) and tiny jars/beakers (eg, Fig. 70, 418–9) are found less often. The tiny jar with a finger pressed rim (Fig. 70, 419) shows signs of a small applied spout on the shoulder (this is now known to be a different ware-type). A wide range of bowls is found, with many of the shapes copying those of Torksey ware examples. The main rim types are inturned (eg, Fig. 71, 442), plain flanged (eg, Fig. 71, 444–9) and thumb-pressed flanged (eg, Fig. 71, 450–5). The thumbing on most Lincoln Saxo-Norman Sandy ware bowls is distinctive as it was usually formed by pinching the rim edge (eg, Fig. 71, 450, 452 and 455), although the more Torksey-type pie-crust effect is sometimes found (eg, Fig. 71, 453). Occasionally hooked-over rims are found (eg, Fig. 71, 443) similar to those on LFS bowls. Pitchers are rare, and those that are reconstructable seem to show little variation (eg, Fig. 72, 460–1). Other rare forms include pedestal lamps (eg, Fig. 71, 456–8), lipped jars (eg, Fig. 71, 442), and stands (eg, Fig. 71, 459).

Source

Four samples of Lincoln Saxo-Norman Sandy ware were examined in thin-section. They contain a typical 'local' siliceous sand composed mainly of quartz with some chert and sandstone. Sparse fragments of basic igneous rock, non-ferroan calcite and altered feldspar were also present. The samples varied slightly in the character of their clay matrix: one contained laminated clay pellets and two contained sparse flecks of muscovite up to 0.04mm long. These differences may be significant, but might simply result from variation within the clay source or even from methods of sample preparation and variation in firing temperature. Small numbers of waster sherds have been found on at least two, and possibly three, sites in Lincoln: (Flaxengate (F72), Flaxengate 1945–48 (FLAX45–7, Coppack 1973), and possibly Holmes Grainwarehouse (HG72)). More recently, however, excavations at the Sessions House (SES97), c.200m north-east of the Silver Street kiln, have uncovered the remains of a kiln filled with Lincoln Saxo-Norman Sandy ware jar wasters, possibly the last load to be fired in the kiln (Fig. 194 No 6). The areas around the kiln and part of the kiln build itself contained a high number of shell-tempered LSH wasters, suggesting that the two industries were linked. These Lincoln Saxo-Norman Sandy ware jars are identical in form and rim shape to late, plain examples of Lincoln Late Saxon Shelly ware, and may turn out to represent an attempt by potters previously making shell-tempered pottery at producing reduced, sand-tempered wares. To the west of this site a dump of waste pottery from a different SNLS production has been found (Fig. 194 No 5).

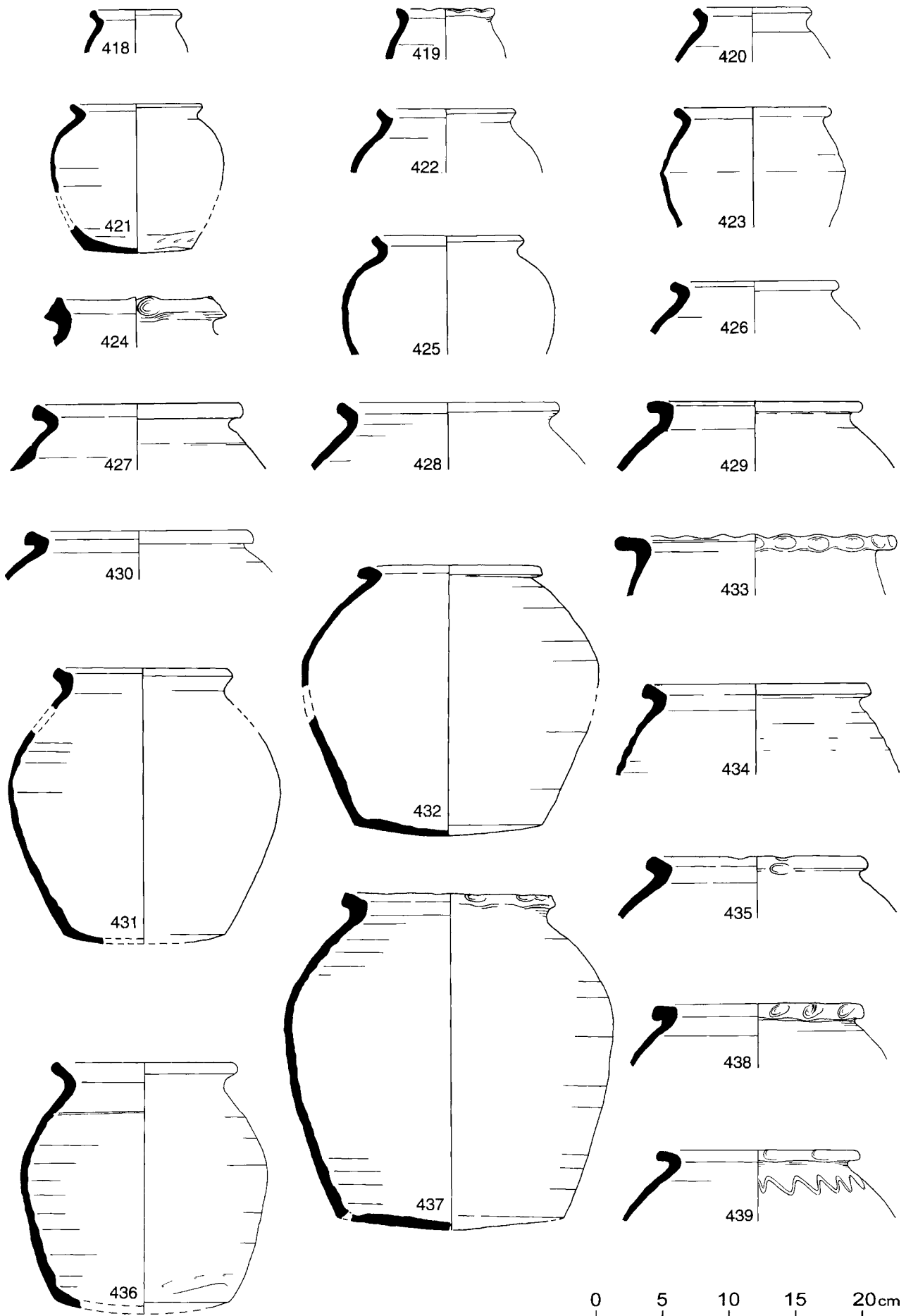


Fig 70 Lincoln Saxo-Norman Sandy Ware: tiny jars/cups 418-419; small jars 420-426; medium jars 427-439.
Scale 1:4

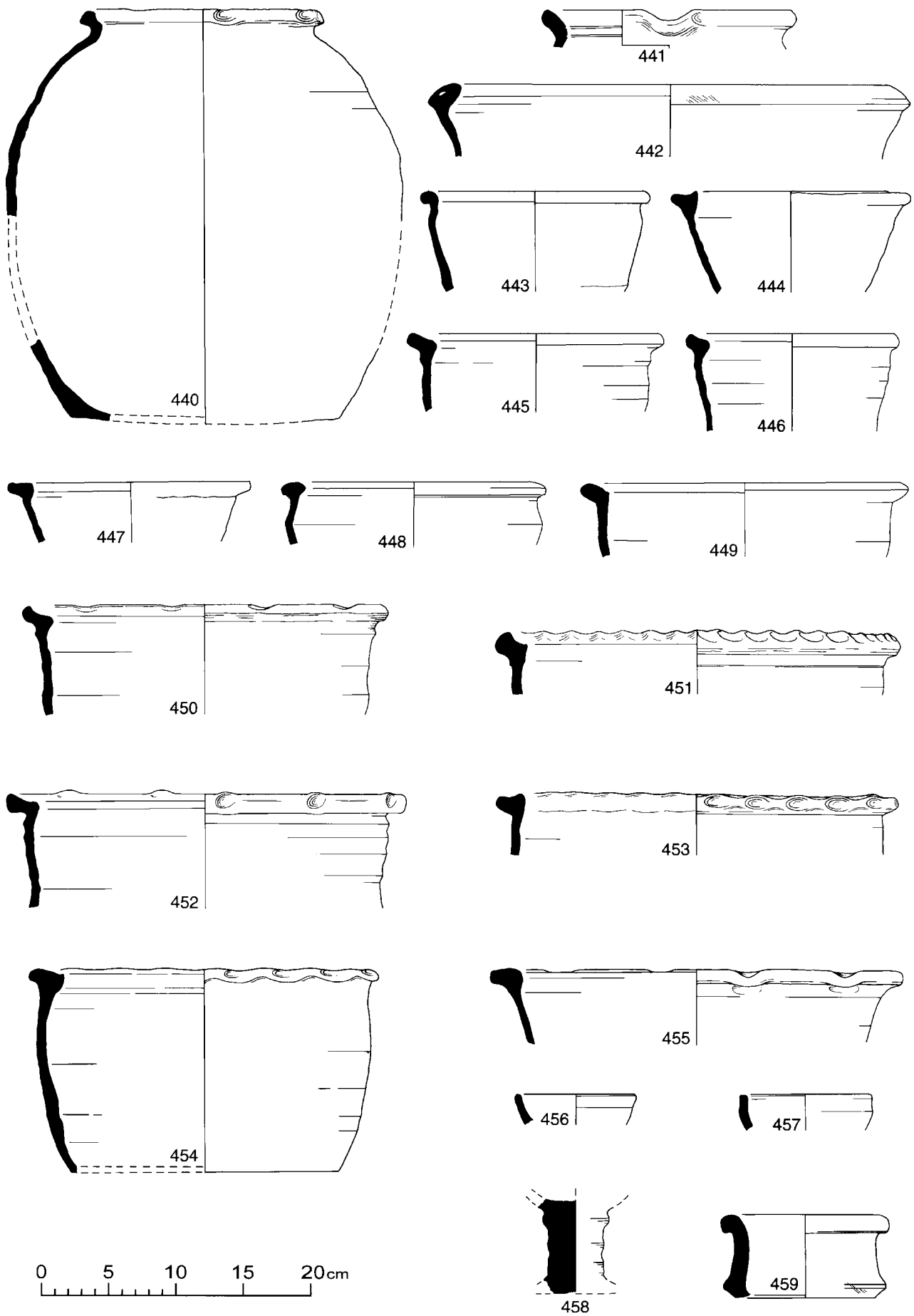


Fig 71 Lincoln Saxo-Norman Sandy Ware: large jar 440; lipped jar 441; bowls 442–455; pedestal lamps 456–458; stand 459. Scale 1:4

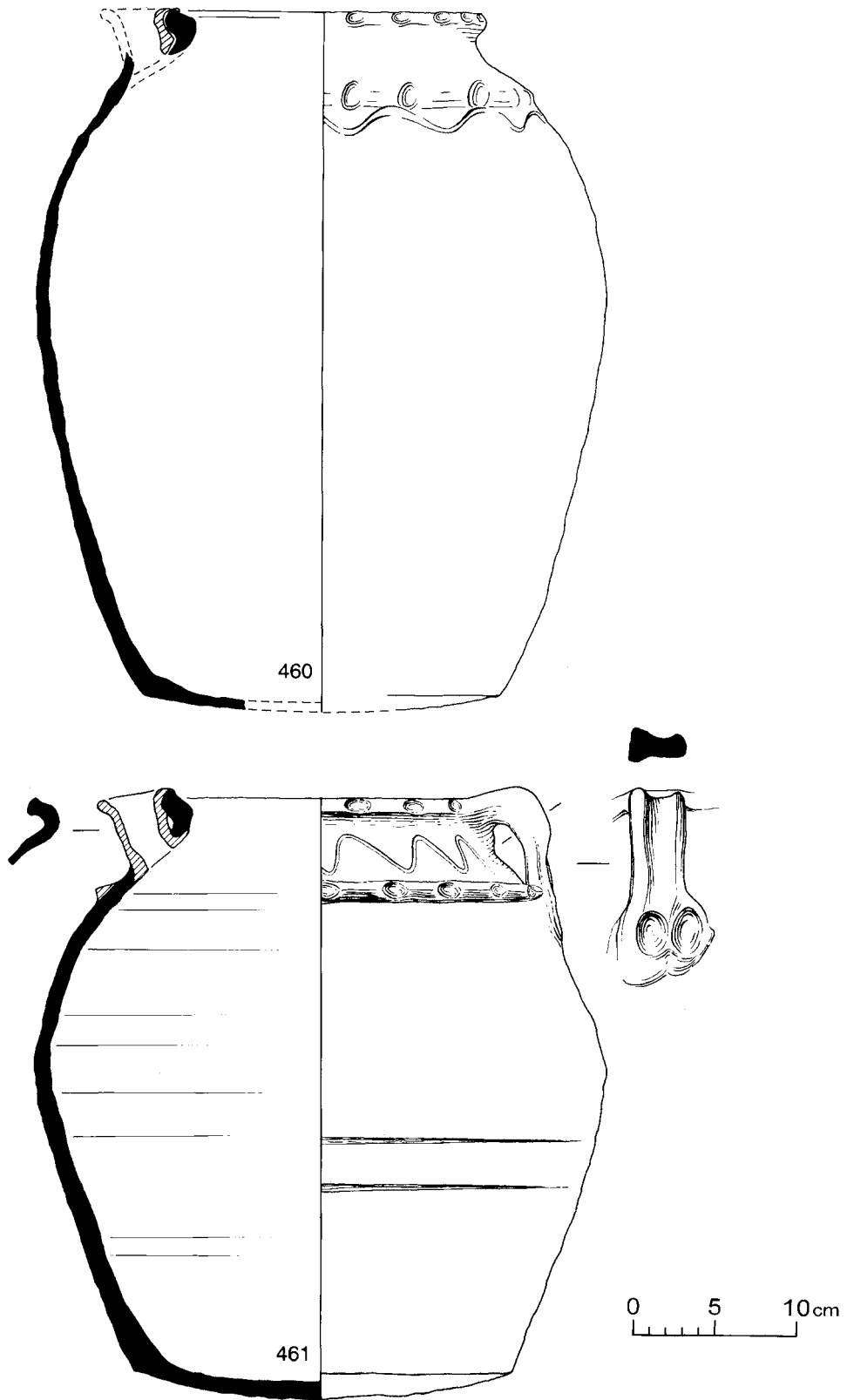


Fig 72 Lincoln Saxo-Norman Sandy Ware: pitchers 460–461. Scale 1:4

Dating

Lincoln Saxo-Norman Sandy ware is first found stratified in ASH11 horizons (late 10th century) where it forms *c.* 3% of the pottery. This increases to *c.* 12% in ASH12 (early to early/mid 11th century), then *c.* 16% in ASH13 (early/mid to mid/late 11th century), and drops to *c.* 7% by ASH14 (late 11th century) by which time it is probably residual. The ware is found on almost all sites in the Lower City and Wigford but is notably absent or rare on most sites on the extreme western side of the Upper City.

*Local Saxo-Norman fabrics (SNLOC) (Fig. 73)**Fabric and technology*

This is a group of loosely associated fabrics, whose inclusions fall into a range that is to be expected locally. Both fabrics tempered with fossil bivalve shell and those tempered with subangular to rounded quartz are found. Very few of the fabrics are distinctive, and in most cases within the city only one example of each fabric type exists; no attempt has therefore been made to subdivide this type into smaller groupings. All the vessels are wheel-thrown.

Forms

Two reduced, sand-tempered jars (Fig. 73, 462–3) from the Goltho Manor site (GM74) (Coppack 1987, Fig. 140, 312–3), are illustrated as being typical of jar and rim shapes found on Local Saxo-Norman fabrics vessels.

Source

Only one sherd of a Local Saxo-Norman fabric has been examined in thin-section (L1726). It contained a mixture of shell sand derived from shelly limestone and an abundant siliceous sand.

Dating

These fabrics are not common in the city: only 159 examples are recorded. They are more commonly found on rural sites the county, mainly to the north and east of the city, such as Goltho (GM74) (Coppack 1987). Less than twenty sherds are usefully stratified within the city and these occur from horizon ASH7 to ASH14 (the late 9th to the early 12th centuries).

*Lincoln Fine-shelled ware (LFS) (Figs. 74–9)**Fabric and technology*

This ware has been described in detail elsewhere (Young 1989, 223; Adams Gilmour 1988, 113–4) and is only summarised here. Fabric hardness, surface texture and colour change through time. Earlier late 10th- to mid 11th-century (ASH11 to ASH13) vessels are soft, have a slightly gritty surface texture and fall within a colour range of light red to red surfaces, with a thick grey to dark grey core. Later vessels of the late 11th to late 12th century (ASH14 to MH3) have a smoother surface texture, are harder fired and have reddish-yellow to grey surfaces with lighter reddish-yellow margins and a thinner grey to dark grey core. Common to abundant fragments of bivalve shell up to 2mm, but mostly in the range 0.5mm to 1mm, with sparse rounded iron-rich grains, are visible in a fresh break. Vessels are hand-made by coil/ring building with some wheel finishing on mid 12th-century and later jars. Decoration is rare and includes thumb and fingernail impressions on the edges of rims, incised parallel or wavy lines and circular incuse stamps.

Forms

Jars are the most common form found, although

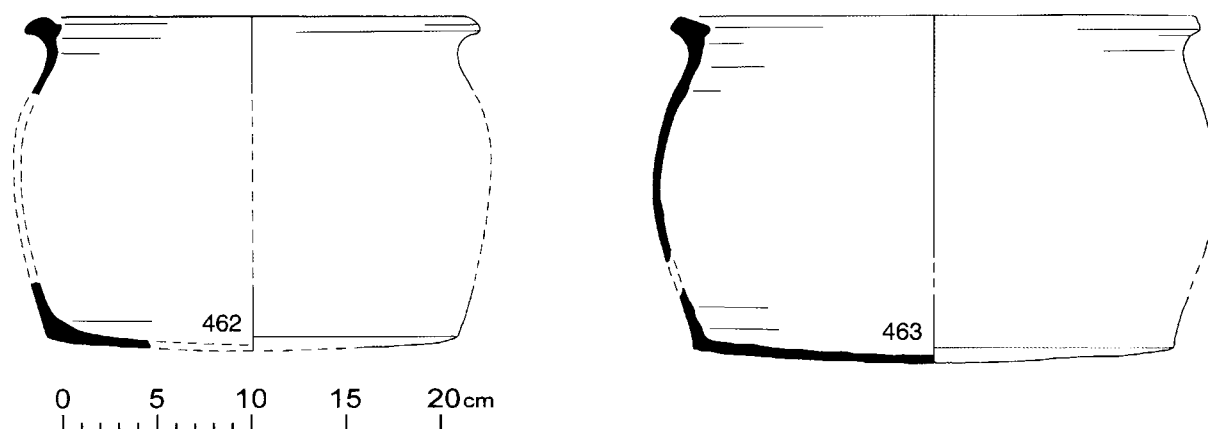


Fig 73 Local Saxo-Norman Fabrics: jars 462–3. Scale 1:4

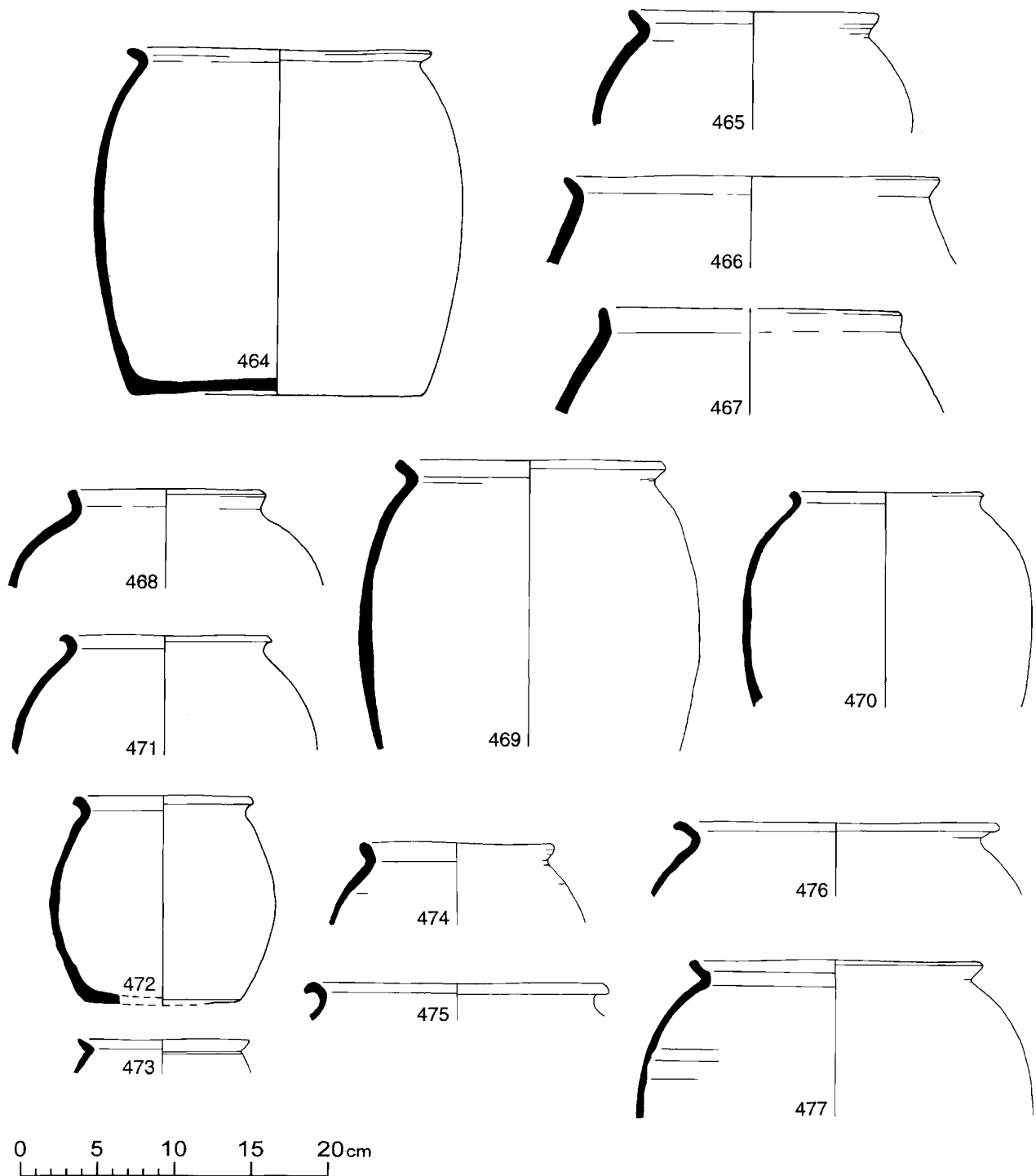


Fig 74 Lincoln Fine-Shelled Ware: jars 464–477. Scale 1:4

bowls are also an important part of the Lincoln Fine-shelled ware potter's repertoire. Overall, jars form c.85% of the identified forms and bowls c.14%, with bowls on the Flaxengate (F72) site being more important in the early 11th century (horizon ASH12) at c.17%, than in the late 12th century (horizon MH3

at c.10%). Early vessels change little in shape from those produced in the 9th-century Early Lincolnshire Fine-shelled ware fabric. Until the late 11th century (horizon ASH14), jar base and rim diameters are roughly equal, with the vessels having only slightly curved sides and no shoulder (Fig. 74, 464–75). Rims

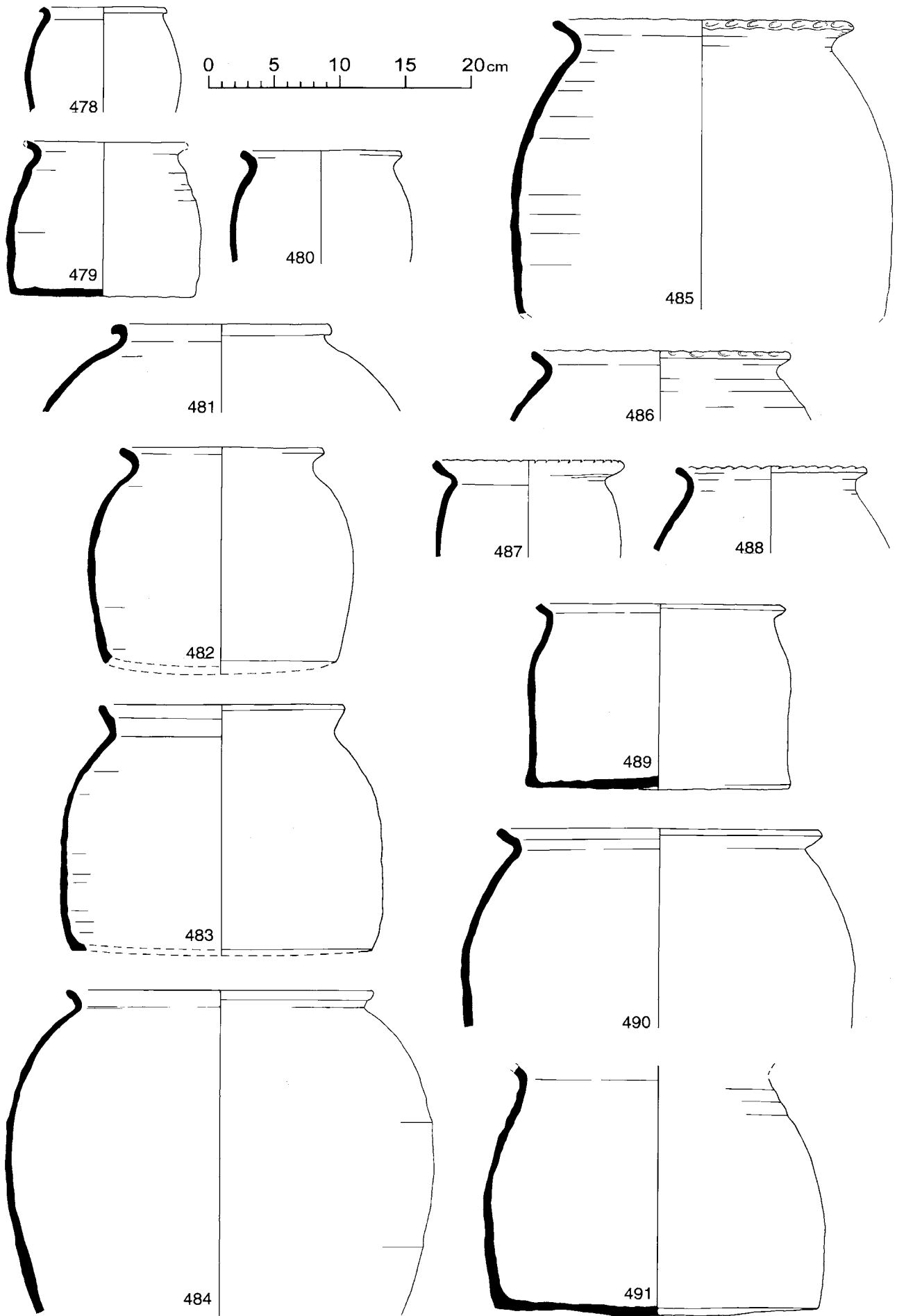


Fig 75 Lincoln Fine-Shelled Ware: jars 478-491. Scale 1:4

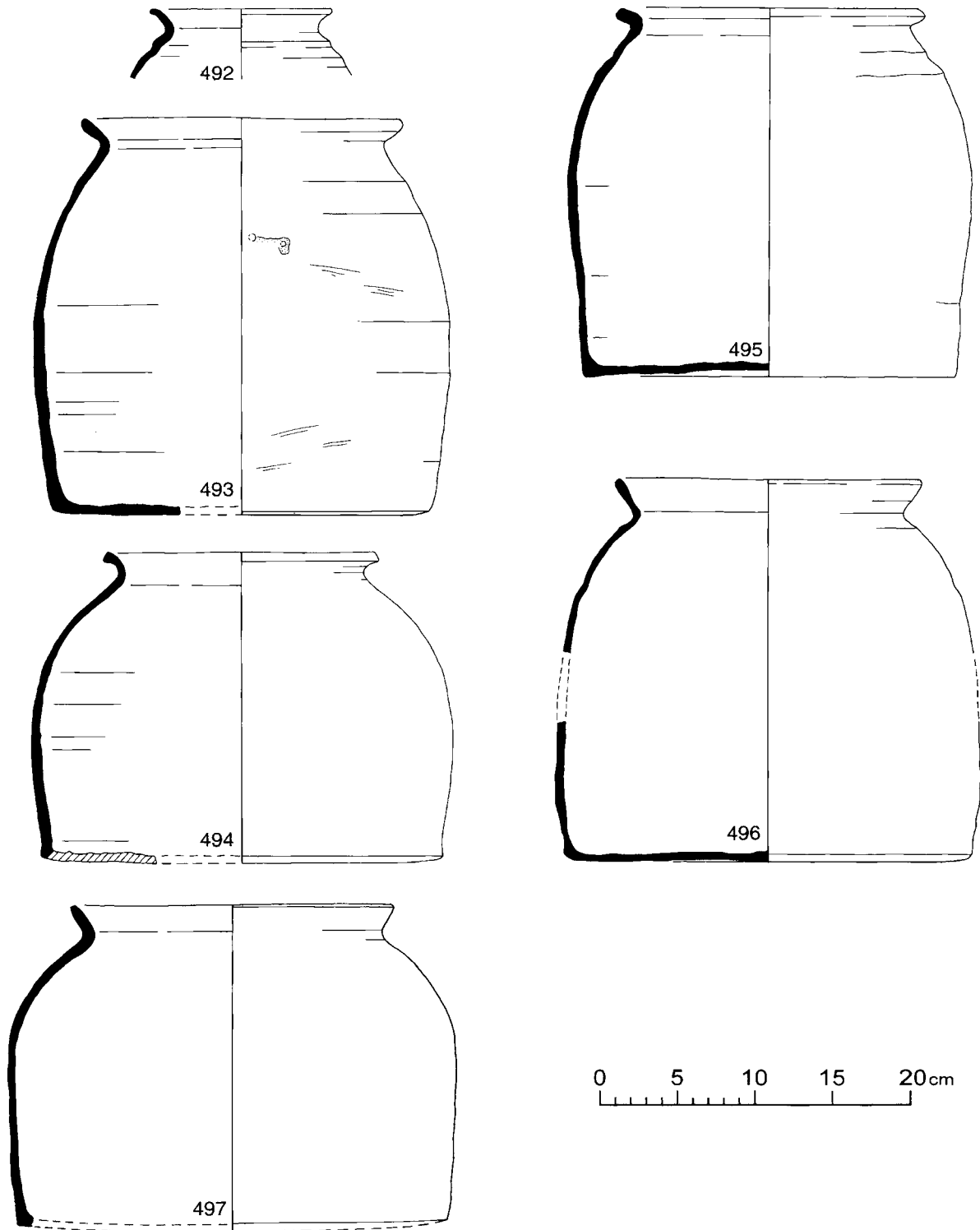


Fig 76 Lincoln Fine-Shelled Ware: jars 492–497. Scale 1:4

are simply everted or occasionally hooked over. By the end of the 11th century (horizon ASH14), vessel sides have begun to be more curved, rims become more complex and the rim to base ratio begins to alter (Fig. 74, 476–7 and Fig. 75, 478–91). Towards

the end of the currency of Lincoln Fine-shelled ware, by the last quarter of the 12th century (horizon MH3), a wide-based form with ridged shoulders and standard large medieval cooking pot shape has evolved (Fig. 76, 492–7).

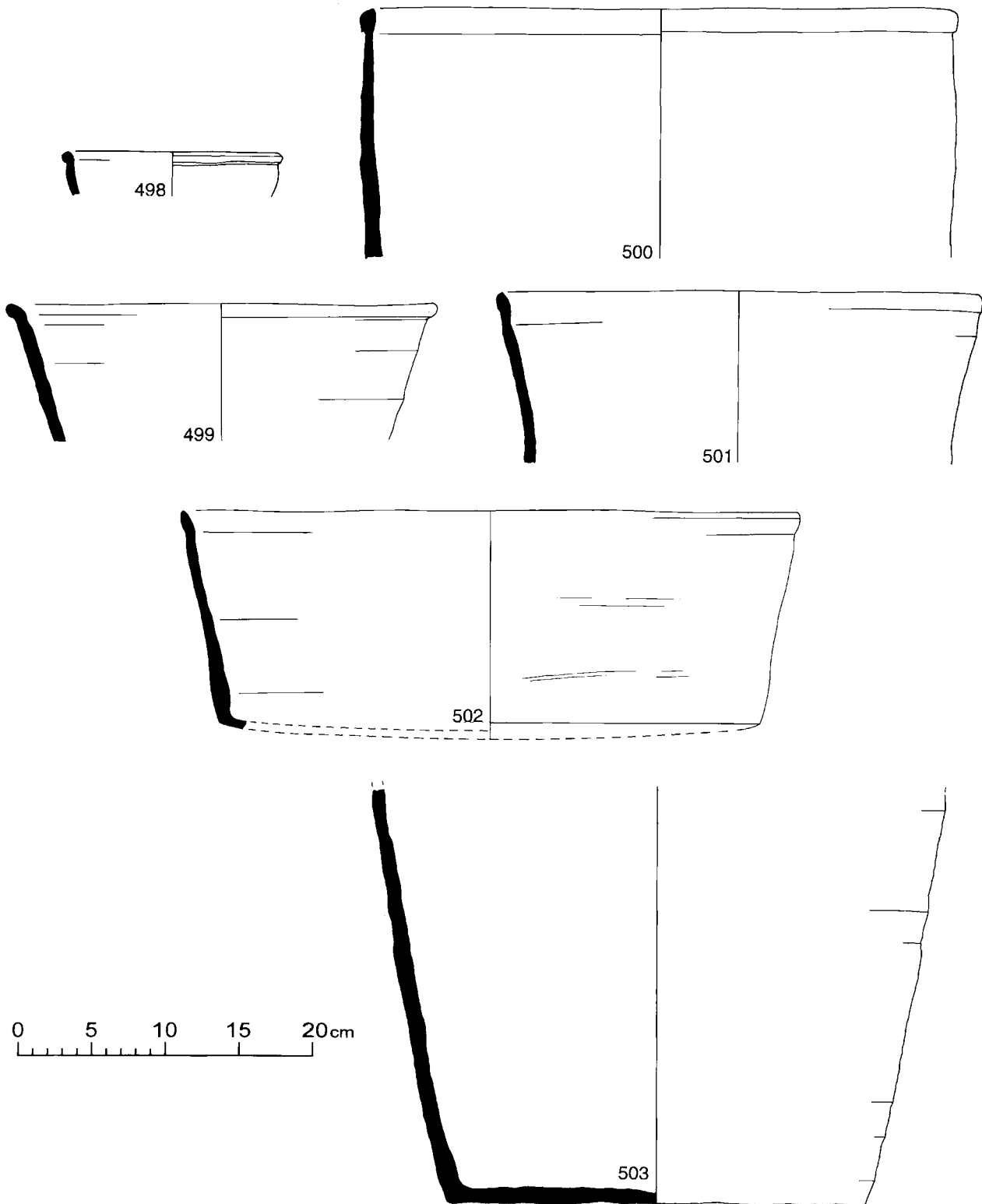


Fig 77 Lincoln Fine-Shelled Ware: bowls 498–503. Scale 1:4

The most common form of bowl before the early 12th century (horizon MH1) is wide, steep-sided and has a simple upright, everted or hooked rim (eg, Fig. 77, 499–500 and 503; Fig. 78, 504–6). A small proportion of

these early flared or straight-sided bowls are shallow (eg, Fig. 77, 501–2). Almost all of these large bowls show evidence of sooting, indicating their use for cooking or perhaps in the dairy. A few small unsooted,

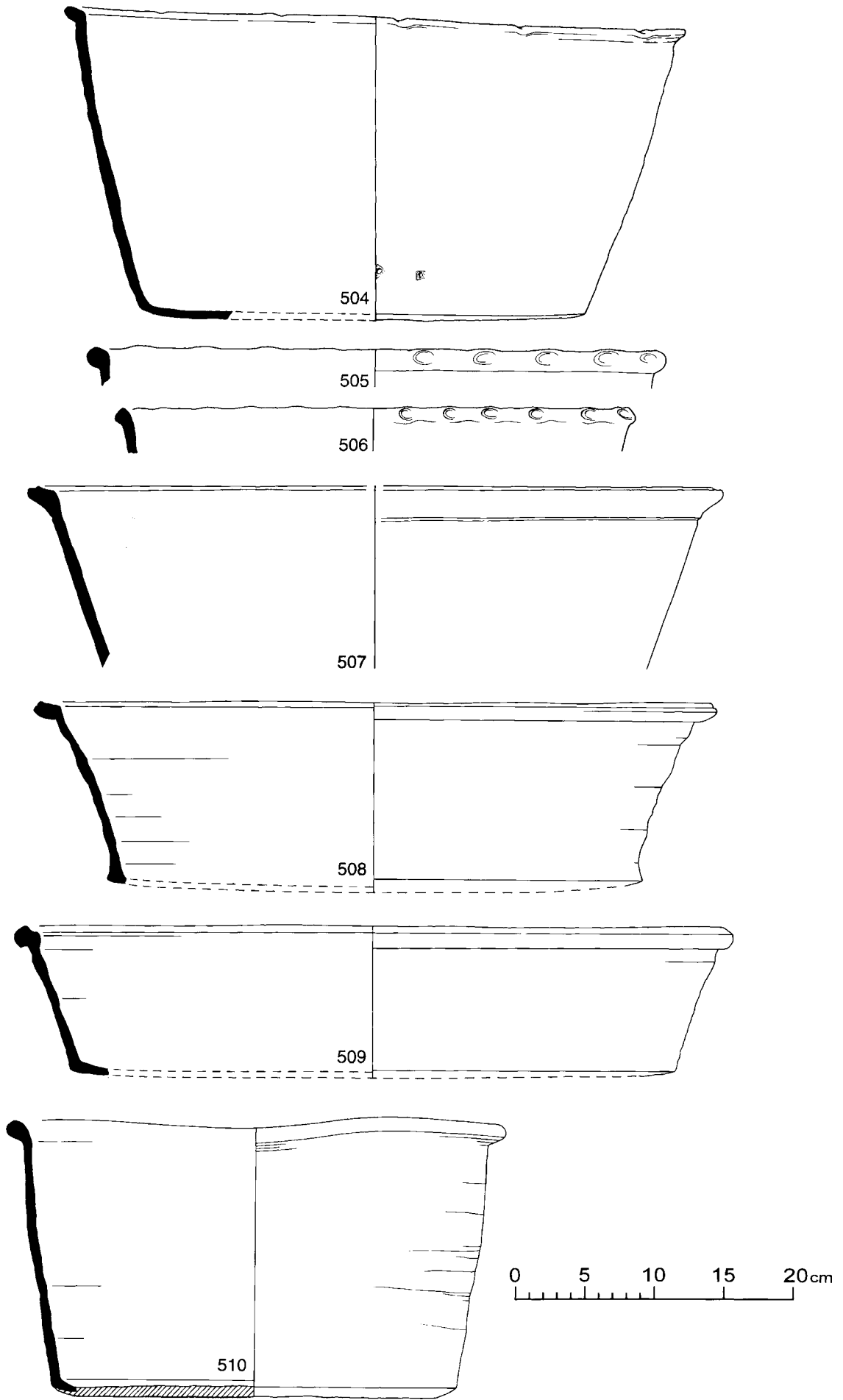


Fig 78 Lincoln Fine-Shelled Ware: bowls 504–510. Scale 1:4

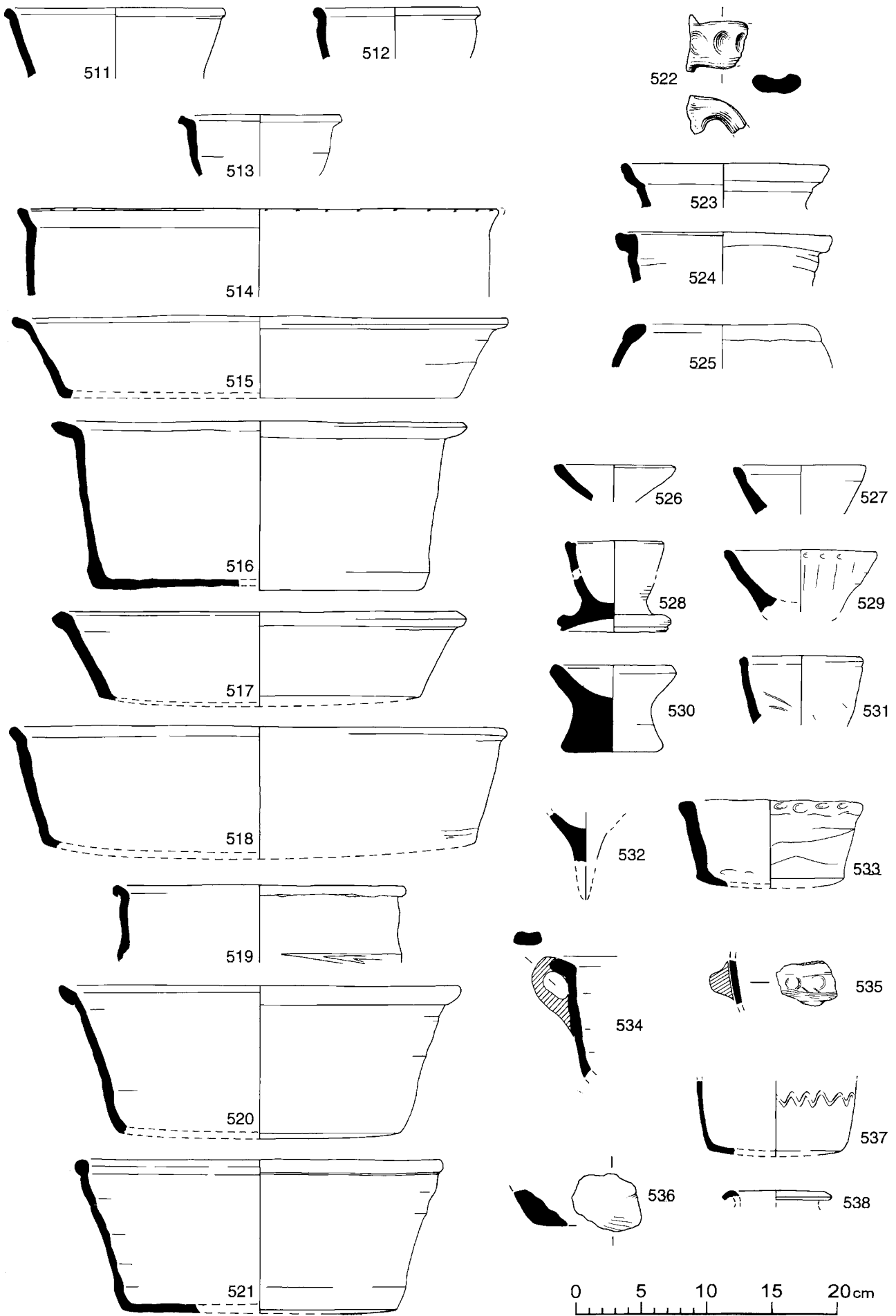


Fig 79 Lincoln Fine-Shelled Ware: bowls 511-521; jugs or pitchers 522-524; ginger jar 525; lamps 526-532; oval dishes 533-534; possible mortars 535-536; bottles 537-538. Scale 1:4

usually rounded, but occasionally flared bowls (possibly used for drinking) are found before the early 12th century (horizon MH1) (eg, Fig. 77, 498), after which they become more common (eg, Fig. 79, 511–13). One of these small bowls has been used as a lamp (Fig. 79, 513). From the early 12th century (horizon MH1), the wide, steep-sided bowls become smaller (eg, Fig. 78, 508) and wide shallow bowls and dishes with more complex everted rims (eg, Fig. 78, 505–7 and Fig. 79, 512–19) become the dominant type.

Other forms produced include both pedestal (eg, Fig. 79, 526–31) and spike lamps (eg, Fig. 79, 532), jugs or pitchers (eg, Fig. 79, 522–4), 'ginger' jars (eg, Fig. 79, 525) and bottles (eg, Fig. 78, 537–8). A few unusual forms have been found, including small, heavily-sooted oval bowls or dishes, often found with a small loop handle (eg, Fig. 79, 533–4), and small fragments of square or triangular vessels that may be mortars (eg, Fig. 79, 535–6).

Source

Two samples of Lincoln Fine-shelled ware from Lincoln have been examined in thin-section. They contain a shell sand derived from a shelly-limestone, identical to the temper found in Lincoln Kiln-type Shelly ware and other Lincoln-area shelly wares. However, the clay matrix contains abundant specks of dark brown material, c.0.04mm across, which are interpreted as being fossil faecal pellets. Such pellets are sometimes seen in the shelly limestone matrix and it is possible that they are present in the Lincoln Fine-shelled ware clay matrix through the weathering of this limestone, although it is also possible that they form a constituent of the original clay. This fabric is found as far north as Beverley (Watkins 1991, Fig. 62, 65–68) and as far south as Nottingham. The fact that the large deep bowls commonly found at Lincoln and also found at Beverley (Watkins 1991, Fig. 62, 67), are rare at Nottingham (pers comm V Nailor, 1983) perhaps indicates that Lincoln and Beverley are closer to the source of the ware. This is also indicated by the similarity of this fabric to other wares of probable Lincoln-area origin such as Lincoln Late Saxon Shelly ware Fabrics A, B and C, and Local Late Saxon Fabric A.

Dating

The precise starting date for the Lincoln Fine-shelled ware fabric is difficult to establish. The Middle Saxon ware, Early Lincolnshire Fine-shelled ware, evolved into Lincoln Fine-shelled ware at a date during the 10th century. As both Early Lincolnshire Fine-shelled ware and Lincoln Fine-shelled ware are extremely rare in the city during this period and there is no good dating evidence from the rural sites, where the tradition remains in use, the date will

remain uncertain until a well-dated rural site has been excavated. The first well-stratified Lincoln Fine-shelled ware in the city appears in horizon ASH11 (late 10th century), where it forms about 0.5% of the pottery. By ASH13 (the early/mid 11th century) the ware has increased to c.13% and by the end of ASH14 (the early 12th century) to c.31%, reaching a peak in horizon MH1 (the early/mid to mid 12th century) at c.43%. It remains the major coarse ware until the end of horizon MH3 (late 12th century) when it still forms about 38% of the assemblage. By the early 13th century (horizon MH4), Lincoln Fine-shelled ware has become residual and is replaced by the other shell-tempered coarsewares, Local Early Medieval Shelly ware and Potterhanworth ware.

Torksey ware (TORK) (Fig. 80)

Fabric and technology

The fabric and technology of pottery from the Torksey kilns has been discussed elsewhere (Barley 1964, 164–87 and 1981, 264–91). All of the material from the city defined as Torksey ware falls within the parameters for the ware. In Lincoln, four visual types occur that have similar fabrics, but are probably the result of differing firing techniques. The first type has typical dark grey or black surfaces and core with red-brown margins; the second type, although similar, is harder fired, has a cleaner matrix and lighter surface and core colours. Both of these types are easy to distinguish from the Lincoln SNLS production. The fully oxidized red-brown to orange type and the fully reduced grey to dark grey type are less easy to spot by eye in a mixed group. Torksey ware has a rougher surface texture than SNLS and the slightly differently sized and more rounded clear and milky quartz grains are readily visible under the microscope. Several Lincoln examples of Torksey ware contained sparse to moderate rounded grains of calcareous material, shown by thin-section analysis to be ferroan calcite. Only two vessels with roller-stamping have been found in the city. Decoration includes direct thumbing, thumb-pressed strips and bosses.

Forms

Jars are the most common form, comprising c.83% of identified vessels. A range in size from small (diameter 80mm–110mm) to large (diameter 200mm–230mm) occurs (eg, Fig. 80, 539–44). Bowls form c.11% of the identified assemblage and include those with inturned, simple everted and flanged rims (eg, Fig. 80, 548–55). Only a small number of bowls are spouted (eg, Fig. 80, 556). Bowls with thumbled rim edges (eg, Fig. 80, 557–9) became the most common type from the late 10th century (horizon ASH11) onwards. Large storage jars or pitchers (eg, Fig. 80,

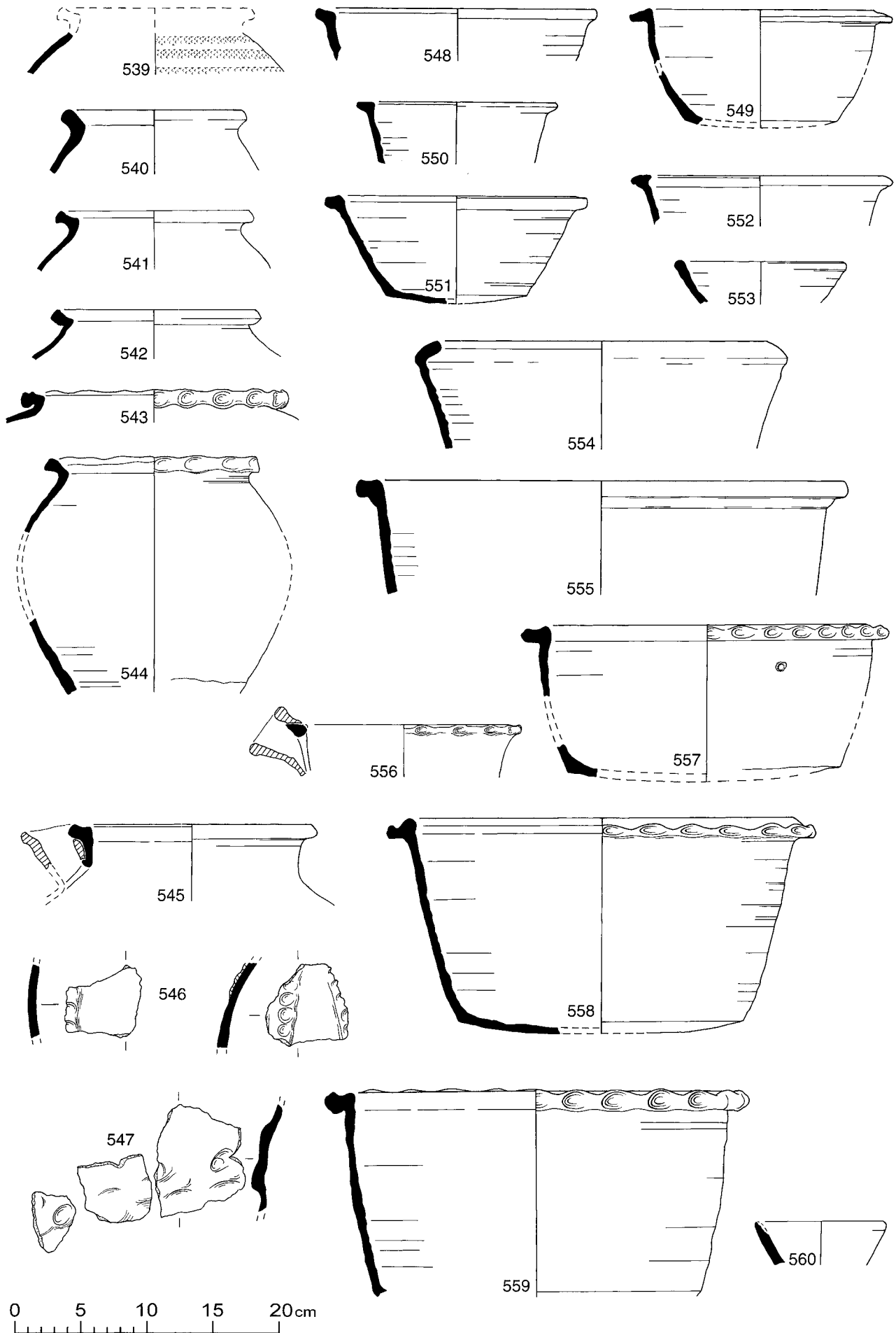


Fig 80 Torksey Ware: jars 539–544; storage jars or pitchers 545–547; bowls 548–559; pedestal lamp 560. Scale 1:4

545–7), together form *c.*6% of the pottery types found. Without the presence of a spout or handle it is impossible to distinguish between these two vessel types. Rarely found forms include pedestal lamps (eg, Fig. 80, 560), hemispherical lamps, bottles, lids, curfews, 'ginger' jars, a costrel and a funnel.

Source

Two samples of Torksey ware from Lincoln were examined in thin-section (L1751 and L1752). They were compared with samples from the Torksey kilns and from the Lloyds Bank site in York prepared by V Denham (Brooks & Mainman 1984). The analysis showed that there was no petrological difference between the samples from the Torksey kilns, the Lincoln samples and the majority of the York samples. A small group of York samples classified as Torksey ware was, however, shown to contain coarse sandstone inclusions of probably Carboniferous origin (eg, Millstone Grit) and is thus probably of Yorkshire origin. Recently, further kilns (kilns 8–13) have been excavated at Torksey (Wilkinson and Young 1995), and within the waster material were a number of vessels with the sparse to moderate calcareous inclusions only rarely seen in material from previously excavated kilns but often noted in Lincoln. There is potential in the future, therefore, to assign at least some Torksey wares to specific kilns.

Dating

Torksey ware is first present in an early horizon ASH7 deposit (mid to late 9th century) at Flaxengate (F72) and is only found sporadically until late 10th-century deposits (horizon ASH11) when it forms *c.*3% of the pottery. This increases to *c.*8% by ASH12 (the early to early/mid 11th century), and *c.*9.5% by ASH13 (the early/mid to mid/late 11th century). Torksey ware appears to be residual by ASH14 horizons (late 11th to early 12th century) when it is absent from groups of this date at the Lawn Hospital (LA85 and LH84) and Bishop Grosseteste College (BGB95).

Torksey-type ware (TORKT) (Fig. 81)

Fabric and technology

Several vessels had forms and fabric similar, but not identical, to that of Torksey ware (TORK). The slightly different pattern of fabric may be accounted for in two ways: first, that the pottery was produced in as yet undiscovered kilns at Torksey, or secondly, that it was produced elsewhere. Not all of the vessels were of the same fabric: some were more micaceous, some had more, or less, frequent quartz and some contained more frequent iron-rich grains. All vessels fall into the colour range for Torksey ware and, with

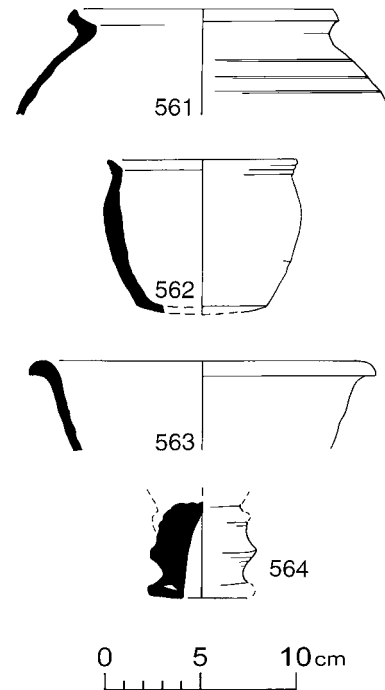


Fig 81 Torksey-Type Ware. Scale 1:4

the exception of one tiny jar/beaker (Fig. 81, 562), are wheel-thrown.

Forms

A range of forms has been found that includes jars (eg, Fig. 81, 561), tiny jars/beakers (eg, Fig. 81, 562), bowls (eg, Fig. 81, 563), pedestal lamps (eg, Fig. 81, 564), and large storage vessels.

Source

Seven samples of Torksey-type ware from Lincoln, and three from wasters found at Newark, were examined in thin-section. The seven Lincoln samples have very similar petrological characteristics, although it is possible to divide them into those which contain sparse calcareous inclusions and those that do not. The clay matrix of all samples is very similar and contains sparse dark brown specks. Recently, a kiln producing Torksey-type wares has been found at Newark (Alvey *et al* forthcoming) and numerous waster sherds have also been found at the Newark Castle site (Young 1996a). Torksey-type pottery from York is thought not to have been produced in Torksey (Brooks and Mainman 1984), although no source has yet been identified.

Dating

Only a small number of sherds (*c.*40 vessels) has been identified in the city and few are usefully

stratified. They appear to have a date range of ASH9 to ASH13 or ASH14 (late 9th to late 11th century).

Non-local Saxo-Norman fabrics (SNX) (Fig. 82)

Description

This is a loose grouping of fabrics from non-identified sources that do not appear to be of local manufacture. Few sherds belong to the same fabric group and inclusions are mainly rounded quartz with other materials including shell, calcite, iron-rich grains, muscovite, clay pellets and chert. Vessels are both reduced (grey to dark grey) and oxidized (pink to red-brown). Almost all vessels are wheel-made or at least wheel-finished. Only two vessels are decorated, one with an oval grid stamp on the top of the rim (Fig. 82, 565) and the other with a thumb-pressed rim. Most sherds found come from jars, although a few bowls and a lid are also represented.

Source

One vessel from the Saltergate site (LIN73D) has been visually identified as London fabric EMS (Vince & Jenner 1991, 56–9). A thin-section (L1126A) revealed similar petrology to that of the London vessels, of which the most distinctive aspect is the presence of rounded fragments of calcareous algae alongside a predominantly quartzose sand. However, the calcareous inclusions noted by eye in the Lincoln specimen were identified in thin-section as being chalk (a nonferroan micrite containing spherulites). The attribution is therefore not proven (nor could it be discounted).

Dating

Fewer than 80 vessels have been identified from the city, with only 16 being usefully stratified. The earliest vessel occurs in an ASH9 horizon (early/mid to mid 10th century) and the latest in MH1 (early/mid to mid 12th century).

Crowland Abbey-type Bowls (CROW) (Fig. 83)

Description

These bowls have been discussed by Vince (Vince and Jenner 1991, 111–2) and Watkins (Watkins 1991, 86). Three of the Lincoln examples have a light orange fabric tempered with abundant fine quartz up to 0.3mm and sparse iron-rich pellets up to 1mm. All are covered with a thick dark amber to brown glaze. One other vessel from the Flaxengate site (F72: Fig. 83, 567) has been badly burnt and the fabric has nearly vitrified. All the vessels show evidence of stamped decoration, although a design is only clear on one vessel (Fig. 83, 566). Only four vessels have been found in Lincoln, the earliest of which is

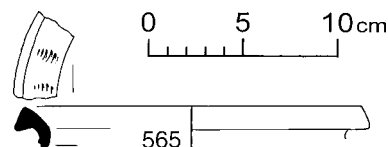


Fig 82 Non-Local Saxo-Norman fabrics. Scale 1:4

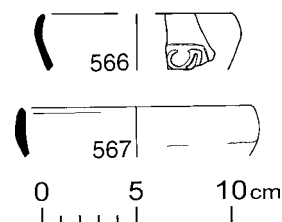


Fig 83 Crowland Abbey-type Bowls. Scale 1:4

stratified in an ASH12 (early to early/mid 11th century) context, the others being found residually.

Source

Bowls with a thick lead glaze and decorated with large, complex stamps have been found on a number of sites in the British Isles and in Scandinavia. Two such bowls, from Sigtuna in central Sweden, are plausibly suggested to be of Byzantine origin (M Roslund, pers comm), but are of two quite different fabrics, one of which is similar to the Lincoln fabric. ICPS analysis has been carried out on the Sigtuna vessels (Vince 2000) but there are as yet no comparanda, either from Byzantine sites or from Western European or Scandinavian findspots. Bowls of this form but in Stamford ware have been found (eg, Fig. 86, 588, and Kilmurry 1980, Fig.77, 3 and 5), and it is therefore unsafe to identify these vessels as the products of a single area simply on typological grounds.

Derby-type ware (DERB) (Fig. 84)

Description

This ware type has been described by both Coppack (Hall and Coppack 1972, Coppack 1980) and Adams Gilmour (Adams Gilmour 1988, 157). The vessels have a similar surface texture to Torksey-type wares, although the colouring is much lighter with a thin brownish-grey surface over red-brown margins and a pale to light grey core. Common subround to round quartz of up to 0.4mm and sparse to common red and black iron-rich grains up to 1mm are visible, together with sparse calcareous material. Vessels are

wheel-thrown, but appear to have been piece-made. That there is more than one period of production is suggested by two very different rim types. The earliest is everted with a flat top (Fig. 84, 568) and is similar to vessels from Barton Blount (Beresford 1975). The Lincoln vessels found in 11th-century deposits, however, have a characteristic everted rim with a slight bead on the inner rim angle and bases that are turned and shaved (eg, Fig. 84, 569). No decoration was found on the Lincoln examples and all the sherds found in Lincoln are from jars. Only 10 vessels have been found in the city, with the earliest occurring in horizon ASH9 (early/mid to mid 10th century), yet most vessels are found in deposits of 11th-century date (ASH11 to ASH13) date.

Source

Derby-type ware has been identified at Full Street, Derby (Hall and Coppack 1972), Barton Blount (Beresford 1975) and Repton (Vince & Young unpublished), but no petrological analysis of these examples has been carried out. Three of the Lincoln examples have been thin-sectioned (L613, L614 and L1302). They reveal that the vessels were tempered with a well-sorted quartzose sand with grains up to 0.4mm across. Chert and sandstone were present but sparse. Laminated clay pellets up to 1mm across were present in two of the sections. The clay matrices contained few inclusions. These characteristics are identical to those of wares known to have been made in the Lincoln area or elsewhere in the Trent Valley

utilising Jurassic clays and Trent Valley alluvial sands, but are insufficiently distinctive to prove a local origin. In the absence of either a distinctive petrological composition or comparanda from the upper Trent Valley it is not possible to say much about the origin of the Lincoln examples.

Newark-type ware (NEWS) (Fig. 85)

Description

The texture of this ware is smooth to slightly sandy, colours being either reduced greys with oxidized margins or fully oxidized red-browns. The fabric is tempered with rounded quartz, mostly between 0.3mm and 0.4mm, together with sparse angular quartz up to 0.3mm, sparse iron-rich grains, sparse chert and sparse sandstone in a matrix that appears quite micaceous. All the vessels from Lincoln are wheel-thrown, medium-sized, undecorated jars with plain everted rims (eg, Fig. 85, 570), although an inturned rim bowl is known from the kiln site at Newark. A total of 23 vessels has been found in the city, all stratified between horizons ASH10 and ASH13 (mid 10th to mid 11th century).

Source

Amongst the Torksey-type pottery found at a Saxo-Norman kiln site at Newark were three sherds which were visually different from the rest of the material (Alvey *et al* forthcoming). Similar sherds have been found on excavations in Lincoln but none has been examined in thin-section. Thin-section of the Newark sherds showed that there is no petrological difference between the sands used for producing either the Newark-type ware or the Torksey-type fabric group. However, the quantity of muscovite in the clay matrix of the two samples coded as NEWS is higher than that found in the TORKT wares and no polycrystalline quartz grains were noted. These two features may be sufficient to distinguish NEWS as a variant of the Newark output, but visual differences are likely to be caused by variations in clay and temper preparation.

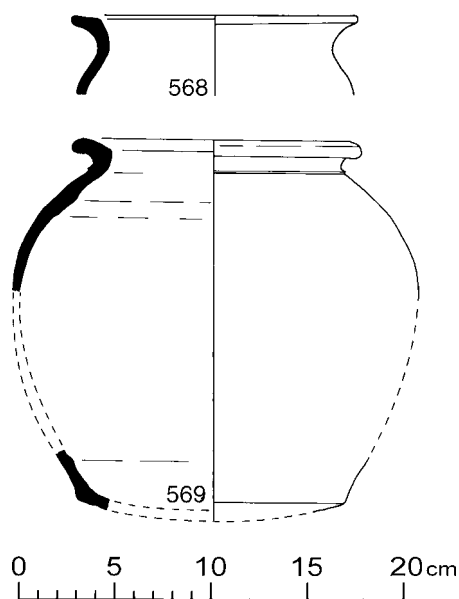


Fig 84 Derby-type Ware. Scale 1:4

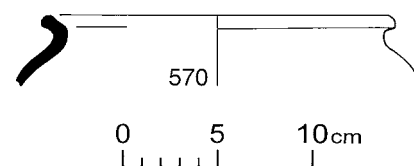


Fig 85 Newark-type Ware. Scale 1:4

Stamford ware (ST) (Figs. 86–8)

Fabric and technology

This category was originally intended to cover Kilmurry's (1980, 7–9) Fabrics A (fine), G and B (coarse), as discussed by Leach (1987, 69–74). All material recorded since 1988 has used this classification. However, for sites recorded prior to 1988, individual fabric types were only noted for a very few sites, notably Flaxengate (F72). This has inevitably resulted in vessels in the fine 12th-century Fabrics B and C (without a copper glaze), and coarser fabrics that should have been classified as EST, also being included under this codename.

Overall, Fabric A is the most common fabric to be covered by this classification, followed by Fabric G. On sites with large pre-conquest 11th-century assemblages (horizons ASH11 and ASH12), Fabric A is the main Stamford fabric found. Sites with mainly later 11th-century occupation (horizons ASH13 to MH1) produced groups in which Fabric G is the most common Stamford fabric type. Fabric B became the main fabric from horizon MH2 onwards. On the Flaxengate (F72) site, where nearly 5000 Stamford ware sherds were recovered, Fabric G was the most common fabric at *c.*35% of all the Stamford ware found, followed quite closely by Fabric A at *c.*31%, and Fabric B at *c.*25% .

Forms

Distinguishing the various Kilmurry Form types (Kilmurry 1980, 13–20) from the small sherds found on most sites in the city is extremely difficult. In many cases it has only been possible to assign sherds to basic groups of cooking pot/jar (Kilmurry's Forms 2, 3 and 4), bowl (Kilmurry's Forms 1, 7, 12, 13, 14, and 15), liquid container (Kilmurry's Forms 5, 6, 17, 18 and 24) or small globular vessel (Kilmurry's Forms 16 and 19). Occasionally, it has been possible to use evidence of rim type, glaze, and decoration to suggest a more specific form, although only in a small proportion of cases have enough attributes been present for identification to be conclusive.

Overall, *c.*62% of sherds came from glazed liquid containers, with only *c.*4% identifiable as Kilmurry's Form 5, *c.*1% as Form 6, and only two vessels as Form 24. Unglazed cooking pots or jars formed *c.*26% of Stamford ware recovered, with less than 1% specifically identifiable as Kilmurry's Form 4. Bowls of varying types formed less than 1% of the Stamford ware imported into the city, and unglazed small globular vessels comprised *c.*5%. Other identifiable forms include Kilmurry's Forms 11, 17, 18, 20, 21, 22 and 23 as well as sprinklers (eg, Fig. 88, 619–20) and tubular spouted bottles (Fig. 88, 623).

Vessels belonging to the 11th and earlier 12th centuries are illustrated in Figs. 86–7, while those of the mid 12th to early 13th are shown in Fig. 88.

Cooking pot/jars

Few of Kilmurry's Forms 2 and 3 (eg, Fig. 86, 571–5, all from horizon ASH13 deposits) are found later than the late 11th century (horizon ASH14). From horizon ASH14, Kilmurry's Form 4 vessels, with slightly collared rims, began to appear (eg, Fig. 86, 576–8 and Fig. 88, 612–4).

Liquid containers and lids

Pitchers (Kilmurry's Form 5) occurring before the late 11th century (horizon ASH14) tended to have restricted necks (eg, Fig. 87, 593) while those from ASH14 onwards were collared (eg, Fig. 87, 594 and 596–8). Only a small number of these pitchers were decorated (eg, Fig. 87, 595). By horizon MH2 (mid 12th century), early jug forms (Kilmurry's Form 6) began to appear (eg, Fig. 88, 601–2), and by the mid/late 12th century (horizon MH3) tubular spouted pitchers (Kilmurry's Form 24) are found (eg, Fig. 88, 603). In the last quarter of the 12th century (horizon MH3), a number of highly decorated sherds belonging to these forms occur, including those with stamped decoration (eg, Fig. 88, 605), applied interlace (eg, Fig. 88, 606–8) and modelled birds with fine incised decoration (eg, Fig. 88, 604). Highly decorated lids to be used with Form 24 are also found in horizon MH3 (eg, Fig. 88, 609–10). Other plain lids are found throughout the life of Stamford ware (eg, Fig. 87, 599 and Fig. 88, 611).

Bowls

Bowls tend to be more common before the early/mid 12th century (horizon MH1) and include Kilmurry's Type 1 (eg, Fig. 88, 580), Type 7 (eg, Fig. 86, 579), Type 12 (eg, Fig. 86, 581), Type 13 (eg, Fig. 86, 582) and Type 15 (eg, Fig. 86, 583–4). Other bowls not included by Kilmurry in her typology are small dishes, often used as glass melting crucibles (eg, Fig. 86, 585–7) and Crowland-type bowls (eg, Fig. 86, 588).

Small globular vessels

Several small globular vessels are found that include Kilmurry's Form 16 (eg, Fig. 88, 615) and Form 19 (eg, Fig. 86, 591–2 and Fig. 88, 616). In 12th-century deposits (horizons MH2 to MH4) a new globular form occurs that is larger than Form 19, always has an upright rim, and is usually sooted on the exterior base and sides (eg, Fig. 88, 617–8).

Miscellaneous

Spike lamps (Kilmurry's Form 20; eg, Fig. 86, 590) do not appear before horizon ASH 14 (the late 11th

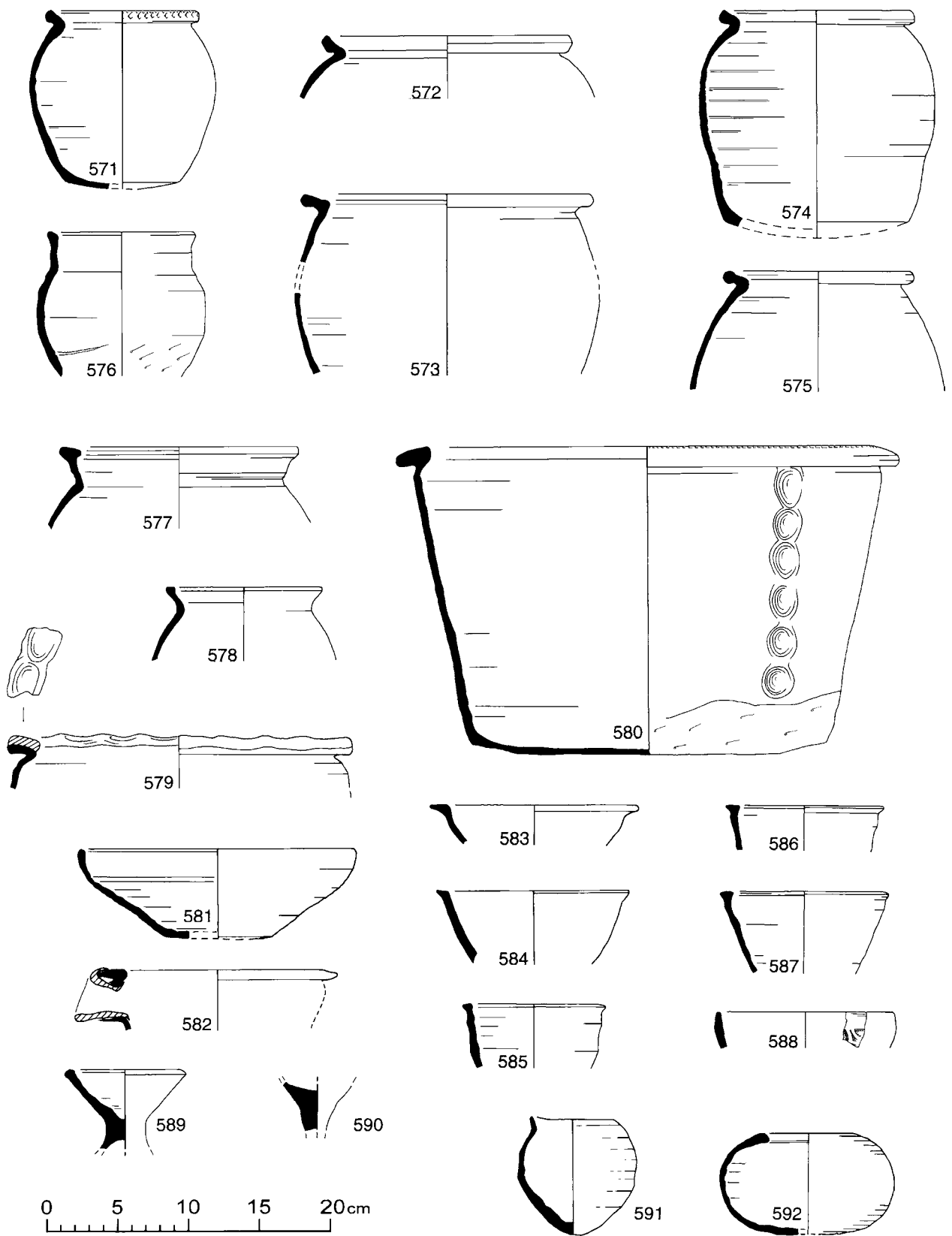


Fig 86 11th century Stamford Ware: jars 571-578; bowls 579-588; lamps 589-592. Scale 1:4

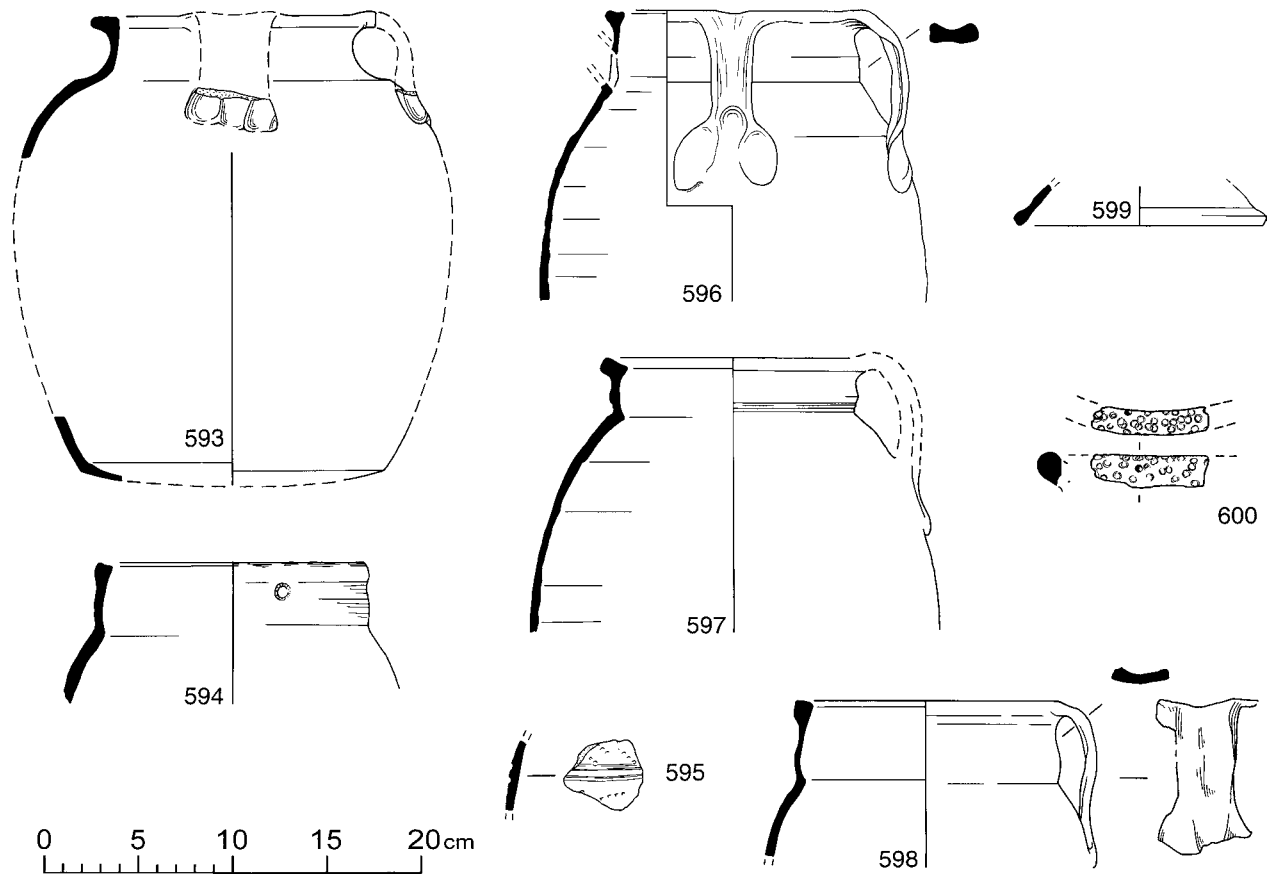


Fig 87 Late 11th to early 12th century Stamford Ware: pitchers 593–598; lid 599; unknown form 600. Scale 1:4

century) although pedestal lamps (Kilmurry's Form 10; eg, Fig. 86, 589) are found from the mid 10th century (horizon ASH10). Several vessels occur that are very rare or unique and, although none is securely stratified, all are in fine Fabric B or Fabric C. These include pedestal vessels (eg, Fig. 88, 622), sprinklers (eg, Fig. 88, 619–20), costrels (eg, Fig. 88, 621), spouted bottles (eg, Fig. 88, 623), and bottles with a footring base (eg, Fig. 88, 624). The presence of a number of miscellaneous vessels of unknown form is indicated by several oddly shaped sherds such as the unglazed, ring stamped sherd from the Danes Terrace (DT74II) site (Fig. 87, 600).

Source

Four examples of Stamford ware were examined in thin-section (L1730, L1731, L1732 and L1733). Three had a very similar petrological composition whilst the fourth (L1732) was distinctly different. The latter sample contained sparse rounded quartz grains up to 0.3mm across, abundant angular quartz up to 0.1mm across and an inclusion-free anisotropic clay matrix. Sparse rounded nonferroan limestone fragments up

to 1.5mm across and rounded opaque grains up to 0.1mm across were present. The remaining samples contained sparse rounded quartz grains up to 0.1mm across in an isotropic clay matrix containing abundant angular quartz up to 0.06mm across. All three contained sparse rounded fragments of white siltstone up to 1.0mm across. Neither of these fabrics appears to correlate precisely with published descriptions of Stamford ware, including those of Kilmurry, which were also based on petrological analysis (Kilmurry 1980). This discrepancy is likely to be linked to the small sample of Stamford ware thin-sections so far published.

Dating

The earliest Stamford ware is recorded as being present in horizons ASH8 to ASH11 (early to late 10th century) and this occurrence probably reflects the failure to recognise vessels belonging to the early Stamford industries (EST). By horizon ASH12 (the early 11th century), Stamford ware represents c.0.5% of the pottery, and it is in this horizon that the first of the finewares as defined by Mahany and Leach (Mahany

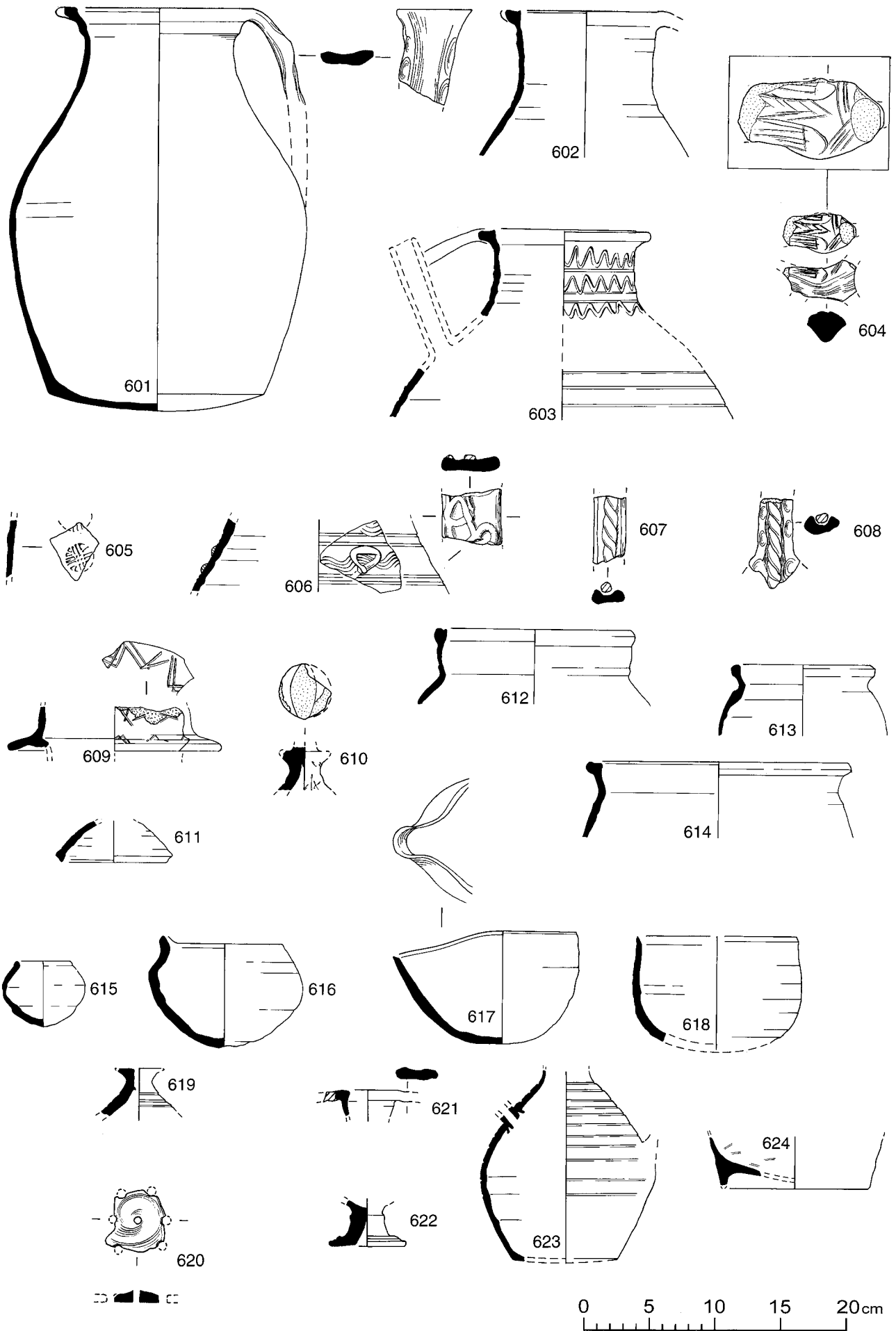


Fig 88 12th century Stamford Ware: jugs 601–608; lids 609–611; jars 612–614; globular vessels 615–618; sprinklers 619–620; costrel 621; pedestal vessel 622; bottles 623–624. Scale 1:4 except 604 1:2

et al 1982, 55; Leach 1987, 69–74) begin to appear. The proportion increases to *c.*5% in horizon ASH13 (early / mid to mid / late 11th century), and reaches a peak of *c.*21% by the end of horizon ASH14 in the early 12th century. With increased competition from the ‘splashed’ glazed wares (NSP and LSW1), Stamford ware slowly declines through horizons MH1 (*c.*16%) and MH2 (*c.*16%) until, by the end of horizon MH3 in the late 12th century, it only forms *c.*7% of the assemblage. By horizon MH3 almost all of the contemporary Stamford ware recorded is of Kilmurry’s Fabrics B and C with a plain lead glaze.

Stamford ware-type Crucibles (STCRUC) (Fig. 89)

Fabric and technology

This category covers crucibles or hemispherical vessels that, although the fabric has been semi- or completely vitrified, are assumed to be of Stamford ware. Isolated finds of small sherds can be impossible to distinguish from Roman crucibles. The fabric is always reduced to a grey or dark grey colour and sherds are usually covered with slag or a glassy waste.

Forms

The typology (Kilmurry 1980, 17–19) of the small Form 16 crucibles (eg, Fig. 89, 625) is less easy to establish than that of the larger Form 19 types (eg, Fig. 89, 626–8), where size and shape can be seen to change through time (Adams Gilmour 1988, 70–3).

Source

No Stamford-type Crucibles were thin-sectioned as part of the corpus programme.

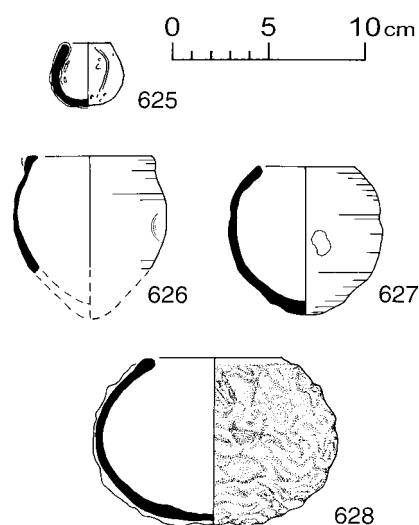


Fig 89 Stamford Ware-type Crucibles. Scale 1:4

Dating

More than 1000 Stamford-type Crucibles have been found in Lincoln, stratified in deposits ranging from ASH8 to MH1 (late 9th to mid 12th century). They have been recovered from more than 30 sites, spread throughout the city, but with concentrations on Flaxengate (F72), Silver Street (LIN73B), Saltergate (LIN73F), Michaelgate, Chestnut House (MCH84), and St Paul-in-the-Bail (SP72).

St. Neots type ware (SNEOT)

Description

No examples of St Neots type ware were found amongst the material excavated in 1972–87. Subsequently, a single sherd has been identified, at the Bishop Grosseteste College (BGB95) site, in the suburb of Newport north of the Upper City. Although first produced in the late 9th or 10th century, St Neots-type ware is not normally found on sites in the south-east midlands until the 11th century, at which time it experienced an expansion in production. Briefly, for example, it was the major coarseware in use in Oxford. An 11th-century or later date for the Lincoln vessel would agree with the findspot in the Newport suburb.

Source

St Neots type ware has a distinctive fine shelly fabric in which fragments of punctate brachiopod form the most diagnostic element. The fabric is, however, identical to that of Romano-British shell-tempered wares of Harrold type. These too, however, are very rare in Lincoln, so it is unlikely that the ware was ever common in the city (Vince & Jenner 1991, 54–6).

Thetford-type fabrics (THETT) (Fig. 90)

Introduction

A wide variety of Thetford-type fabrics is found in the city. An attempt has been made to subdivide more than half of the material into the fabric groups listed below. Fabric C forms *c.*62%, Fabric G *c.*21%, Fabric T *c.*12% and Fabric I *c.*4% of the subdivided material. In general, the vessels have reduced sandy fabrics, often with sparse visible flint and occasional clay pellets. Forms are mostly large storage vessels, although jars, pitchers and lamps also occur.

Fabric C (Fig. 90, 629–32)

Description

This is basically a coarse sandy ware tradition producing mainly large storage vessels. Surface texture ranges between smooth and sandy, with fabric colours in the light to dark grey range. A

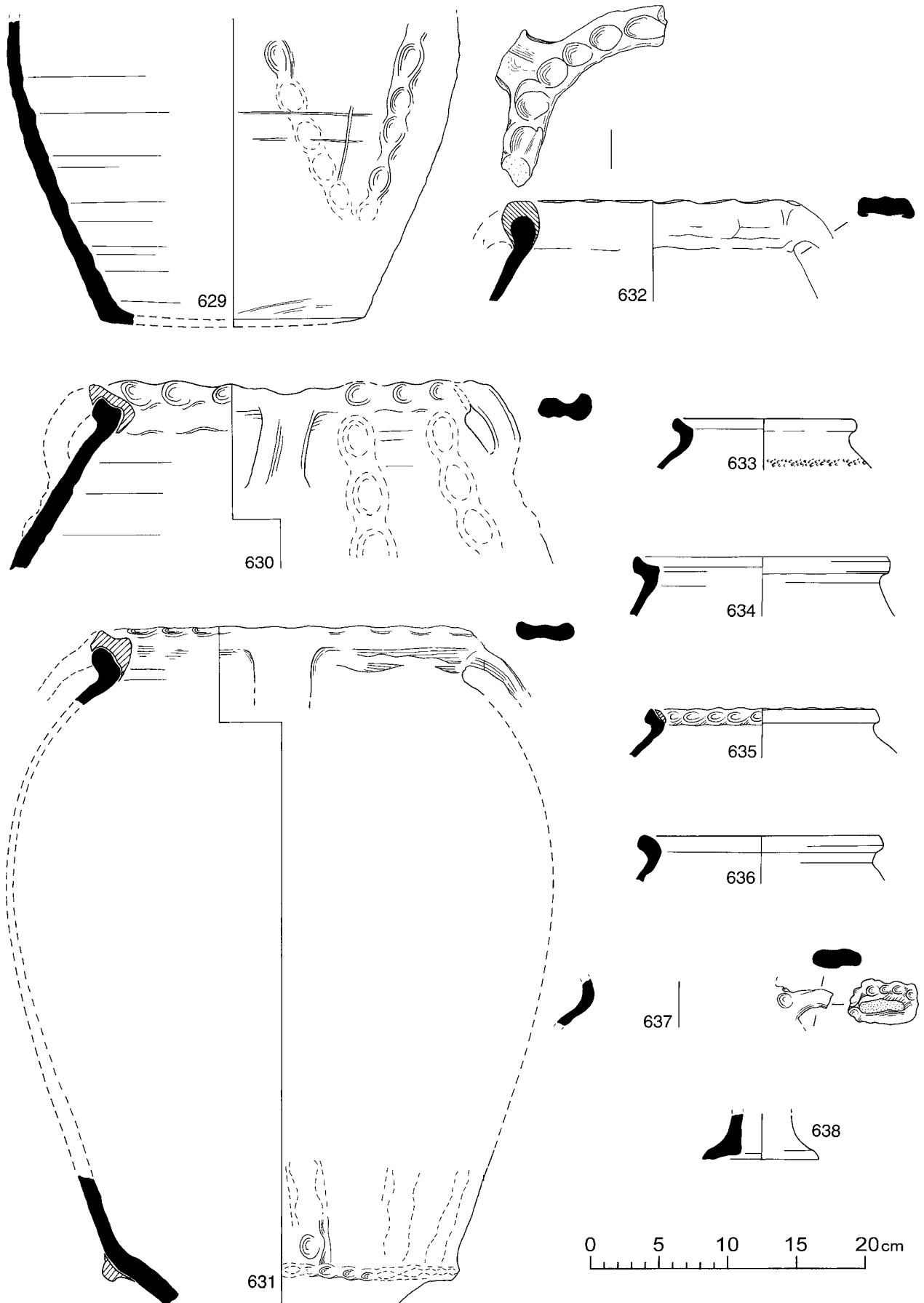


Fig 90 Thetford-type fabrics: Fabric C 629–632; Fabric T 633–635; Fabric G 636–637; Fabric I 638. Scale 1:4

number of sherds have grey to red brown margins. The fabric is tempered with abundant rounded quartz up to 0.5mm together with sparse chert, sparse sandstone and occasional clay pellets. All vessels were wheel-thrown, except for some of the largest examples that were hand formed. Decoration is mainly thumb-pressed applied strips. Almost all sherds found were from large, highly decorated storage vessels or pitchers (eg, Fig. 90, 629–32).

Source

Six samples of this fabric from Lincoln were thin-sectioned (L1736, L1738, L1739, L1740, L1746 and L1749). All contained a rounded quartz sand with sparse silt- or sandstones and chert inclusions. In terms of detailed constituents, however, each section was slightly different and none of the five contained any distinctive characteristics.

Fabric G (Fig. 90, 636–7)

Description

Unless vessel surfaces have been smoothed they are sandy to gritty in texture. Fabric colour ranges from light to dark grey, quite often with red-brown surfaces. The main inclusion is abundant rounded quartz up to 0.6mm, together with abundant rounded brown grains up to 0.2mm, sparse flint and sparse clay pellets. Manufacture and decoration is as Fabric group C. Vessels are mainly large jars, pitchers or storage jars (Fig. 90, 636–7).

Source

Fabric G represents another coarse sandy fabric also producing storage vessels, although this is visually similar to material from the kilns at Grimston, Norfolk (Clarke 1970, 79–95). Ten samples of Fabric G from Lincoln were thin-sectioned (L1737, L1742, L1743, L1744, L1745, L1747, L1750, L1770, L1771 and L1772). All were similar in petrology and contained features characteristic of a cretaceous origin: well-rounded quartz grains ('Greensand quartz'); altered glauconite, rounded flint and rounded chalk). These characteristics are consistent with a source at Grimston, which lies in an area of Cretaceous rocks and whose Saxo-Norman products have similar characteristics.

Fabric I (Fig. 90, 638)

Description

This grey fabric has a smooth surface texture, and is tempered with abundant subangular quartz up to 0.2mm, moderate flint up to 0.2mm, sparse chert and sparse rounded quartz up to 0.4mm. Vessels were wheel-thrown. The only forms identified in Lincoln are jars and a pedestal lamp (Fig. 90, 638).

Source

The fine sandy fabric is visually similar to material from Ipswich. Two examples from Lincoln were examined in thin-section (L1734 and L1735). Both had a similar petrological composition. The only noted difference between the two was the presence of sparse glauconite in one of the sections. The most distinctive feature of the fabric is the presence of moderate subangular flint fragments up to 0.2mm across. These are not present at all in local Lincolnshire or Trent Valley sand-tempered wares. However, nor were they a noted characteristic of Ipswich Thetford-type ware from London (Vince and Jenner 1991, 89). The distinguishing feature of that ware's fabric was moderate to abundant muscovite, not noted in the Lincoln samples. On balance, therefore, it seems likely that the Lincoln vessels were regional imports but perhaps not from Ipswich.

Fabric T (Fig. 90, 633–55)

Description

Surface texture ranges from smooth to slightly sandy and colour from grey to dark grey. The fabric contains abundant rounded and subangular quartz up to 0.2mm, sparse chert/flint and occasional clay pellets. All vessels were wheel-thrown. Forms are mostly jars (eg, Fig. 90, 633–55) and pitchers.

Source

A fine sandy fabric visually similar to material from Thetford (Rogerson and Dallas 1984, 121–53, and Dallas 1993, 67–9) and Norwich (Atkin *et al* 1983, 61–104). Three samples of Thetford-type fabrics Fabric T from Lincoln were examined in thin-section (L1748, L1749 and L1750). Although they differed in detail, they each revealed a quartzose sand with rounded chert as a minor element in a clay matrix containing moderate to abundant quartz silt and muscovite. Two of the samples contained rounded fragments of a sandstone composed of rounded quartz grains up to 0.3mm across in a silica matrix. It is likely, on this evidence, that the Lincoln examples of Thetford-type fabrics came from a single source, and were probably regional imports to Lincoln. Without access to petrological samples of Thetford and Norwich Thetford-type ware products it is not possible to say which, if any, of these wares was the source of the Lincoln finds.

Dating

More than 600 sherds of Thetford-type fabrics have been found on sites in all parts of the city. Thetford-type fabrics are first found in deposits dating to the mid to late 9th century (horizon ASH7), and continue to be found in small numbers until horizon ASH12 (the early 11th century) when the type becomes more common; by horizon ASH13 (early /

mid to mid/late 11th century) it may form c.1.5% of an assemblage. The incidence of Thetford-type fabrics declines by the mid 12th century (horizon MH2), although it probably still continues to come into the city until the last quarter of the 12th century (horizon MH3).

Winchester-type ware (WINC) (Fig. 91)

Description

Two vessels have a similar fabric to Winchester ware as defined by Biddle and Barclay (1974, 137). The sherds have a fine white fabric and are tempered with frequent subangular quartz up to 0.3mm. The vessels are covered with a thick lustrous glaze that is pale yellow on one vessel and light olive on the other, which has been burnt. Both vessels were wheel-thrown. One vessel is a roller stamp decorated pitcher (Fig. 91, 639) and the other a ring vase (Fig. 91, 640).

Source

The two examples of Winchester-type ware from Lincoln were identified visually by Ms K Barclay and published by Adams Gilmour (1988, 159 and Fig. 56, 12–13). The glaze, colour, and texture of the fabric of the ring vase fragment are similar to those of Stamford ware, whilst the pitcher sherd is coarser-textured (although apparently burnt). Pending further scientific analysis of the fabric, it is probably safer to accept a more local origin for the ring vase but to accept the attribution of the pitcher.

Dating

The two vessels are both from the Flaxengate (F72) site. The ring vase is from a deposit dated to horizon ASH14 (late 11th to early 12th century), and the pitcher sherds come from deposits dated between ASH10 and MH2 (mid 10th and mid 12th century).

Saxo-Norman Imported fabrics (SNIMP)

Description

Only one fabric can possibly be considered as an unsourced import for this period. The sherd has a smooth surface texture with the calcareous inclusions masked on the exterior surface. The vessel is fired to a light orange colour with off-white and red inclusions up to 2mm visible in a fresh break. Microscopic examination shows common rounded limestone up to 2mm together with sparse iron-rich grains up to 1mm, and sparse rounded quartz up to 0.3mm. From the small fragment of base found, the vessel appears to be wheel-thrown and is either a jar or pitcher. The single sherd comes from the Flaxengate (F72) site from a deposit dated to the 12th century (MH1 or MH2).

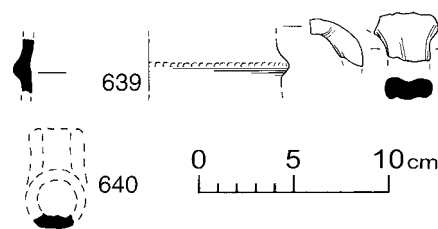


Fig 91 Winchester-type ware: 639–40. Scale 1:4

Source

The thin-section of this sherd (L1306) reveals abundant rounded limestone fragments up to 2mm across. This limestone includes thin-walled non-ferroan bivalve shell, nonferroan microfossils including ostracods, dark brown faecal pellets in a matrix of clay and ferroan calcite, echinoid shell, and nonferroan spherulites filled with ferroan calcite. The limestone is not of a sufficiently distinctive type for its potential source area to be identified, but if similar vessels are identified in the future, it should be possible to confirm that they share the same source using thin-section analysis.

Andenne-type ware (ANDE)

Description

Fabric colour of the Lincoln sherds varies from off-white to orange with the thick glossy glaze colour ranging from yellow to orange. The fabric contains abundant subangular quartz up to 0.1mm and occasional streaks or pellets of low iron clay. All vessels were finely wheel-thrown. The form of the Lincoln vessels is uncertain, as all vessels are represented by undiagnostic sherds; they would all seem, however, to be either pitchers or jars.

Source

Five examples of Andenne-type ware from Lincoln were examined in thin-section (L1761 to L1764), in addition to the two examples of Huy ware initially classified as Andenne-type ware but subsequently re-identified by W Giertz. There were differences in texture and minor differences in the range of inclusions within the Andenne-type ware samples, but in general all shared the same petrological characteristics as those of the Huy ware. This is perhaps not surprising given the proximity of Andenne and Huy and the likelihood that similar clay and temper resources were utilised at both centres (Giertz 1996). The most noteworthy feature was the presence of streaks and pellets of low iron clay. Sparse rounded fragments of siltstone, up to 0.8mm across, were present in two of the samples. The

petrological characteristics of the Lincoln samples match those of Andenne-type ware from London (some of which has, similarly, been recently identified as coming from Huy).

Dating

Fewer than 30 vessels have been found in the city, stratified between horizons ASH11 and MH3 (the late 10th and the late 12th century). Distribution is biased towards the Lower City and Wigford, concentrating on two main sites: Broadgate East (BE73), and Danes Terrace (DT74II).

Baltic-type fabrics (BALT)

Description

Two hand-made sherds from a single vessel may be of Baltic origin. The sherds are in a reduced grey fabric with partially oxidized margins and surfaces. The fabric is tempered with sparse fragments of granite up to 1mm. The sherds may be from a globular jar and are from a horizon ASH14 deposit (late 11th to early 12th century) at the Flaxengate site (F72).

Source

A sherd of this vessel was examined in thin-section (L1953). The presence of granite was confirmed, and shown to include biotite, quartz and feldspar of perthitic texture. The clay matrix contained abundant quartz and muscovite and sparse biotite and glauconite. Two possible sources are Potters Marston in Leicestershire and southern Scandinavia. Samples of Baltic ware from Lund and Lejre examined by the author (AGV) as comparanda for the earliest Scandinavian glazed ware (Christensen *et al* 1994) did not contain muscovite or glauconite, but other Danish and northern German wares also examined by the author did contain both types. The petrology of Potters Marston ware was studied by Rita Rattray and the author in 1982 (Vince 1984, 38–9), and subsequently by David Williams in 1985 (Williams 1985; Sawday 1991). In neither study, however, was either muscovite or glauconite noted.

Pingsdorf-type ware (PING) (Fig. 92)

Description

The Pingsdorf-type ware fabrics from Lincoln vary from soft, off-white earthenwares through yellow, hard earthenwares to a near stoneware fabric with red-brown surfaces and an olive core. All vessels were wheel-thrown. At least 13 examples have traces of red paint. There is little variety in the white earthenwares, where all the sherds come from large pitchers (eg, Fig. 92, 641–2). Smaller pitchers and beakers are found in the harder and later fabrics (eg, Fig. 92, 643–6) .

Source

Seven samples of Pingsdorf-type ware from Lincoln were examined in thin-section. All contained abundant quartz sand, (although this varied in size range, grain-size distribution and roundness), sparse rounded clay pellets and sparse rounded opaque grains. The clay matrix was consistently a clean, low-iron anisotropic clay containing sparse flecks of quartz *c.*0.04mm across. The lack of distinctive petrological characteristics in the samples means that the thin-section analysis cannot be used to identify these sherds positively as being of Rhenish origin, especially considering the use of equally low-iron, inclusion-free clays in the late 9th- to 12th-century Lincoln area pottery industries, but the fabric characteristics are at least consistent with a Rhenish origin and the fabrics are paralleled at London (Vince and Jenner 1991, 100). Three vessels from Lincoln had previously been identified

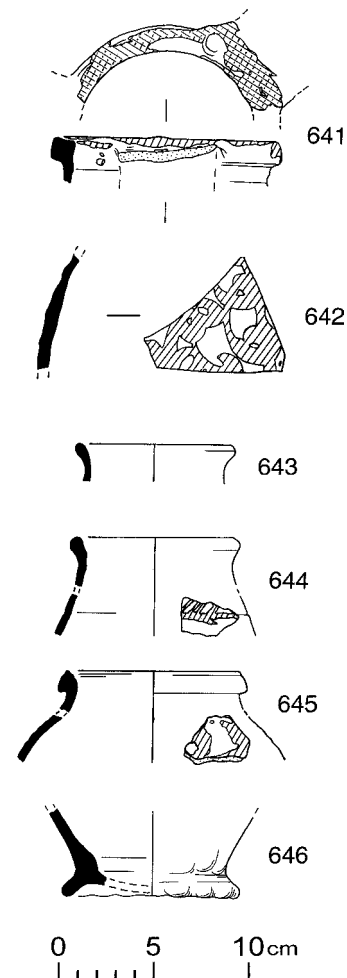


Fig 92 Pingsdorf-type Ware: 641–6. Scale 1:4

by eye as Beauvais red-painted ware (Adams Gilmour 1988, Fig. 58, 27). All sherds were re-examined visually and a single sample examined in thin-section (L 1945) and compared with thin-sections of sherds of Beauvais red-painted ware from Southampton. The Southampton pieces typically contain evidence of a Cretaceous or Tertiary element within the rock and mineral fraction, usually altered glauconite and sparse highly polished, rounded quartz grains. These features were absent from the Lincoln sample, which had a similar appearance to other red-painted wares from the city (PING), thought to be from the middle Rhine and possibly Meuse valleys. The main reason for the northern French attribution appears to have been the squared rim which is certainly a common French characteristic but is also known from the Rhineland. All red-painted sherds from Lincoln (with the exception of two Early Stamford ware rims) are now listed as Pingsdorf-type ware.

Dating

Sherds from 35 vessels have been found in the city from sites in the Lower City and the Wigford suburb. The earliest fabric to occur is the fine white earthenware, first found in a ASH9 to ASH10 horizon (mid to late 10th century). The hard yellow fabric first occurs in deposits dating to ASH12 or ASH13 (early to mid/late 11th century) and the dark semi-vitrified fabric by horizons MH1 or MH2 (early/mid to mid 12th century).

Early Medieval (c.1120–c.1220)

Introduction

National Context

Over much of England, the later 12th and early 13th centuries were marked by the appearance of local glazed ware industries, most of which also produced unglazed cooking wares in addition to glazed jugs and some other forms (such as pipkins, aquamaniles and dripping dishes). These glazed wares were usually wheel-thrown (but not always; the Ham Green potteries on the south bank of the Bristol Avon produced only hand-made wares) and seem to have been located to serve the emerging urban market; (Ham Green, for example, was ideally situated for serving not only Bristol but the new towns of the south Welsh coast). Despite the presence of local centres almost everywhere in England, some vessels were still carried remarkable distances overland, though whether as part of personal baggage or as a result of trade is not clear. There appears to have been a national decline in the level of continental

importation of pottery, perhaps reflecting the fact that England was emerging as an exporter of pottery. English wares from east-coast centres occur at port sites in Scandinavia, especially on the Norwegian and western Swedish coast, and a similar pattern is seen in the west with the exportation of Ham Green and other wares from Bristol to Wales and Ireland. Glazed wares increase in frequency at most English sites during this period and there is a suggestion, as yet unproven, that they were used more frequently in towns than in the countryside. This may, however, partly reflect the use of metal cooking-vessels in the towns rather than the lack of glazed wares in the countryside.

Lincoln Production

The late 12th century saw the establishment of a glazed ware industry in Lincoln (LSW1 and LSWA). This industry only slowly became an important exporter of pottery to the local countryside and some regional centres. The location of this 12th-century Lincoln industry is uncertain. Unlike the later industry, there is no archaeological or documentary evidence from the Wigford suburb, while the street name, Pottergate, is likely to pre-date this industry and refer to the 10th-/early 11th-century production of LSH and SNLS at the southern end of the medieval street (now replaced by Lindum Road). The presence of a mixed silt in the clay matrix of many LSW1 samples might suggest that the clay was dug from a source bordering the Witham fens, which would favour production on the east side of the city, close to the river. Suitable clays, however, also occur to the east of Wigford and it may be that access to this clay was made more difficult by the construction of the Sincil Dyke.

Local Production

Several late 12th- and early 13th-century wares are known, which, from their fabric or distribution, are likely to be of local origin. These include some of the hand-made wares (EMHM) and glazed wheel-thrown wares (FINSP and LOCC).

Regional Imports

This period is dominated by 'splashed-glazed' vessels, mainly jugs, from Nottingham types until towards the end of the 12th century when Lincoln-produced wares become dominant. Glazed wares from centres at Beverley (BEVO), Doncaster (DONC) and Stamford (DST) are also found in the city at this time, as well as wares whose precise source is not known, but which can be shown by fabric analysis or distribution pattern to have been made outside the region. The latter include both hand-made cooking vessels (such as SLSNO and UNGS) and glazed, wheel-thrown jugs.

Continental Imports

Rhenish and Meuse Valley wares are still relatively common imports (ANDE and PING) and some North French vessels (NFREM) are found at the end of this period.

Lincoln Glazed ware; Fabric A (LSWA) (Figs. 120–1)

This fabric is discussed in full in the medieval section (below pp133–42). Vessels that typologically belong to the 12th century are shown in Figs. 120–1.

*12th- to 13th-century Lincoln Glazed ware (LSW1) (Figs. 93–8)**Fabric and technology*

This ware is characterised by glaze type, by rim, base and handle typology, by decoration, and, to a lesser extent, by fabric. Where a clear distinction between LSW1 and the later LSW2 industry cannot be made, vessels are classed as LSW1/2. Vessels that are thought to belong to this period, but cannot conclusively be classified as LSW1, are illustrated in Fig. 98. There are two main fabrics for this ware that have been confirmed by thin-section analysis. As it is only possible to be certain by eye, at the extreme ends of both fabrics, to which group a LSW1 sherd belongs, fabric distinctions have not been recorded in the database for any site other than Flaxengate (F72), where all glazed sherds were typed by microscopic examination.

Fabric A

Vessels in this fabric type have a sandy texture with fabric colours ranging from light to dark grey with pink to orange surfaces. Glaze colours vary from amber to apple-green. The fabric is tempered with moderate to abundant rounded quartz of up to 0.6mm, together with sparse iron-rich grains, sparse chert, sparse to moderate, rounded laminated clay pellets and sparse, rounded calcareous inclusions.

Fabric B

This fabric often has a slightly rougher sandy texture with a grey to dark grey fabric and orange to red-brown surfaces. Some vessels may be entirely oxidized. Glaze colours are usually reduced greens, often mottled with orange. The fabric contains common to abundant rounded quartz up to 0.6mm with sparse rounded iron-rich grains, sparse rounded chert, moderate rounded laminated clay pellets and sparse sandstone.

The manufacture of both LSW1 fabrics is by wheel-throwing, with most vessels being well centred and having thin walls, indicating that they were probably thrown on a fast wheel. The first fabric is perhaps more finely thrown, with more evidence for

finishing with trimming and wiping. Early vessels tend to have flat bases, occasionally with wire marks. Firing temperature is usually high, with all vessels except a few examples of Fabric B having a hard fabric and a glaze that is well fused to the body. Glazing is entirely of the type termed 'splash glaze' (Newell 1995, 77–88), varying from a few spots to almost complete cover of the upper vessel. Early vessels in early to mid/late 12th-century deposits (MH1–MH2 horizons) have only a partial glaze cover, with the glaze being thin and individual spots of glaze only slightly overlapping each other. From the mid/late 12th century (horizon MH3), the glazing cover extends across the upper two thirds of the vessel and the glaze is much thicker. Individual spots of glaze are now only visible at the lower edge of the glaze cover, or on incidental patches, giving a thick covering glaze that is pocked with tiny little craters. Copper specks appear occasionally in the glaze throughout the period of production and this may indicate the use of scrap metal for the source of some of the lead used in the glaze. There is little decoration (apart from thumb pressing of the handle edges) before the last quarter of the 12th century (horizon MH3), when a wide variety of decorative techniques began to be employed. These most commonly included incised and combed lines, thumb-impressed strips (that may be further combed or notched), stabbing and rectangular roller stamping. Other less common forms of decoration were the use of modelled applied motifs such as horseshoes and leaves, iron-stained applied or directly painted decoration and 'seals' as on York Glazed ware jugs (Jennings 1992, 41). In horizon MH4 (the early to early/mid 13th century), there was an amazing variety of decorative elements used in varying combinations producing 'one-off' vessels (eg, Fig. 95, 671 and 673).

Vessel types

The commonest vessel form is the jug, with other forms being rare until horizon MH3 when a limited range of other vessels appears.

Spouted Pitchers

There is little direct evidence for the typical Saxo-Norman short spouted pitcher form. The few fragments of spout that have been found may be from this form, or they may equally well be from the later tubular spouted pitcher form. Recent excavations, however, have produced an example of a rim that may be from a collared pitcher, similar to those found in Nottingham Splashed ware.

Jugs

A limited range of jug types was made in LSW1, with the only developments being those in rim shape, the

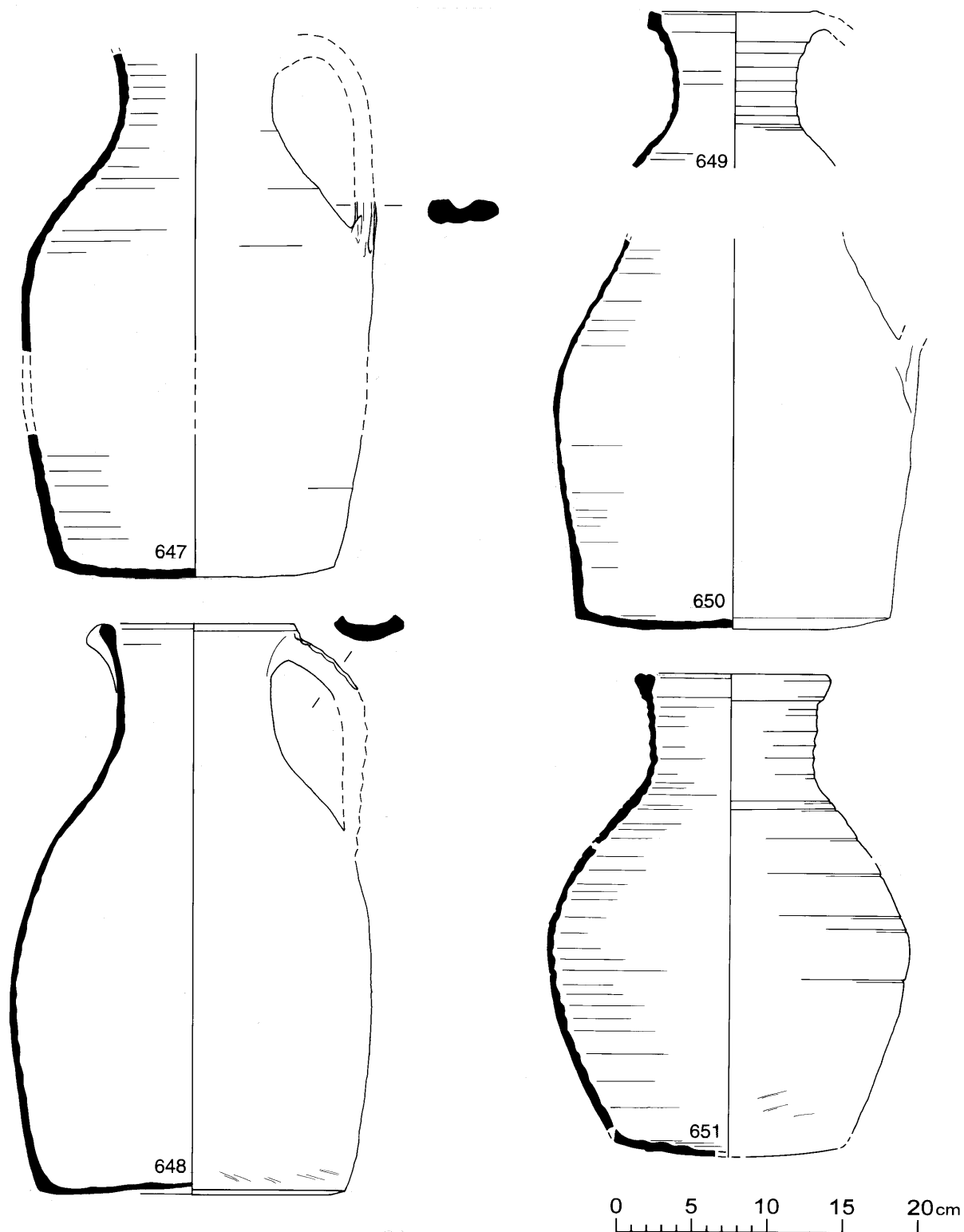


Fig 93 12th to 13th century Lincoln Glazed Ware: early jugs, 647–651. Scale 1:4

positioning of the upper handle join, and in decorative techniques. The most common type of jug (early shouldered) seems to have continued in use throughout the currency of the ware with little change in shape.

A number of jugs have an internal white deposit which is also found on contemporary Nottingham Splashed ware jugs. The LSW1 jugs, however, have no sign of sooting on the base, unlike the Nottingham examples that are usually heavily sooted.

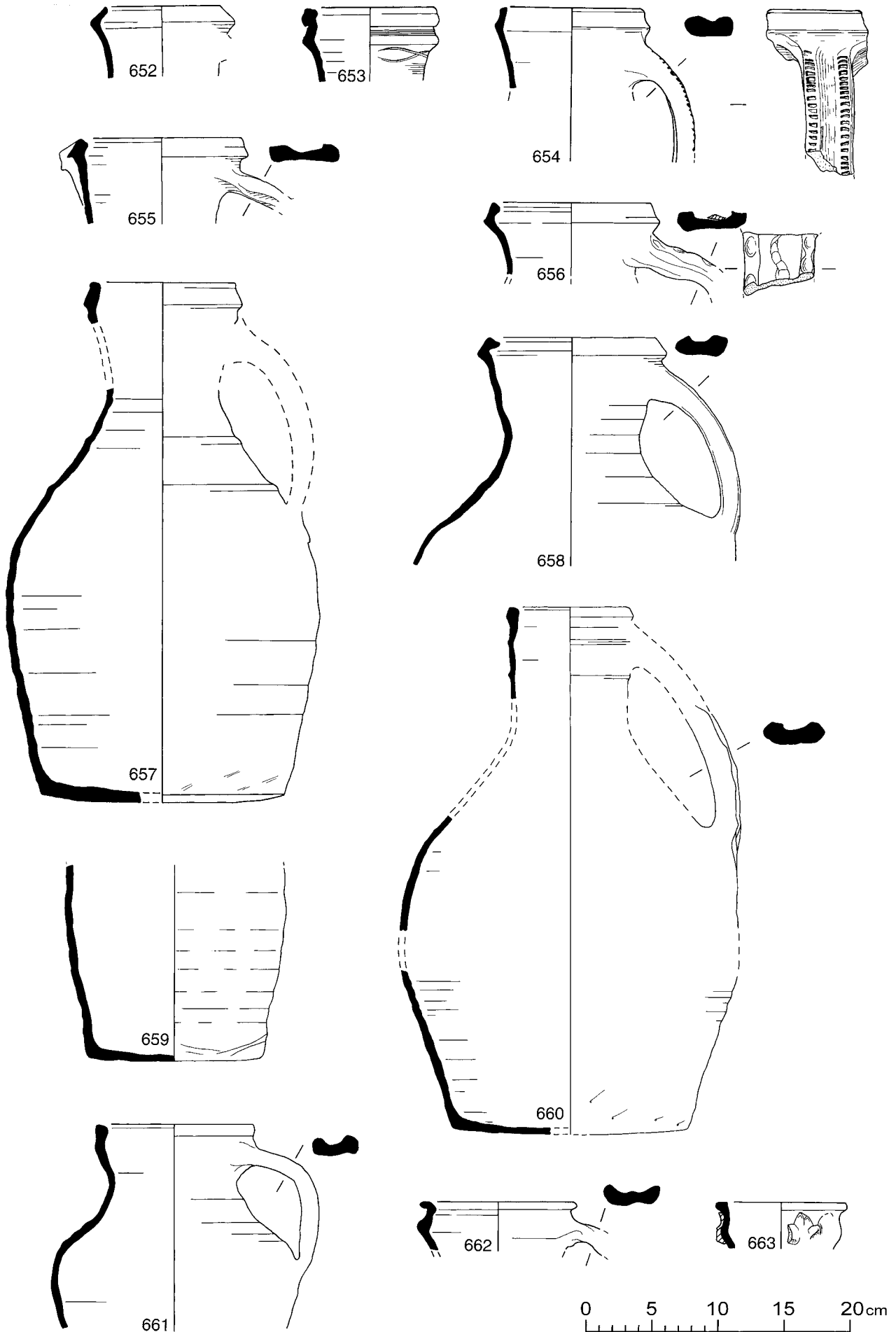


Fig 94 12th to 13th century Lincoln Glazed Ware: later jugs, 652–663. Scale 1:4

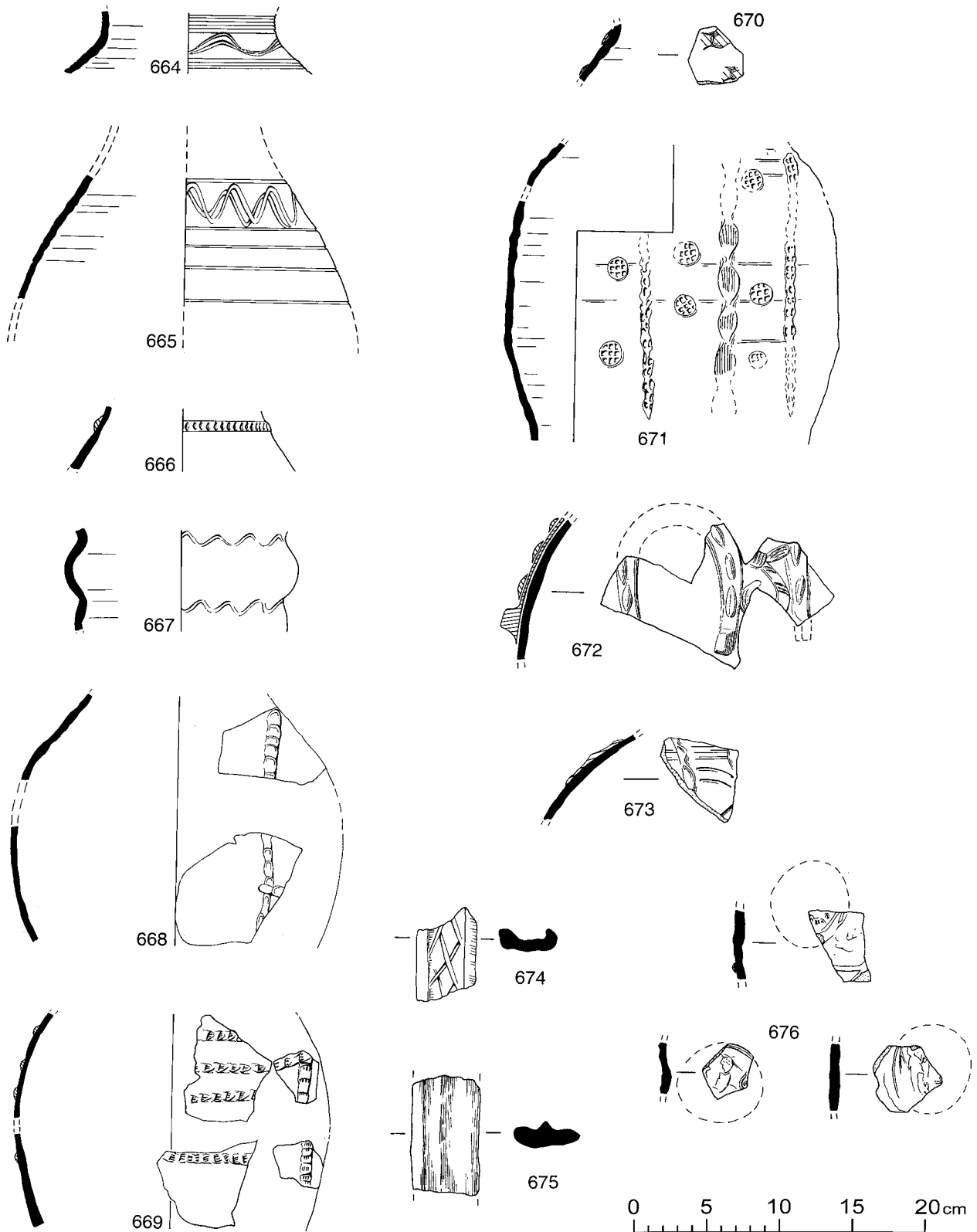


Fig 95 12th to 13th century Lincoln Glazed Ware: decorated jugs, 664-676. Scale 1:4

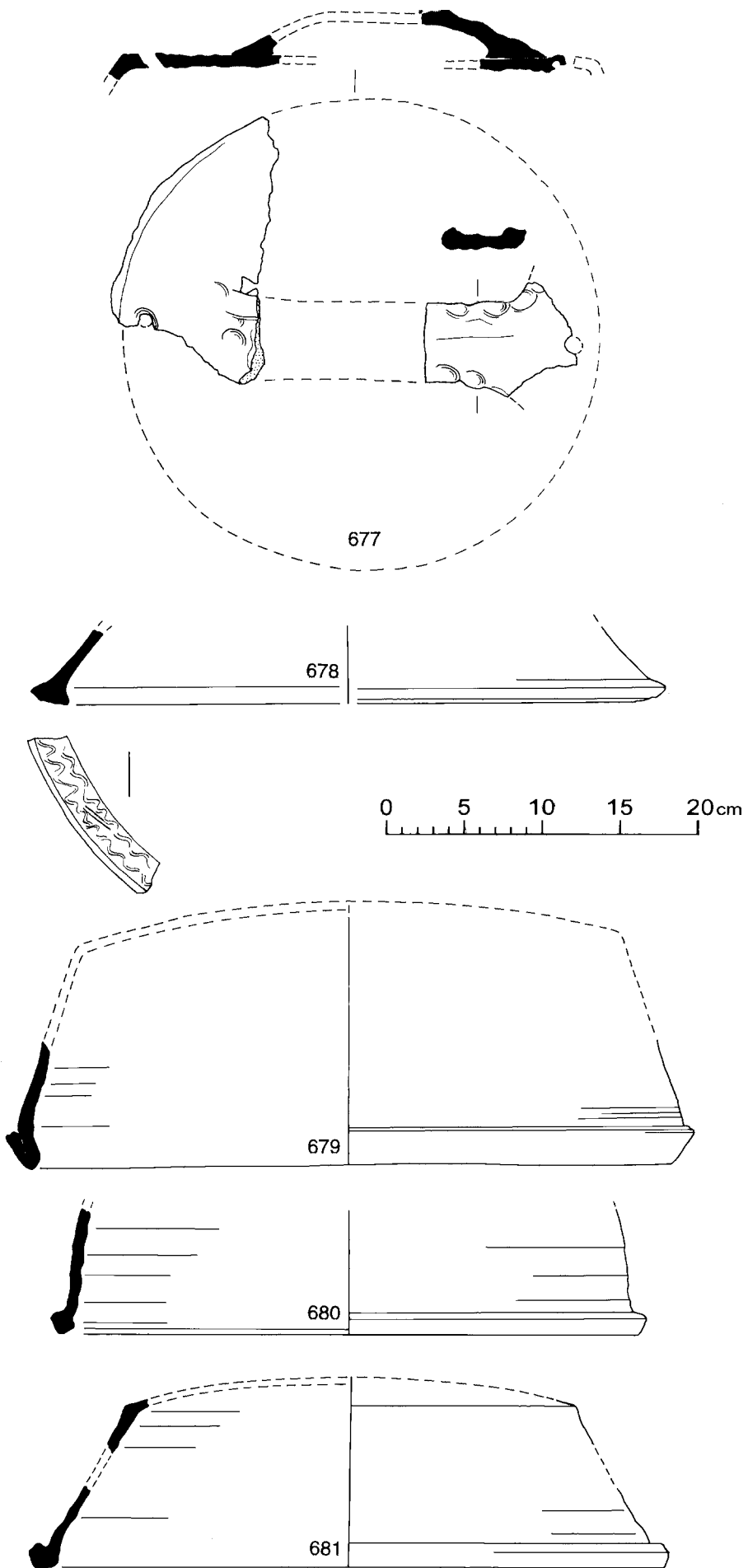


Fig 96 12th to 13th century Lincoln Glazed Ware: curfews, 677–681. Scale 1:4

1. EARLY SHOULDERED

(FIG. 93, 647–50; FIG. 94, 657, 659–60, AND FIG. 95, 665)

This type of jug has a wide, usually flat base, with almost straight sides up to the shoulder and a long neck. This is the most common jug shape, occurring in both fabrics. It was in use from the early 12th to the early 13th century (horizon MH1 until MH4). The bases show no sign that vessels have been stacked on top of each other in the kiln. Jugs occurring before the last quarter of the 12th century (horizon MH3) are undecorated, although the edges of some handles may be thumbled. Later vessels are decorated or have one or more cordons on the neck and body (eg, Fig. 94, 657 and 660).

2. EARLY ROUNDED

(FIG. 93, 651; FIG. 94, 661, AND FIG. 95, 668–73)

The early rounded jug has a more rounded body shape that gently tapers to a slightly smaller base. No vessels of this type have been confirmed before the last quarter of the 12th century (horizon MH3) and they occur more commonly in Fabric B. Decoration, even if it only consists of incised parallel lines, is quite common and extremely variable.

3. WAISTED (FIG. 95, 667)

These jugs are rare, and although no complete profiles have been found they are probably similar to jugs found in London-type ware (Pearce *et al* 1985, Fig. 34, 111). All examples so far recovered have been residual in their context.

4. INDENTED

These vessels appear to be an early rounded jug form that has had the sides indented, similar to some Roman beakers. None of the LSW1 examples is complete enough to be illustrated, but they are similar to those in LSWA and LSW2 fabrics (see Fig. 120, 875–6). Stratified examples occur in early horizon MH4 deposits (early 13th century).

RIM AND SPOUT TYPES

The earliest rim forms are simple everted triangular or square shapes (eg, Fig. 93, 648–9). By the last quarter of the 12th century (horizon MH3) almost all rims have become inturned (eg, Fig. 94, 654–8). A small number of rims are more complex and may be copying metal types (eg, Fig. 94, 653), these and other odd shapes (eg, Fig. 94, 661–3) are found on vessels in both fabrics, usually on early rounded jugs. Spouts are simple pouring lips, and most appear to have been pushed from the inside rather than pulled. Only one long tubular spout has been definitely identified as a LSW1 product, although small fragments from several others may also be of this type (see Spouted Pitchers, above).

BASE TYPES

Most jugs have a flat base. Wire marks, formed when the vessel was removed from the wheel, are sometimes visible. More commonly these marks are usually smoothed or wiped away, leaving a smooth surface to the underside of the base. Slightly sagging bases are occasionally found and these are always associated with the early rounded jugs. All bases are well trimmed, giving a sharp basal edge which is then smoothed over leaving a slightly faceted surface. The thickness of the base is usually no more than 6mm on standard jugs and slightly more on early rounded jugs. No LSW1 jug has any evidence of thumbing to the base edge, and only three footed jugs are known. One LSW1/2 jug has a shallow continuous footring around the base (Fig. 98, 702).

HANDLE TYPE

With only one possible exception (Fig. 98, 699), all LSW1 handles are of the strap type. Generally they have a concave upper surface with thickened edges and appear to have been wheel-thrown. Handles are often the only feature on many jugs to be decorated. A wide variety of techniques is used, including applied strips (eg, Fig. 94, 656), and stabbing and incision (eg, Fig. 95, 674). The unusual twisted handle in LSW1/2 (Fig. 98, 699) is formed by twisting one piece of a wheel-thrown, square-sectioned strip and the accentuating ribs with knife-cuts. At both the upper and lower handle attachment points, handles are smoothed on externally and the join is blended into the surrounding vessel. Two or three finger impressions are visible on the interior of the vessel at the joining points, and these are usually more pronounced at the upper join. On early vessels the upper handle join is just below the rim edge (eg, Fig. 93, 648). The handle join moves downwards with the introduction of inturned rims, to below the lower rim edge (eg, Fig. 94, 656–8).

Jars and pipkins

(Fig. 97, 684–5; Fig. 98, 703–8)

Only about 2% of vessels found in mid 12th- to early/mid 13th-century deposits can be positively identified as LSW1 jars or pipkins. The proportion may have been greater, as it is extremely difficult to be sure of the attribution of these forms to either the LSW1 or the LSW2 industries, owing to the lack of any distinct characteristics of the form. The main type is a small rounded jar with a slightly wider mouth than base, and a girth that is greater than the height (eg, Fig. 97, 667). Until the early 13th century (horizon MH4), when the more typical medieval jar base was introduced, bases are always flat and have a sharp angle that is usually trimmed. These small jars are adapted for use as pipkins by the addition

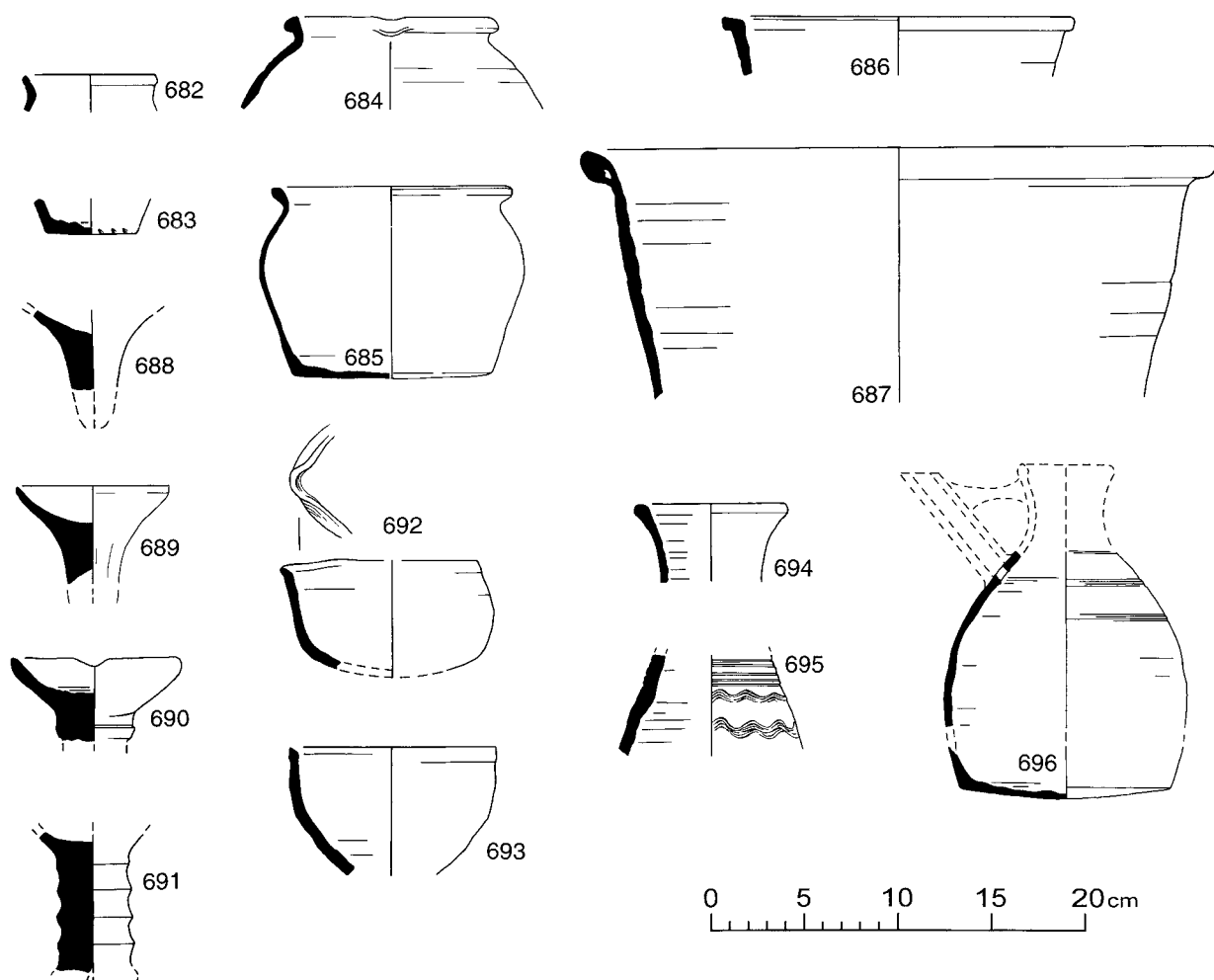


Fig 97 12th to 13th century Lincoln Glazed Ware: miniature jars 682–683; jar/pipkins 684–685; bowls 686–687; lamps 688–691; hemispherical vessels 692–693; bottles and small tubular spouted jugs 694–696. Scale 1:4

of a pulled lip and a horizontal handle applied to the shoulder (eg, Fig. 98, 707). Unless at least one of these two features is present, it is not possible to distinguish between a jar and a pipkin. The pouring lips are pulled forwards and may be quite wide, all known examples being for right-hand pouring. The handles are large in comparison with the size of the body and give the vessel profile an unbalanced feel. They are usually of oval section with a central rib or hollow (eg, Fig. 98, 707–8) and are plugged through the vessel wall high on the shoulder, and then secured with two finger pressings to the upper part and a thumb pressing to the lower part of the join. The tip of most of the handles is hooked or curved over (eg, Fig. 98, 707). Both jar and pipkin forms have a small amount of glaze applied to the upper vessel. Pipkins first begin to appear at the end of horizon MH3 in the late 12th century although they are rare until horizon MH4 (early to early/mid 13th century).

A few larger jars with everted or square rims also belong in this period (eg, Fig. 98, 704–6) although it is uncertain if they belong to the LSW1 or LSW2 tradition. These jars are often glazed both internally and externally and, apart from the rims, are similar to earlier collared types made in the LSWA fabric (see Fig. 121, 879).

Bowls and dishes

Together these forms comprise less than 1% of the pottery made in this ware. Although there is no complete profile of a dish form, several sherds indicate that a dish or shallow bowl form exists (based on relative dimensions).

1. PLAIN (FIG. 97, 686–7)

The plain bowls range from small (eg, Fig. 97, 686) to large (eg, Fig. 97, 687) in size and always have an internal glaze which thickens towards the base. Rim

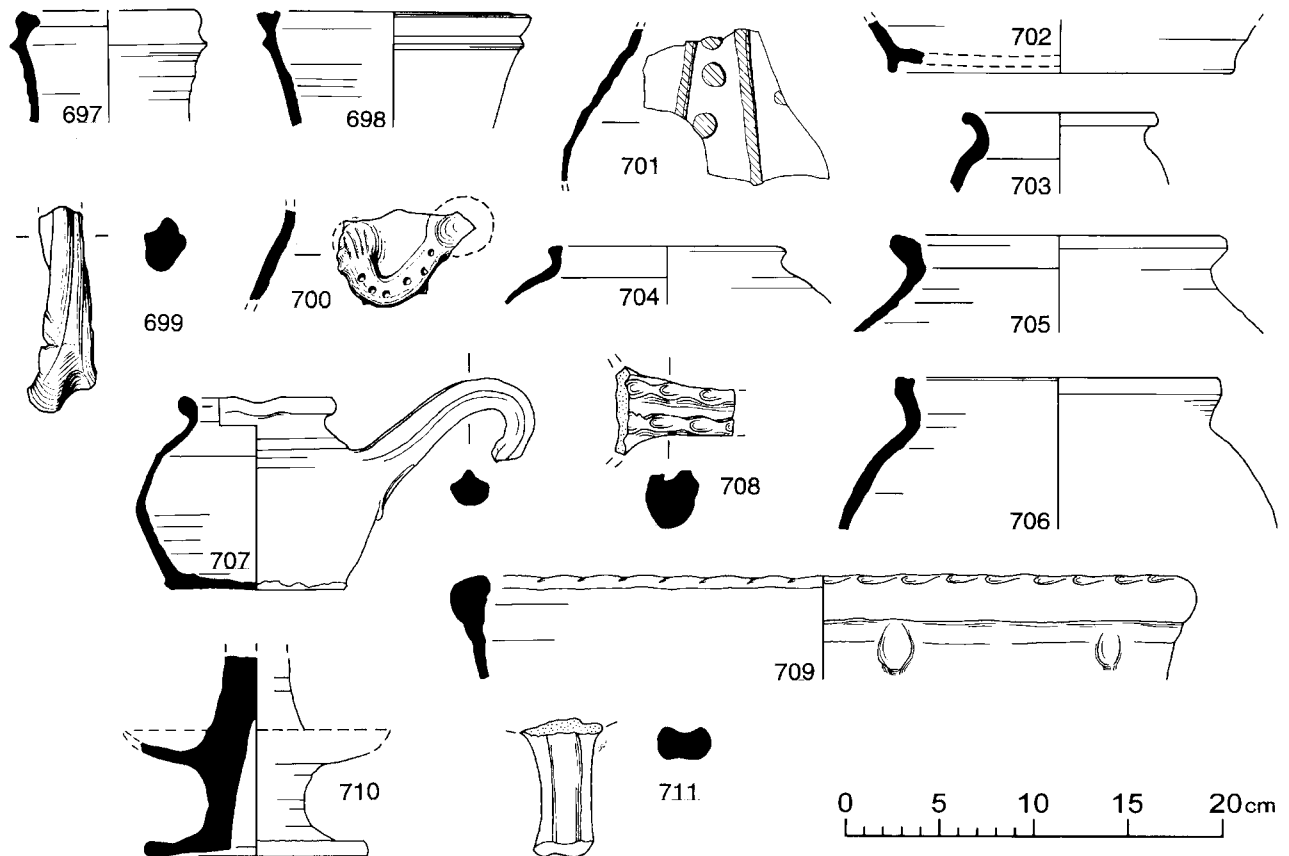


Fig 98 12th to 13th century Lincoln Glazed Ware: jugs 697–702; jars 703–706; pipkin 707–708; bowl 709; lamp 710; dripping pan 711. Scale 1:4

types range from everted to folded and bases are always flat and often heavily trimmed. A few bowls (eg, Fig. 98, 687) have internal sooting and have been used secondarily as curfews. These plain bowls seem to belong to the later part of LSW1 production in horizons MH3 and MH4 (late 12th to early/mid 13th century).

2. DECORATED (FIG. 98, 709)

A small number of decorated, unglazed bowls (eg, Fig. 98, 709) belong to this period. Similar bowls are found in LSWA where they are glazed. As no complete profiles have been found, the depths are uncertain, although the heavy thumbled rim and the use of thumbled strips indicate a deep Stamford Type 1 bowl (Kilmurry 1980, fig. 3, 1). All LSW1 examples occur in residual contexts.

Curfews (Fig. 96)

This vessel is an adaptation of the basic large plain bowl. Bases are pushed out to form a slightly convex surface, small circular vent holes are made in the

base and occasionally in the lower body, and a wide strap handle is applied across the base. Unlike bowls, curfews are not glazed internally, but have a sparse to thick glaze applied externally to the base and body. These vessels may be decorated with thumbing (eg, Fig. 96, 677) or with combing (eg, Fig. 96, 678). Curfews form more than 1% of the LSW1 pottery forms found in horizons MH3 and MH4 (late 12th to early/mid 13th century).

Lamps

A variety of lamp types is found in LSW1 and together they form about 1% of all LSW1 production. Types can only be distinguished where a base is present, as the upper bowls for each type are identical. A small lip is occasionally found on the upper bowl of all types of lamp (eg, Fig. 97, 690). Glaze is usually only found inside the bowl, although accidental spots may occur on the base.

1. SPIKE (FIG. 97, 688–9)

These lamps have a shallow bowl on a spike base

and are similar to those found in some Saxo-Norman fabrics. They tend to be found in horizons MH1 to MH3 (12th century), although they may be residual by the last quarter of the 12th century (MH3).

2. PEDESTAL (FIG. 97, 691)

These lamps have a shallow bowl set on a thick, (usually solid) pedestal, which has been slightly hollowed out towards the base. This type of lamp is most common in horizons MH1 to MH3 (12th century).

3. DOUBLE-SHELLED PEDESTAL (FIG. 98, 710)

The form of these lamps differs from plain pedestal lamps in that examples of this period have a drip-tray set part way up a more hollow pedestal. By the medieval period this drip-tray has dropped to just above the base.

Miscellaneous

HEMISPHERICAL VESSELS (FIG. 97, 692–3)

In horizons MH2 to MH4 (mid 12th to early/mid 13th century), an unglazed, small hemispherical form is found. The vessel is oval in plan, has an upright rim and is usually sooted on the base and sides. A similar form is made in Stamford ware (Fig. 88, 617–8).

BOTTLES AND SMALL TUBULAR SPOUTED JUGS (FIG. 97, 694–6)

A limited number of small shouldered vessels with a flaring rim were made in LSW1. Some examples have no handle or spout and are obviously bottles, while others, like the example from Goltho (GM74) (Fig. 97, 696, and Coppack 1987, Fig. 149, 629), have a tubular spout that may have had a supporting bridge to the body and are similar to a form made in Stamford ware (Fig. 88, 623). Combed horizontal and wavy decoration is found on the shoulder and body of some vessels.

MINIATURE JARS (FIG. 97, 682–3)

A few very small glazed jars occur that have a rounded profile, simple everted rims and flat trimmed bases. No vessel shows any signs of sooting and the presence of decoration on one example indicates that they may have been designed for table use.

HANDLED JARS

A single example of a jar with a rod handle has been found.

GLOBULAR JARS

Two inturned, rounded rims similar to those found on so-called 'ginger' jars found in the Thetford ware industry (Jennings 1981, Fig. 8 Nos 187–188) indicate

that this form was made in Lincoln.

DRIPPING DISHES (FIG. 98, 711)

There are two sherds in LSW1 and three in LSW1/2 from dripping dishes. Not enough of the vessels is present to reconstruct a profile, although all of the vessels appear to be of the small oval type similar to those found in the LSW2 fabric. The presence of a single, upward-curving strap handle, applied to the rim edge, further indicates that the form is probably similar to one made in LSW2 (see Fig. 133, 1023). The vessels appear to have been wheel-thrown rather than slab-built and have a thick internal glaze.

LID

A few sherds indicate that a lid of unknown type was made.

Source

Six sherds were examined in thin-section (L1803–L1808), of which all but one (L1806) were of Fabric B. Each contained a quartz sand temper with minor quantities of chert and sandstone. The largest grains were *c.*0.8mm across. Two of the samples also contained laminated clay pellets up to 1mm across and a third sample contained clay pellets of variegated clay. The clay matrix was the most variable aspect of the samples, with a single example of a low-iron clay (Fabric A, L1806), whilst the remaining five samples contained sparse quartz, muscovite, biotite and unidentified high-relief minerals. This combination is shared only with one other medieval fabric found in Lincoln, Sparsely Glazed ware.

Dating

Sherds of LSW1 first appear in horizon MH1 deposits (early/mid to mid 12th century) as a very minor element in the assemblage. By the mid 12th century (horizon MH2), when the jug found at the Observatory Tower at Lincoln Castle (Lincoln Castle 1974) (Fig. 93, 647 and Reynolds 1975) was probably made, the material shows that the ware is forming *c.*4% of pottery found at this time. This finely made jug was found in a deposit probably dating to before 1151. In horizon MH3 (the last quarter of the 12th century), the ware forms *c.*9% of the total assemblage and several innovations take place: the introduction of a wider range of forms, new inturned jug rim types, the use of more decorative elements, and an increase in the thickness of the glaze. At the beginning of MH4 (the early 13th century), LSW1 still forms *c.*15% of the pottery, but by the end of the horizon quantified assemblages show that this has dropped to less than 2%. In horizon MH4 (early to early/mid 13th century), many changes take place in the pottery industry in Lincoln, with the introduction of a new ware (LSW2) that has new form shapes, new rim types, new decorative

elements and new glazing techniques. For Fabric A the change is still not fully understood, but some of the evidence suggests that the production evolves into typical LSW2 by the end of horizon MH4 (early/mid 13th century). This evidence includes the use of a splashed-type glaze on early LSW2 jugs; the use of the inturned rim on vessels with a suspension glaze and the use of traditionally 'high medieval' decoration on some late Fabric A LSW1 jugs. There is no evidence that the industry producing Fabric B survives, unless the clay source was altered, as this fabric is not found on any LSW2 vessels.

Local Early Medieval fabrics (EMLOC) (Fig. 99)

Fabric and technology

With the exception of one definable group, this is an amalgamation of loosely associated fabrics whose inclusions fall into a range that is to be expected locally. All fabrics are tempered with subangular to rounded quartz. Very few of the fabrics are distinctive, and, with the exception of Fabric group A, only one example of each fabric type exists. There is a mixture of wheel-throwing and hand-forming for the construction of these miscellaneous vessels and forms are either jars (eg, Fig. 99, 715) or jugs (eg, Fig. 99, 716). Any glaze is of the splashed type and decoration is rare, mostly consisting of applied strips that have been thumbbed, although one sherd has iron-stained, roller-stamped strips.

Fabric A (Fig. 99, 712–16)

Fabric and technology

Surface texture is smooth to slightly gritty and fabric colours vary between grey and light grey with light orange to orange surfaces flecked with white spots. The fabric contains common to abundant rounded

quartz up to 0.4mm, together with common rounded calcareous inclusions up to 1.0mm, sparse sandstone, sparse iron-rich grains, sparse chert and sparse, rounded and laminated clay pellets. Vessels are wheel-thrown, although not very competently. Glazing of a thick splashed-type is found on the upper body of jugs. No decoration is known.

Forms

Only jugs and a single lamp (Fig. 99, 714) are known. Jugs have simple everted rims and thin strap handles that spring from the rim top.

Source

A single sample of Fabric A was thin-sectioned (L1300). It contained a typical local quartzose sand (quartz, chert, sandstone), together with sparse rounded, laminated clay pellets. The clay matrix is distinctive, however, in that it contained abundant quartz silt together with ferroan calcite and muscovite. From this evidence, it is not possible to suggest a precise source. Four samples of ungrouped Local Early Medieval fabrics vessels were thin-sectioned (L1118 – Fig. 99, 715; L1120 – Fig. 99, 716; L1813 and L1308). All contained quartzose sand temper containing quartz, chert and sandstone. L1120 also contained sparse rounded nonferroan and ferroan limestone fragments up to 0.5mm across. These had been heat-altered and therefore no internal details remained.

Dating

Local Early Medieval fabrics are found scattered in horizons ASH14 to MH4 (late 11th to early/mid 13th century) with no real concentration. There are only about 50 vessels from the city, of which 13 are in Fabric A. These fabrics are also found on rural sites in the county with six Fabric A vessels coming from

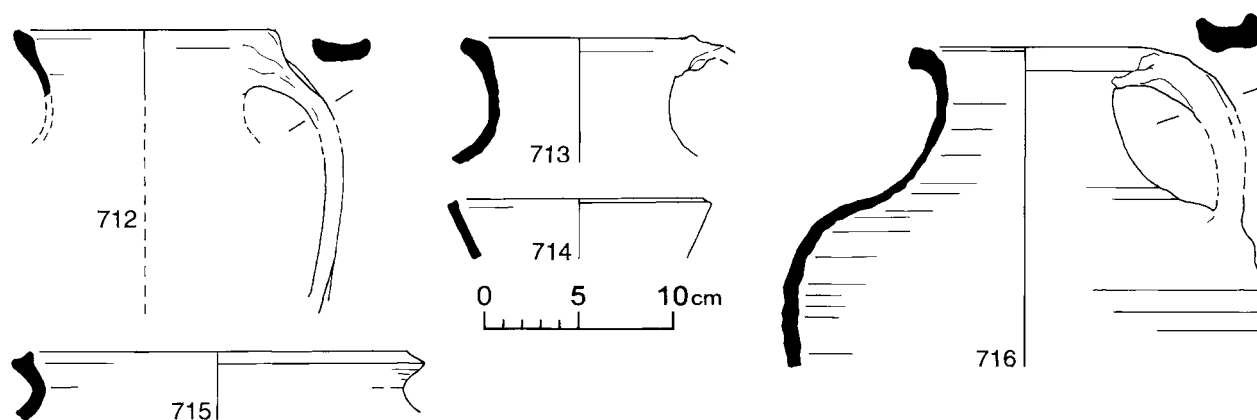


Fig 99 Local Early Medieval Fabrics: Fabric A 712–714; miscellaneous 715–716. Scale 1:4

the Goltho site (GM74) (eg, Coppack 1987, fig. 149, 617–8). Fabric A seems to start in horizon MH3 (the last quarter of the 12th century) and may only have a short life.

Local Early Medieval Shelly ware (LEMS) (Figs. 100–1)

Introduction

This ware has been described in detail elsewhere (Adams Gilmour 1988, 137) and is only summarised here.

Fabric and technology

Two fabrics can be discerned within this tradition, one of which is extremely rare. The main fabric has a soft, slightly bumpy surface texture, and sherds are either oxidized with a reduced core or have darker oxidized surfaces that blend into a lighter oxidized core. Surface colours range from red to orange and core colours from grey to buff. The fabric contains abundant fragments of fossil bivalve shell up to 3mm along with sparse iron-rich grains and sparse subangular quartz. Small sherds can be difficult to separate from Lincoln Fine-Shelled ware, as visually they are very similar, although the shell used for this ware is slightly larger than that used for Lincoln Fine-Shelled ware. The minor fabric has a hard slightly gritty surface texture, with a reduced dark grey fabric that may sometimes have oxidized light red surfaces. This fabric contains abundant fossil bivalve shell up to 1mm together with moderate subangular quartz, sparse iron-rich grains, and sparse rounded sandstone. Vessels in both fabrics appear to have been both slow wheel-thrown and coil-made, with the bases of large cooking pots sometimes being applied separately or strengthened with a separate band of clay (eg, Fig. 100, 728). Surfaces are wiped, partially masking the dense shell, but they do not have the striations seen on the surface of Lincoln Fine-Shelled ware pottery. Decoration is rare and mainly consists of stabbing or incised lines of varying type (eg, Fig. 101, 729, 731–2 and 740). A most unusual piece of decoration on the shoulder of a cooking pot is an applied horseshoe (Fig. 101, 730).

Forms

The principal form in this ware is a wide-bottomed cooking pot (eg, Fig. 100, 719–28 and Fig. 101, 729–32). Approximately 85% of all of the Local Early Medieval Shelly ware in Lincoln can be identified as this form, which is made in a variety of sizes. Cooking pots in the minor fabric have a slightly different shape with a narrower base (eg, Fig. 100, 717–8). Shallow everted-rimmed dishes (eg, Fig. 101, 736–8) and small rounded bowls (eg, Fig. 101, 735) form about 6% of all Local Early Medieval Shelly

ware and these are more common in horizons MH3 and MH4 (mid/late 12th to early/mid 13th century). Other forms produced include lipped jars (eg, Fig. 101, 733–4), curfews (eg, Fig. 101, 739–40), dripping dishes, lids, ladles, industrial bases, and louvers.

Source

Six samples of Local Early Medieval Shelly ware were thin-sectioned (L1802, L1815, L1816, L1817, L1818 and L1819). All had a very similar petrological composition. The main inclusion consists of fragments of a shelly limestone in which the shell fragments are almost entirely bivalve shells composed of non-ferroan calcite set in a matrix of ferroan calcite. Sparse subangular quartz grains up to 0.3mm across were present in every sample. The clay matrix in each case was highly birefringent with few inclusions. The similarity of this shelly limestone temper and the clay matrix to those found in products of the Lincoln area (Lincoln Kiln-type ware, Lincoln Late Saxon Shelly ware, and Potterhanworth being the proven examples) suggests that Local Early Medieval Shelly ware was also produced locally.

Dating

Local Early Medieval Shelly ware first appears stratified in MH1 horizons (early/mid 12th century) where it forms less than 1% of the material. By the mid 12th century (horizon MH2) this percentage has increased to c.11% in quantified groups and continues to increase, reaching a peak of c.15% by the beginning of the 13th century (early MH4 horizon), dropping to c.8% in later MH4 groups (early/mid 13th century). The ware has become residual by the mid 13th century (horizon MH5), when it is replaced as the principal coarseware by Potterhanworth ware.

Sparsely Glazed ware (LOCC) (Fig. 102)

Introduction

This ware has been described in detail elsewhere (Adams Gilmour 1988, 159) and is only summarised here.

Fabric and technology

The surfaces of this ware have been wiped, giving a smooth surface texture. Vessels usually have a grey to dark grey fabric, with sharply defined red-brown to light red surfaces. Vessel hardness varies considerably from soft to very hard. The fabric contains sparse rounded quartz up to 0.6mm, sparse iron-rich grains, sparse sandstone, sparse chert, sparse carbonised organic material and sparse biotite. The main features of the ware are that vessels are partially glazed with an under-fired, splashed-type glaze and appear to be of a thick coil construction

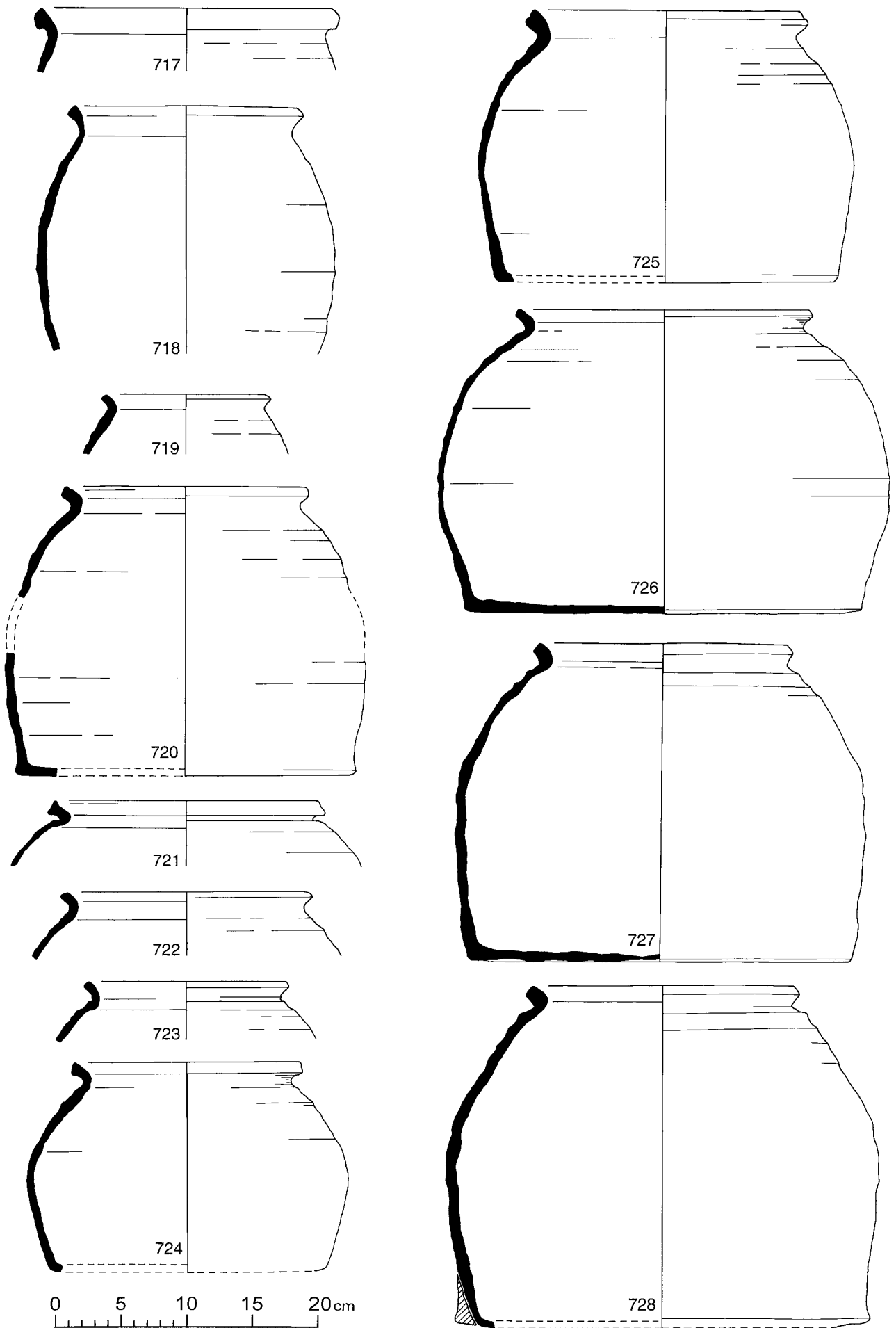


Fig 100 Local Early Medieval Shelly Ware: cooking pots 717–728. Scale 1:4

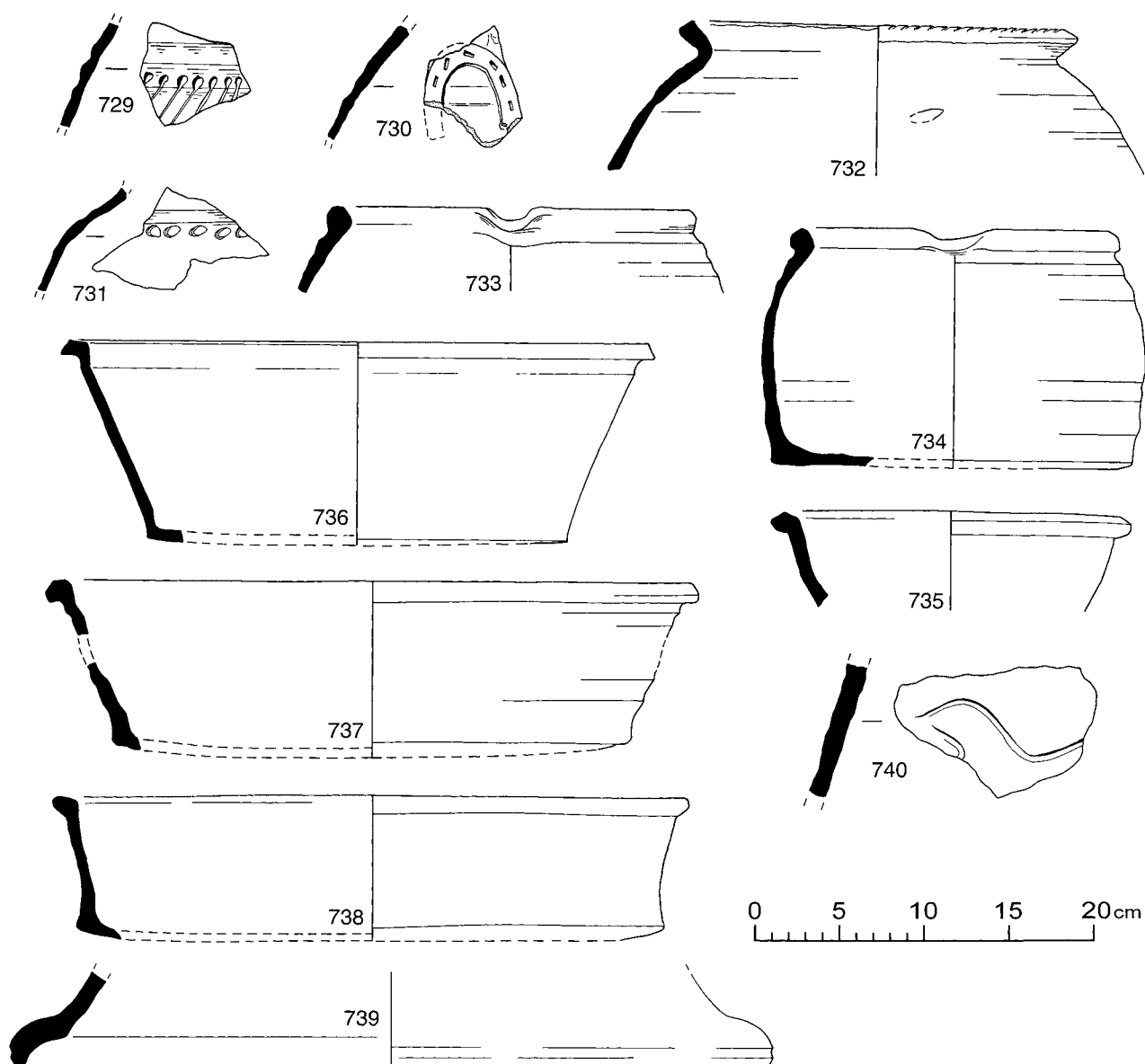


Fig 101 Local Early Medieval Shelly Ware: cooking pots 729–732; lipped jars 733–734; bowls and dishes 735–738; curfews 739–740. Scale 1:4

that is drawn upwards, possibly on a turntable. The internal surfaces of most vessels show this clearly, with characteristic groups of finger impressions (eg, Fig. 102, 753), while the exterior is carefully finished, giving the impression that the vessel is wheel-thrown. The neck and rim are applied separately, and this is clearly visible on the interior of most vessels (eg, Fig. 102, 741). The extent of the glaze varies from a few spots to almost complete cover of the top two-thirds of the vessel. On all but a few vessels, the glaze is underfired, giving a dull opaque apple-green to amber cover, pocked with craters often containing lumps of lead. Although a limited range of decorative techniques is employed (combing, stabbing, incising and thumbing) they are used to

great effect by combining up to three elements on a single vessel.

Forms

With only a few exceptions, all vessels found have been jugs with flaring necks (eg, Fig. 102, 741–55). At least one rim sherd is from a lid (Fig. 102, 756) and a further base sherd with incised decoration is either from a lid or curfew. A single thumb decorated spout from a pitcher and a single jar sherd have also been found.

Source

Five samples of Sparsely Glazed ware from Lincoln were examined in thin-section (L1792, L1793, L1794,

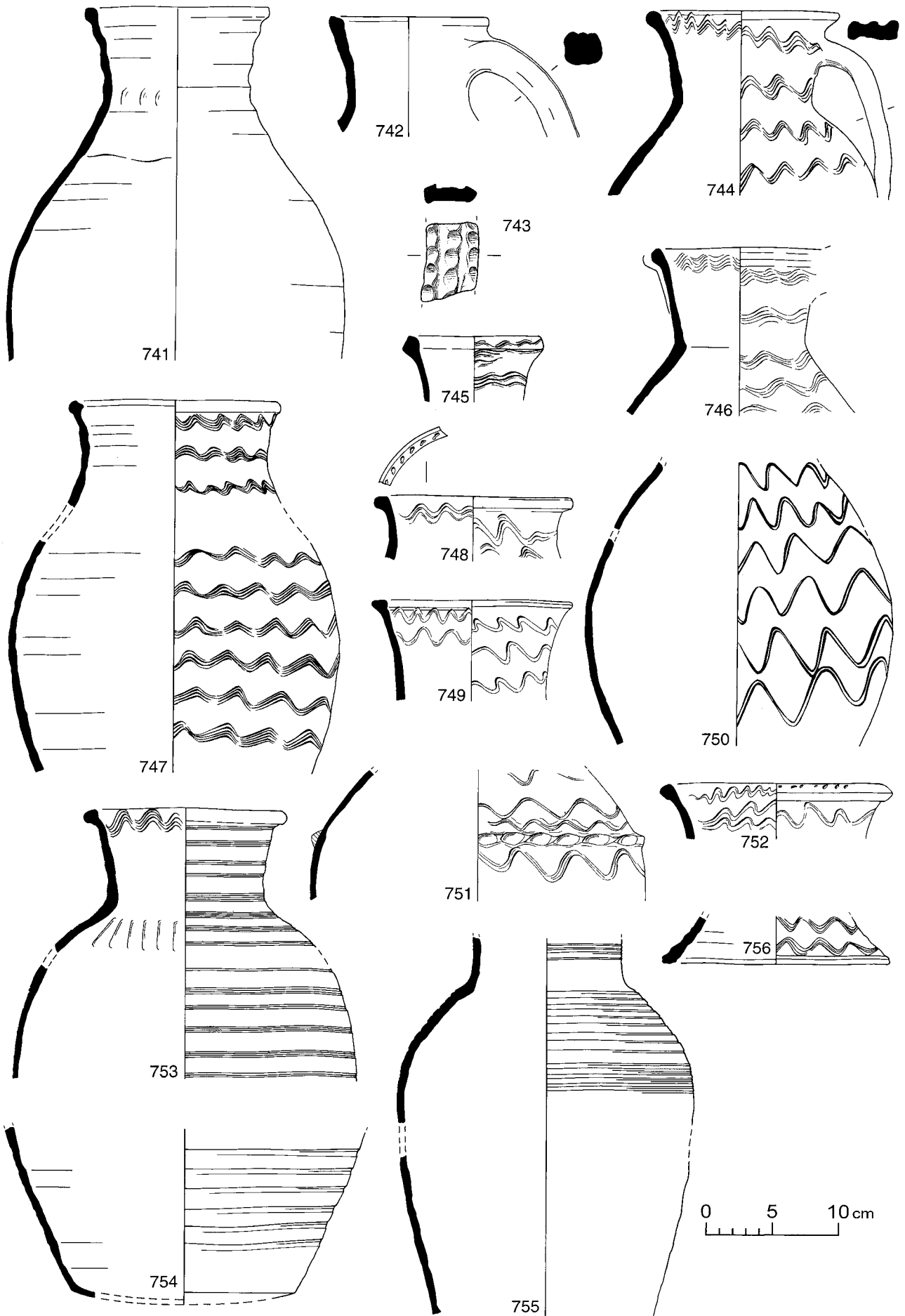


Fig 102 Sparsely Glazed ware: jugs 741–755; lid 756. Scale 1:4

L1795 and L1812). The samples all contained quartzose sand (quartz, chert and sandstone being the main components but including in two instances rounded, altered feldspar). The clay matrix contains abundant quartz silt with muscovite and sparse heat-altered biotite. These characteristics are shared with Fine splashed ware (FINSP) and Beverley ware (BEVO). Distribution evidence suggests a source in central Lincolnshire: vessels in this ware have been found at Goltho (eg, Coppack 1987, fig.149, 635), Stow, Louth, Swinehope, and Langrville, in addition to Lincoln.

Dating

More than 600 sherds are known from the city, the ware starting by MH1 (the early/mid 12th century) and forming between 1% and 3% of the pottery found in horizons MH2 and MH3 (the mid to late 12th century). This proportion drops to below 1% in horizon MH4 (early 13th century) by which time the ware is residual.

Non-local Early Medieval fabrics (EMX) (Fig. 103)

Introduction

Except for two discernible fabric groupings (A and C), this is a loose amalgamation of fabrics from non-identified sources that do not appear to be of local manufacture.

Description

Except for the material comprising fabric groups A and C, few sherds belong to the same fabric group. Inclusions of these miscellaneous fabrics are mainly rounded quartz, with other materials including sandstone, shell, calcite, iron-rich grains, muscovite, clay pellets and chert. Vessels are reduced (grey to dark grey) or more commonly oxidized (pink to red brown) and are on the whole wheel-thrown, although a few are hand-formed (eg, Fig. 103, 768). Decoration is rare and consists of incised lines, stabbing, notched strips (eg, Fig. 103, 771), and triangular roller stamping (eg, Fig. 103, 768). With the exception of a single lamp and a possible curfew, all of the miscellaneous vessels are jugs (eg, Fig. 103, 767–71), cooking pots (eg, Fig. 103, 773), or jars (eg, Fig. 103, 772 and 774). Jugs are mainly glazed with a splashed-type glaze, except for a few examples that have a thick copper green suspension glaze (eg, Fig. 103, 771), whilst jars and cooking pots are on the whole unglazed.

Fabric A (Fig. 103, 757–7)

Fabric and technology

The surface texture of this fabric is gritty, with colours usually oxidized to between light reds and reddish-yellows. Occasional sherds may have a partially reduced grey core. The fabric contains

moderate subrounded to rounded quartz of up to 0.8mm, although most grains are in the 0.2mm to 0.4mm range; sparse sandstone, sparse iron-rich grains, sparse chert and sparse rounded brown clay pellets. All vessels are wheel-thrown, well finished and have a thick vitreous amber to olive glaze that is often pitted and crazed. One vessel has cloth impressions or fibres embedded in the glaze, indicating that the glaze may have been wiped on. No decoration is known.

Forms

All vessels found have been jugs with simple everted or clubbed rims and plain flat bases (eg, Fig. 103, 757–61).

Source

Four samples of Non-local Early Medieval Fabric A were thin-sectioned (L1280, L1281, L1282, L1283). All were tempered with a quartzose sand containing minor quantities of chert and sandstone and had a relatively clean clay matrix. These characteristics are consistent with a local origin but are by no means proof that Non-local Early Medieval Fabric A was produced in the Lincoln area.

Fabric C (Fig. 103, 762–7)

Fabric and technology

This fabric can be very highly fired giving an almost vitrified finish to the smooth slightly sandy body. Colours are mainly reddish-browns although a few vessels have reduced grey cores. The fabric contains common rounded quartz up to 0.4mm, together with sparse iron-rich grains, sparse rounded sandstone and occasional chert. Vessels are finely wheel-thrown and are well finished, often with paring or fettling to the lower body and base (eg, Fig. 103, 766). A thick vitreous glaze reduced to an olive or brown colour is found over the upper part of most vessels. Close examination of the glaze shows it to be pitted and crazed. The only decorative element found on the fabric is the pulled thumbing to the basal edge, which is found either continuously around the base or as four single imprints.

Forms

The only vessel type to be found is the jug. The shape is unusual and can be best paralleled by a jug in Beverley type 1A found at 33–35 Eastgate, Beverley (Didsbury and Watkins 1992 Fig. 57, 224), in a phase dated to between the mid and late 12th century.

Source

Two samples of Non-local Early Medieval Fabric C were examined in thin-section (L1287 and L1288). Both had similar petrological characteristics. The

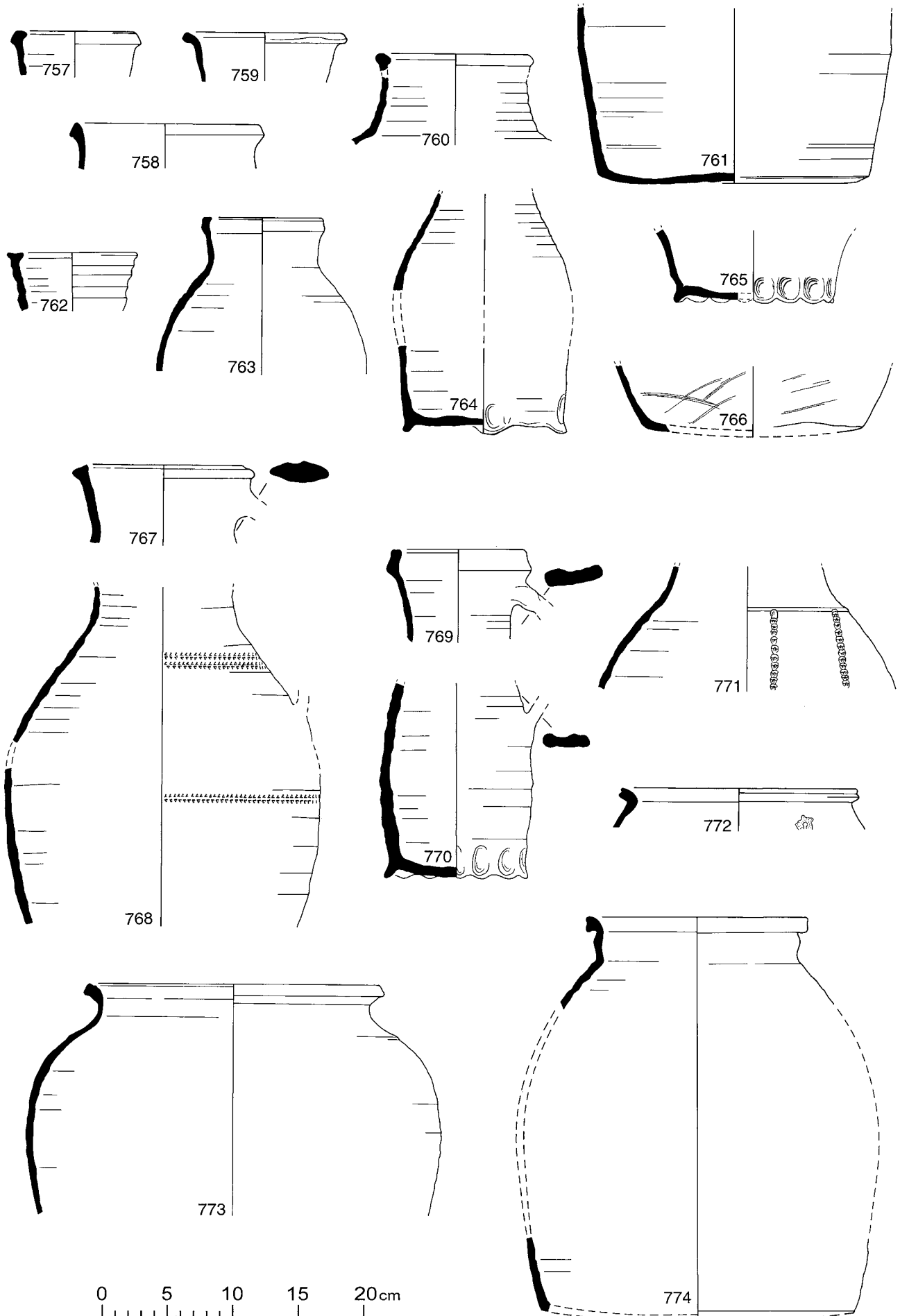


Fig 103 Non Local Early Medieval fabrics: Fabric A 757-761; fabric C 762-766; miscellaneous 767-774. Scale 1:4

fine quartzose sand temper is typical of the Trent Valley (ie, 'local'), and the clay matrix contains moderate, fine brown specks, noticed in several wares of Lincoln or local origin.

Dating

These fabrics are never very common but occur throughout the period covered by Horizons MH1 to MH4 (early/mid 12th to early/mid 13th century).

Beverley ware (BEVO) (Fig. 104)

Description

This covers the ware defined by Watkins (Watkins 1987, 82–93, and Watkins 1991, 80–6) and further expanded by Didsbury and Watkins (Didsbury and Watkins 1992, 108–11) as Beverley Types 1 and 2. A small number of vessels are in Beverley Type 1A, with a splashed-type glaze (eg, Fig. 104, 775), and an even smaller number in the later Beverley Type 2C. The vast majority of vessels are of Beverley Type 2B and have a suspension glaze (eg, Fig. 104, 776). All vessels are jugs, a few of which are decorated with roller stamping or combing.

Source

Seven samples of Beverley ware from Lincoln were examined in thin-section (L1323, L1324, L1325, L1326, L1334, L1335 and L1336). The fabric is tempered with a quartzose sand, composed mainly of quartz with sparse chert in all samples and sandstone in three. Sparse angular flint up to 0.4mm across is present in three samples. The most distinctive aspect of this fabric is the clay matrix, which contains abundant quartz silt, together with biotite and muscovite. In a few of the samples glauconite was also present, whilst nonferroan calcite was present in a single sample. This matrix is similar to that of LSW1 but with a higher amount of silt and mica. Furthermore, glauconite is absent from LSW1.

Dating

Nearly 100 Beverley vessels have been recovered from the city, stratified in deposits ranging in date from horizons MH2 to MH6 (mid 12th to mid 14th centuries). The number of vessels seems significantly high enough to indicate a small trickle of trade, possibly via Torksey, with sherds of Beverley ware known to have been transported down the Trent at least as far as Newark (Young 1996a, and Young 1996c).

Doncaster Hallgate-type ware (DONC) (Fig. 105)

Description

A small number of vessels have been found in fabrics similar to those described as Hallgate Fabrics A and

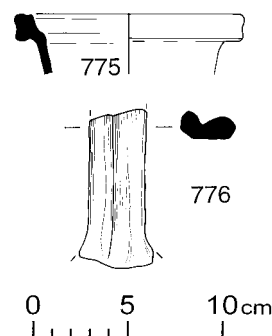


Fig 104 Beverley ware Fabric 1A 775; Fabric 2B 776. Scale 1:4

B by Buckland and Hayfield (Buckland *et al* 1979, 12–13). All vessels found are jugs, most of them with combed or applied decoration. The tubular spouted pitcher in Fabric A has applied iron-stained scale decoration around the base of the spout (Fig. 105, 777). Decoration on jugs in Fabric B consists mainly of combed elements (eg, Fig. 105, 779). Only one rim in Fabric B has been recovered and this is of the inturned variety (Fig. 105, 778) usually found in other regional industries from the last quarter of the 12th to the early part of the 13th century.

Source

Evidence for medieval pottery production has been found at several sites in Doncaster Hallgate and Market Place (Buckland *et al* 1979; Hayfield 1984; Cumberpatch *et al* 1998–9), and the pottery fabrics produced at Doncaster have been characterised. A major division can be made into white-firing wares (Hallgate B) and red-firing wares (Hallgate A). In comparison with locally-made wares, the Hallgate redwares have a much siltier matrix and their sand temper is usually (but not always) coarser, with a maximum grain size of *c.*1mm. Sandstone is perhaps a less common element in the Hallgate sand than in the Lincoln area sands. A sherd of Hallgate B whiteware from Lincoln examined in thin-section (L1301) was found to contain abundant subangular quartz (up to 0.4mm across) and moderate rounded fragments of a sandstone (up to 1mm across). The sandstone included grains of quartz and chert up to 0.3mm across in an unidentified brown-coloured cement. The clay matrix is typical of Coal Measure white-firing clays, is highly birefringent and contains few inclusions. Not only do the two groups of Hallgate ware have distinctive appearances: they were also made using quite different clays and tempers.

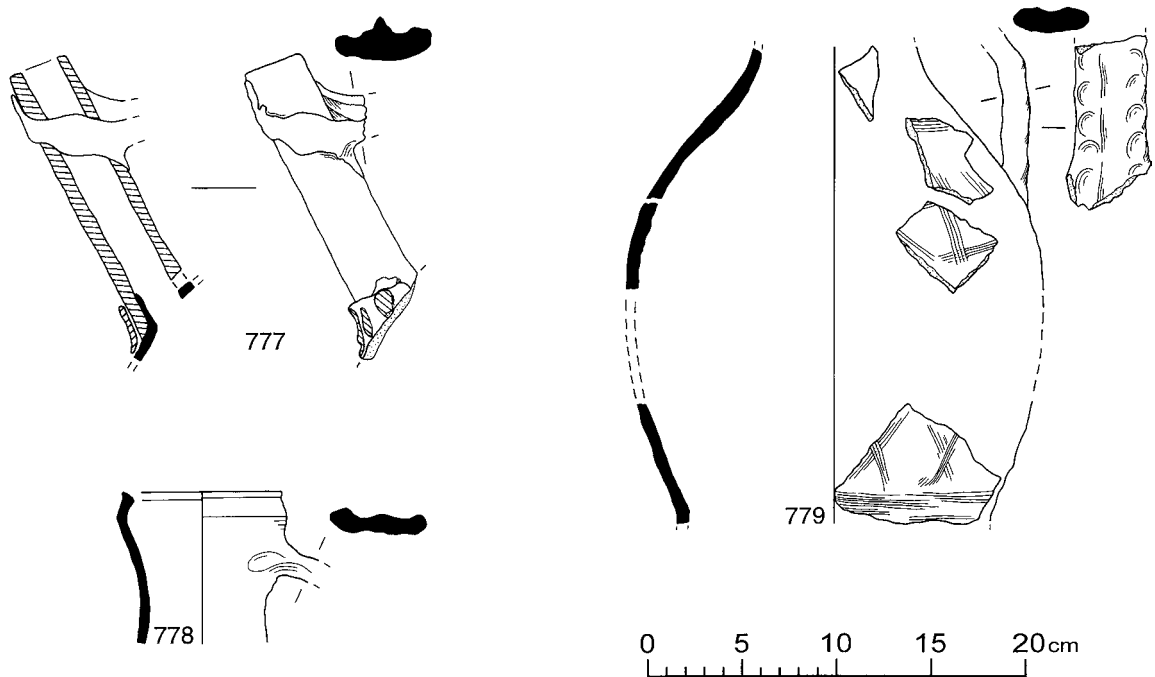


Fig 105 Hallgate-type ware Fabric A 777; Fabric B 778–779. Scale 1:4

Dating

Two vessels have tentatively been identified as Fabric A and 13 more confidently as the white-firing B type. Only one of the Fabric B vessels is usefully stratified in horizon MH2 and MH3 deposits (mid to late 12th century).

Developed Stamford ware (DST) (Fig. 106)

Description

This grouping covers copper-glazed Stamford ware in Kilmurry's Fabrics B and C (Kilmurry 1980, 8–12). Most of the vessels have a thick lustrous copper glaze, covering at least the upper two-thirds of the pot, although a significant number have a thinner yellow glaze that is mottled with copper green specks. Less than a third of vessels are decorated with combing, applied strips, or incised horizontal lines (eg, Fig. 106, 780–4). A limited range of forms is found in this ware, the most common of which is the jug (eg, Fig. 106, 780). Other forms include tubular spouted pitchers, bottles (eg, Fig. 106, 783), lids, and a tiny lid-seated jar form (Fig. 106, 784).

Source

Six samples of Developed Stamford ware from Lincoln were examined in thin-section (L1787, L1788, L1789, L1809, L1810 and L1811) and compared to published descriptions of this ware from the Stamford kiln sites (Kilmurry 1980, 8–9), and from the consumer site of

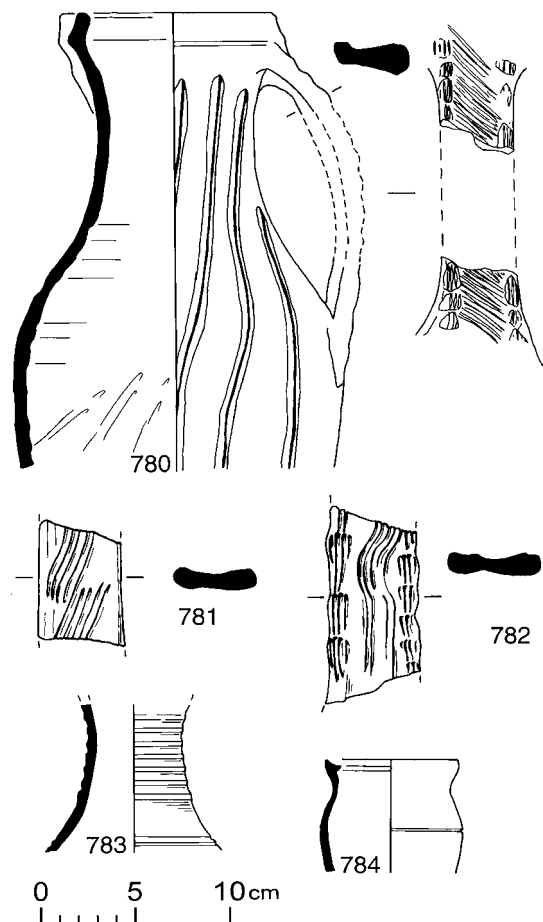


Fig 106 Developed Stamford ware. Scale 1:4

London (Vince and Jenner 1991, 96). All the samples had a very similar clay matrix containing abundant quartz silt. The only other inclusions were sparse rounded quartz and chert grains, up to 0.4mm across, tabular iron ore fragments up to 2mm across, and angular white siltstone fragments. The fabric of the Developed Stamford ware vessels from Lincoln is quite homogeneous.

Dating

More than 1000 sherds of Developed Stamford ware have been found on excavations throughout the city. Only three sites, Broadgate East (BE73), Flaxengate (F72), and West Parade (WP71), all in the Lower City, have each produced more than 100 sherds. The rest of the material occurs in small numbers on more than 60 other sites. The earliest well-stratified Developed Stamford ware is found in horizons MH1 and MH2 (early/mid to mid/late 12th century), although these are only a few isolated occurrences. The ware forms up to 3% of the pottery found in MH3 horizons (late 12th century), and up to 4% in MH4 (early to early/mid 13th century) deposits.

Early Medieval Handmade fabrics (EMHM) (Fig. 107)

Introduction

Several distinct fabrics are discernible in this ware type, of which only those listed below are found in the city. The type is especially common in the south

of Lincolnshire, where the evidence suggests that, as well as the mainstream Fabrics A and B found in Lincoln, several other local production sites (including Bourne) were also involved. All vessels are primarily hand-formed with the possible use of a turntable for the finishing of the rim.

Fabric A (Fig. 107, 785–8)

Fabric and technology

The surface texture of this fabric is slightly sandy. Surface colours are typically a red brown with core colours of dark grey. The fabric contains common rounded quartz up to 0.5mm, with a background of subangular quartz up to 0.1mm, together with sparse to moderate flint up to 5mm, sparse iron-rich grains, and occasional muscovite. Vessels in this fabric are often smoothed towards the base. Decoration is rare and consists of combing, thumb pressed rims, or applied pressed strips.

Forms

With one exception of a small flat base (Fig. 107, 788) all vessels are globular jars with flaring everted rims (eg, Fig. 107, 785–7). All are well sooted and one vessel has a post-fired hole in the lower body (Fig. 107, 785).

Source

Two samples of Fabric A were thin-sectioned. Both contained abundant rounded quartz sand and sparse angular flint.

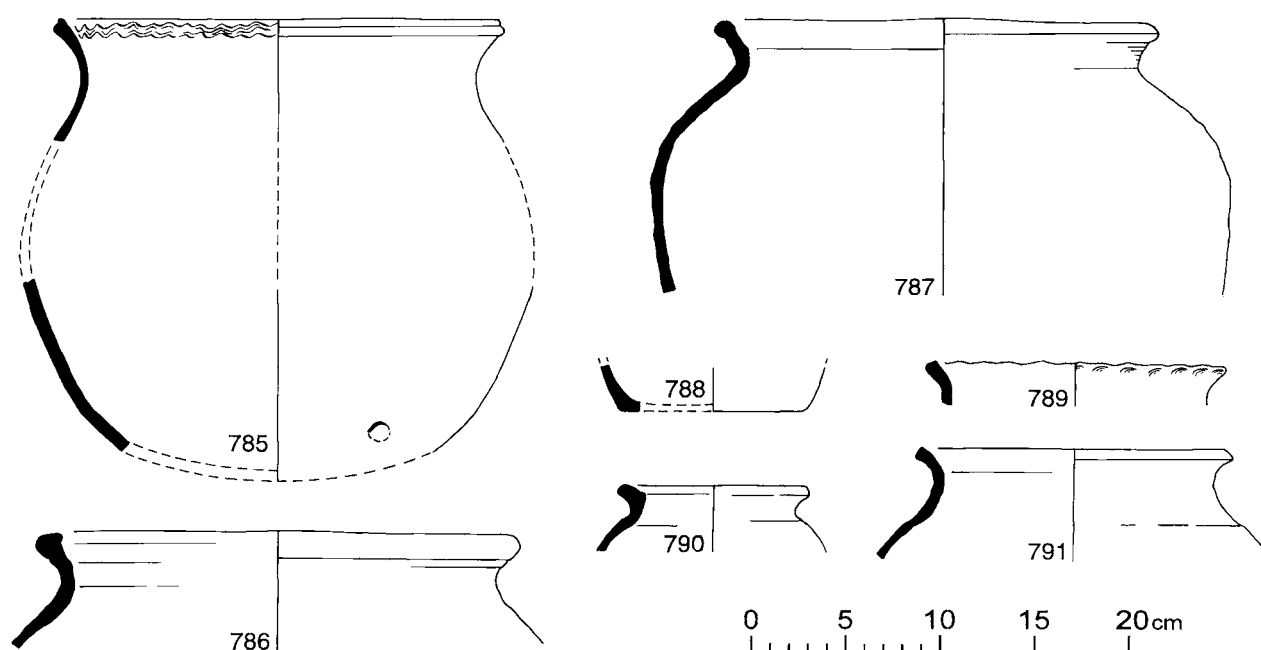


Fig 107 Early Medieval Handmade fabrics: Fabric A 785–788; Fabric B 789; Fabric T 790–791. Scale 1:4

Fabric B (Fig. 107, 789)

Fabric and technology

The surface texture of this fabric is smooth and the fabric is reduced to a dark grey with black surfaces. The fabric contains abundant rounded and sub-angular quartz up to 0.6mm, sparse iron-rich grains, sparse chert and sparse sandstone. Only one vessel is decorated, by pinching the rim (Fig. 107, 789).

Forms

The small number of vessels found in this fabric are all globular cooking pots of a smaller size than those in Fabric A (eg, Fig. 107, 789).

Source

A single sample of a Fabric B vessel from Lincoln was thin-sectioned (L1311). It contained a quartzose sand including minor quantities of chert and sandstone in a relatively clean clay matrix. These characteristics suggest, but do not prove, a local origin.

Fabric T (Fig. 107, 790–1)

Fabric and technology

This fabric has a rough sandy surface texture and visually resembles one of the Torksey ware fabrics. Surface colours are orange-brown to a greyish red-brown, and core colours vary from a light blue-grey to grey. The fabric has an abundant rounded and subangular quartz temper of up to 0.6mm, together with sparse iron-rich grains, sparse sandstone and sparse chert/flint.

Forms

Only small globular cooking pots (eg, Fig. 107, 790–1) and the rim of a possible jug or pitcher are known from Lincoln, although a wheel-thrown bowl with pressed decoration on the rim from Goltho (Coppack 1987, Fig. 145, 543), is in an identical fabric, and may be a product of the same industry producing the hand-made globular cooking pots.

Source

Two samples of Fabric T from Lincoln were examined in thin-section (L1309, L1799). They contained a quartzose sand composed of quartz with sparse rounded grains of chert, sandstone and basic igneous rock. One of the samples also contained sparse, angular flint fragments up to 0.4mm across. The clay matrix in each sample was isotropic, indicating a high firing temperature, but had no distinguishing characteristics. The presence of flint and basic igneous rock would be uncommon in a locally-produced ware, but this is neither sufficient evidence to prove a non-local origin nor to suggest where that source might be.

Dating

At least 175 vessels have been found on sites all over the city. The tradition may start as early as the late

11th century (horizon ASH14) and continues in Lincoln until horizon MH4 (early/mid 13th century) by which time it forms between 1% and 2% of the pottery in early groups. The ware is definitely residual in the city by the mid 13th century (horizon MH5), and possibly by the end of MH4. Fabric group A is the most common type with fewer than 20 vessels occurring in each of Fabrics B and T. Similar hand-made globular cooking pots, mostly made in Bourne-type fabrics, were used in the south of the county until the mid to late 13th century.

Fine Splashed ware (FINSP) (Fig. 108)

Description

Surface texture is smooth, and colours are light orange surfaces with a grey core. The fabric has sparse rounded quartz up to 0.3mm, sparse iron-rich grains and sparse feldspar in a matrix that contains a background of abundant angular quartz and muscovite up to 0.1mm. All vessels are finely wheel-thrown with thin, even walls, and have a splashed-type amber, or apple-green glaze that is heavily pocked and may also have odd copper-green specks. Two vessels are decorated, one with square roller stamping and one with incised wavy lines. All vessels so far found are jugs, and as only one rim has been found, it is not possible to be sure if the complex cordoned shape illustrated is typical (Fig. 108, 792).

Source

Three samples of Fine Splashed ware from Lincoln were thin-sectioned (L1790, L1791 and L1814). The fabric contains a quartzose sand containing minor quantities of altered feldspar and basic igneous rock. The clay matrix contains abundant quartz and muscovite silt with sparse laths of biotite. The presence of basic igneous rock and feldspar suggests that the sand may include glacial erratics. Similar sands are known from eastern Yorkshire and the Lindsey marshes and a source either in northern or eastern Lincolnshire, or in Yorkshire, is likely.

Dating

Only 12 vessels have been found in the city, stratified mainly in horizons MH3 and MH4 (late 12th to early 13th century).



Fig 108 *Fine Splashed ware*. Scale 1:4

South Lincolnshire Oolitic Limestone-tempered fabrics (SLSNO) (Fig. 109)

Introduction

This category covers reduced fabrics containing abundant oolitic limestone temper of 11th- to 12th-century date. Similar fabrics were in use in the county during the Anglo-Saxon period (LIM) but have not yet been recognised within the city of Lincoln.

Fabric and technology

The fabric is distinguished by the presence of abundant grains of oolite in a reduced grey fabric, often with red-brown surfaces, and should not be confused with a similar but oxidized medieval fabric (SLEMO) found in the south of Lincolnshire. All Oolitic Limestone-tempered vessels found in the county are hand-made, although some of the later rims look as though vessels may have been finished on a turntable. Only one of the Lincoln examples is decorated, with finger pressings on the rim.

Forms

The few vessels found in Lincoln have all been jars (eg, Fig. 109, 793).

Source

A single sample of South Lincolnshire Oolitic Limestone-tempered fabric from Lincoln was thin-sectioned. It contained abundant, rounded, oolitic or pelletal limestone fragments (consisting of non-ferroan calcite ooliths in sparry ferroan calcite matrix) up to 0.6mm across. The clay matrix was not calcareous and contained moderate quartz silt. Oolitic limestone is a common tempering agent in medieval wares in parts of Gloucestershire and Oxfordshire, but those examined in thin-section differ in detail from SLSNO. Fabrics with similar appearance to SLSNO have been found on a number of sites in southern Lincolnshire, and this was probably the source area. However, further precision should be possible when or if comparative data is available.

Dating

Only seven vessels have been found in Lincoln in layers thought to date generally to the 12th or early 13th centuries (between horizons MH1 and MH4). This fabric is found in 11th-century deposits at Stamford Castle (Miles forthcoming).

Nottingham Splashed ware (NSP) (Fig. 110–2) by V Nailor

Fabric and technology

Nottingham Splashed ware is characterised by glaze type, forms, decoration and fabrics. Development of

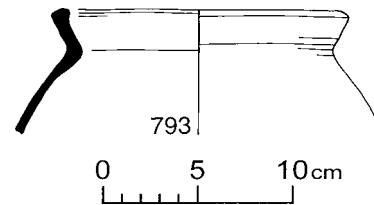


Fig 109 South Lincolnshire Saxo-Norman Oolitic Limestone-tempered fabric. Scale 1:4

this ware has been identified by production of a rim, base, and handle typology, kept as part of the archive in the Archaeology Section of Nottingham Museums. Three main fabric types have been identified occurring in Nottingham Splashed ware. Broadly speaking, the finer, less sandy of the fabrics occurs earlier, while the sandier, iron-rich fabric appears later, although similar iron-rich sandier fabrics are found on Early Nottingham Splashed ware dating to the late 11th or early 12th century. The third fabric group, Fine/Sandy is a transitional point between the two fabrics. As such, date attribution relies on the relationship of both fabric and form.

Fine sandy fabric

Fairly hard fabric, sparsely tempered with medium quartz sand, and iron. Surfaces are usually oxidised to a pink or red-orange, with a grey core. Some of the vessels are fully oxidised.

Sandy fabric

Fairly hard fabric, well tempered with abundant medium quartz sand and sparse iron, occasional sandstone and feldspar. Vessels are either a fully oxidised orange or orange-red, or have an orange-red outer surface and outer margin and a dark grey inner margin and surface. A reduced dark grey interior is more common with jugs, but oxidised examples also occur.

Fine/sandy fabric

This is a variable iron-rich reduced fabric with oxidised cores.

The manufacture of Nottingham Splashed ware vessels was by wheel throwing, with vessels usually being well finished. Glaze is entirely of the type termed 'splashed', varying from a few spots to coverage from neck to the lower body. Glaze colour is dependent on the amount of iron in the fabric; where the surface of the pot is reduced, the glaze is dark green. Glazes on Fine Sandy Fabric vessels are usually green, bleeding to yellow or orange at the glaze edge. The glaze is usually mature, although

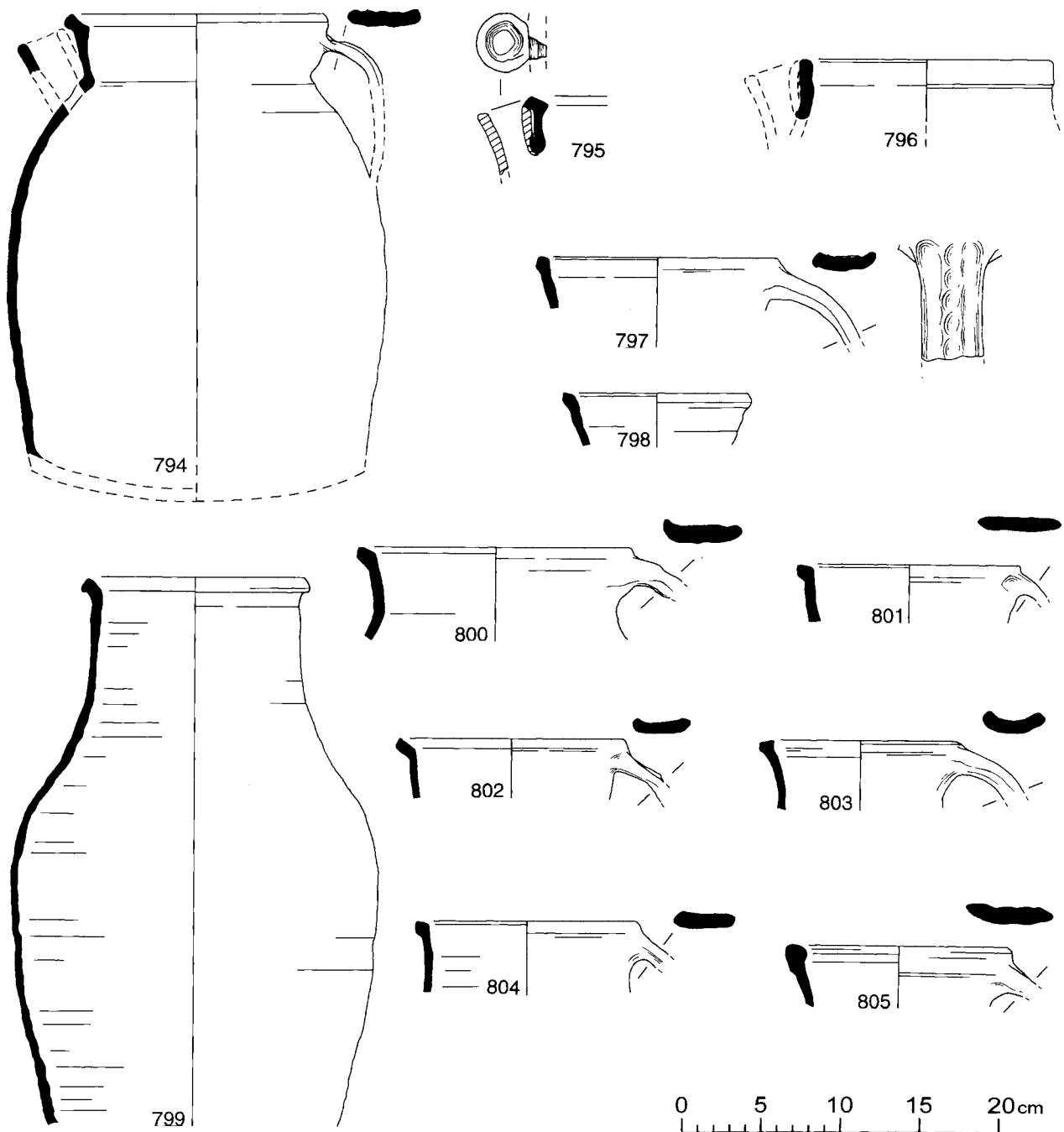


Fig 110 Nottingham Splashed ware: pitchers and early jugs. Scale 1:4

often thinly applied over the pot body. On Sandy Fabrics glazes are usually brown-green, with noticeable brown spotting, bleeding yellow-orange at the glaze edge. Jugs are usually glazed from the neck to the lower body, with an absence of glaze beneath the handle. The glaze is usually thickest at the jug neck, indicating inverted firing.

The decoration on the earlier splashed ware is usually combing, either wavy, or alternating wavy and horizontal bands (Fig. 111, 810–11 and 822). Rarely, there are examples of bands of rouletting, (Fig. 111, 817),

and the occasional use of applied and thumb-strips (Fig. 110, 797 and Fig. 111, 821). In the later splashed ware period, decoration is less common, with applied thumb-strips becoming the dominant decorative technique.

Forms

In Lincoln as well as in Nottingham, the jug is the most common vessel form found, with examples of both earlier and later types. The earliest vessels are spouted pitchers. Other vessels include jars/cooking

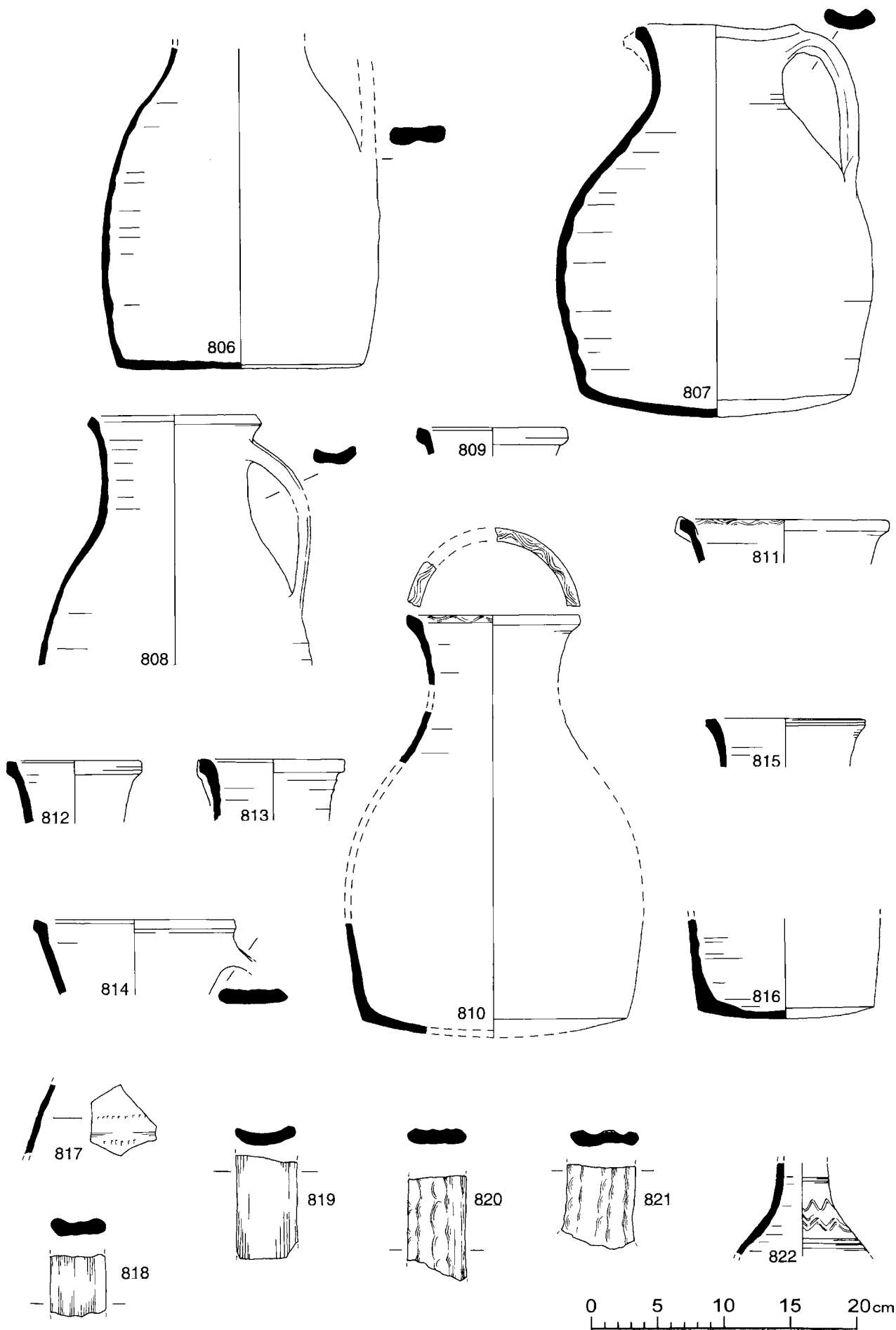


Fig 111 Nottingham Splashed ware: jugs 806–821; bottle 822. Scale 1:4

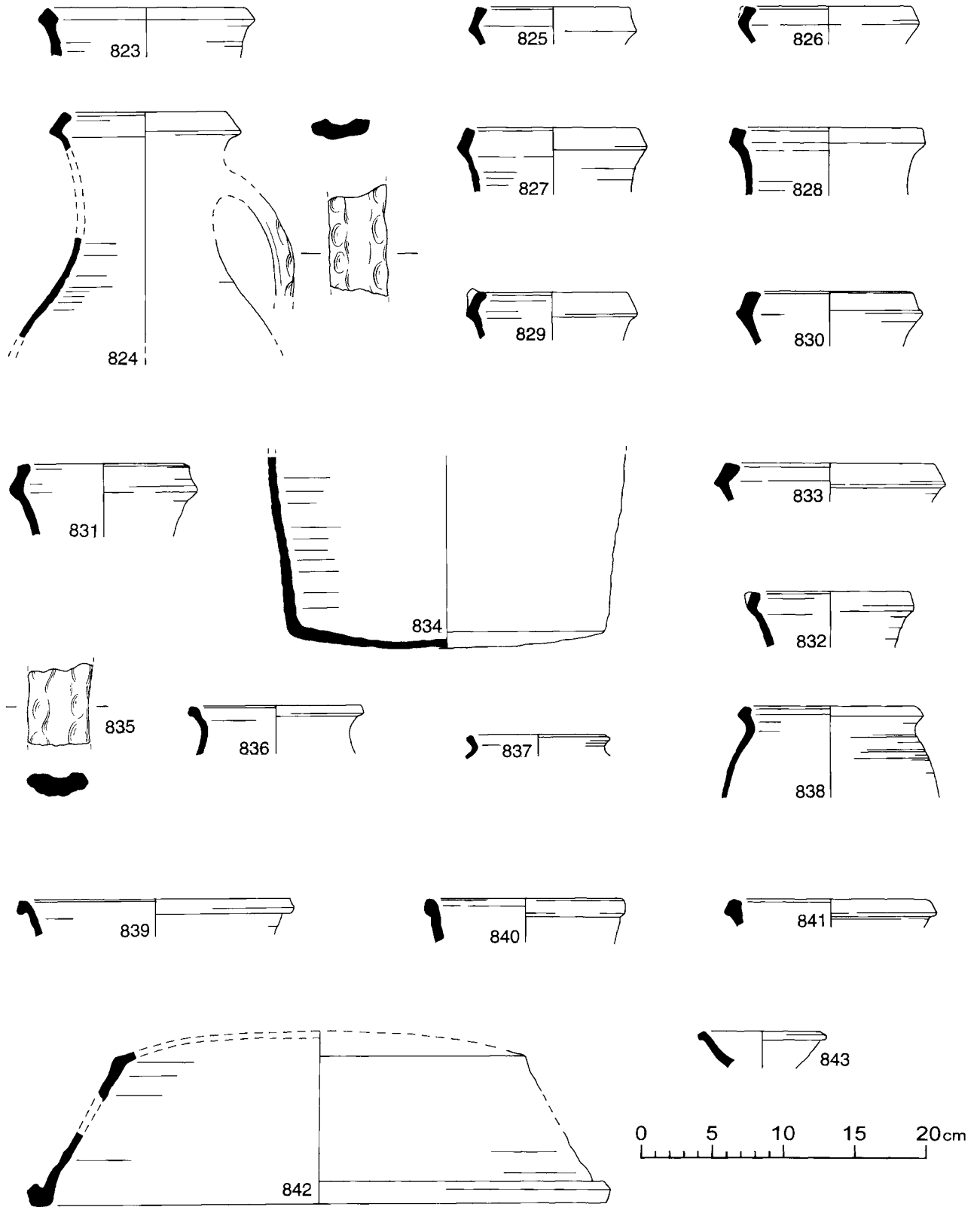


Fig 112 Nottingham Splashed ware: later jugs 823–835; jars 836–838; bowls 839–841; curfew 842; lamp 843. Scale 1:4

pots, bowls, and rarely lamps and other less common forms.

Spouted pitchers

Spouted pitchers belong to the earlier phase of the ware and occur in the Fine sandy fabric. They are often thin-walled, neatly made with simple out-turned or thickened rims (eg, Fig. 110, 794–6) and thin strap handles, attached at or near the rim edge. Early examples are collared and are direct copies of Stamford ware types.

Jugs

The earliest jugs are usually neat, cylindrical shapes (eg, Fig. 110, 799 and Fig. 111, 806; 808; 810), although occasional examples of more rounded forms also occur (eg, Fig. 111, 807). These earlier jugs have simple thickened and/or out-turned rims (Fig. 110, 797–805, and Fig. 111, 807–15), thin, strap handles, and often heavily sagging, well trimmed bases (Fig. 111, 807 and 816). Later jugs are commonly wide-bodied, with an ubiquitous inturned rim (eg, Fig. 112, 824–33). Variants of this rim type occur on later examples of earlier Nottingham Splashed ware (eg, Fig. 112, 823). Handles on the earlier examples appear 'neat', and are thinner than the later jug handles (eg, Fig. 111, 818–9), which sometimes have thumbled edges (eg, Fig. 112, 835). Some earlier handles have centrally applied and thumbled strips (eg, Fig. 111, 820–1), and may belong to pitchers or storage vessels. The handle position on earlier jugs and pitchers is near the rim (eg, Fig. 110, 797 and Fig. 111, 807), while later examples are attached to the vessel neck (eg, Fig. 112, 824).

Other forms

Other vessels in Nottingham Splashed ware include jars (eg, Fig. 112, 836–8), bowls (eg, Fig. 112, 839–41), and, rarely, examples of lamps (eg, Fig. 112, 843), bottles (eg, Fig. 111, 822), and fire covers, (eg, Fig. 112, 842). The earlier examples of jars and bowls echo jug and pitcher rims with neat out-turned or everted rims (eg, Fig. 112, 839), with later bowls having more thickened rounded rims.

Source

Three examples of Nottingham Splashed ware from Lincoln were examined in thin-section (L2216, L2217, L2220). All three have very similar petrological characteristics, the principal difference being that one sample had an isotropic clay matrix and was thus fired at a higher temperature than the other two. The clay matrix included quartz silt which contains muscovite, opaque minerals, unidentified high relief minerals, and dark brown clay pellets. Whereas the quartzose sand is similar to those found in other Trent Valley products, including those from the Nottingham area (NOTTS, NOTG), this clay

matrix is quite distinctive. Nottingham Splashed ware was therefore produced using a different clay source from those used both earlier and later in the Nottingham area.

No earlier Nottingham Splashed ware kilns have been found in Nottingham, but at Goosegate (1976) one of two kilns was filled with later NSP products. Vessels thought to be wasters were identified by R. C. Alvey (pers comm) in the St. Ann's Street area of the city.

Dating and frequency

More than 5000 sherds of Nottingham Splashed ware have been recovered from excavations in Lincoln. Earlier examples of the ware are more common in the city, with few identifiable obvious later Nottingham Splashed ware vessels. Body sherds which cannot be closely dated may, however, span most of the production period. The ware first occurs in horizon MH1 (early/mid to mid 12th century) as c 4% of the pottery present, and by horizon MH2 (mid 12th century) constitutes over 20% of wares present. In well-stratified horizon MH3 groups (last quarter of the 12th century), it forms nearly 14% of all wares, although quantified groups show a percentage nearer to c 10%, c 6% in horizon MH4 (early to early/mid 13th century), and c 2% in horizon MH5 (early/mid to late 13th century). The frequency indicates a relatively short-lived dominance of the earlier Nottingham Splashed ware during the middle to late 12th centuries.

There is some evidence of the use of a splash glaze on a coil-built, reduced sandy fabric in the Saxo-Norman period in Nottingham (Nailor and Young 2001), and an Early Splashed Glazed ware phase that may date to the period between the late 11th and early 12th centuries, however neither has so far been recognised in Lincoln. True Nottingham Splashed ware does not appear until sometime in the early to mid 12th century.

Evidence from Lincoln supports this date with its first occurrence in Ceramic Horizon MH1 (early/mid to mid 12th century). The change from earlier to late Nottingham Splashed ware forms in Lincoln probably occurs towards the end of the 12th century. The end of production in Nottingham is currently considered to be around the middle of the 13th century, although the evidence from Lincoln suggests that it ceased to be an important regional import into the city by the early part of the 13th century.

Nottingham Developed Stamford-type ware (NDST) by V Nailor

Description

The ware type is a direct copy of Developed Stamford ware and has previously been referred to as St. Anne's Kiln type (Coppack 1978). This is a hard, sparsely sand-tempered light firing fabric, usually

oxidised and firing to a pale pink to pale orange colour. Most vessels have a copper green glaze. Decorative techniques include applied strips which are occasionally notched or combed. All known examples are jugs, including tubular spouted examples with combed strips. A small number of residual sherds from Lincoln have tentatively been identified as this type including a jug base from the West Parade (WP71) site which has an adhering spacer in a bright orange abundantly sandy fabric similar to that used for Nottingham Splashed ware (Sandy Fabric).

Source

In 1939 suggested waster material was excavated in St Ann's Street, in forms and fabric which can be identified as Nottingham Developed Stamford-type (Coppack, 1978; now in the collections of Birmingham City Museum). In Nottingham, this ware type is known to occur within some late NSP groups dating to between the late 12th and early/mid 13th centuries.

Scarborough-type ware (SCAR) (Fig. 113)

Fabric and technology

Several vessels have been found in fabrics and forms similar to those described as Scarborough Phase I and Phase II by Farmer (Farmer 1979, 28–31). Glaze colours include bright copper-green, amber, and yellow. Almost a third of the vessels are decorated, with techniques including the use of scales, strips, and incised lines, some of which are further enhanced by the use of iron and copper staining of the applied decoration.

Forms

With the exception of one fragment from an aquamanile in a Phase II fabric (Fig. 113, 847), all of the vessels from Lincoln are jugs (eg, Fig. 113, 844–6).

Source

Samples of both Phase I and Phase II Scarborough ware fabrics from Lincoln were thin-sectioned. However, the Phase I sample was found on thin-section to be more likely of local origin (LSWA). There is therefore some uncertainty as to how much pottery of Scarborough Phase I is present in Lincoln. The Phase II sample (L1319) has a grain size distribution which clearly distinguishes it from Lincoln-area products, as does the presence of rounded low-iron clay pellets and iron-coating of some of the subangular quartz grains.

Dating

A total of 27 vessels have been recovered from excavations in the city and at least a further two are

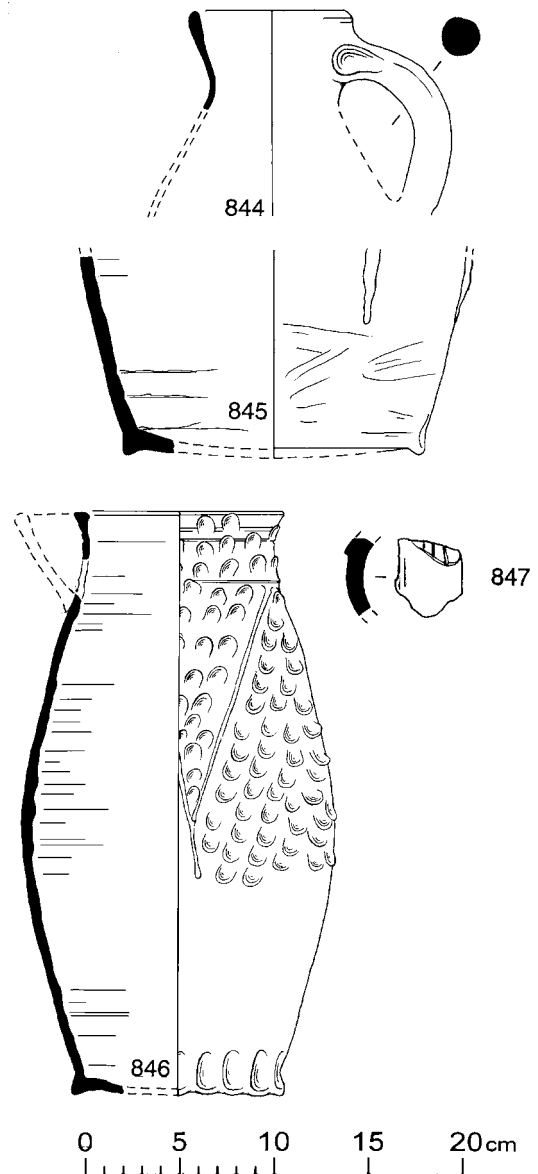


Fig 113 Scarborough-Type ware. Scale 1:4

known from collections in the City and County Museum. Although the earliest vessels at the Flaxengate (F72) site appear before horizon MH4 (early 13th century), the occurrence of the other vessels clusters in deposits of MH4 or MH5 (early/mid to late 13th century), with a few vessels, perhaps not residually, in horizons MH6 to MH7 (late 13th to mid 14th century).

Unglazed Greensand-tempered fabrics (UNGS) (Fig. 114)

Description

Vessels have a slightly gritty exterior surface and are usually oxidized to a red-brown to orange colour,

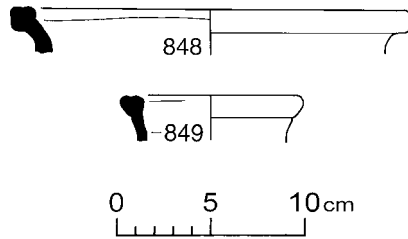


Fig 114 Unglazed Greensand-tempered fabrics. Scale 1:4

although reduced grey examples do occur. The fabric is tempered with Greensand quartz of up to 2mm, often accompanied by sparse to common calcareous inclusions. Vessels are both hand- and wheel-made and are usually undecorated. All vessels from the city are jars or jugs (eg, Fig. 114, 848–9).

Source

Two samples of Unglazed Greensand-tempered fabrics from sites in Lincoln were examined in thin-section (L1290 and L1291). In addition to the rounded quartz sand which characterises this fabric group, sparse angular flint and calcareous inclusions were noted. The latter included definite rounded chalk fragments in one sample and rounded bivalve shell fragments in the other. The clay matrix of both samples contained very few inclusions. Visually similar fabrics occur on sites on the Lincolnshire coast from Boston northwards, and the petrological evidence would suggest a source in the vicinity of the Wolds.

Dating and frequency

Only seven vessels have been recovered from the city, five being stratified in deposits dating between ASH14 and MH4. Although this fabric group only occurs in the city during the early medieval period, rim types of vessels found in the county indicate that the tradition started much earlier, possibly in the 10th century, as suggested by a vessel from Horncastle with diamond roller-stamping.

Gritty ware (YG) (Fig. 115)

Description

This type of pottery has variously been published as Pimply ware by Le Patourel (Le Patourel 1955, 1965); York Type G by Holdsworth (Holdsworth 1978, 7–8) and Watkins (Watkins 1991, 78); and Gritty ware by Mainman, Brooks and Jennings (Mainman 1990, 485–6; Brooks 1987, 150, and Jennings 1992, 14). All of the Lincoln examples fall into the range described as Gritty ware, with four of the Lincoln examples having small areas of glaze. All vessels recovered are jars (eg, Fig. 115, 850–1)

Source

Two samples of Gritty ware were examined in thin-section (L1321 and L1322). Both contained a quartzose sand with grains of quartz and sparse chert up to 1mm across. The quartz grains include examples with overgrown quartz. The clay matrices contain few inclusions. These characteristics suggest the use of a sand derived in the main from the Carboniferous sandstones, such as Millstone Grit, and are typical of the York area.

Dating and frequency

A total of 11 vessels has been recovered from the city, stratified in deposits dating from horizon ASH14 to MH3 (late 11th to late 12th century).

York Glazed ware (YORK)

Description

A small number of vessels occur in York glazed ware as described by Brooks (Brooks 1987, 151–2), and include both examples of Early York glazed ware with a splashed-type glaze and jugs with a thick copper glaze. Decoration on vessels from Lincoln includes the following: stabbing, slashing and a 'THOMAS' seal. Vessels are all jugs with examples of a tubular spouted pitcher and a seal jug.

Source

No examples of York Glazed ware from Lincoln have been examined petrologically.

Dating and frequency

In all, 17 vessels have been found in Lincoln, including four examples of Early York glazed ware.

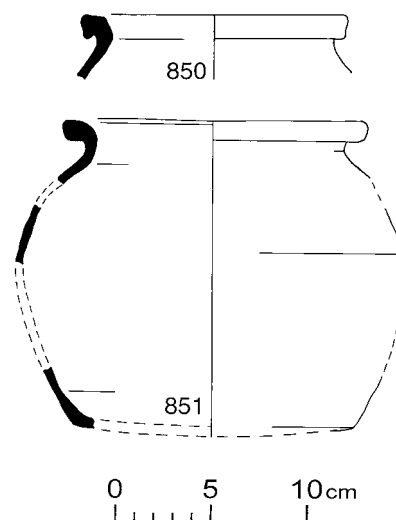


Fig 115 Gritty Ware. Scale 1:4

The vessels occur in deposits ranging from horizon MH3 to horizon MH7 (late 12th to mid 14th century).

York-type Splashed wares (YORKSPL) (Fig. 116)

Description

Several splashed glazed vessels are similar to material described by Brooks (Brooks 1987, 150–1) as occurring in York and having an identical fabric to that of the later Walmgate ware. None of the vessels was decorated. All vessels are jugs (eg, Fig. 116, 852–3).

Source

A single sherd of York-type Splashed wares from Lincoln was examined in thin-section (L1294). The petrological characteristics of the inclusions suggest that the sand temper was derived from an area of Cretaceous rocks (chert and flint) whilst the clay matrix contained moderate quartz silt and sparse muscovite and biotite. Similar clay matrices have been observed both locally and in products from Beverley. Neither temper nor matrix, however, suggests an origin in the York area.

Dating and frequency

Excavations have produced 15 vessels in this ware type, 12 of which were found on the Flaxengate (F72) site. Most of these sherds occur in layers dating between horizon MH1 and MH4 (early/mid 12th to early/mid 13th century).

Paffrath-type ware (BLGR) (Fig. 117)

Description

Vessels in this ware type have been found in fabrics that range from soft to near vitrified. All vessels found in the city are ladles of small to medium size (eg, Fig. 117, 854–8). More than 50 vessels have been found in the city, stratified in deposits ranging from horizons MH2 to MH4 (mid 12th to early/mid 13th century).

Source

None of the 57 sherds of Paffrath-type ware from Lincoln has been examined using scientific methods. Hand-made cooking vessels made from a low-iron clay and tempered with a coarse quartzose sand with a metallic sheen were manufactured at various sites in the Vorgebirge (Reineking-von Bock 1976, 27, and Janssen 1983, 178 n.39), to the south-west of Cologne, from the 10th to the 12th or 13th centuries. Paffrath itself is a village within this district and whilst it was certainly producing such vessels, the name is only meant to convey a particular range of forms and treatments, ie, a ceramic tradition rather than the precise source.

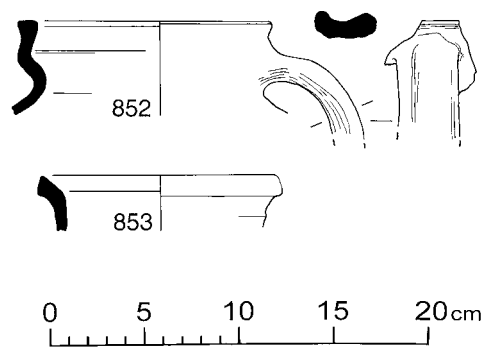


Fig 116 York-type Splashed Ware. Scale 1:4

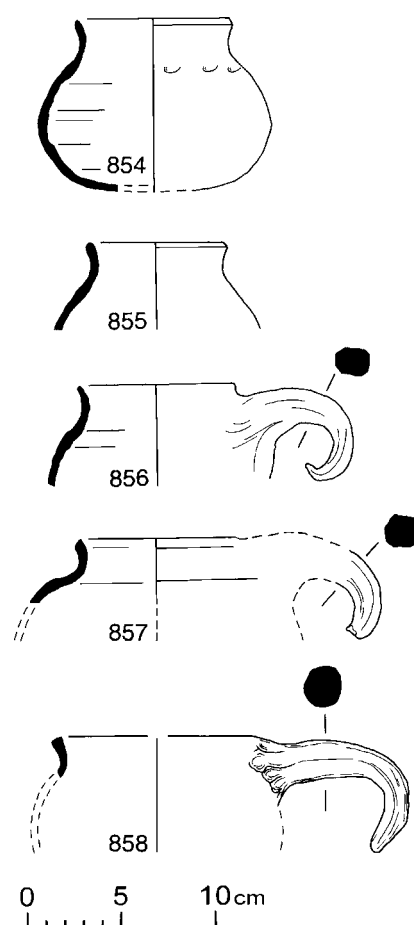


Fig 117 Paffrath-type Ware. Scale 1:4

Brunssum-type Flasks (BRUNS) (Fig. 118)

Description

This pottery type is very distinctive, with its fine, light firing fabric and splashed type glaze. Sherds have a pale grey to grey core, white to pale grey interior surface and exterior margin, with a pale

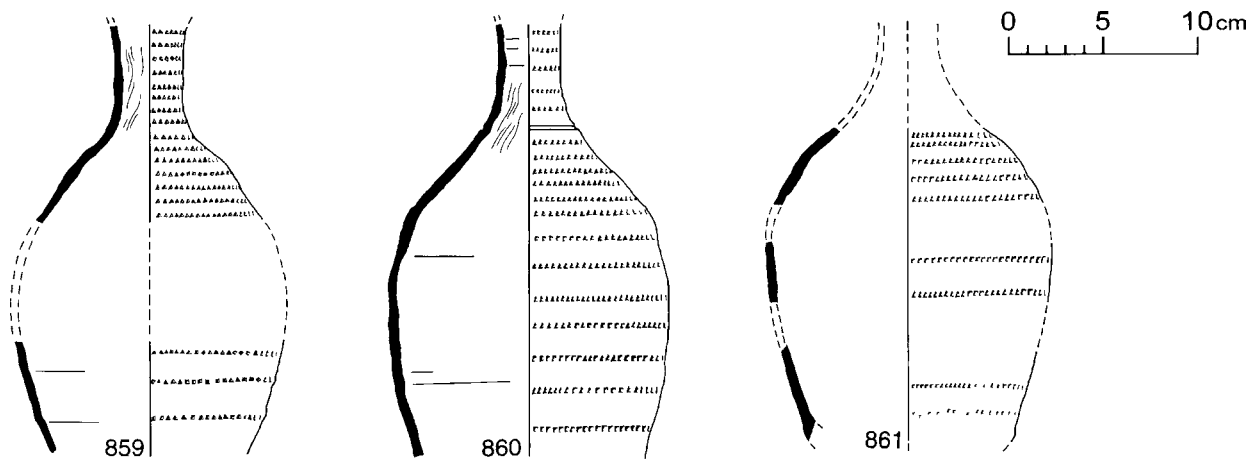


Fig 118 Brunssum-type Flasks. Scale 1:4

orange exterior surface where the vessel is not glazed. The surfaces are smooth and silky in texture where unglazed. The fabric contains sparse rounded quartz up to 0.2mm, together with sparse iron-rich grains in a fine slightly micaceous clay. Vessels are finely wheel-thrown and show distinctive twisting marks at the neck where the vessel has been drawn inwards. The thick, heavily pocked, splashed-type glaze is apple-green, grading to yellow at the edges where it becomes thinner. The vessels are decorated with a roller stamp that includes both triangular and square shapes. All vessels are globular flasks with tall narrow necks (eg, Fig. 118, 859–61).

Source

Three sherds of Brunssum-type Flasks were examined in thin-section, two from Lincoln (L1558 and L1560) and one from Goltho (L1559). One of these, L1559, revealed a very similar petrology to that of locally-produced wares with a low iron content. The other two samples differed in that they contained no inclusions larger than 0.2mm. It seems that the fabric is not petrologically distinctive and shares characteristics with local products, but it is also possible that one of the samples is a mis-identified local vessel. The example from Goltho (Fig. 118, 860, and Coppack 1987, fig. 149, 636) was identified as a mid 12th-century Brunssum product.

Dating and frequency

Only five vessels have been located in the county, four in Lincoln and one at Goltho Manor (GM74). The two earliest Lincoln vessels are stratified in horizon MH2 and MH3 deposits (mid to late 12th century), and the Goltho flask, found in group GM26 (Coppack 1987), is associated with similarly dated material.

North French wares (NFREM) (Fig. 119)

Introduction

Vessels thought to have been manufactured in northern France between the last quarter of the 12th century and the first quarter of the 13th century are grouped together under this codename. Several fabric types have been discerned within this grouping, some of which may be comparable to material found at Exeter (Allan 1984, 21–3).

Fabric A (Fig. 119, 862–5)

Description

Vessels in this group have a fine white fabric and a mottled green glaze. Jug handles are hollow and are stabbed. Decoration on the vessel body consists of slashed or incised applied strips. The vessels are all jugs, those with rims all having complex, reeded rims.

Source

Fabric A is distinctly different from others in the North French ware group from Lincoln. Sherds have a higher iron content and flakes of muscovite visible to the naked eye. Whether it is a variant fabric from the same source as the remaining vessels or from a different source is not known. Sherds share the abundant quartz silt which characterises the fabric.

Fabric B

Description

These vessels have a fine white fabric covered with a light mottled green glaze and are decorated with applied vertical strips. The jugs have a solid stabbed rod handle with 'ears'.

Source

Fabric B differs from Fabrics C and D solely in glaze.

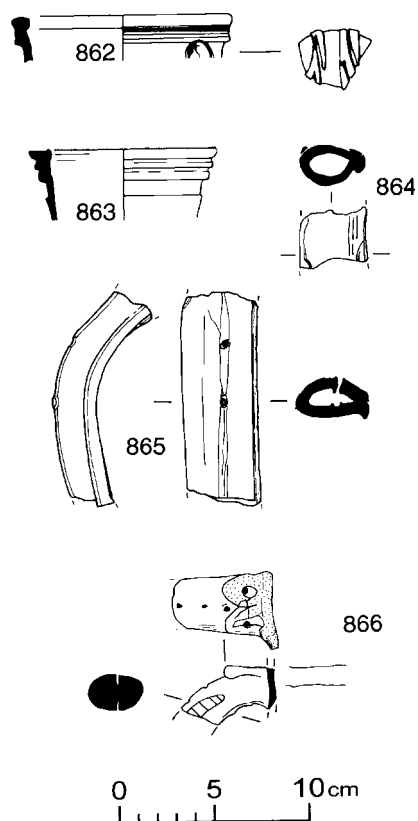


Fig 119 North French Wares: Fabric A 862–865; Fabric D 866. Scale 1:4

Sherds have a silty clay matrix with a low iron content.

Fabric C

Description

This is similar to Fabric B except that vessels are decorated with iron-stained applied vertical stripes.

Source

Fabric C differs from Fabrics B and D solely in glaze. Sherds have a silty clay matrix with a low iron content.

Fabric D (Fig. 119, 866)

Description

This group has a fine white fabric and a thin, pocked, pale yellow to pale green glaze. Decoration consists of applied stripes stained with an iron slip to a tan, or dark brown, colour. Jugs are found with both solid and hollow rod handles that have 'ears' and have been stabbed.

Source

Fabric D differs from Fabrics B and C solely in glaze. Sherds have a silty clay matrix with a low iron content.

Vessels with a white-firing body, copper-free glaze, and decorated with iron-rich applied stripes have been noted as a distinct type mainly as a result of the work of Hillewaert (1990, 41–6), who noted that the distribution of this ware was centred on sites in the modern Departements of Picardy and Artois, and on sites in south-west Belgium, close to the French border. In thin-section, however, there is no mineralogical or textural difference between these wares (Fabric D) and those for which a general 'Northern French' attribution is normally given. This may be explained either by wares made over a wide area of present-day southern Belgium and northern France utilising similar sources of raw materials, or that green-glazed vessels from Picardy are an unrecognised element of this industry.

Dating and frequency

Only 16 North French ware jugs have been identified from the city: five Fabric A, two Fabric B, one Fabric C, and six of Fabric D. Two vessels remain unattributed. Fabric A mainly occurs in horizon MH3 (last quarter of the 12th century) and group D in deposits dating to between horizons MH3 and MH4 (late 12th to early/mid 13th century). Fabrics B and C occur residually associated with other typical late 12th- to early 13th-century pottery types.

Medieval (c.1220–c.1350)

Introduction

National Context

The late 13th and early 14th centuries saw the flowering of many pottery industries in the British Isles. Not only was there by this time a network of production sites covering the whole of the British Isles, but their products were often more highly decorated than those of the preceding period and were often distributed more widely. Hand-made wares were almost entirely replaced by those thrown on a wheel and the distinction in fabric, source and manufacture between cooking wares and "fine" wares, so evident before, had now become blurred.

The late 13th century also saw an increase in the quantity and range of imported vessels, of which the most distinctive were the Saintonge wares of South-West France. Glazed wares from the Low Countries also appear on east-coast sites more frequently at this time than before, and the period also saw the beginning of importation of luxury wares from the Iberian peninsula and the Mediterranean. The range of pottery forms used was still essentially restricted to jugs, cooking vessels and bowls. Other forms were used, but are never common site finds.

Lincoln Production

Although some aspects of the local economy were suffering, the Lincoln pottery industry was thriving during the later 13th and early 14th century (LSW2), and by this date appears to have been located in the Wigford suburb, also the centre for tile manufacture. Ceramic vessels made in a tile fabric are known (TILE) and are described here.

Local production

In the Lincoln area pottery production was mainly concentrated on the manufacture of shelly ware cooking vessels. These are known in the early 13th century (MEDLOC A) but become more common in the mid 13th century, by which time manufacture seems to have been concentrated at Potterhanworth (POTT). Undiagnostic sandy wares were also probably produced locally (MEDLOC). There is some evidence for the production of sandy glazed wares at Potterhanworth, Fiskerton and Boston. The first two of these were probably in part producing pottery for the Lincoln market but their products have yet to be identified.

Regional Imports

Although pottery had ceased to be produced at Stamford by this time, Lincoln did obtain small quantities of pottery from the area (BOUA and STANLY). Toynton (TOY) Medieval ware is also present. Pottery from surrounding regions, principally Yorkshire and Nottinghamshire, has also been recognised in the city (NOTG, HUMB, BRANS) and a possible Surrey whiteware (KING), as well as a small quantity of unsourced, English wares (MEDX).

Continental Imports

Pottery from France was present in late 13th- and early 14th-century Lincoln and appears to have come from two principal areas: Whitewares from North-Western France (four distinct fabric groups: ROUEN A, ROUEN B, ROUEN C, and ROUEN E), and whitewares from South-Western France (three different styles are represented: polychrome decorated SAIP, mottled glazed SAIM, and a lustrous green-glazed ware SAIG). A further unsourced French ware is also present (FREN). Despite its east coast location, Lincoln did not receive a large quantity of Low Countries wares. Those found are the highly-decorated vessels probably produced mainly in Flanders (AARD). Iberian imports consist of single sherds of an unsourced tin-glazed vessel (SPTG) and Andalusian lustreware (ANDA). Italy is represented by sherds of Archaic Maiolica (ARCH) and the rest of the Mediterranean world by Islamic glazed ware (ISLG) and Magrebi ware (MAGR). A few unsourced wares are also probably imported (MIMP).

*Lincoln Glazed ware – Fabric A (LSWA)
(Figs. 120–4)**Fabric and technology*

This fabric type covers vessels that are usually softer, and have a lighter firing colour than the normal range of Lincoln Glazed wares. Many vessels had previously been identified as Nottingham, Scarborough, or imported products. It is obvious that the fabric does not cover the output of a single production centre; at most periods it is more likely to represent lower fired vessels produced at the same centres as the other Lincoln Glazed wares. This is evidenced by the finding of the fabric at the St Marks kiln site (ZE87) together with identical forms in LLSW. However, it may be that this fabric was deliberately used for certain vessels, or that, conversely, the fabric type resulted from the production techniques required for some vessel and glaze types. Vessels of 12th- to early 13th-century date are illustrated in Figs. 120–21, those of the 13th to 14th centuries in Figs. 122–23, and later 14th- and 15th-century material in Fig. 124. Surface texture of the sherds varies between smooth and sandy and may even be powdery on some under-fired examples. Vessels are almost always low-fired, resulting in a soft to medium hardness and also in under-developed glazes. Colouring of the fabric is various, with surface colours ranging from buff through light orange to a light orange-brown, and core colours from pale grey to grey. On the whole, LSWA colours are lighter and duller than those found on other Lincoln Glazed wares. The fabric has common to abundant rounded quartz up to 0.4mm, sparse iron-rich grains, sparse chert, sparse rounded sandstone and sparse to moderate rounded laminated clay pellets that are usually visible on the surface of the vessel. With the exception of certain types of vessels, such as curfews and dripping pans, all vessels are wheel-thrown. Detailed construction techniques are given under vessel types. Glaze is found on all vessels except some small jars and the hemispherical curfews. The type of glaze varies with the date of the vessel. A splashed-type glaze which is usually yellow or amber (but occasionally may be green), is found on early medieval vessels up until the early 13th century (horizon MH4). Glazes on medieval vessels are almost always amber or yellow in colour and are found associated with a white or occasionally a red slip. They are of the liquid or suspension type, although quite a high proportion are not fully matured, giving a thick opaque glaze. Very few vessels are found with an overall copper-green glaze, although 13th-century examples are often typified by an amber glaze speckled with copper. Several vessels of the late medieval period exhibit a dull green glaze. A wide range of decorative techniques

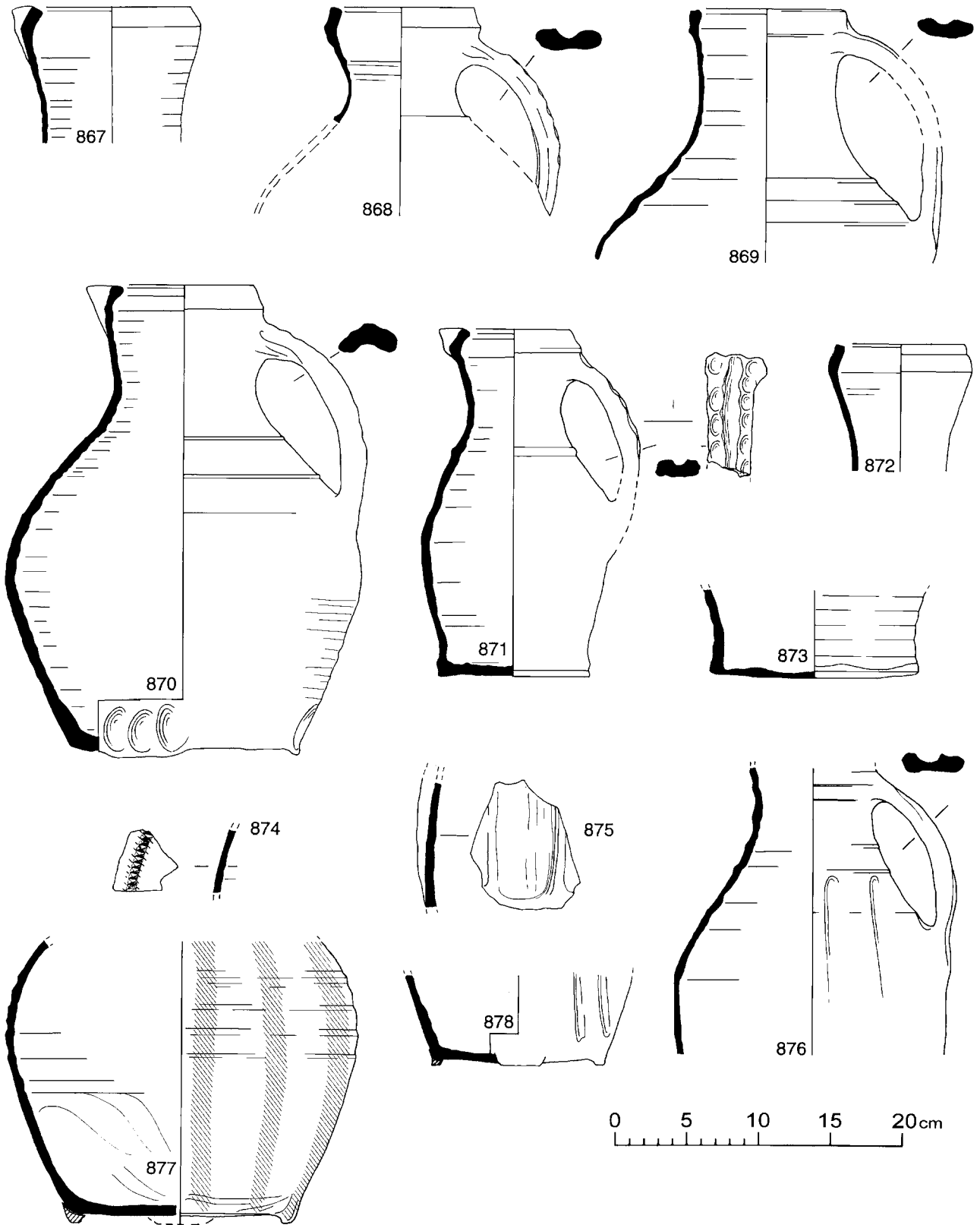


Fig 120 12th to early 13th century Lincoln Glazed Ware Fabric A: jugs 867–878. Scale 1:4

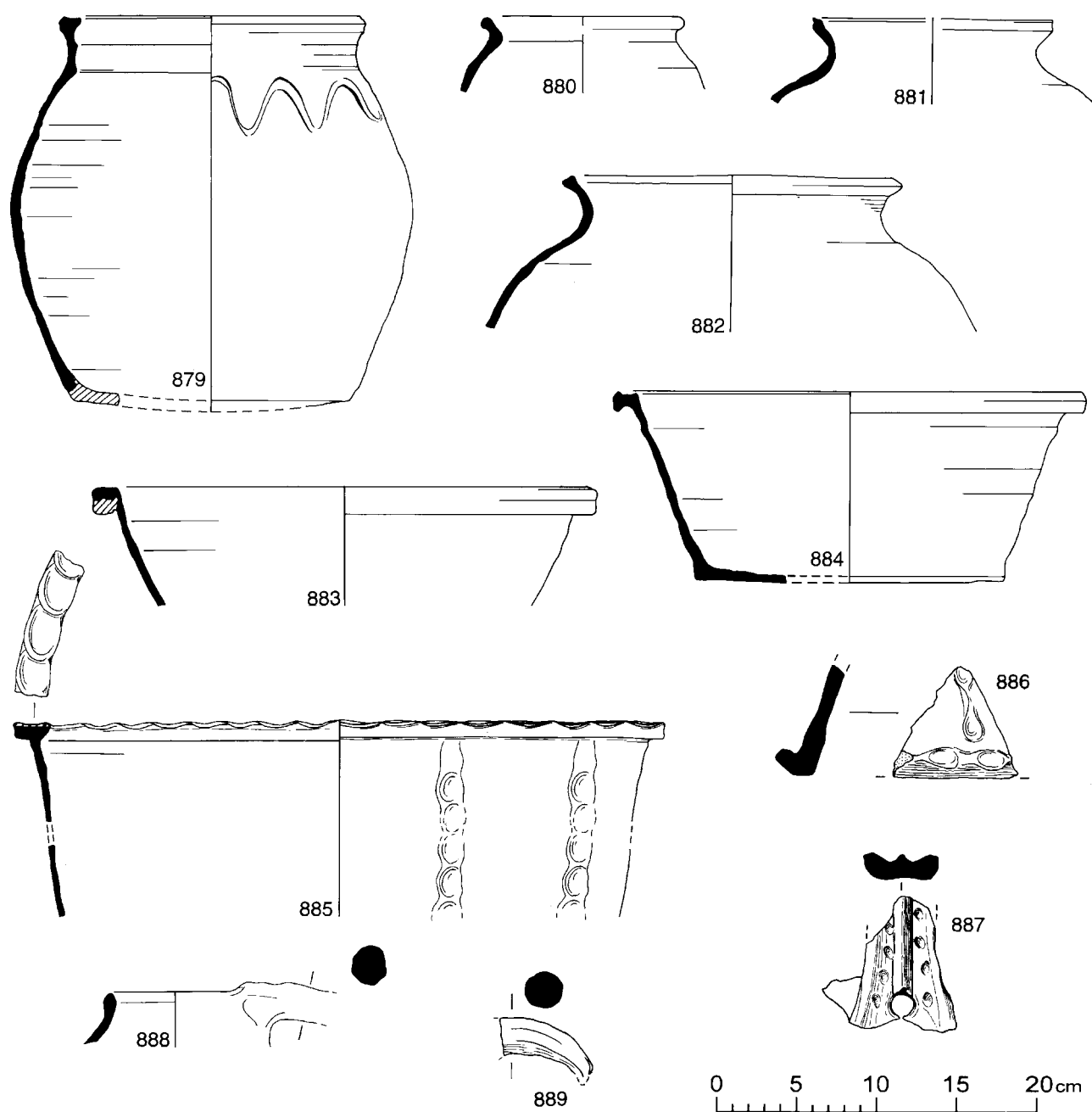


Fig 121 12th to early 13th century Lincoln Glazed Ware Fabric A: jars 879–882; bowls 883–885; curfews 886–887; ladles 888–889. Scale 1:4

is found, reflecting the longevity of this fabric type, and these too are discussed along with the vessel form.

Forms

The most common form throughout most of the currency of this ware is the jug, and, although a wide range of other forms was made, until the 14th century (horizon MH7) they only formed a small part of production.

Pitchers

The only direct evidence for a short spouted pitcher form in LSWA comes from a spout, with pressed decoration, found on the West Parade (WP71) site.

Jugs

A wide range of jug types was made in LSWA, and whilst developments similar to those found in the other Lincoln productions can be seen, some elements are unique to this fabric.

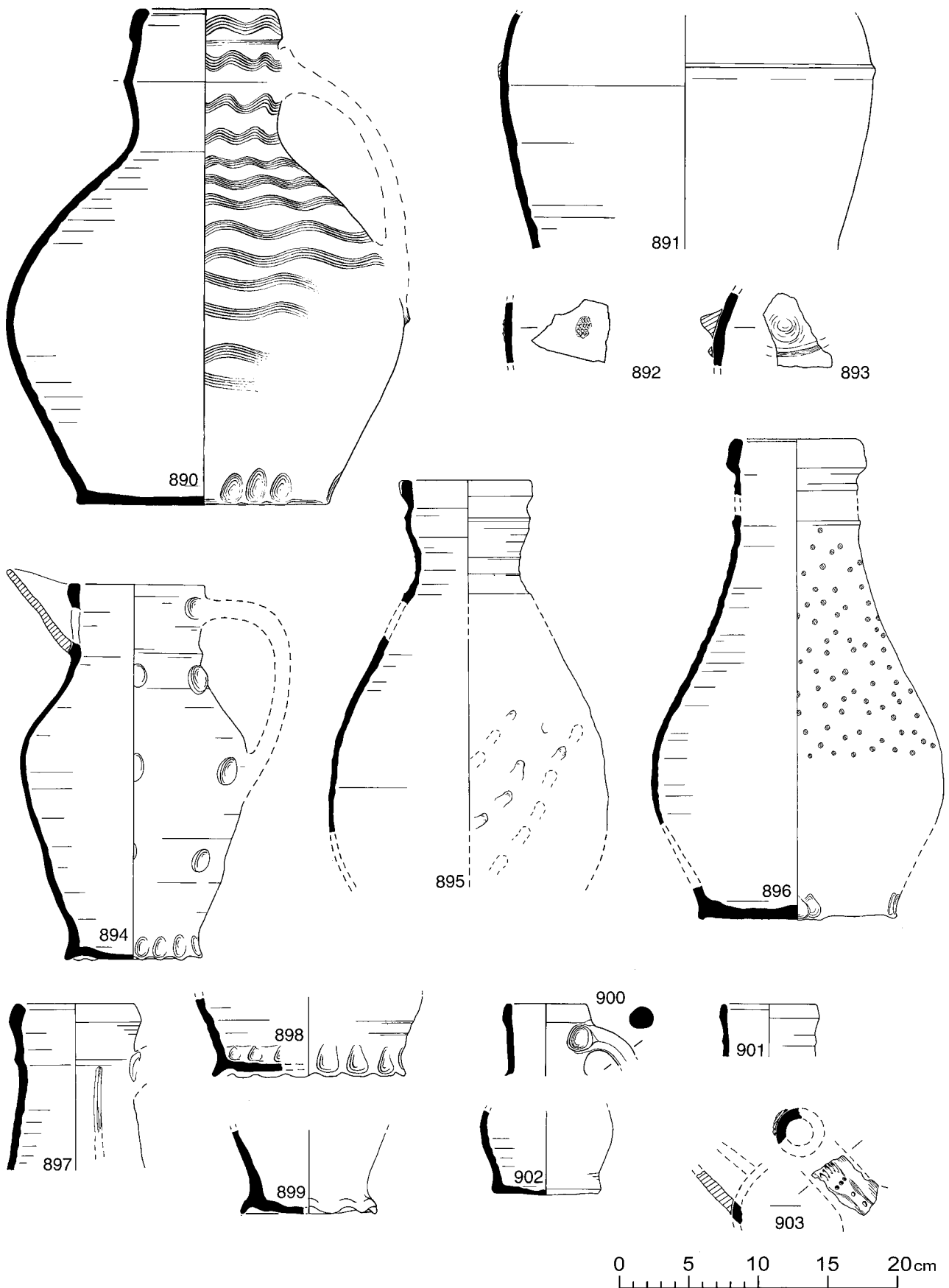


Fig 122 13th to 14th century Lincoln Glazed Ware Fabric A: jugs 890–899; drinking jugs 900–902; tubular spouted pitcher 903. Scale 1:4

1. EARLY SHOULDERED

The jug is identical in shape to that made in LSW1, although it is rarely found in the LSWA fabric and is confined to 12th- to early 13th-century deposits (horizons MH1 to MH4).

2. EARLY ROUNDED (FIG. 120, 868–70 AND 877–8)

The early rounded jug, similar to that produced in LSW1, is the most common form from horizon MH3 to MH4. Most vessels have a simple, thumbled strap-handle that is attached just below an inturned rim. Handles are attached simply by smearing the upper and lower attachment points to the wall of the vessel. Several of these jugs in LSWA have three pulled feet (eg, Fig. 120, 870), or applied feet (eg, Fig. 120, 877–8). There are no stacking scars on the base of any of the jugs and none of the rims shows signs of having been knocked off another vessel, indicating that vessels have been stacked singularly in the kiln. All of the jugs have a splashed-type glaze that extends over the upper part of the body. Lumps of lead are visible on several vessels and more than half of the jugs have copper specks in the glaze. Decoration is mostly simple, and consists of incised horizontal grooves or cordons, applied vertical strips, combed or incised wavy lines and occasional iron painted vertical lines (eg, Fig. 120, 877) or notched strips (eg, Fig. 120, 874).

3. INDENTED (FIG. 120, 875–6)

These vessels are an early rounded form with indentations made around the shoulder and lower body. No complete forms have been found. Glaze is thick, covering the upper part of the jugs, and of the splashed type. Stratified examples occur in early 13th-century deposits (early horizon MH4).

4. SHOULDERED TYPE 1 (FIG. 120, 871)

These jugs are generally much smaller than the other early medieval types and, apart from a cordon at the neck and pressing on the handle edges, are undecorated. Bases are always flat and often have a turned footring. Handles are applied by smearing to the body just below an inturned rim, and spouts are pulled forwards with the index finger, while the rim is held back with the thumb and third finger. Glazes are of the splashed type and are usually mottled with copper. This jug type is uncommon and is found in early 13th-century deposits (early horizon MH4).

5. SHOULDERED TYPES 2, 3 AND 4 (FIG. 122, 898–9)

These jugs are basically similar in shape to Shouldered type 1, but several stylistic changes have taken place (for a more detailed description of these types see LSW2). The rim type has changed from an inturned shape to a collared shape, and the neck below the rim has developed a corrugated bulge (see

Fig. 125, 931–5 for LSW2 examples). A centrally grooved strap-handle springs from the bulging neck below the rim and is joined to the lower body with two large thumb pressings. In the early to mid 13th century strap-handles are joined to the neck with a single finger pressing in the central groove of the handle. By the late 13th century thin rod handles have been introduced and these, together with the later strap-handles, are joined at the top with two finger pressings either side of the handle. None of the handles is plugged in, although the wall of the jug is often pushed into the handle at the joining point. Bases are thumbled, either all around (eg, Fig. 122, 898) or in groups of two, three, or occasionally four pressings. Most of the continuous thumbing is achieved by pinching the basal angle between the fore finger and the thumb of the right hand while the vessel is held upside-down with the left hand inside the jug base. A few vessels have a frilled base (eg, Fig. 122, 899), possibly copying imported Pingsdorf or Early German stonewares. The glaze on most of these jugs is of a suspension type, although some early 13th-century vessels have a splashed-type glaze. Colouring is usually amber or yellow, with copper-coloured glazes being extremely rare and almost always occurring underfired. Decoration on the shouldered jugs is uncommon and includes the use of applied vertical strips and scales. The type is in use from the early 13th to the late 14th century (horizons MH4 to MH7).

6. SHOULDERED TYPE 5 (FIG. 122, 894)

This jug type is rare and is obviously copying a non-local form with its bridge spout and applied pad decoration.

7. SHOULDERED TYPES 8, 9, AND 10

From the mid 14th century (horizon MH7), jugs are less important in LSWA and all jug types so far found are similar to Shouldered types 8, 9, and 10 made in LSW3 (for a full description of these types, see p182).

8. ROUNDED TYPES 1 AND 2

For a detailed description of these forms see LSW2 (page 146). They are produced from the early 13th to the mid 14th century (horizon MH4 to MH7) in LSWA but are never very common. Decorative techniques include the use of applied motifs, among them grid-stamped pads (Fig. 122, 893).

9. ROUNDED TYPE 3 (FIG. 122, 890–1)

This type of large rounded jug is found made in LSWA from the mid 13th to the mid 14th century (horizons MH5 and MH6). The jugs are finely thrown, although they tend not to be well-centred and often have repair patches where the potter has

put his fingers through the side of the thin-walled vessel. All handles on the LSWA jugs are of the strap type and are attached, below a collared rim, to a bulging neck that may be corrugated. Thumb pressings are found in groups of three or four, around the basal angle. Glazes are almost always immature and may be amber or yellow, often speckled with copper. Some vessels in horizon MH6 have a cordon around the lower body that separates the glazed and unglazed parts of the jug (eg, Fig. 122, 891). Decoration found on these jugs is usually quite simple and consists of combed wavy lines, applied vertical strips and scales. A few unusual motifs occur that may be from this form (eg, Fig. 122, 893) .

10. PEAR-SHAPED TYPE 1 (FIG. 122, 895–7)

These well-thrown, thin-walled jugs are quite common in the LSWA fabric from the mid 13th to the mid 14th centuries (horizons MH5 and MH6). They have a pear-shaped body with a long neck and a restricted base that is thumbed with three or four pressings. Handles are of the thin rod type and are attached at both the upper and lower points with two finger pressings. The glaze on these vessels is often a well-fired to glossy amber colour with bright copper specks. Decoration is found on all jugs and is quite variable including iron-stained spots (eg, Fig. 122, 896), vertical and diagonal scales (eg, Fig. 122, 895), vertical strips (eg, Fig. 122, 897) and applied motifs such as fleur-de-lis and horse-shoes.

11. TUBULAR SPOUTED PITCHERS (FIG. 122, 903)

Only one fragment of a tubular spout is known in this fabric. The spout is decorated with an applied hand that is ornamented with dot stamps and aligned up the spout. A thick dull copper glaze covers the spout.

12. OTHER JUGS

A few fragments of baluster and conical jugs are also found in LSWA; for descriptions of these forms see LSW2, LSW3 and LLSW.

Drinking Jugs (Fig. 122, 900–2 and Fig. 124, 921)

By the mid 14th century (the end of horizon MH6), small jugs with simple collared or rounded rims and rod handles begin to appear in LSWA. The earliest examples are well-thrown, thin-walled, and usually exhibit a thick glossy green or amber glaze (eg, Fig. 122, 900–2). From the late 14th century (horizon MH8) onwards, the quality of the small jugs declines and vessels become poorly thrown and sparsely glazed (eg, Fig. 124, 921). They only ever represent a very minor part of LSWA production.

Bunghole jugs (Fig. 124, 924–5)

A single example of a plain bung from a bunghole jug is known. The vessel has a thick amber glaze with copper specks and the bung is pressed against the vessel wall and attached to it by finger smearing downwards from the top of the bung on to the body. Several large heavy rims found in horizon MH8 and MH9 deposits (late 14th to mid 15th century) are probably also from this form. The illustrated example is typical with its poorly-made thick walls, external copper and internal copper speckled amber glaze, and thumbed strip decoration. The handle is of the thick rod type, attached below the rim with two side thumb pressings, and embellished on the top with small pressing marks made with a small implement.

Small Jars and Pipkins

(Fig. 121, 880, Fig. 123, 906–11, and Fig. 124, 922–3) About 12% of all LSWA recovered comes from small rounded jars or pipkins and of these c.50% can specifically be identified as pipkins. The basic shape of both vessels is identical, and most pipkins can only be identified by the presence of a handle and/or lip. There is little change of basic form shape from the 12th to the 15th century, making it difficult to identify residual vessels in an assemblage.

Some details of manufacture alter through time and an attempt to summarise them is made here. Vessels found in 12th- to early 13th-century deposits (horizons MH1 to MH4) are more likely to be unglazed jars with a flat trimmed base, similar to those made in LSW1. Incidental spots of glaze show that the jars were fired with other glazed wares and that the decision not to glaze the vessels was intentional. Few pipkins are found before the early 13th century (horizon MH4), and those that are have a sparse splashed-type glaze on the shoulder (eg, Fig. 121, 880) and over the hooked single handle. By the end of horizon MH4 (the early/mid 13th century), bases are untrimmed, leaving a characteristic rough edge to the basal angle. Vessels are more likely to be pipkins with large hooked handles positioned at varying angles from the shoulder. A suspension glaze is applied to the upper part of the vessel, although sometimes this may only be a bib of glaze opposite the handle. From the mid 13th century (horizon MH5) onwards, rilling on the shoulder of LSWA pipkins becomes more common, culminating in deeply ridged vessels in the 14th century (horizons MH6 and MH7) (eg, Fig. 123, 910–11). There is a slight decline in the throwing standard of vessels between the mid 14th and late 15th century (horizons MH7 and MH10), resulting in more thickly potted vessels that sometimes have glaze applied internally. There is little evidence

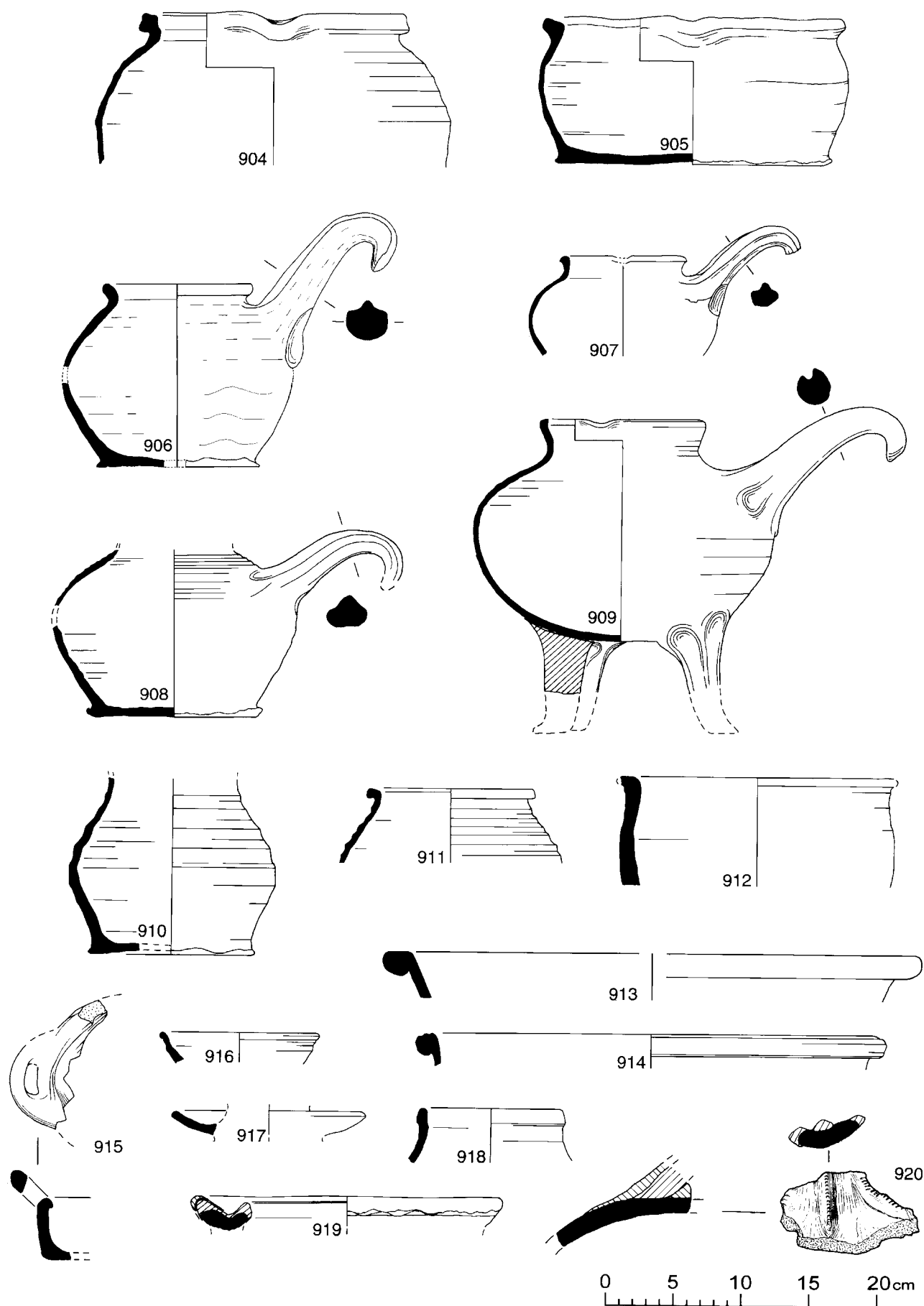


Fig 123 13th to 14th century Lincoln Glazed Ware Fabric A: lipped jars 904–905; pipkins 906–911; bowls 912–914; dripping dish 915; lamps 916–917; urinal 918; industrial vessel 919; curfew 920. Scale 1:4

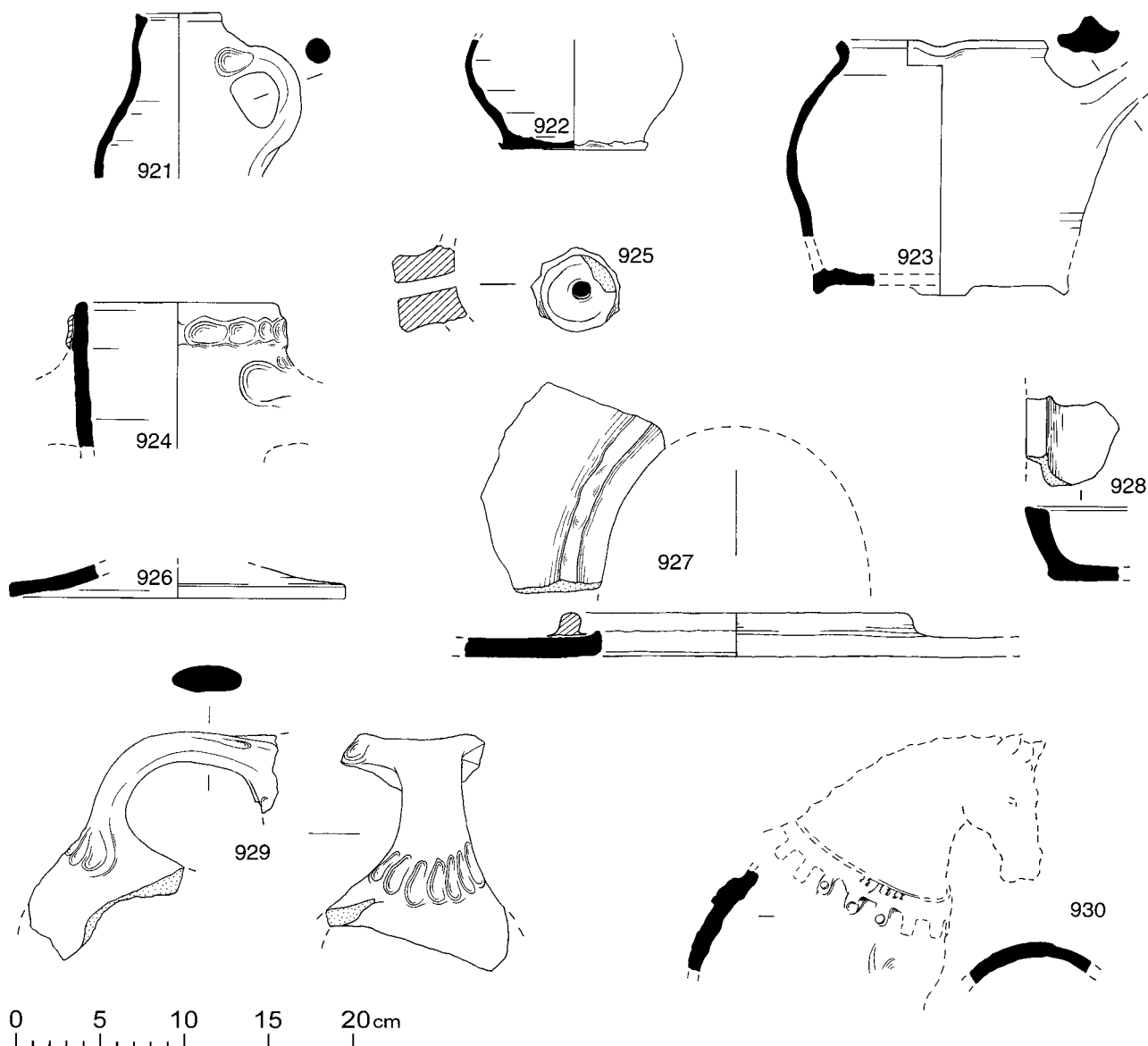


Fig 124 14th to 15th century Lincoln Glazed Ware Fabric A: drinking jug 921; pipkins 922–923; bunghole jugs 924–925; lid 926; unknown form 927; dripping dish 928; aquamanile 929–930. Scale 1:4

for footed pipkins (eg, Fig. 123, 909 and Fig. 124, 923), although some of the longer feet may have been mistakenly identified as handles, owing to the similarity in shape.

Large jars (Fig. 121, 879)

Large rounded jars with a collared rim, similar to those made at Stamford (Kilmurry 1980, 14–15), are occasionally found in early to mid 12th-century (horizon MH1) deposits. The vessels are finely thrown but seem to have had the base applied separately. A patchily applied thick, glossy amber and green, splashed-type glaze (often with lead

lumps visible on the surface), is found both internally and externally on the jars. Most are decorated with a incised wavy line on the shoulder.

Lipped Jars (Fig. 123, 904–5)

A small number of these squat, lipped jars have been found in early to mid 13th-century (horizon MH4 and MH5) deposits. They are crudely made, with roughly formed rims and untrimmed bases. Straw and stone marks are visible on the base of one vessel. The lip is pulled forwards with the forefinger whilst the rim is held at either side with the thumb and third finger. The interior of the jars is glazed with a

thick, pocked, splashed-type glaze over, or in, a red slip that appears to have been poured inside the vessel and swirled around.

Globular Jars (Fig. 121, 881–2)

These unglazed cooking pots are rare and seem to represent a direct attempt to copy the handmade EMHM wares. The vessels are wheel-thrown and then from the shoulder downwards are hand pressed and pushed out to form a globular shape. This form often has visible shell fragments on the surface of the vessel that are not apparent in a fresh break. The few stratified examples are in MH4 horizons (early to early/mid 13th century).

Ladles (Fig. 121, 888–9)

A few ladles, identical in form to those in BLGR, have been found in the LSWA fabric. These are found in early to early/mid 13th-century (horizon MH4) deposits and it is possible that they were made as an attempt to replace the no-longer imported BLGR forms.

Bowls and dishes

Overall these are a minor element of LSWA production, forming less than 1% of vessels found, although in the early medieval period bowls are far more common.

1. DECORATED (FIG. 121, 885)

A small number of decorated, internally glazed flared bowls similar to those made in LSW1 belong to the early medieval period. Similar bowls are found at Stamford (Type 1 bowl Kilmurry 1980, 13–15). None of the LSWA bowls is securely stratified although they are found associated with material dating to between horizons MH3 and MH4 (late 12th to early 13th century).

2. SHALLOW BOWLS (FIG. 121, 883–4, FIG. 123, 913–4)

These finely-thrown, everted-rimmed, shallow bowls are found from the late 12th to the late 14th centuries (horizons MH3 to MH7). From the late 12th to the early 13th centuries (horizon MH3 to MH4), the slightly sagging bases are heavily trimmed and have a thick, green-to-amber, splashed-type glaze applied internally. By the end of horizon MH4 in the early/mid 13th century, they have an internal suspension glaze and bases have become flat. Vessels are usually sooted, suggesting their use in the kitchen or dairy.

3. SMALL BOWLS (FIG. 123, 912)

These are crudely thrown, thick-walled vessels, with a simple rounded rim and an internal suspension glaze. The form is rare and always heavily sooted. The few dated examples belong to the mid to late 13th century (horizons MH5 to MH6).

Dripping Dishes (Fig. 123, 915, Fig. 124, 928)

Although sherds from at least 25 vessels have been found, all are very fragmentary and it has not been possible to reconstruct a profile. Vessels found in 13th-century deposits are more carefully made than later examples. The walls appear to have been wheel-thrown and then applied to hand-made bases that are sanded on the bottom. A thick, glossy, usually copper suspension glaze is applied to the interior of the vessels. Some of the dishes have a small looped handle applied to the rim at one corner of the vessel. From the late 13th century (horizon MH6), the dripping dishes tend to be more crudely slab-made, and then finished with a knife by cutting the rim to a flat surface and trimming the base. A thick copper glaze is still applied to the interior of the pans.

Aquamanile (Fig. 124, 929–30)

Fragments of two aquamanile have been found, both probably representing horses. The example from the St. Mark's Church site (SM76) (Fig. 124, 930) is from the side of the vessel and depicts the trappings around the horse's neck at a point where two parts of the vessel have been luted together. The other fragment is the handle and back of what may have been a horse (Fig. 124, 929). This vessel is of a much cruder manufacture and has been highly fired, perhaps over-fired. Both vessels are glazed externally with a patchy green or amber glaze.

Lids (Fig. 124, 926)

Only two lids have been found in this fabric and both are simple and unglazed. Sooting on the underside edge of the rim indicates that they were used over a cooking vessel.

Lamps (Fig. 123, 916–7)

Very few sherds from lamps are found in the LSWA fabric. Some (eg, Fig. 123, 916) are finely thrown while others are quite crudely made (eg, Fig. 123, 917). All have a thick copper suspension glaze applied to the interior of the upper bowl and lower drip trays.

Urinals (Fig. 123, 918)

Several simple rounded rims appear to come from urinals. The earliest stratified vessel comes from a horizon MH7 (mid to late 14th century) deposit and is similar in shape to those known to have been produced at a later date at the St. Mark's Kiln.

Hemispherical Curfews

(Fig. 121, 886–7, Fig. 123, 920)

The earliest curfews in LSWA are found in early 13th-century deposits (MH4 horizon), and the type continues in use until the late 15th century. They

are slab made, with the rim being knife-cut to provide a flat surface for the vessel to sit on. All examples are unglazed and are heavily knife-trimmed on the interior. The sides of the curfew are often strengthened with applied thumbed strips that run vertically down from the base, to meet the usually thumbed rim. Handles are rarely found, all examples being of the strap type with the base of the handle perforated with a vent hole. As none of the vessels found shows any traces of glaze, it may be that this form is one made by tilers rather than potters. Decoration includes thumb pressing, stabbing and rouletting with a knife blade.

Industrial Forms (Fig. 124, 919)

Several heavily sooted sherds from probable industrial vessels, including the illustrated complex rim, have been found in this fabric.

Miscellaneous (Fig. 124, 927)

A few odd sherds have been recovered that indicate unknown forms. The illustrated example may be from some sort of chicken feeder (Fig. 124, 927). The vessel has a thick glaze partially covering the upper surface except for the inner lip. The base and top of the inner projection are both well worn and there is no sign of any sooting. A large number of flat roof tiles, ridge tiles and roof fittings are also made in this fabric which is covered petrologically by the tile fabric type TF1 (Kemp and Vince 1995).

Source

Nine samples of LSWA from Lincoln were examined in thin-section (L1314, L1320, L1829, L1830, L1831, L1832, L1833, L1833 and L1834). One sample was very different from the remainder, having a silty clay matrix characterised by quartz, muscovite and biotite (as found in LSW1 and Beverley ware). It may be mis-classified or represent a minor but significant fabric variant. The sand tempering, abundant in all but one of the samples, is typical of the Trent Valley and consistent with a Lincoln source, and the highly anisotropic clay matrix with few inclusions was probably obtained from the Lias beds. Several of the samples contained laminated clay pellets which appear to be characteristic of unweathered Lias clay. This fabric was found on the St. Mark's Kiln site (ZE87), mainly on underfired vessels, and was being produced in the Lower City, as indicated by an early 13th-century kiln excavated at Gibraltar Steps in 2000 (MGC00).

Dating

LSWA vessels are first found stratified in horizon MH1 deposits (early/mid to mid 12th century) and are rare until the early 13th century (horizon MH4) when they form between 1% and 9% of quantified

deposits (c.3% of all horizon MH4 material). The fabric continues to form between 5% and 15% of quantified assemblages until horizon MH7 (the mid to late 14th century), after which the proportion drops to below 5%.

13th- to 14th-century Lincoln Glazed ware (LSW2) (Figs. 125–35)

Fabric and technology

This ware is characterised by glaze type; by rim, base and handle typology; by decoration; by manufacture; and to a lesser extent by fabric. Where a clear distinction between LSW2 and the later LSW3 industry cannot be made, vessels are classed as LSW2/3. Vessels with this codename that are thought to belong to this period have been illustrated together (Fig. 135).

The 13th- to 14th-century Lincoln Glazed ware – LSW2 fabric – has a sandy texture with fabric colours ranging from light to dark grey, with orange to red unglazed surfaces. Some jugs have a reduced interior surface from the neck downwards. Glaze colours are various, with the most characteristic being a bright copper-green. Vessels with amber to apple-green, or a dark reduced green glaze, are also found. The fabric is variable and tempered with moderate to abundant rounded quartz of up to 0.4mm, together with sparse iron-rich grains, sparse chert, sparse rounded sandstone, sparse to moderate rounded laminated clay pellets, and occasional rounded calcareous inclusions. The manufacture of all except a few vessels is by wheel throwing, with most vessels being well centred and having thin walls, indicating that they were probably thrown on a fast wheel. This competent throwing, combined with careful finishing techniques, is one of the main distinguishing features between the LSW2 and the later LSW3 industry. The firing temperature is usually high, giving a hard fabric and a well-matured glaze that is fused to the body.

Glaze is generally of the type termed suspension, although a close inspection reveals that the surface is rarely smooth and, at times, may be even more pocked than the preceding splash-type glaze found on LSW1 vessels. Glaze on most LSW2 vessels is applied in a red, orange or, in the case of the very bright copper-glazed, highly decorated jugs, a white slip. By the early/mid 13th century (horizon MH5), most jugs are glazed with a bright copper glaze that covers the upper two-thirds of the vessel. Other decorated vessels are glazed internally, also with a bright copper-green or, less commonly, an amber glaze.

A wide variety of decoration is in use and this is described below with the appropriate vessel types where possible. Use is made of contrasting clay

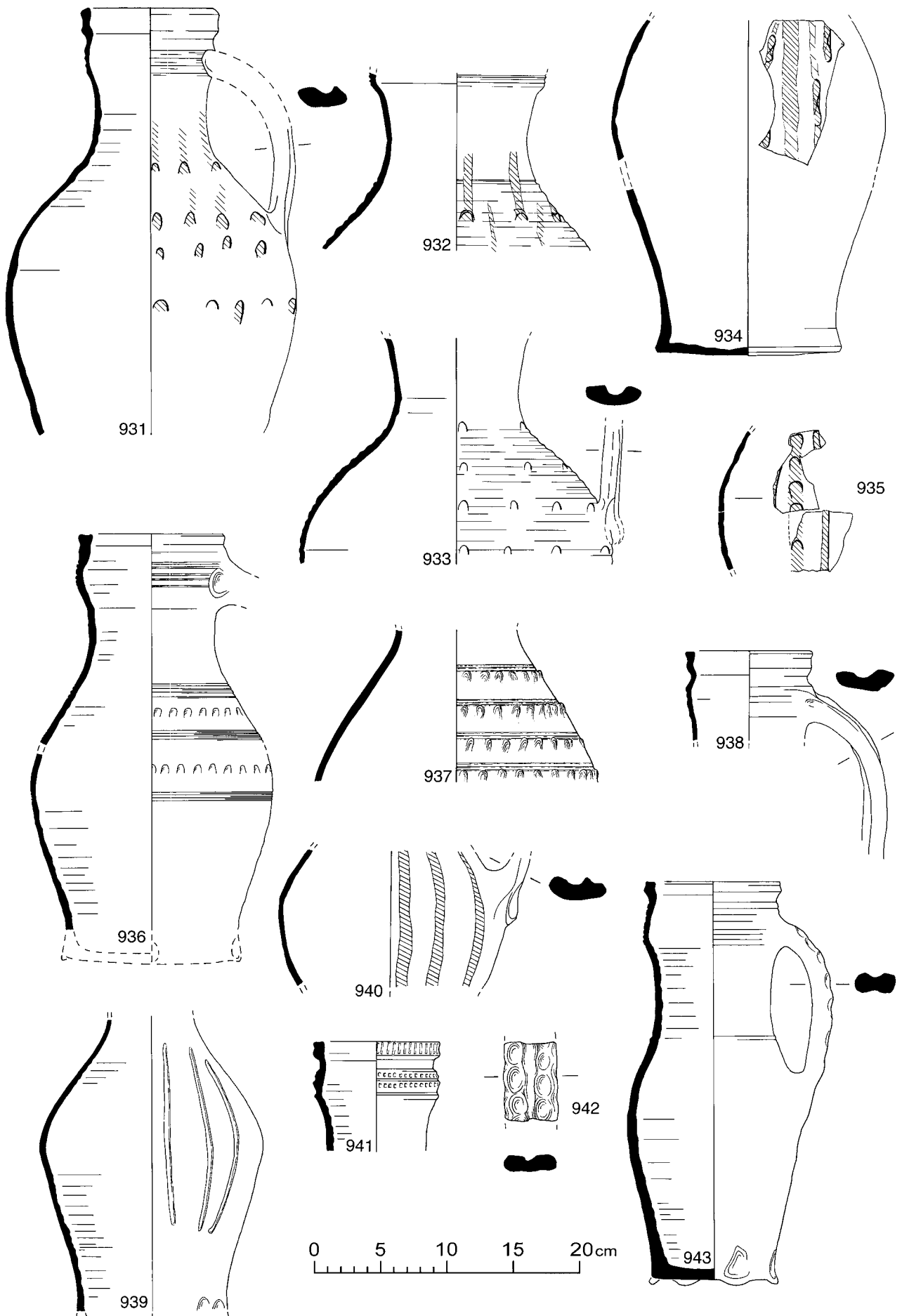


Fig 125 13th to 14th century Glazed Lincoln Ware: shouldered type 2 jugs 931–935; shouldered type 3 jugs 936–38; shouldered type 6 jugs 939–940; shouldered type 7 jugs 941–943. Scale 1:4

colours, using both iron-rich and, more rarely, white clays as applied motifs, to give a two-tone effect to a vessel. Motifs are generally simple and are formed from applied strips, scales and pellets. Complex overall designs (eg, Fig. 132, 1001) are occasionally found, although designs such as horseshoes (eg, Fig. 132, 996 and 1000) or roundels (eg, Fig. 132, 1002) are more common. A few early jugs still have combed decoration that is more typical of LSW1 vessels (eg, Fig. 132, 997). Rarely used motifs include the use of animals (eg, Fig. 135, 1045 and Fig. 128, 958), flowers (eg, Fig. 132, 999) or stamped pads (eg, Fig. 132, 998).

Forms

As with all the Lincoln glazed ware industries, the jug form is the main vessel type found. A wide variety of other forms is found, although some are so rare that it is difficult to be certain that they belong to the LSW2 industry. Material from outside the city does not alter the main typology of vessels, but the number of different vessel shapes and decorative techniques noted in the county could perhaps represent double the number of types known from the city. This may be because some of these vessels are produced by industries outside of the city making material similar to LSW2, or because certain types were more commonly exported to Lincoln's hinterland and beyond.

Jugs

1. SHOULDERED TYPE 2

(FIG. 125, 931–5 AND FIG. 132, 1007)

These thin-walled, ovoid-shaped jugs are among the earliest to be found in the LSW2 ware. Most of the jugs are reduced internally to a buff to light grey colour. Rims are generally of the collared type with a short bulging corrugated neck below. The thin, centrally-grooved strap handle springs from the lower part of this bulging neck, where it is joined on with a single shallow finger-pressing in the centre of the groove. The lower handle join has two shallow finger-pressings slightly splaying outwards from the handle. The slightly splayed flat bases are rarely found with thumbing; instead, the basal angle is often shaved (eg, Fig. 125, 934 and Fig. 132, 1007). Glaze is thick and glossy and can either be a bright copper-green or a light yellow-green with occasional copper flecks. The glaze is of the suspension type and there is no pitting visible; indeed, under microscopic examination the thick glaze is crazed. This glaze often extends down the jug to just above the base. The most common decorative technique is the use of applied scales running in horizontal lines around the jug (eg, Fig. 125, 931–3). Other decorative elements include alternate plain or painted strips with vertical

scales or 'bows'. Most of the applied decoration is painted over with an iron-rich slip to give a two-tone effect. It can be seen, from the runs of this slip, that after it had been applied, the jugs were put upside down to dry (eg, Fig. 125, 931–3 and 935). Evidence from a few jugs (eg, Fig. 125, 931) suggests that some jugs may have been stacked rim to shoulder in the kiln. The use of this shape is confined to MH4 or very early MH5 horizons (early to early/mid 13th century).

2. SHOULDERED TYPE 3 (FIG. 125, 936–8)

These jugs are narrower and generally smaller than type 2 and, although the rim and handle types are similar, the base types are not. Both the upper and lower handle joins have two finger-pressings at the attachment points. Bases have either four single pressings or continual pressings around the basal edge. At least two variations of this type of jug exist, the first having a reduced dark to very dark grey internal surface and a thick glossy reduced dark green glaze. The second type has a horizontally striped grey and orange to buff internal surface and a thick, but pocked, amber and light green glaze that starts below the neck bulge and finishes about half way down the vessel. Both types have almost identical decorative techniques, using a combination of alternate horizontal rows of applied scales and combed lines. The more reduced fabric has three rows of combing (eg, Fig. 125, 937), whereas the lighter fabric has four or five rows (eg, Fig. 125, 936). This type of jug is found in horizon MH4 and MH5 (early to late 13th century) deposits.

3. SHOULDERED TYPE 4 (FIG. 126, 944–7)

These jugs, with their narrow necks, globular bodies and small restricted bases, are the precursors to the early baluster versions. Rims are generally of the simple, rounded-collared type and the bases have four groups of three or four pinched finger-impressions around the edge. Handles are either a thick narrow strap or ovoid shape. Glazes are generally smooth and thick and of a slightly mottled, dark copper-green colour, although some jugs do have an amber glaze. Most jugs are left plain, while those that are decorated tend to have unusual designs including imitation stitching (Fig. 126, 946), roller-stamped leaves (Fig. 126, 945), and false handles fashioned as arms or legs (Fig. 126, 947). These jugs are rare and only occur in horizon MH5 (mid 13th century) deposits.

4. SHOULDERED TYPE 6

(FIGS. 125, 939–40 AND FIG. 132, 1009)

These small jugs have narrow necks and bases with a globular body. No upper parts have been found, so it is not possible to be sure of their rim and neck

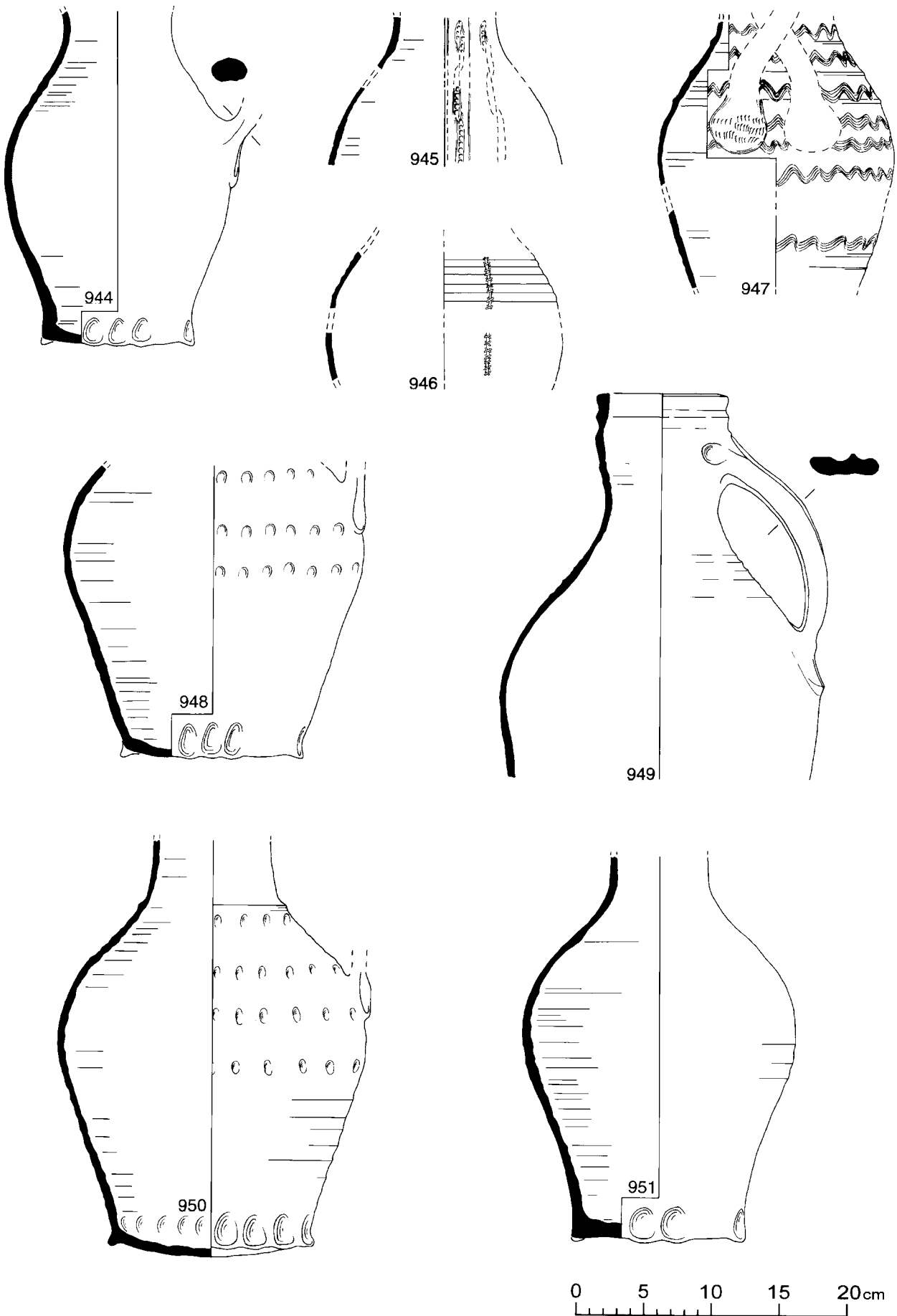


Fig 126 13th to 14th century Glazed Lincoln Ware: shouldered type 4 jugs 944–947; rounded type 1 jugs 948–951. Scale 1:4

type. The strap-handles have a central groove, and are applied at the lower join with a single deep thumb-pressing, and supported inside with three fingers, the impressions of the whole length of which are clearly visible on the interior. Bases are small and generally have continual thumbing around them. Most of the jugs have a bright orange, oxidised interior surface, although a few (mostly those with iron-stained decoration) are reduced to a very dark grey. The glaze is thickest at the top of the vessel and gradually thins towards the base. Glazes are only slightly pocked where they are thickest, but very clearly pocked above the base where they are thinnest. Colours range from a dull dark green flecked with amber to a light yellow-green flecked with copper-green. Decoration includes applied vertical strips (eg, Fig. 125, 939), iron painted strips (eg, Fig. 125, 940) and square roller-stamping (eg, Fig. 132 1009). This type of jug is uncommon and only found in horizon MH4 and early MH5 (early to early/mid 13th century) deposits.

5. SHOULDERED TYPE 7 (FIG. 125, 941–3)

This small jug, with its neat, almost square collared rim, and narrow, thumbed strap handle is rare. The neck directly under the rim forms a slight bulge which is heavily grooved and occasionally decorated (eg, Fig. 125, 941). The upper and lower handle joins are merely smoothed to the body, supported at the lower join by two finger-tips and by a slight finger impression at the top join. Eight singularly-placed thumb impressions are found around the base. They were formed by pinching and pulling the basal angle between the thumb on the outside and a bent index finger underneath. The most interesting feature of the jugs is that both this basal thumbing and the supporting finger-marks for the lower handle join are formed with the left hand. The jugs are generally oxidised on the interior surface to a bright orange-red. Glaze is a light green to olive colour, only covers the central third of the jug, and is of the splashed type. Decoration is rare, apart from thumbing on the edges of the strap handle, and includes roller stamping. This type is only found in early 13th-century deposits (MH4 horizons).

6. EARLY ROUNDED

Early rounded jugs similar to those produced in LSW1 (see Fig. 93, 651 for LSW1 examples) but with a suspension glaze, are occasionally found in early horizon MH4 (early 13th century) deposits.

7. INDENTED

Similar jugs to those found in the LSW1 and LSWA industries (see Fig. 120, 875–6) occasionally occur in early horizon MH4 (early 13th century) deposits.

8. ROUNDED TYPE 1 (FIG. 126, 948–51)

This type has a more rounded profile than the shouldered jugs, but still has a fairly narrow base. Almost all vessels have a grey to dark grey, reduced interior surface, and are covered on the upper two-thirds with a glaze that may either be thin and heavily pitted or thick and slightly pitted. The glaze is applied over a slip that is often visible on the unglazed portions of the lower body. Most glazes are of an olive-green colour, with only very occasional vessels having copper colourant added to the glaze, but even then a successful bright copper-green colour is never achieved. Rims are usually a plain collared type, although a few unusual shapes occur (eg, Fig. 126, 949). Below the rim is a short corrugated bulging neck. Handles are a thin strap type with a central groove that often has sharp edges (eg, Fig. 126, 949). These are attached at the top with two lateral and one central pressing. The lower join is formed by pressing the handle with two downwards pressings, while supporting the inside with two finger tips. Bases have no uniformity, with examples of pressing occurring both as all-round finger pressing, formed by pinching between the index finger on the outside and the sideways bent thumb underneath, leaving thumb nail impressions on the base; and as groups of two or three thumb pullings.

The scar from the rim of another vessel is commonly found on the base of this type, showing that they were stacked upside down in the kiln. Most of the jugs are plain and undecorated, with the only common decoration being horizontal lines of applied scales. This shape of jug first occurs in horizon MH5 (mid 13th century) and continues into horizon MH6 (mid 14th century), by which time vessels are always undecorated and have a slightly narrower base (eg, Fig. 126, 951).

9. ROUNDED TYPE 2 (FIG. 127, 952–7)

These jugs have a more rounded body than type 1 and may have a slightly restricted base (eg, Fig. 127, 952). Rim types are almost always a long rounded collar and below the rim is a large, corrugated, bulging neck. All horizon MH5 jugs (early/mid to late 13th century) have strap handles, with a slight central groove. By the late 13th century (horizon MH6), both strap and rod handles are found. While the strap handles are applied in the same way as those on rounded type 1 jugs, the rod handles are secured at the lower join by pushing the wall of the jug into the handle, leaving a deep finger impression on the interior of the vessel (eg, Fig. 127, 956). Bases have groups of two or three small finger-pulled impressions.

Scars from the rim of another vessel are rarely found on these bases; however, scars of wasted sherds used as spacers in the kiln are commonly found and include the use of both rim and handle

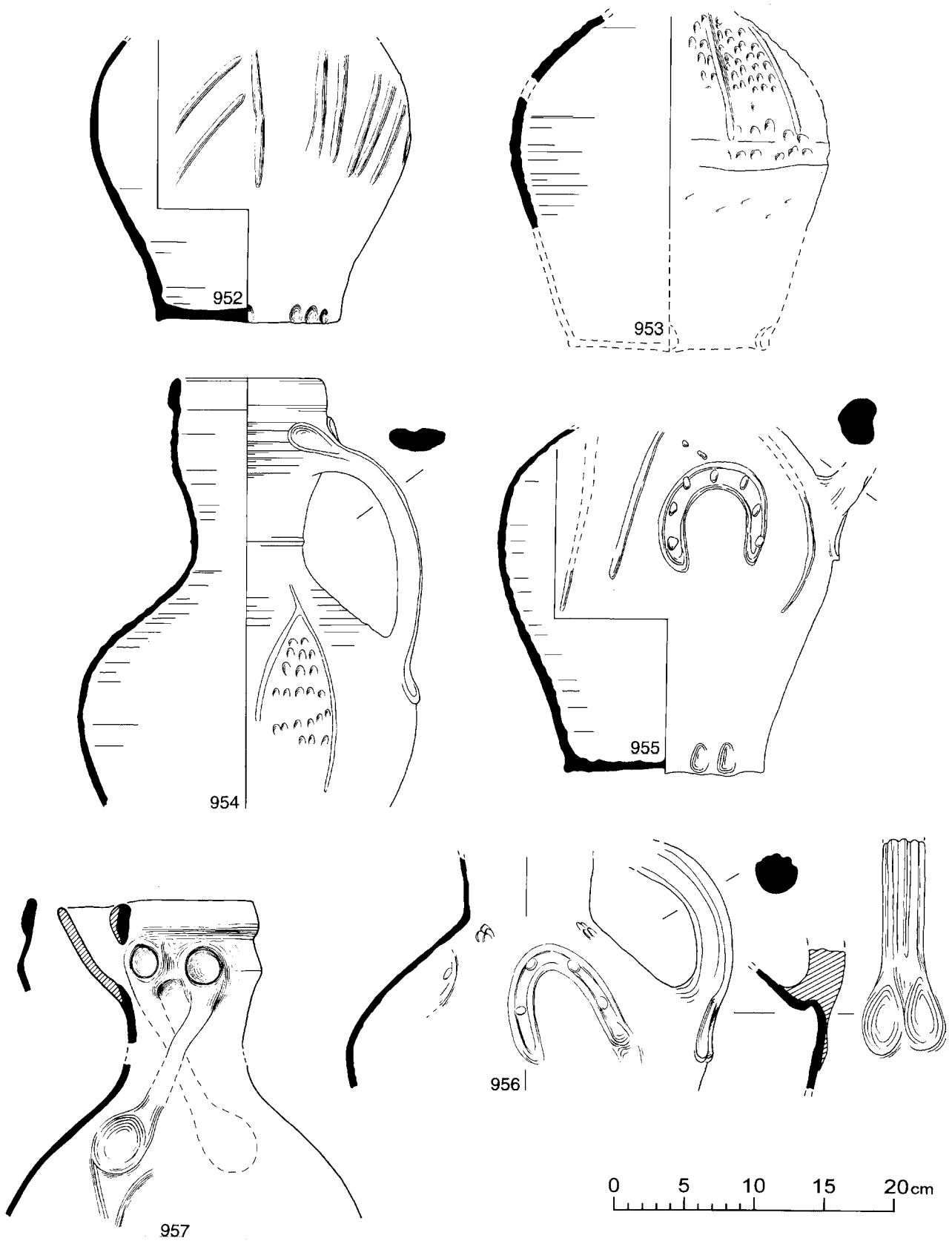


Fig 127 13th to 14th century Glazed Lincoln Ware: rounded type 2 jugs 952–957. Scale 1:4

fragments. The rims of these jugs tend to have chips at one or two points around the edge, probably where they were separated from the spacers. The lower interior surface of the jugs is almost always reduced to a light grey, or greyish-red, and graduates in colour to an oxidised red-brown by the rim. The glaze is applied over a slip that varies from pale orange to white, and it is this slip that seems to determine the final shade of copper-green which the glaze assumes. A white slip gives a lighter green and a light orange slip a darker bright green. The glazing extends over the upper two-thirds of the jug, is commonly pocked and occasionally mottled. All of the vessels are decorated with an array of haphazard motifs. Use is made mainly of applied strips, scales and pellets, which may be combined to form flowers, leaves, and horseshoes, or used in abstract groups. Occasional use is made of applied white clay strips (eg, Fig. 127, 953). Overall designs are rarely symmetrical and several motifs appear to be randomly placed on the jug (eg, Fig. 127, 955–6). Occasional examples of jugs with bridge spouts occur and these are usually associated with false handles (eg, Fig. 127, 957). This is the most common form of jug found in LSW2, first appearing at the end of horizon MH4 in the early/mid 13th century (eg, Fig. 127, 953), and continuing until the end of horizon MH6 in the mid 14th century (eg, Fig. 127, 956).

10. ROUNDED TYPE 3

(FIG. 128, 958–62 AND FIG. 129, 963)

These large rounded jugs are thin-walled and often not well centred. Rim types vary with the date of the jugs. The earliest vessels found in early horizon MH4 (early 13th century) deposits have an inturned rim (Fig. 128, 961). By the end of horizon MH4 (early/mid 13th century), however, the jugs have a sharp collared rim (Fig. 128, 959) which gradually becomes a long slightly rounded rim by the late 13th century (horizon MH5) (Fig. 128, 960). With the exception of the earliest vessels, all the jugs have a bulging corrugated neck. Handles are always a wide, centrally grooved, strap type, and early to early/mid 13th-century examples (horizon MH4) are often thumbed along the edges. The earliest handles are attached simply by smearing them on to the body, with no thumb-pressing; then two upper and two lower thumb-pressings develop, followed by three upper and two lower pressings. The wide bases are variable, with most having groups of five or six thumb-pullings around the edge, although a few unusual examples have a plain base (Fig. 128, 962). Most bases show clear evidence of stacking scars from jugs placed upside-down on the centre of the bases during the firing process. These jugs may be oxidised, or reduced internally to between a

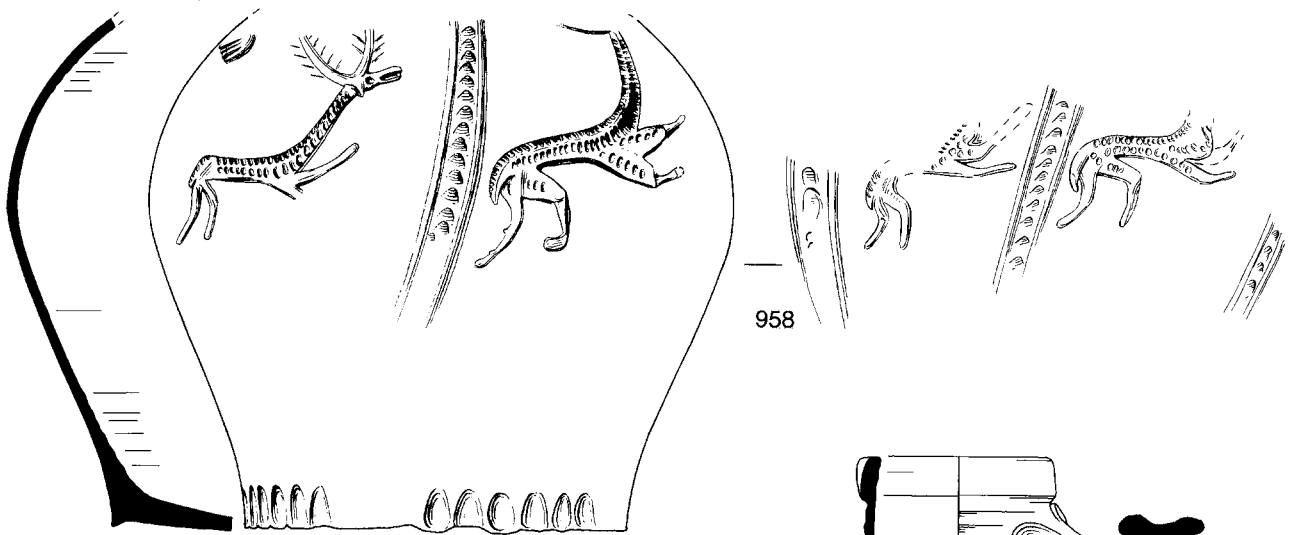
greyish-brown and a very dark grey colour. The glaze, which is applied over an orange to red slip, usually covers the top three-quarters of the jug and is almost always a bright, mottled copper-green colour. All except a few have a heavily pitted and cratered glaze. Most are decorated with a wide range of motifs, including zoomorphic designs (Fig. 128, 958) and applied scales and strips (Fig. 129, 963). On early vessels, iron-stained decoration is often found (Fig. 128, 959). This type of jug in LSW2 is found in 13th- to mid 14th-century deposits (from horizon MH4 to MH6) and is fairly common. The diversity within the type and its longevity may indicate that it was made at more than one production centre.

11. ROUNDED TYPE 4 (FIG. 129, 964–5)

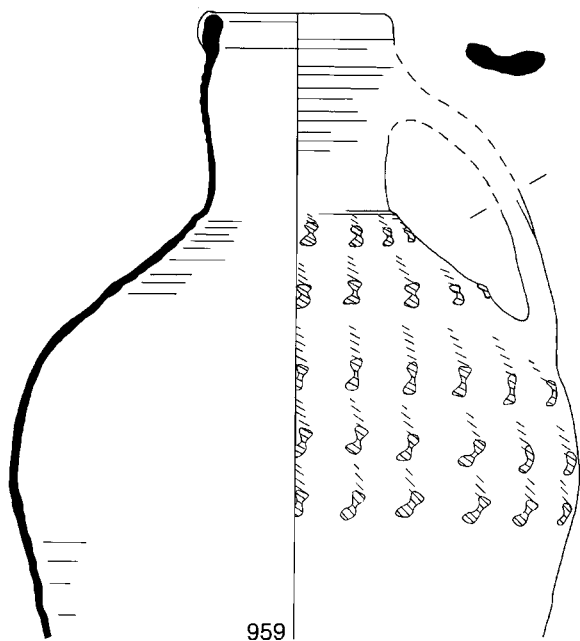
These plain rounded jugs have short bulging necks, flaring out to a wide shoulder. Rims are either a small flat or rounded cuff with a sharp lower edge. Handles are a thin, centrally-grooved strap, either joined at the top with one central thumb-pressing and only smeared on at the lower join, or joined with three upper thumb-pressings and two lower ones. Bases have groups of two or three tiny pressings at the basal angle and generally show no stacking signs. Vessels are usually oxidised internally and have a thick and lustrous glaze that is quite heavily pocked with colours ranging from a mottled copper-green to a mottled amber. No jugs of this type have been found with any form of decoration. They are rare and found in mid 13th century (horizon MH5) deposits.

12. EARLY BALUSTER (FIG. 129, 966–9)

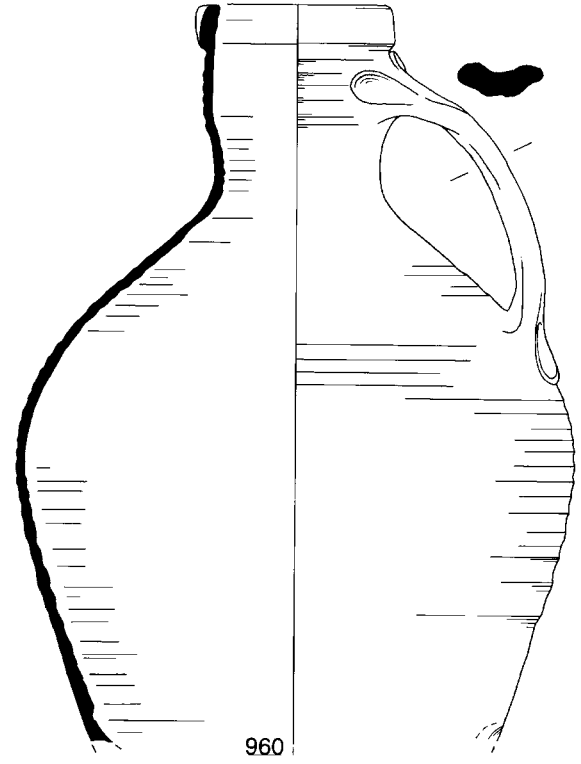
Jugs of Early Baluster type first appear in horizon MH5 deposits in the mid 13th century, but do not become common until the late 13th century (horizon MH6). The rim shape is always a small rounded collar, usually set above a small corrugated bulge at the top of the neck. The few existing MH5 horizon jugs of this type all have a narrow centrally-grooved strap-handle joined with three pressings at the upper join and two at the lower join. By MH6, all examples of the type have a long thin rod handle applied at the top with two external deep 'eyelet' pressings, and at the bottom with two small, often shallow pressings. The internal wall is sometimes pressed into the rod handle at either or both of the joining points with two or three finger tips. Bases narrow, with either all-round pulled thumbings that are often widely spaced, or four groups of three pullings. Alternatively, they can be slightly splayed with all-round pressings pinched between the thumb on the exterior and the index finger underneath the jug. The pressings on the illustrated example of this base type (Fig. 129, 968) are formed with the left hand.



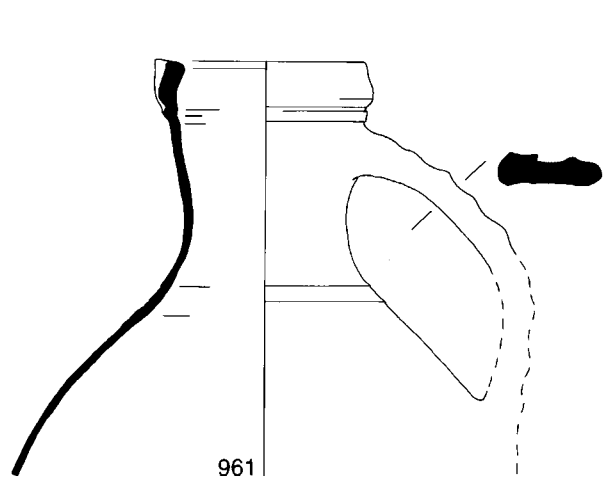
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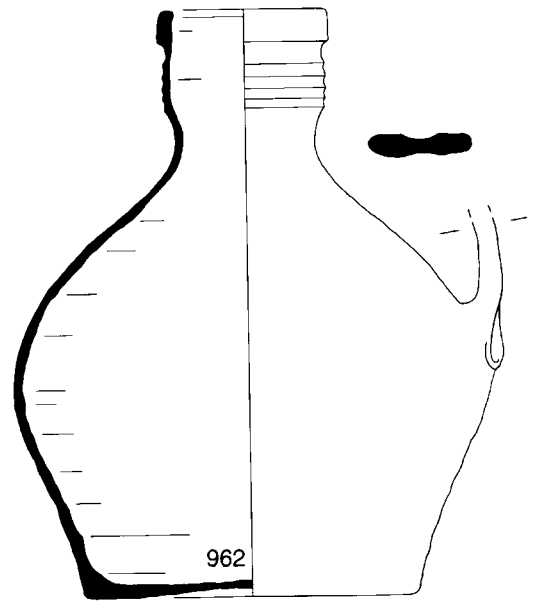
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961



962

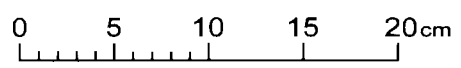


Fig 128 13th to 14th century Glazed Lincoln Ware: rounded type 3 jugs 958-962. Scale 1:4

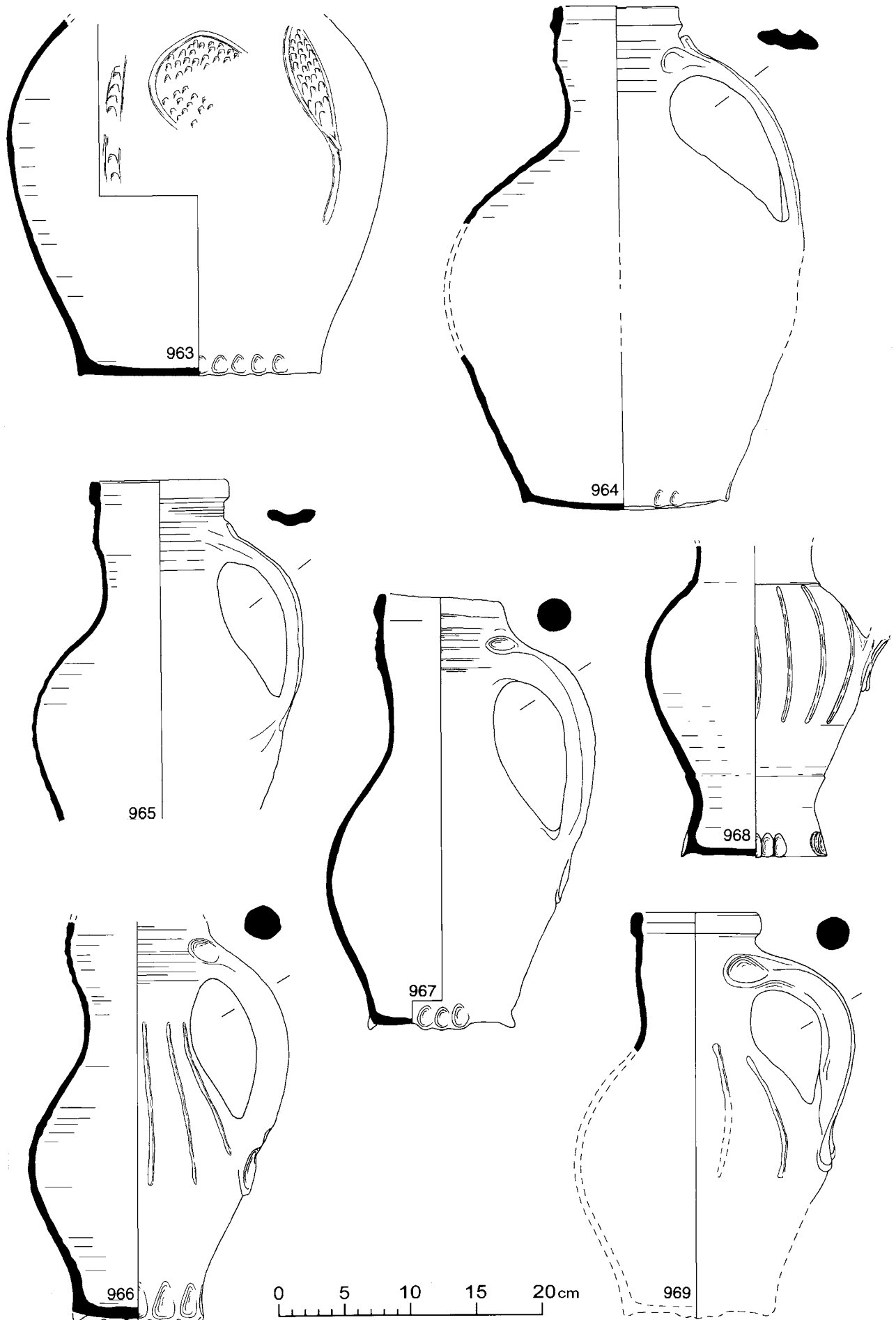


Fig 129 13th to 14th century Glazed Lincoln Ware: rounded type 3 jug 963; rounded type 4 jugs 964–965; early baluster jugs 966–969. Scale 1:4

Occasional stacking marks are visible on the underside of bases.

Both oxidised and reduced interiors are found, ranging in colour from dark grey to bright orange. The thick glaze which covers the top three-quarters of the jug is applied over, or in, a slip that is heavily pocked on all but the latest examples. Most have a mottled bright copper-green glaze, although some amber or olive examples exist. The most common decoration to be found is applied vertical strips. An early jug from Short Ferry, Fiskerton (White 1977), has rows of one or two incised lines with scales applied over the top.

13. BICONICAL TYPE 1 (FIG. 130, 970–2)

This narrow biconical jug is found in several sizes. The rims are collared and there is no bulging neck; instead the neck tapers down to the widest point of the vessel, which is accentuated by a cordon, and then the vessel narrows again to the base. All jugs have a rod handle that springs from just below the rim and joins back on to the body at the widest point of the jug. The upper join has two deep 'eyelet' pressings and the lower join has two vertical pressings at the base of the handle. The interior of the vessel wall is pushed into the upper join with a finger, and the lower join appears to be plugged into the jug and then smoothed over. Bases have four groups of two thumb-pullings around the edge.

The jugs may have oxidised or reduced interiors and are glazed from the rim downwards to the widest point. The glaze may be thick and a lustrous copper-green or amber colour, or thin, deeply pocked and olive green. The most common decoration is vertically applied strips; some jugs, however, have panels of strip and scale decoration including the example from the St. Mary's Guildhall (SMG82) site which has an iron-rich slip painted over scale decoration, enclosed within a triangular shape by applied strips (Fig. 130, 972). These jugs occur in horizon MH6 (late 13th to mid 14th century) and are uncommon.

14. BICONICAL TYPE 2 (FIG. 130, 973)

These large biconical jugs are extremely rare and no complete profiles have been found. Existing vessels indicate that they have a slightly sagging base that has single thumb-pullings around the edge. The bright copper-green glaze is pocked and speckled, and applied over a pale orange slip. The glaze on this type of jug extends below the lower body cordon. Several vessels have applied strip decoration above the cordon, and a few fragments suggest that decorative motifs include fleur-de-lis. This jug type is found in horizon MH6 (late 13th to mid 14th century).

15. SQUAT TYPE 1 (FIG. 130, 974)

This type of rounded, comparatively short-necked, squat-bodied jug is very rarely found in LSW2. The scarcity may stem from the difficulty of distinguishing it from other jug types without a good proportion of the vessel profile. On known vessels, the rims are a long collared type above a slightly bulging neck. No handles have been firmly identified as belonging to this type, although it is likely that they would be of the strap variety. The bases are slightly sagging and have groups of three overlapping thumb pullings around the edge. The glaze is a bright copper-green and is slightly pocked and mottled. It is applied over a cream slip and covers the vessel down to about 4cm from the base. Where the glaze has covered the body without a slip, a thin specked olive and amber sheen occurs. The few examples that occur are found in MH6 horizons (late 13th to mid 14th century).

16. TUBULAR SPOUTED HIGHLY DECORATED PITCHERS (FIG. 131, 981–90)

Although numerous fragments of this type of jug have been found both on sites in the city and in the county, no complete profiles have been found. Each jug has its own unique character, centred around a range of decorative motifs including male heads, knights on or off horseback, and hunting scenes. The jugs are based on a rounded type 1 or type 2 shape and most have a collared rim, although a few early jugs have a ledged rim intended to take a locking lid (eg, Fig. 131, 988). Handles are almost always of the rod type and are often twisted, probably copying Scarborough ware examples. The glaze is usually applied over a white slip giving a bright lustrous copper-green colour. The main elements of decoration include large modelled male face masks that are applied just below the rim. These masks have a long beard that sticks out away from the face before joining back to the body of the jug. Two main types occur, the first with hands pulling at the end of the beard (eg, Fig. 131, 981), and the second with the hands at the top of the beard, almost as if the figure was holding its head in despair (eg, Fig. 131, 981). Small modelled heads with short beards occur in isolation on various places (eg, Fig. 131, 981 and 989). The other main modelled figure is a knight, often with a shield, and mounted on horseback (eg, Fig. 131, 981 and 985–7). Both the face masks and the knights are often used as phallic images by placing them together with modelled hands appropriately above, or on, the tubular spout (eg, Fig. 131, 981–3). A small modelled head with what appears to be a crown (Fig. 131, 990) may also be from a jug of this type, if not from an aquamanile. These jugs are rare, and are found from the early 13th to mid 14th century (from horizon MH4 to MH6).

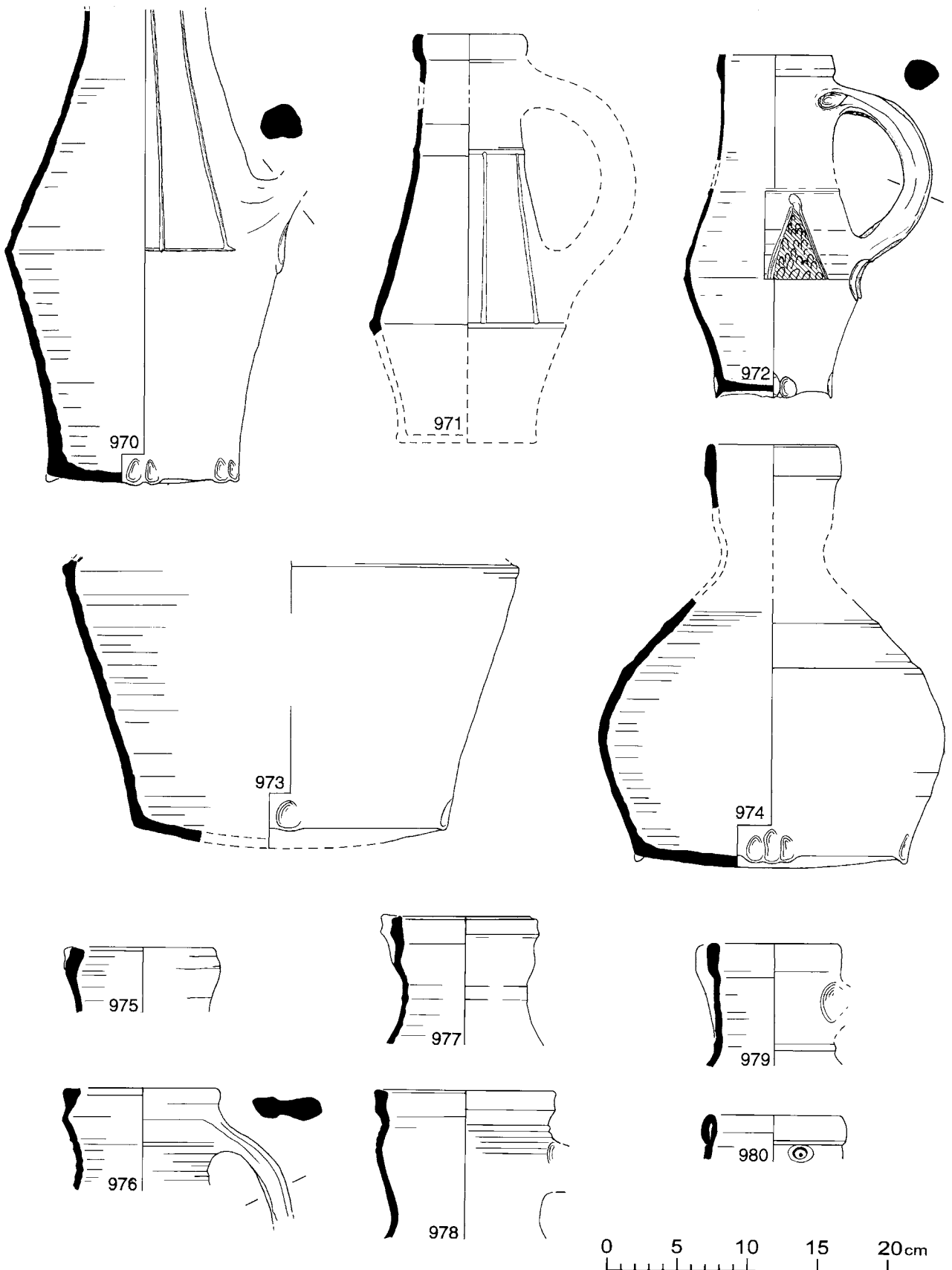


Fig 130 13th to 14th century Glazed Lincoln Ware: biconical type 1 970–972; biconical type 2 973; squat type 1 974; rim types 975–980. Scale 1:4

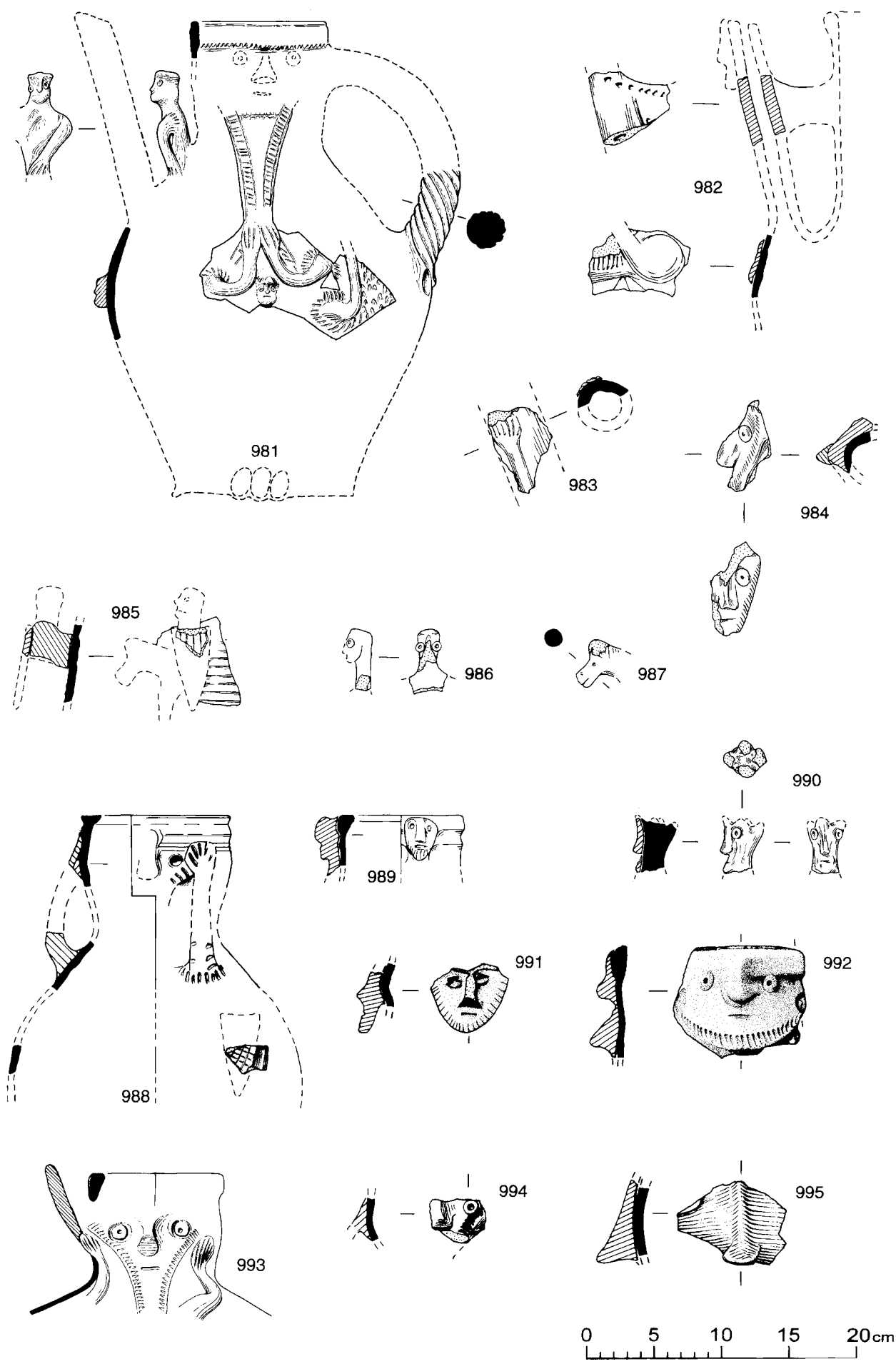


Fig 131 13th to 14th century Glazed Lincoln Ware: highly decorated tubular spouted pitchers 981–990; face-mask jugs 991–995. Scale 1:4

17. FACE-MASK JUGS (FIG. 131, 991–5)

This type of jug is defined purely by its decorative elements. The face masks occur on shouldered type 4 and rounded types 1, 2 and 3 jugs. A variety of face types is found, including the long beard type which is usually placed on the bulging neck of bridge spouted jugs (eg, Fig. 131, 993–4); a short bearded face placed on the inturned rims of early 13th-century jugs (early horizon MH4) (eg, Fig. 131, 991); pulled jug spouts formed from short bearded masks (eg, Fig. 131, 992); and large faces placed on the side of rounded type 3 jugs created with individually modelled features (eg, Fig. 131, 995). Unlike the anthropomorphic decoration found on the tubular spouted pitchers, these heads often occur as the only decorative element on a jug. The face masks are uncommon and are found throughout the currency of LSW2.

RIM AND SPOUT TYPES

The earliest rim forms, found in the early 13th century (horizon MH4), are of the inturned type (eg, Fig. 130, 975–6), and these are rare. The most common rim type for all LSW2 jugs is an upright collared rim. At first, in the early to mid 13th century (horizons MH4 and MH5), this collar is small and sharply defined (eg, Fig. 130, 977–8), but by the late 13th century (the end of horizon MH5) it has become larger and more rounded in profile (eg, Fig. 130, 979–80). Below the rim on most 13th-century jugs is a bulging, corrugated neck. The bulge becomes gradually more elongated until by the mid 14th century (the end of horizon MH6) the rilling on the bulge has dropped to the lower part of the neck, leaving a plain, slightly bulging top. Some jugs, especially smaller ones, are found with plain concave necks.

Spouts are usually simple pouring lips formed by pulling forwards part of the rim with the index finger while holding back the rest of the rim with the thumb and third finger. Applied long tubular spouts and bridge spouts are found on highly decorated vessels, but both are very rare.

BASE TYPES

Base types are dependent on the shape of the vessel, although some traits are common to all LSW2 jugs. The main distinguishing feature between LSW2 and the earlier LSW1 bases is the presence of thumbing at the basal edge of all except a few LSW2 jug types (eg, Fig. 132, 1007). This thumbing occurs singularly (eg, Fig. 132, 1008) or in groups of two, three, four or six pressings. A few vessels have continuous pressings all around the base. Shouldered jug types 3 to 7 tend to have thumbing either all round or in groups of two or three four pressings. Almost all of the thumbing on types 3 to 6 is done by pinching the basal angle between the forefinger and the thumb of the right hand while the vessel is held upside-

down with the left hand inside the jug base (eg, Fig. 132, 1010). The pressing on Shouldered type 7 jugs, however, is formed with the left hand. Bases on Shouldered type 2 jugs are more commonly trimmed and left unthumbed. Rounded jugs usually have groups of two, three, four or six pressings that are either made with the jug held on its side and direct, small, slightly overlapping impressions being made by pulling between the thumb and tip of the forefinger, or less commonly by pinching the basal angle between the thumb and bent forefinger. All early baluster jugs have single or continuous pressings created by pinching between the thumb and bent forefinger, or finger-pullings.

The earliest evidence for the organization of jugs within the kiln indicates that some vessels may have been stacked on their side, on top of a row of upright jugs. It is not until horizon MH5 (the mid 13th century) that evidence of stacking marks first occurs on jug bases. On some of the rounded jugs, marks show that a variety of sherd separators was used, probably waste products from earlier firings. Scars of handle and shoulder segments, used to separate vessels, are clearly visible. By the end of horizon MH5 (the late 13th century), the first evidence is found for the direct stacking of vessels rim to base. On the larger jugs one vessel is stacked centrally on the base of another, and on the smaller ones the jug rim appears to overlap at least two jug bases.

HANDLE TYPE

Until the late 13th century (end of horizon MH5) all jug handles, with the exception of some of those from elaborately decorated vessels, are of the strap type. These strap-handles appear to be wheel-thrown and generally have a sharper profile than those found on LSW1. Early examples are thumbed along the edges in a similar manner to those in LSW1. The handles are smoothed on externally at both upper and lower handle attachment points, and the join is blended into the surrounding vessel. All handles are joined just below the rim on jugs without a bulging neck, or further down towards the base of the bulge (if it is present), and rejoin the body about half way down the vessel. Two or three finger impressions, caused by pushing the body of the jug into the end of the handle, are visible on the interior of the vessel at the joining points, and these are usually more pronounced at the lower join. Early handles have two thumb-pressings, one at each side of the handle at both the upper and lower join. These pressings are faint at first, becoming more obvious by the end of horizon MH4 (the early/mid 13th century), by which time their presence is not merely functional. By the mid 13th century (horizon MH5), a third deep pressing is often made at the top and/or bottom join in the central handle groove.

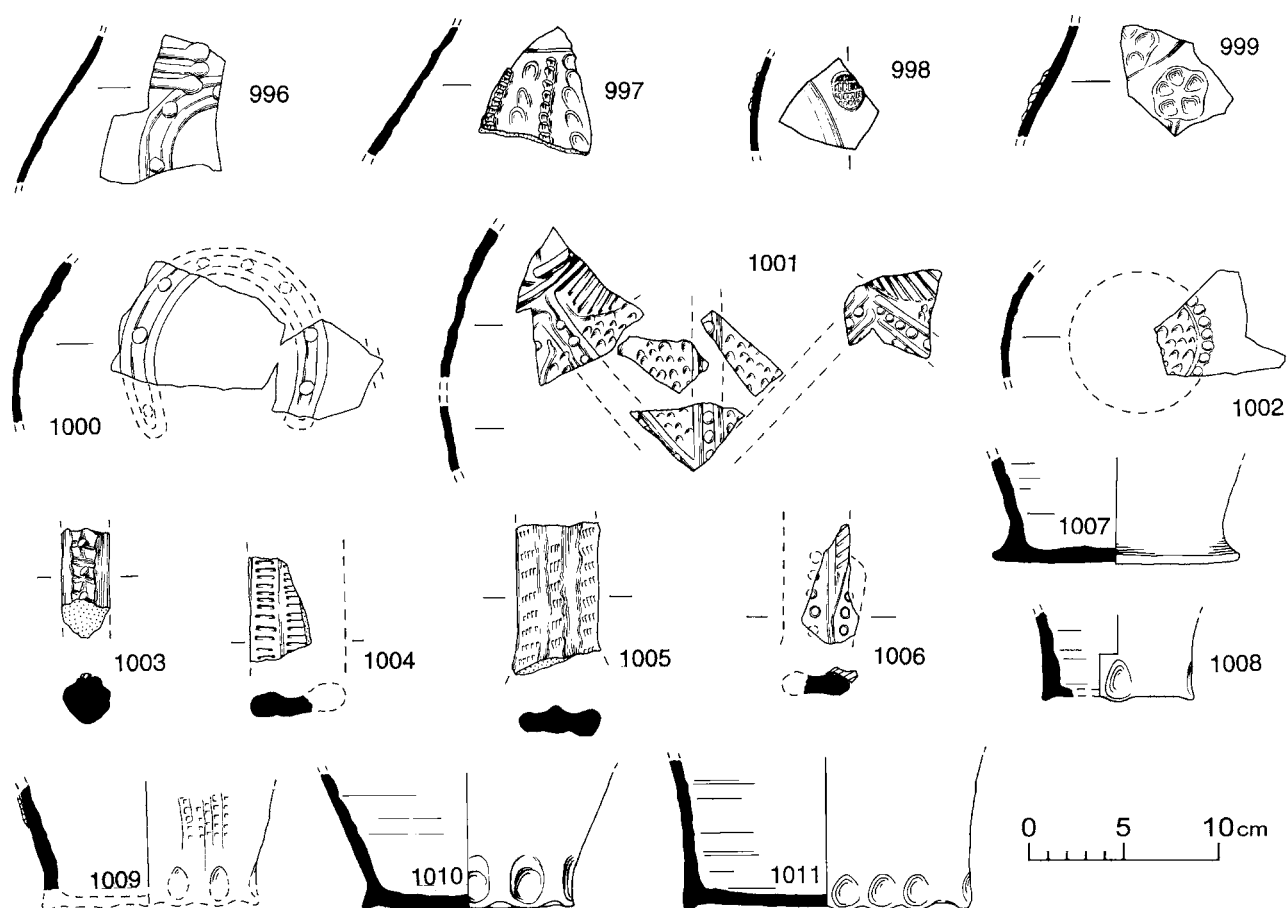


Fig 132 13th to 14th century Glazed Lincoln Ware: decorative elements. Scale 1:4

Plain rod handles first appear at the end of horizon MH5 in the late 13th century and then only on knight jugs. By horizon MH6 (late 13th to mid 14th century), rod handles are found on all early baluster jugs and biconical type 1 jugs and some of the rounded type 2 vessels. These thin, round handles are unlike the later, larger and often more crudely made rod handles found on LSW3 vessels.

Finely made, grooved rod or twisted handles copying those produced at Scarborough (Farmer 1979, 33) are occasionally found on highly decorated vessels. Decoration on handles is rare: some of the rod handles from highly decorated jugs may have elaborate impressed or applied designs (eg, Fig. 132, 1003), but both strap and rod handles are only usually decorated with roller-stamped or simple impressed decoration (eg, Fig. 132, 1004–6 and Fig. 135, 1046).

Small tubular spouted jugs (Fig. 134, 1031–6)

These vessels are found in early to mid 13th-century deposits (MH4 and early MH5 horizons) and are a continuation of the same form that was previously

made in LSW1 and Stamford ware. The long thin tubular spouts are knife-cut at the top edge and smeared on to the body at the lower join where a small hole has been pushed through the vessel wall. Occasional examples have ornate pressings around the join (eg, Fig. 134, 1031). The earliest spouts are joined to the vessel rim by a small strap of clay at the top of the spout (eg, Fig. 134, 1036). This strap is found lower down the spout on later vessels when it is also wrapped around the spout (eg, Fig. 134, 1033–4). Simple, narrow strap-handles, occasionally with thumb-pressed edges, are found on the early forms (eg, Fig. 134, 1031). By the early/mid 13th century (horizon MH5) all handles are of the small rod types, secured at the lower join by two small finger-pressings (eg, Fig. 134, 1032). No decoration other than direct pressings to the handle edge and around the spout is known.

Miniature jugs (Fig. 134, 1037)

Small slightly biconical forms without a pouring lip are occasionally found in mid 13th- to mid 14th-cen-

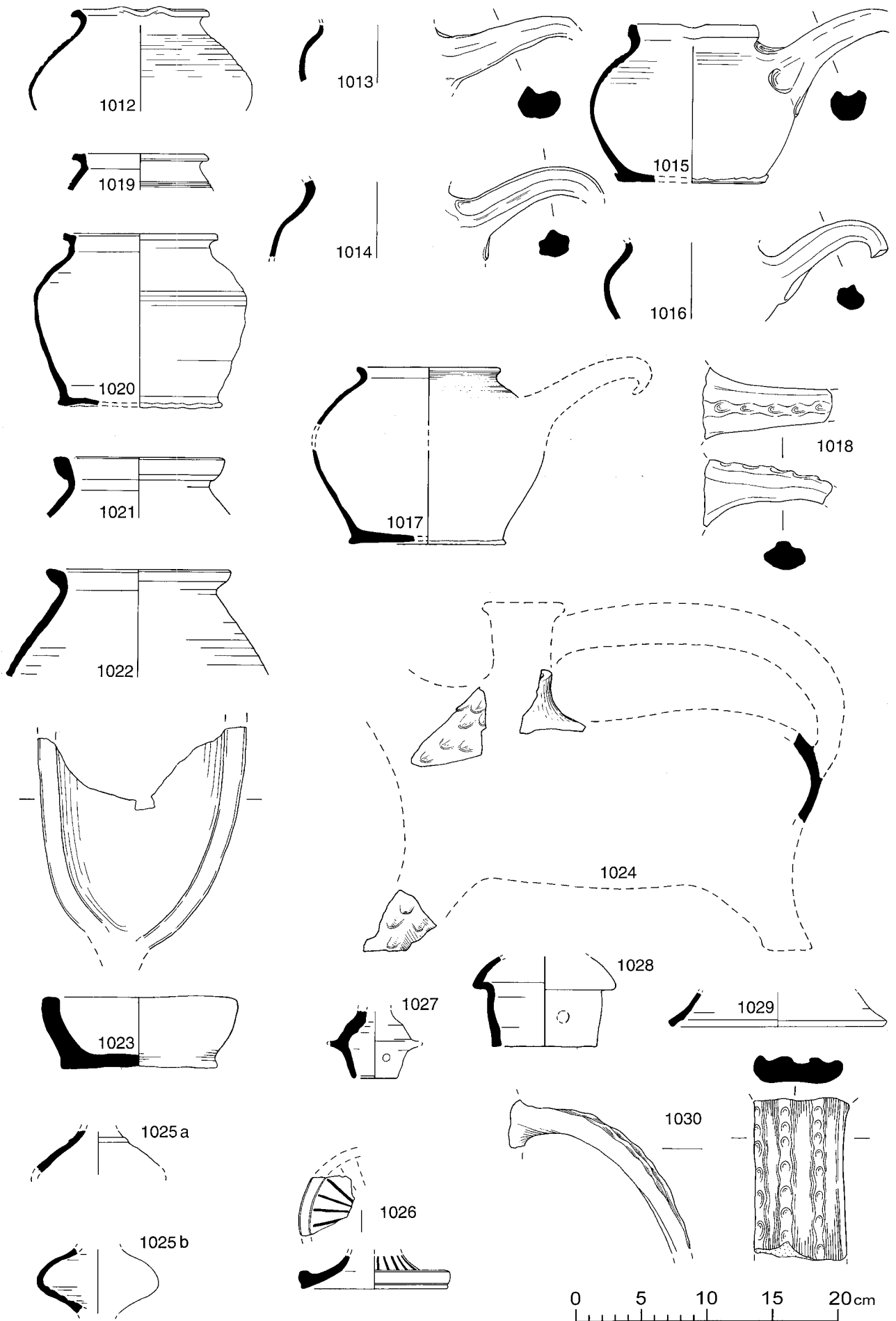


Fig 133 13th to 14th century Glazed Lincoln Ware: pipkins 1012–1018; jars 1019–1022; dripping dish 1023; aquamanile 1024; finials 1025a–1025b, pedestal vessel 1026; lids 1027–1029; large vessel 1030. Scale 1:4

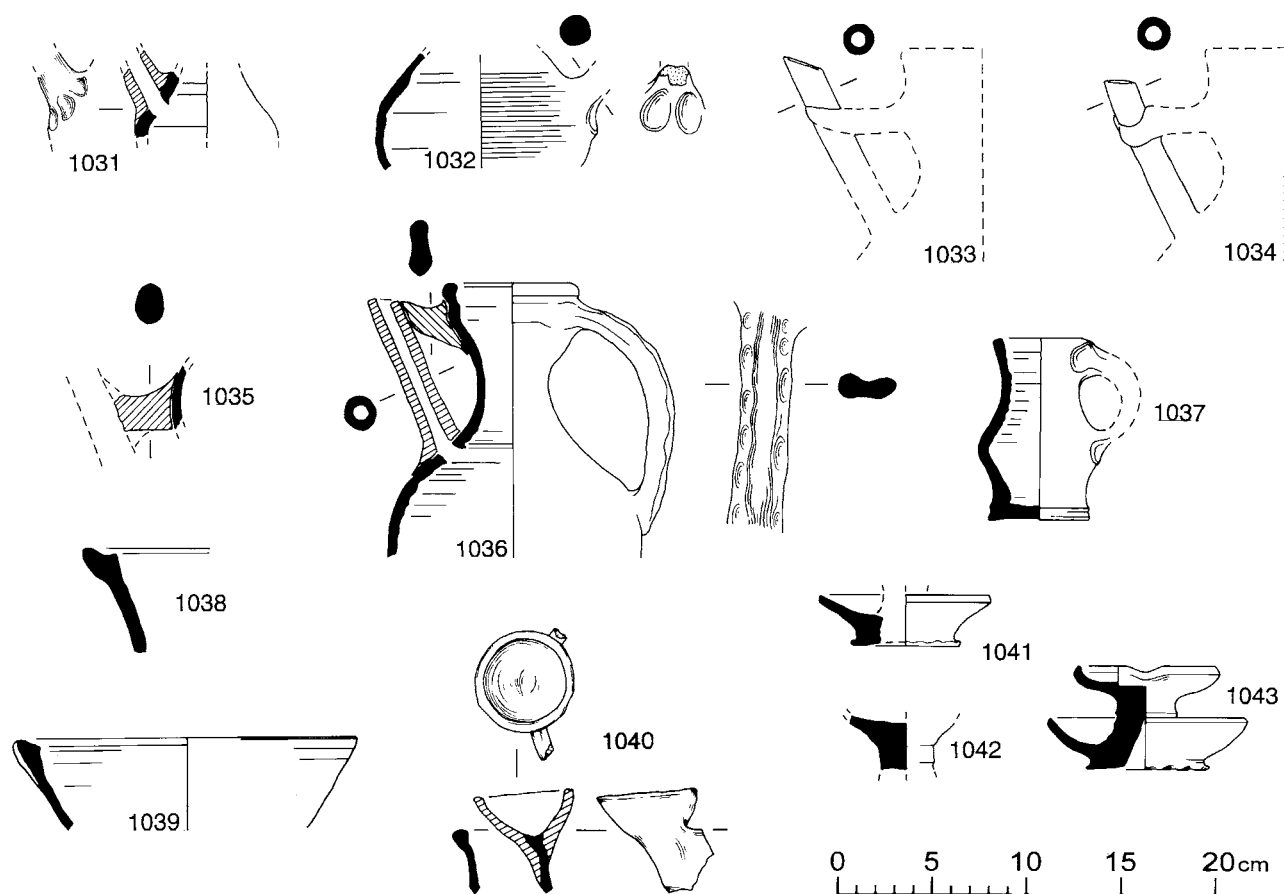


Fig 134 13th to 14th century Glazed Lincoln Ware: small tubular spouted jugs 1031–1036; miniature jug 1037; bowls 1038–1039; sweetmeat dish 1040; lamps 1041–1043. Scale 1:4

ture groups (horizons MH5 and MH6). The rim is a simple upright shape that has been cut flat, and the restricted bases are left rough and untrimmed at the edge. The thin rod handles are sometimes almost square in section and secured at the upper and lower joins by two pressings. The thick external glaze is sometimes patchy and varies from copper-green to amber.

Narrow-necked jugs (Fig. 135, 1044)

A few narrow-necked vessels with a looped rod handle occur. They are finely thrown and covered with a thick lustrous, sometimes pocked, reduced green or copper-green glaze.

Small jars and pipkins

(Fig. 133, 1012–20 and Fig. 135, 1047)

The problem of attributing these forms to individual LSW productions has already been discussed (p108). Less than 3% of LSW2 vessels can be identified as either jars or pipkins, although c.14% of vessels classed as LSW2/3 are of these forms. Most vessels

by this period are probably pipkins, as few examples with enough of the rim present to allow certainty about the vessel type turn out to be jars (eg, Fig. 133, 1019–20). There is little change in shape from the vessels produced in LSW1, except that by the late 13th century (end of horizon MH5) the handles have become smaller, and more in proportion with the rest of the vessel. LSW2 jars and pipkins are thin-walled and finely thrown with ridged shoulders on most examples (eg, Fig. 133, 1012). Jars tend not to have intentional glaze, whereas pipkins have a slightly pitted apple-green to olive glaze or, very rarely, a bright copper-green glaze over the top third of the vessel, and incidental glaze is often found on the interior of the base. The horizontal pipkin handles are found both with a central groove (eg, Fig. 133, 1013) and with a central ridge (eg, Fig. 133, 1014). Occasionally handles are decorated with a thumb-stripe (eg, Fig. 133, 1018). Several types of external joining of the handles are found, including two upper and one lower thumb-pressing and two upper and two lower pressings. All of the handles

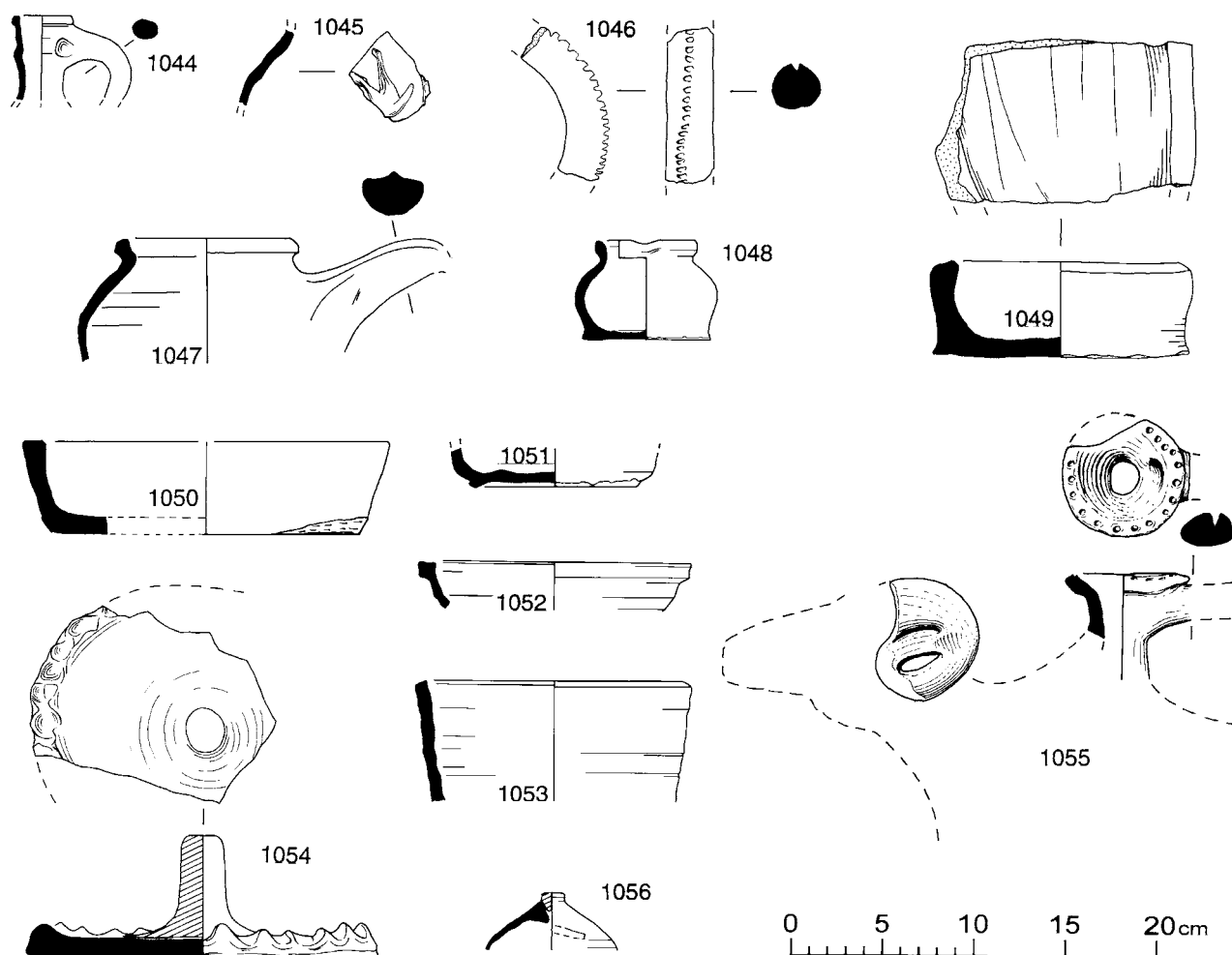


Fig 135 13th to 14th century Glazed Lincoln Ware: LSW2/3; narrow-necked jug 1044; jugs 1045–1046; pipkin 1047; miniature jar 1048; dripping dishes 1049–1050; bowls 1051–1054; lid 1054; aquamanile 1055; money-box 1056. Scale 1:4

have the wall of the vessel pushed c.10mm into the handle with the thumb. Vessel bases of both jars and pipkins are left untrimmed (eg, Fig. 133, 1020).

Glazed Jars (Fig. 133, 1021–2)

These vessels have not yet been specifically identified in the city as they can only be detected by the presence of a rim. The jars are basically an adaptation of the rounded jug form with a squared or clubbed rim. They have a bright copper-green, external glaze covering the top two-thirds of the vessel. No complete profiles have been found.

Miniature Lipped Jars (Fig. 135, 1048)

This is a very rare form and has so far only been found in late 13th- to mid 14th-century (horizon MH6) deposits. Vessels are oxidised, have an internal and external mottled copper-green glaze, and are always unsooted.

Bowls (Fig. 134, 1038–9 and Fig. 135, 1051–3)

Fewer than 20 bowls have been identified in either LSW2 or LSW2/3 fabrics and all are represented by only a small part of the vessel. Several types of bowl are found, including a large flared, probably deep type (eg, Fig. 134, 1038) that has a thick, internal olive glaze; a small straight-sided bowl (Fig. 135, 1053) that has a thick, internal copper-green glaze and is sooted externally, and small shallow dishes that have a thick, internal and external copper-green glaze (Fig. 135, 1051–2). An unusual occurrence is a small lipped bowl from Fiskerton Short Ferry (Fig. 134, 1039) that has an internal pocked amber glaze.

Dripping dishes (Fig. 133, 1023 and Fig. 135, 1049–50) Of the few vessels of this form identified as part of the LSW2 industry, all are of the small oval type. The walls appear to have been wheel thrown and then applied to hand-made bases that have been

formed on a sanded, or in one instance, possibly a cloth surface. The rim is pressed flat, probably with the fingers, and the base is left untrimmed. A thick, glossy, usually copper- or apple-green suspension glaze has been applied to the interior of the vessels. Only one of the vessels has traces of a handle. This appears to have been a straight vertical strap-handle applied at one end of the vessel. More than 40 examples of this form are recorded as LSW2/3. All are fragmentary and similar to the LSW2 examples, but are mainly from slightly larger vessels.

Lamps

1. SAUCER LAMP (FIG. 134, 1041–3)

These lamps have a shallow saucer set on a short, usually solid, pedestal which has been slightly hollowed out towards the base, and have a second saucer forming a drip tray just above the base. A small lip formed with the thumb is often found on the top saucer, although this is sometimes just a slight impression. The form is finely thrown and well finished except for the basal edge which is left untrimmed. The interior of both saucers and also usually the pedestal are well glazed with a thick copper-green glaze that has often pooled at one edge of the rim, indicating that the vessels were set on their sides to dry. These lamps are found throughout the production of LSW2 and form less than *c.*0.5% of all LSW2 forms found.

Curfews

Occasional flared curfews similar to those made in LSW1 are found in early to early/mid 13th-century deposits (horizon MH4). They are covered with a suspension glaze that does not include copper colourant, and may represent the final stage of production of this type.

Aquamaniles (Fig. 133, 1024 and Fig. 135, 1055)

Fragments of only one aquamanile in LSW2 have been found (Fig. 133, 1024), although a few others have been recorded as LSW2/3 (eg, Fig. 135, 1055). All probably represent rams. The vessels are well made with relatively thin walls, and are decorated on the body with scale decoration to represent the fleece. The vessels are glazed externally with a thick, lustrous, olive or copper-green glaze. The LSW2 example has a heavily-pocked olive glaze and is from an early 13th-century (early MH4 horizon) deposit.

Lids (Fig. 133, 1027–9 and Fig. 135, 1054)

Lids are not a common form in LSW2 and only about 20 vessels are known. Three types are found.

1. FLANGED LID

These are designed to be used with tubular spouted pitchers (eg, Fig. 133, 1027) or small jugs (eg, Fig.

133, 1027). The lids are formed with a long vertical collar intended to sit inside the neck of the jug and a ledge to sit on top of the rim. The collars of the lids are pierced with a small hole which, conceivably, was intended to be used with a thong to attach the lid to its companion vessel, but was more likely to have simply provided an air-hole, similar to those found on modern teapots. The lids have been wheel thrown and the collar afterwards trimmed to fit. A thick glossy olive or copper-green glaze is applied to the upper part of the lid, leaving the collar unglazed.

2. FLAT-TOPPED LID

This type of lid (eg, Fig. 133, 1029) is formed as a small shallow bowl or dish before being inverted and a knob or small loop handle added. The type was intended to be used with a vessel that had a lid-seated rim such as a jar or pipkin. LSW2 examples have a thick, usually copper-green glaze applied externally.

3. FLAT LID

These are made by forming a flat circle of clay on a sanded surface and adding a central stalk to form a handle (eg, Fig. 135, 1054). A roll of clay is added around the edge to form a rim, and this is often decorated with thumb and finger pressings forming a pie-crust edging. The exterior of the lid is mostly covered with a thick, lustrous, copper-green glaze.

Finials (Fig. 133, 1025a–25b)

Spinning-top type finials are quite often found in the LSW2 fabric. It is often difficult to identify them from small fragments as both the basic body shape and the glazing is similar to that of the money boxes (eg, Fig. 135, 1056) and of the small spouted jugs (eg, Fig. 134, 1031). They are covered all over with a thick, lustrous, amber or olive glaze.

Money-boxes (Fig. 135, 1056)

A single sherd from the top of a knobbed money-box has been identified amongst the Lincoln material. The vessel is hard-fired and covered with a thick, lustrous, reduced green glaze. The top of the form is surmounted by a small knob, *c.*2cm below which a small slot is cut diagonally into the body.

Miscellaneous

A large thumb-pressed handle (Fig. 133, 1030) comes from a very large jug, possibly a bunghole type. The handle has a thick white slip under a light copper-green glaze which may indicate that the vessel was highly decorated. The finely thrown, incised decorated pedestal base (Fig. 133, 1026) appears to be from a vessel intended for table use, possibly a drinking vessel or a salt. An unusual vessel from Short Ferry, Fiskerton, with an internal and external

copper-green glaze (Fig. 134, 1040) has been interpreted as a sweetmeat dish (White 1989). A variety of roof furniture was made in LSW2 (for details, see Kemp & Vince 1995).

Source

Seven sherds of LSW2 from Lincoln were examined in thin-section (L1316, L1835, L1836, L1837, L1838, L1839 and L1840). All contained a typical Trent Valley quartzose sand. A distinctive feature of four of the samples was the presence of abundant rounded, laminated clay pellets. These pellets evidently had an organic content and were often coloured black as a result of carbon deposition. This is perhaps due to the use of unweathered, shaly clay. There are variations in the amount of muscovite present and in the optical characteristics of the matrix. Both of these characteristics are likely to be the result of firing rather than source.

Wasters have been found on Anchor Street (Coppack 1980), and seconds on the Gaunt Street site (ON362), both in the Wigford suburb, to the west of the lower High Street. The Gibraltar Steps kiln in the Lower City was also producing vessels in this fabric (MGC00).

Dating

The earliest stratified LSW2 is found in early MH4 horizons (early 13th century) when it forms up to c.2% of assemblages. Groups dating to the very late 12th to early 13th century at the Bishops' Palace (LBP72: Chapman *et al.*, 1975, Group A) and the West Parade site (WP71: context I AT: Young 1999, 212) do not contain any LSW2. By c.1220–1230, however, deposits at the Lincoln Cathedral site of CAT86 (LUB3 and LUB4) contain c.51% of the ware. By the end of horizon MH4 in the early/mid 13th century, up to c.55% of pottery in a group is LSW2. LSW2 seems to be replaced by LSW3 as the major fineware by the mid 14th century at the beginning of horizon MH7, although the picture is not clear owing to the high amount of LSW2 found residually. The ware is found throughout the county in small numbers, with concentrations at only a small number of sites, including Short Ferry (Fiskerton), Stow, and North Ormsby Abbey. Outside the county the ware is mostly found as isolated examples, with only sites at Newark and Boston producing large enough samples to postulate long distance trade of the ware.

Medieval Crucibles (MCRUC)

Description

A small number of wheel-thrown vitrified and semi-vitrified crucibles have been found in the city. It is impossible to define vessel types precisely as only

small fragments have so far been recovered, although both hemispherical and cylindrical shapes are indicated. They occur throughout the medieval period, but are rarely found.

Source

No analysis of fabric has taken place.

Tile fabric (TILE) (Fig. 136)

Fabric and technology

This grouping covers vessels that are made in similar fabrics to the local tiles, and are, on the whole, hand formed. Surface texture ranges from smooth to sandy, with surface colours varying from orange to orange-brown and core colours from grey to dark grey. Fewer than half the vessels are glazed, generally with a olive-green to yellow suspension type glaze. The fabric contains common to abundant rounded quartz up to 1mm, sparse to moderate iron-rich grains, sparse chert and sparse to moderate, rounded clay pellets.

Forms

Dripping dishes (Fig. 136, 1058–61)

This is the second most common form found in Tile fabric. Dripping dishes in Tile fabric are extremely individualistic in style, with a wide range of types being produced over the c.300 years' currency of the form. Both small and large forms were produced, all by the slab method. Most are thick-walled, heavily trimmed, undecorated and only glazed internally. A few finer vessels are found including one with a bird's head mounted on the rim (Fig. 136, 1061). This vessel is glazed both internally and externally with a thick amber glaze, and is further ornamented by stabbing with a three-pronged implement.

Hemispherical Curfews (Fig. 136, 1062–4)

This is the most common identified form in Tile fabric. A few sherds may in fact be from Fish Smokers (White 1984, 29–35), but without a complete profile it is impossible to be sure, although the provenance of a few of the vessels found in the Wigford area of the city (ie, close to a water course) suggests that this is a possibility. Both large and small sized vessels are produced. They are slab-made, with the rim being knife-cut to provide a flat surface for the vessel to sit on. All examples are unglazed and are heavily knife-trimmed on the interior. The sides of the larger curfews are often strengthened with applied thumbed strips that run vertically down from the base to meet the (usually thumbed) rim. Curfews are first found in the late 12th century (MH3 horizon) and continue to be used until the late 15th century (horizon MH10).

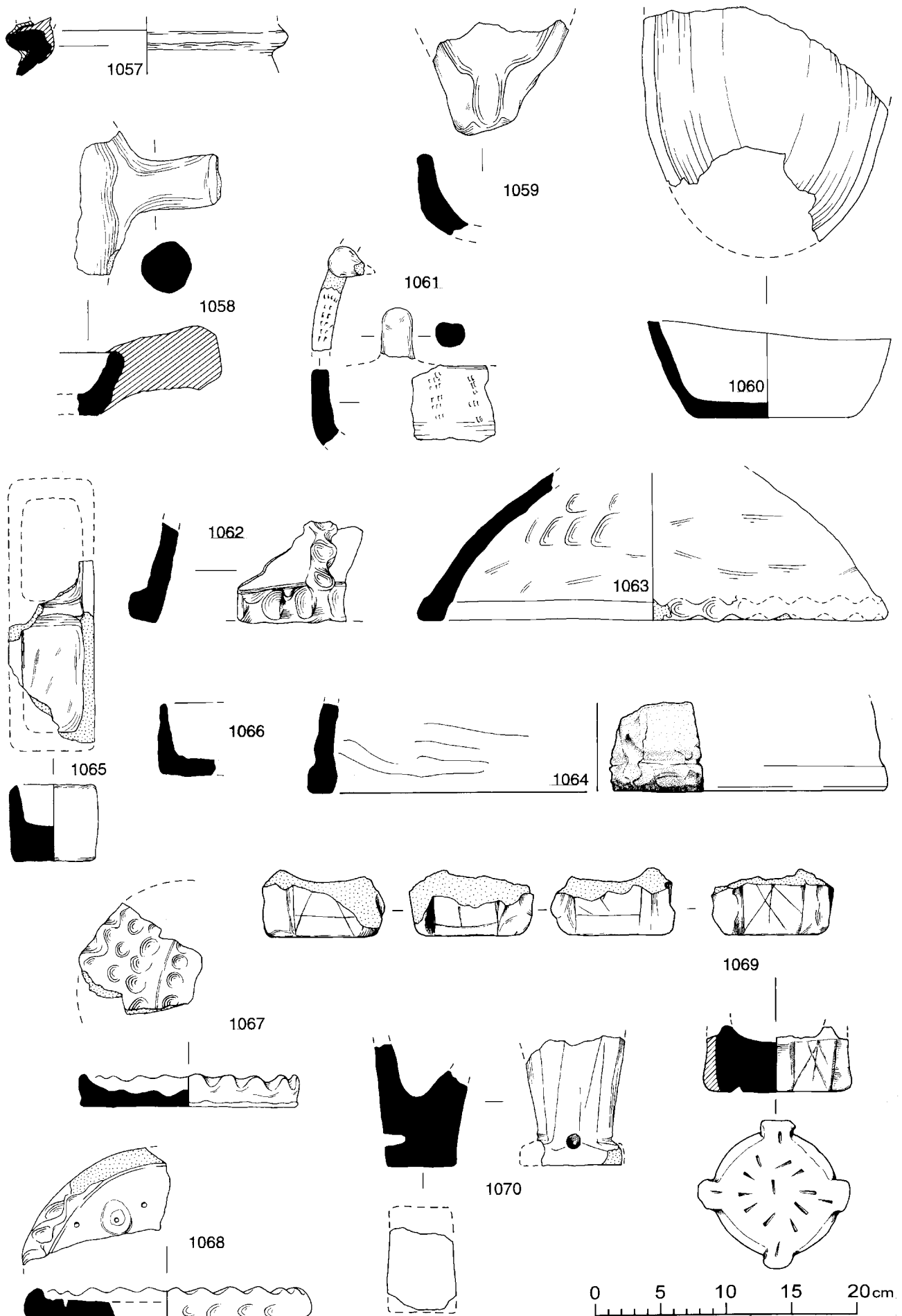


Fig 136 Tile fabric: industrial vessel 1057; dripping dishes 1058–1061; curfews 1062–1064; divided dishes 1065–1066; lids 1067–1068; mortar 1069; ? lamp/torch holder 1070. Scale 1:4

Lids (Fig. 136, 1067–8)

Only three lids are known in Tile fabric, all being flat circular discs with an external amber or reduced green glaze on the upper surface. Two of the lids are decorated: one entirely with pressed decoration and the other with pressed, applied, and stabbed decoration. Heavy sooting is present on the underside of two of these lids and the third has faint traces of soot around the edges.

Industrial Vessels (Fig. 136, 1057)

Three vessels, all probably jars, have been interpreted as industrial forms. One has a thick internal glaze, one a splashed-type external glaze, and the third is represented only by a rim, so it may also have been glazed on the body. All have thick walls and have been subjected to intense heat, causing the fabric to overfire and in one case split apart. The illustrated vessel has several layers of applied clay on the rim, indicating that another vessel was luted on top.

Mortar (Fig. 136, 1069)

A single, well-worn mortar from the Broadgate East site (BE73) was found incorporated into a post-medieval wall. Not enough of the vessel is present to be certain of the method of manufacture, although it seems probable that the basic bowl shape was formed on a turntable or wheel before the four side ribs were added and shaped with a knife. The thick base has been pierced a number of times to help in the firing process. A pocked, reduced green glaze covers the exterior of the vessel although this is almost worn away. Each of the four sides of the mortar is inscribed with a symbol or letter.

Divided Dishes (Fig. 136, 1065–6)

Fragments of two, crudely built, divided dishes have been found. Both are unglazed and partially sooted, indicating that they were intended for kitchen or industrial rather than table use.

Miscellaneous

An unusual, crudely formed, unglazed vessel in Tile fabric came from the Hungate site (H83) (Fig. 136, 1070). The vessel has a vertically trimmed and faceted conical stem, set on an oblong base. On one of the long sides of the base the stem is pierced by a small hole. As the vessel is heavily sooted on the external surface, one possible interpretation of the form is as a lamp, or torch-holder intended to be secured against a wall, possibly sitting on a ledge or shelf. Other forms found in Tile fabric include kiln props and sherds from a large bowl.

Source

A single sample of Tile fabric was examined in thin-

section (L1315). It contained an abundant quartzose sand temper, similar to that found in LSW2 but with some larger grains. Laminated clay pellets were also present. The most distinctive inclusions, however, were rounded fragments of iron-rich compound, some of which were up to 3.0mm across.

Dating

A total of 36 vessels have been found in the city, in deposits ranging from the late 12th to the late 15th century (horizons MH3 to MH10) in date. There is no apparent pattern to the occurrence of vessels in Tile fabric, and it is likely that vessels in this fabric were made and bought to fulfil a specific household or industrial need.

Medieval Local fabrics (MEDLOC)

Description

With the exception of one definable group (Fabric A), this group is an amalgamation of loosely associated fabrics whose inclusions fall into a range that is to be expected locally. Fabrics are tempered with subangular to rounded quartz or fossil shell. Very few of the fabrics are distinctive, and with the exception of Fabric group A, only one or two examples of each fabric type exist. There is a mixture of wheel-throwing and hand-forming for the construction of these miscellaneous vessels, and forms are either mainly jugs, jars, cooking pots or curfews. Glaze is common on the quartz-tempered vessels and is of the suspension type. Decoration is rare, consisting mostly of incised wavy lines.

Fabric A

Fabric and technology

Vessel surfaces have a slightly sandy texture and have visible fossil shell inclusions up to 2mm. The fabric is basically reduced to a dark grey colour, with both internal and external surfaces being oxidised to an orange-brown. The compact fabric contains common to abundant fossil bivalve shell up to 2mm, together with sparse rounded quartz up to 0.3mm, abundant subangular quartz to 0.3mm and sparse angular chert. Vessels appear to be formed on a slow wheel or turntable, and bases show signs of having sat on a sanded surface. There is little evidence of any attempt at giving the vessel a tidy finish, and the only decoration noted is of incised wavy lines on the shoulder of a few cooking pots.

Forms

Most vessels can be identified as large cooking pots with wide flat bases similar in profile to those made in LEMS. Amongst the material found in the city is a cooking pot from the Spring Hill/Michaelgate site (MCH84) with both pre- and post-firing holes. A few

bowls are known, including one from the West Parade site (WP71) used as a curfew.

Source

A single example of a standard Medieval Local Fabric A sherd from Lincoln was examined in thin-section (L1825). The vessel contained an abundant quartzose sand (quartz and sparse chert) as well as abundant shelly limestone fragments. The latter are similar to those found in Lincoln-area products. A second sample of a visually unusual example (L1298), was also thin-sectioned and had an almost identical composition, except that the walls of the shells in the shelly limestone were thinner.

Dating

Medieval Local fabrics are found throughout the medieval period at Lincoln. Fabric A belongs to the period covered by horizon MH4 (the early to early/mid 13th century). The various fabrics are found on sites throughout the county, although no production centres have yet been identified.

Potterhanworth-type ware (POTT) (Figs. 137–42)

Fabric and technology

Sherds have a rough to slightly sandy surface texture and are fairly hard fired, with a tendency to feel brittle. Almost all sherds have a reduced dark grey core, and surface colours that range from buff through orange to a light orange or red-brown. The fabric is tempered with common to abundant fossil bivalve shell up to 2mm, moderate rounded quartz up to 0.4mm, sparse iron-rich grains, sparse rounded siltstone or sandstone up to 0.3mm and sparse rounded chert. Vessels are thought to have been built up on a turntable using thick coils of clay (Healey 1975). Bases are formed on a heavily sanded surface and little trimming or finishing takes place after the initial construction of the vessel. Rims show clear evidence of having been formed while the vessel is being rotated at speed, probably with a simple template. Decoration is uncommon and includes incised or combed wavy lines, incised dashed lines, thumbing to rim edges, or very occasionally oblong roller-stamping. Only two vessels have traces of glaze, perhaps indicating that this shell-tempered ware was produced alongside glazed finewares, at least at some stage.

Forms

Less than 10% of sherds from the city can be identified as coming from forms other than the basic cooking pot.

Cooking Pots (Fig. 137–9)

The wide-based, high-shouldered, cooking pots

show little development in basic shape over c.300 years of production. A range of sizes from small (c.14cm high) to large (c.30cm high) is produced throughout the currency of the ware, although small cooking pots are more common from the mid 13th to the mid 14th centuries (horizons MH5 and MH6) (eg, Fig. 138, 1082–6). Before the late 14th century (horizon MH8), a wide variety of everted rim shapes is found (Fig. 137, 1071–8 and Fig. 138, 1079–88). After this date, a slightly more upright everted shape develops (eg, Fig. 138, 1089 and Fig. 139, 1090–2), which can be used for dating the vessels. Decoration on the cooking pots is rare and includes incised wavy lines (eg, Fig. 138, 1081 and Fig. 140, 1092), stabbing (Fig. 138, 1087) and rectangular roller-stamping (Fig. 138, 1088).

These vessels would have primarily been used for cooking as they are almost always heavily sooted, although the evidence suggests that they must also have fulfilled other functions. Several vessels have a thick white internal deposit, which can be associated with external sooting on some vessels and with no sooting on others. Other vessels have a red deposit, possibly madder, on the internal surfaces. A few bases show traces of heavy internal burning, indicating that the vessels may have been used to carry or contain burning embers. A number of vessels have pre-fired and or post-fired holes (eg, Fig. 138, 1085 and Fig. 140, 1092), suggesting that they have probably been used for industrial purposes. One heavily sooted large vessel (Fig. 138, 1081) was found set into the ground, and so may have had secondary use as a container. The discovery of a large number of Potterhanworth ware cooking pots at the St Mark's kiln site (ZE87), associated with LLSW waster deposits, might indicate that they were more suited than the sand-tempered pottery (in production there) to some specific use associated with pottery production.

Lipped Jars (Fig. 139, 1093)

This form is occasionally found in Potterhanworth ware and vessels are much larger than contemporary versions in sand-tempered wares such as LSWA.

Industrial Vessels (Fig. 140)

A number of probable industrial bases have been identified in the city (Healey 1988, 85–7). The vessels vary in size and all but one have a flange at or just below the rim to take an upper vessel or a lid. A more recent find from the St Mark's Station site (ZEB95) may be an alembic.

Bowls and Dishes (Fig. 141)

Although this is the second most common form to occur in Potterhanworth ware, bowls only occur sporadically in assemblages. All known vessels are

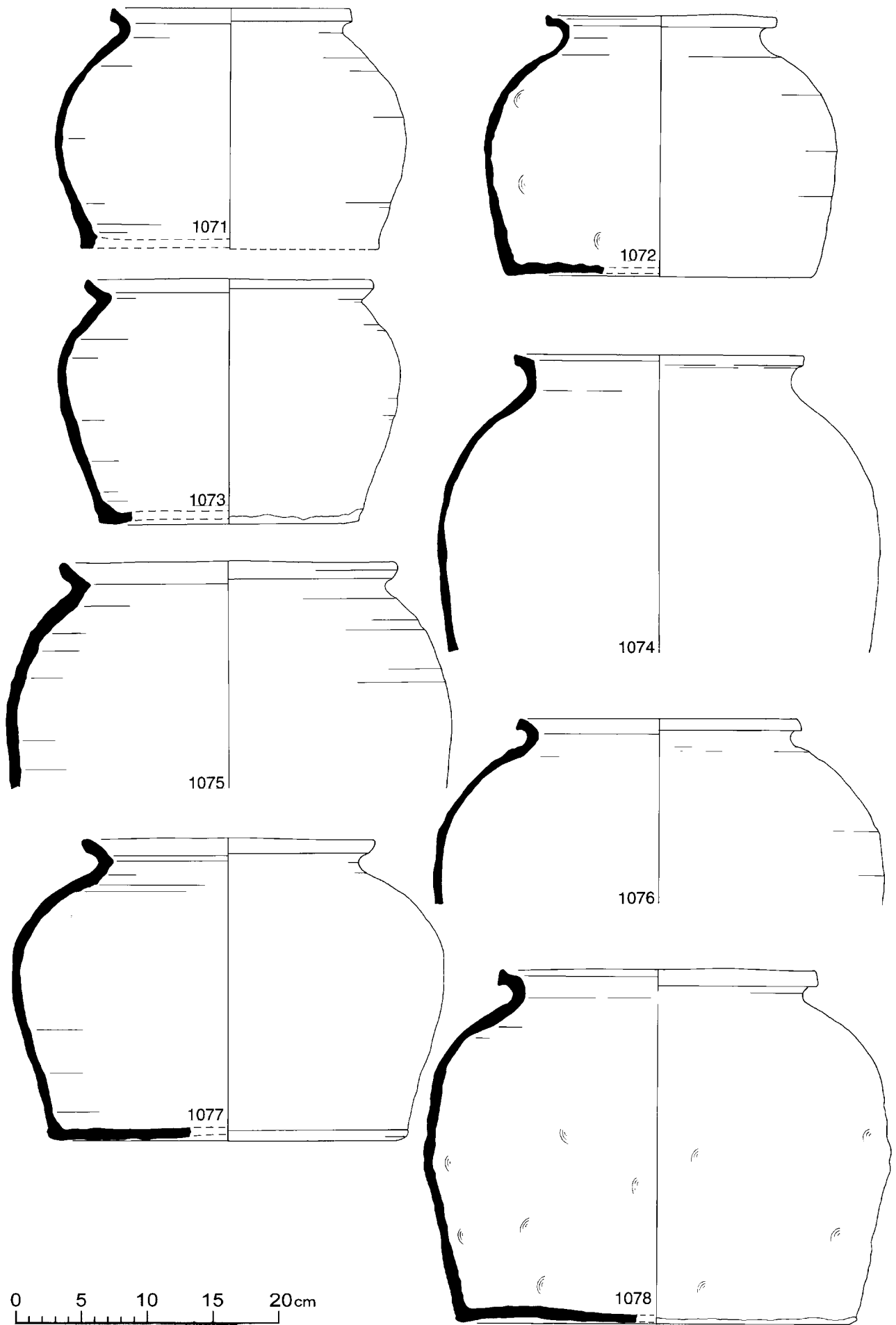


Fig 137 Potterhanworth-type Ware: early cooking pots 1071–1078. Scale 1:4

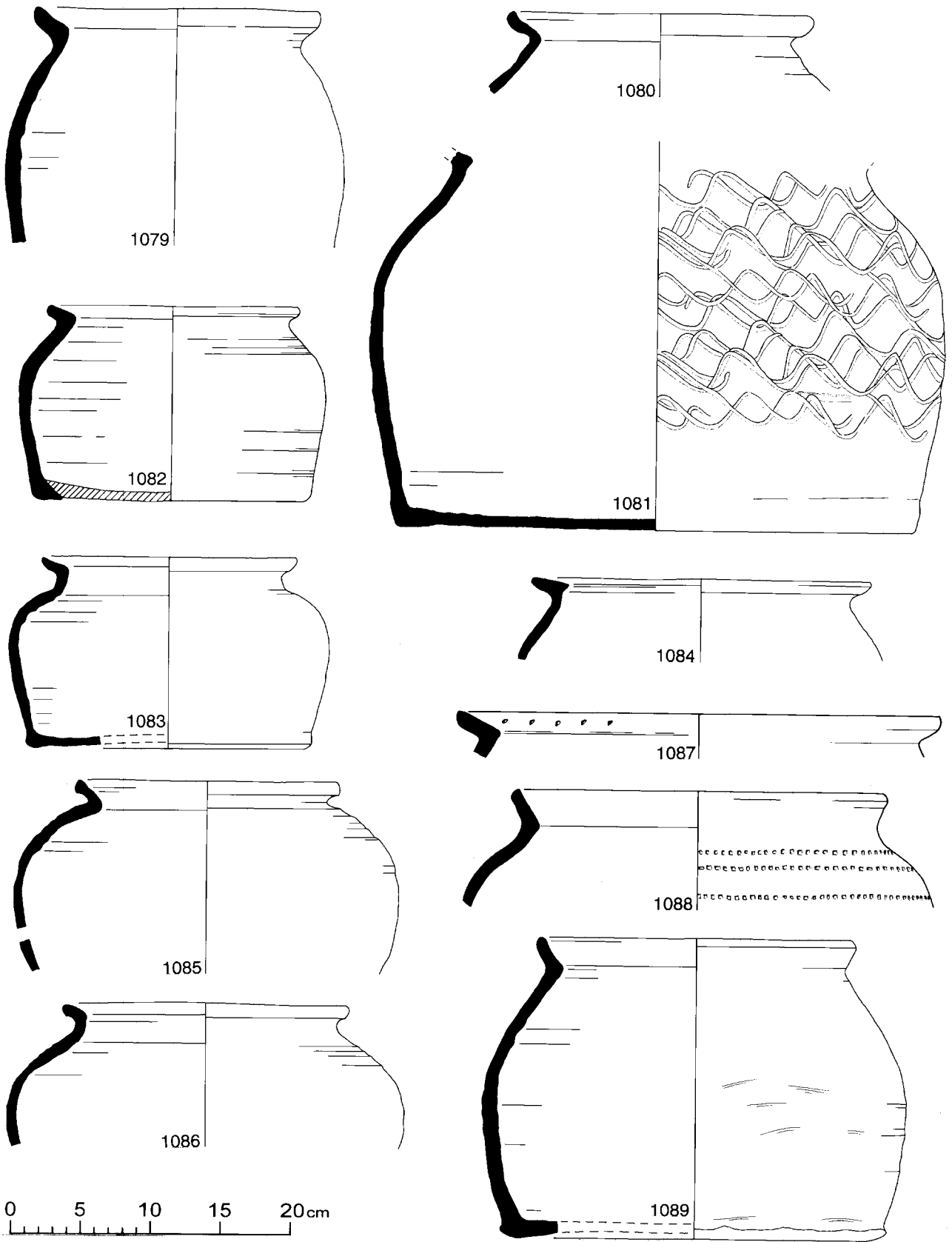


Fig 138 Potterhanworth-type Ware: 14th and 15th century cooking pots 1079–1089. Scale 1:4

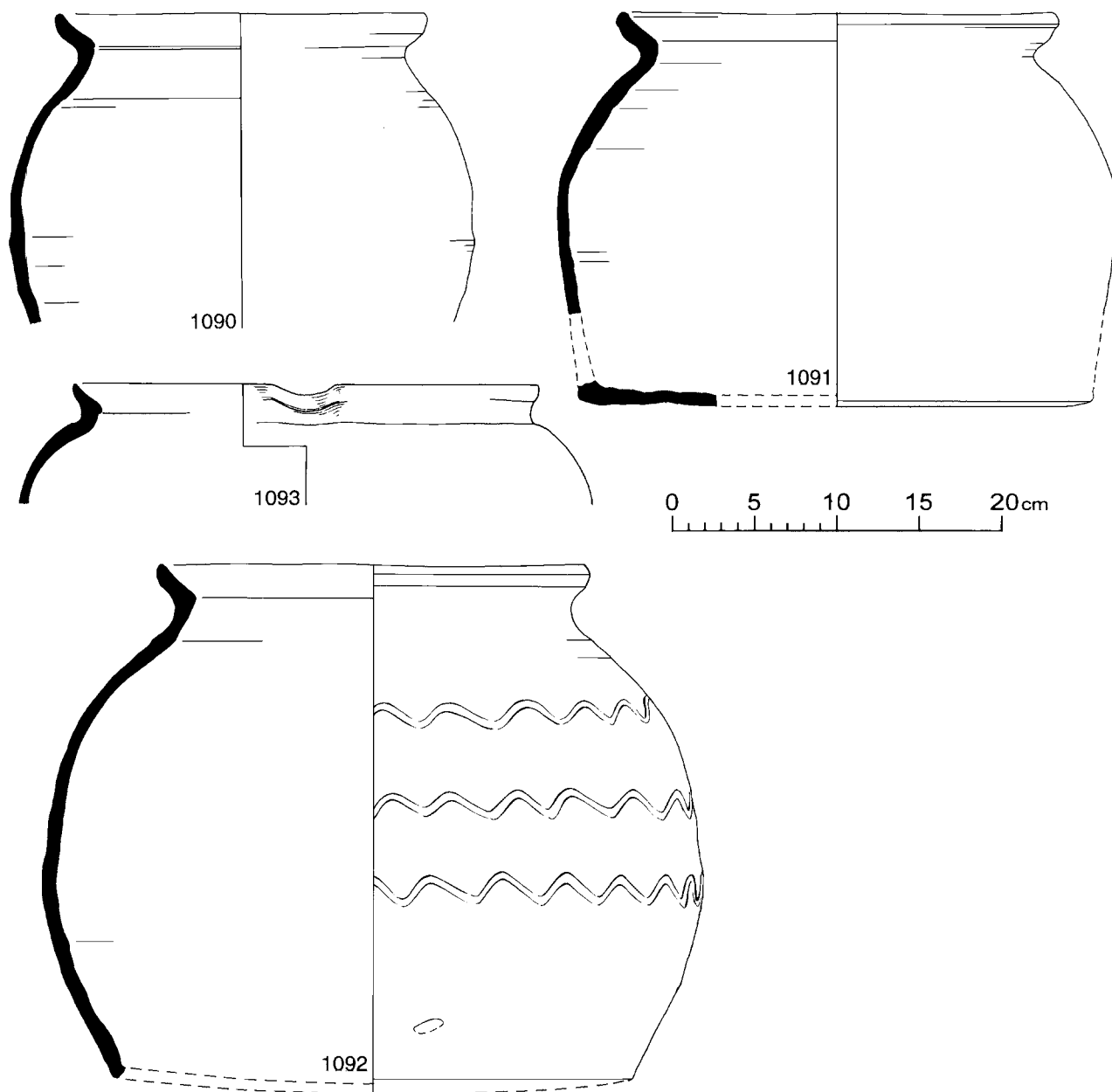


Fig 139 Potterhanworth-type Ware: late cooking pots 1090–1092; lipped jar 1093. Scale 1:4

above c.30cm diameter with both straight-sided (eg, Fig. 141, 1101) and flared (eg, Fig. 141, 1099–1100) examples occurring. Rim shapes are extremely varied and no pattern has been found to enable them to be used for dating purposes. Decoration is not common, consisting mainly of incised wavy lines on the interior of the rim. About 50% of vessels are sooted, suggesting that they were used either for cooking, or, considering their shape, more probably in the dairy. Sooting is also occasionally found internally, indicating that some bowls may have been used as curfews. Both white

internal deposits and red staining, possibly from madder, are found on a few bowls.

Dripping Dishes (Fig. 142, 1106–9)
Several fragments of these slab-made, oval-shaped vessels have been found in the city, almost all occurring in the mid to late 15th century (horizon MH10). The top of the rim on several vessels has been finger-pressed, a trait which is not common on other vessels in this ware type. One straight, vertical strap-handle is definitely from this form, while other

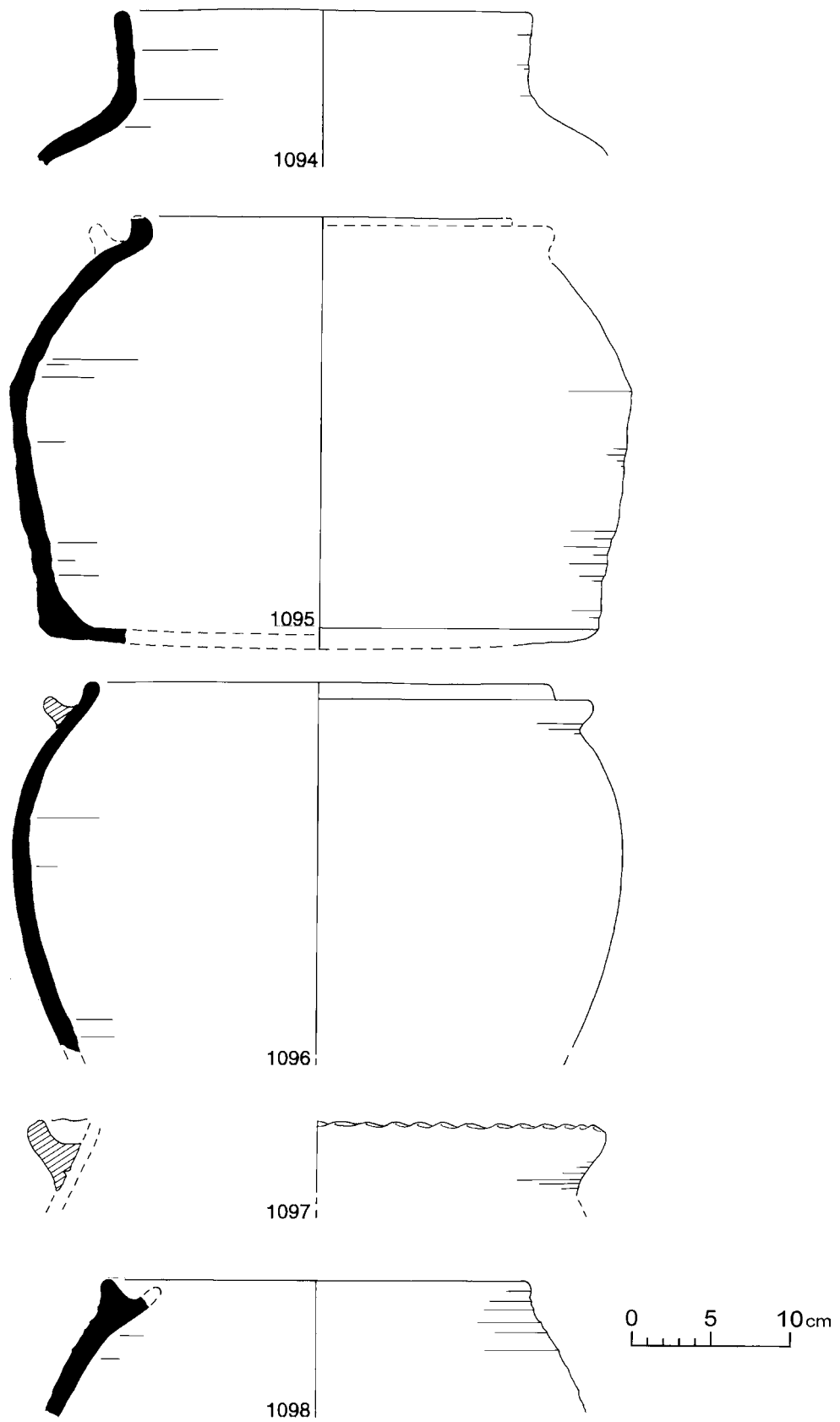


Fig 140 Potterhanworth-type Ware: industrial bases 1094–1098. Scale 1:4

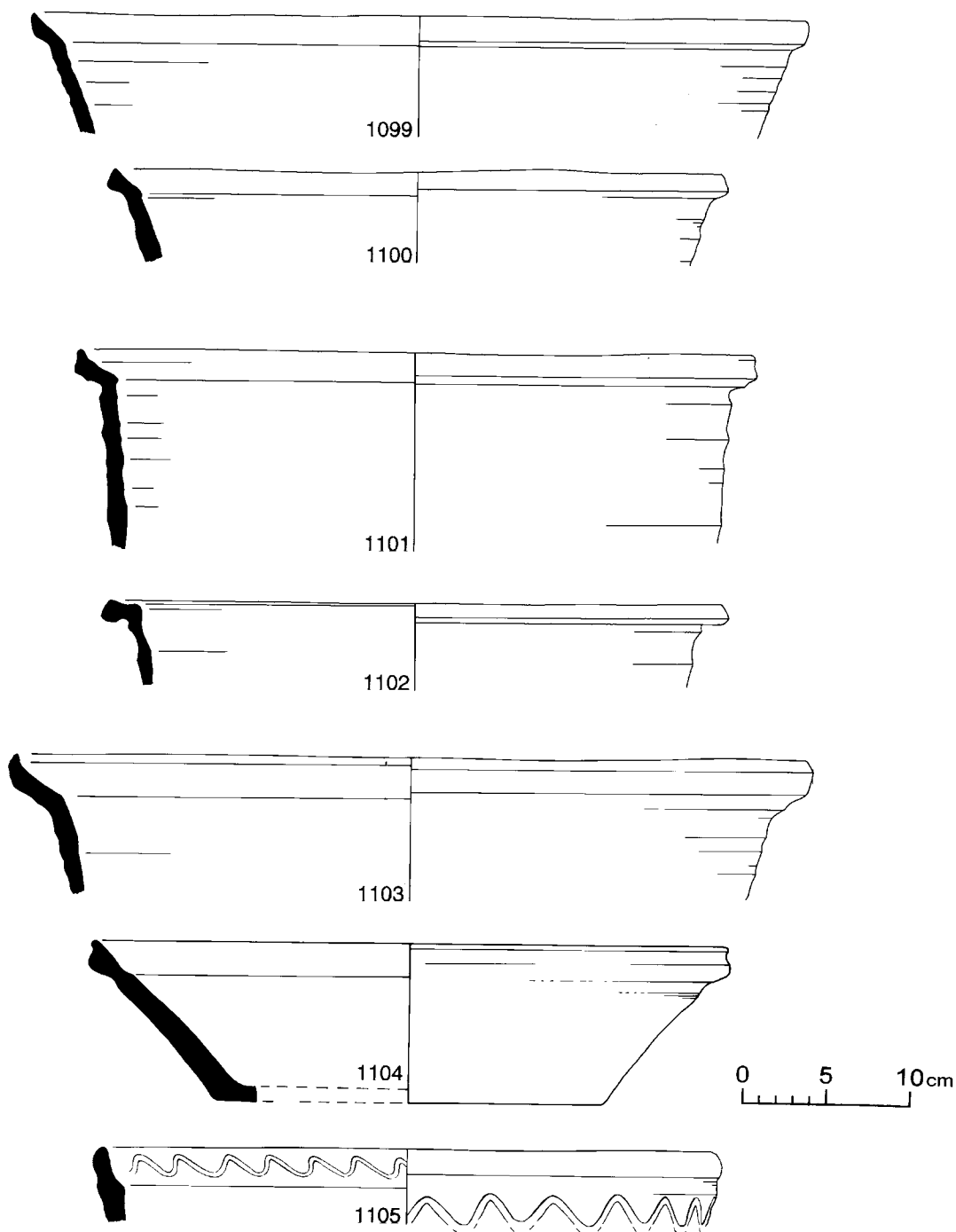


Fig 141 Potterhanworth-type Ware:bowls and dishes 1099–1105. Scale 1:4

unattached side handles that have been found are also likely to be from dripping dishes.

Skillets or Pipkins (Fig. 142, 1110 and 1117)

A few sherds, including the illustrated straight handle (Fig. 142, 1110) and the hollow applied foot (Fig. 142, 1117), suggest that at least one of these forms was made in Potterhanworth ware.

Curfews (Fig. 142, 1111–4)

A small number of what appear to be purpose-designed curfews are found in Potterhanworth ware. All have a heavily sooted deposit on the internal surface. As no complete profile has been found, it is not possible to be certain if the form had a flat or a domed base. An unusual, sooted strap-handle (Fig. 142, 1111) is probably from this form.

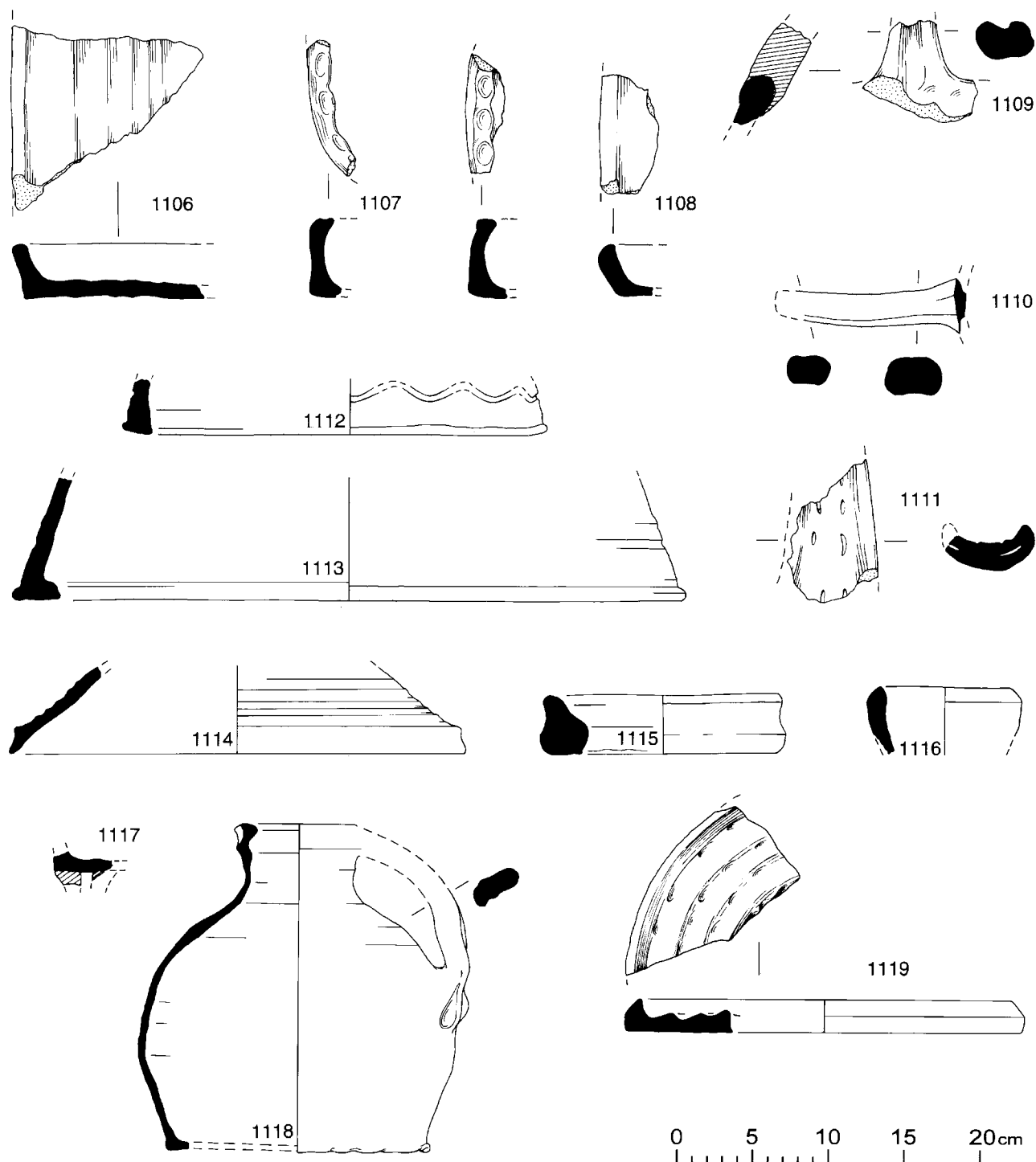


Fig 142 Potterhanworth-type Ware: dripping dishes 1106–1109; pipkins or skillets 1110 and 1117; curfews 1111–1113; lid 1114; stand 1115, lamp 1116; jug 1118; possible chicken feeder 1119. Scale 1:4

Jugs (Fig. 142, 1118)

Sherds from two vessels of this form have been found in the city despite the impracticality of the fabric for liquid containment. The earlier of the two vessels (Fig. 142, 1118) is from a horizon MH4 group and has the inturned rim characteristic of later 12th-

century or early 13th-century jugs in the Lincoln area.

Lamps (Fig. 142, 1116)

This is a rare form with only one firm attribution from material within the city.

Stands (Fig. 142, 1115)

Part of a ring stand was recovered from the Broadgate East site (BE73). The vessel shows only very slight signs of sooting, which may be post-depositional. It is possible that the form was used as a sort of collar, similar to that used for supporting cloth over a narrow-necked container while straining curd cheese.

Miscellaneous (Fig. 142, 1119)

A large fragment of what can possibly be interpreted as a chicken feeder is among several unusual, unidentified forms to be found in this fabric.

Source

Twelve samples of Potterhanworth ware were examined in thin-section (L625, L626, L627, L628, L629, L630, L1826, L1827, L1828, L1847, L1848 and L1849). Four (L627 to L630) were from a production site at Potterhanworth, found by Hilary Healey (1974, 30 and 33), with the remaining eight from Lincoln. The main characteristic of the twelve samples in thin-section is abundant bivalve non-ferroan calcite shell fragments with ferroan calcite matrix. These shell fragments, which range up to 2.0mm in length, are indistinguishable from those found in LKT, LSH and several other local shell-tempered wares. They are clearly derived from a shelly limestone and there is some evidence for the weathering of the shell fragments. This would suggest that a shell sand was used to temper the pottery. However, no such shell sand has yet been noted in the Lincoln area, despite attempts to locate it. Given the location of Potterhanworth, it is likely that the shelly limestone which forms the ultimate source of the inclusions, outcrops on the dip slope of the Jurassic ridge.

The samples vary in their quartz sand content. Some had none at all but most had moderate quartzose sand (quartz with minor chert and sandstone). A distinctive feature of seven of the samples, including both Lincoln and Potterhanworth examples, was the presence of silt-sized altered glauconite fragments in the clay matrix.

Dating

More than 4000 sherds of Potterhanworth ware have been recovered from excavations in the city. The ware first appears sporadically in MH4 horizons (early to early/mid 13th century), and by the mid 13th century in horizon MH5 forms between c.8% and c.16% of pottery groups. Potterhanworth ware remains in use until at least the end of horizon MH10 in the late 15th century, when it still forms up to c.8% of assemblages.

Non-local Medieval fabrics (MEDX) (Fig. 143)**Fabric and technology**

This is a loose grouping of fabrics from unidentified sources that do not appear to be of local manufacture. The temper of these miscellaneous fabrics mainly includes rounded to angular quartz, together with other materials including sandstone, shell, calcite, iron-rich grains, muscovite, clay pellets and chert. Quite a number of vessels have a white or light-grey body, made with material derived from Coal Measure clays. The remaining vessels are mainly reduced (grey to dark grey) or oxidised (pink to red-brown) sandy fabrics. Almost all of the vessels are wheel-thrown, although a few are hand-formed. Jugs are mainly glazed with a suspension-type glaze, except for a few examples that are unglazed.

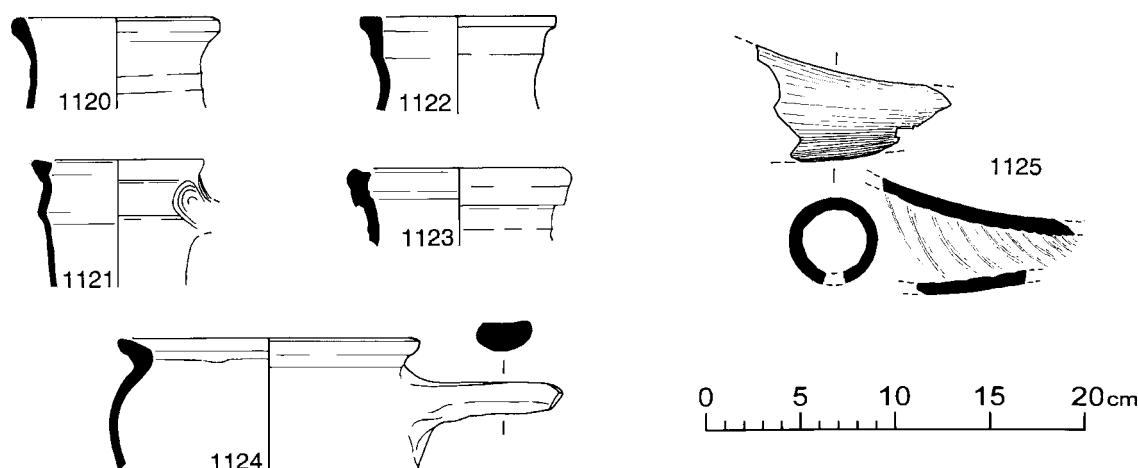


Fig 143 Non Local Medieval Fabrics. Scale 1:4

Jars and cooking pots are on the whole unglazed. Decoration is rare and consists of incised lines, notched or thumbled strip, and iron-stained applied spots or scales.

Forms

Almost all vessels are jugs (eg, Fig. 143, 1120–3) with a few jars and pipkins (eg, Fig. 143, 1124) also occurring. Single examples of a dripping dish, lamp and horn (Fig. 143, 1125) occur. The horn is in a semi-vitrified, part-burnished fabric, unglazed except for a few incidental spots.

Source

Three samples of Non-local Medieval fabrics from Lincoln were examined in thin-section. Two of these samples (L1128 and L1150) actually contain inclusions of coal or shale with a high carbon content and as such are quite distinctive. Both belong to the white-firing variety and were probably manufactured using Coal Measure clays. The third (L1142) does not contain these inclusions.

Dating

About 500 sherds of Non-local Medieval fabrics have been found on more than 50 sites in the city. If there is a concentration, then it is probably in the Lower City, although it is difficult to be certain because of the higher amount of medieval material recovered. No ceramic horizon stands out as having a higher frequency of non-local wares.

Bourne-type ware – Fabrics A, B, and C (BOUA)

Fabric and technology

These fabrics were first defined by Healey (1969) in respect of the medieval material recovered from kiln site(s) at Bourne, Lincolnshire (Kerr 1973, Hurley and Zeffert 1992, 46). As their occurrence in the city is rare, and as there is a wide range within each fabric type that in effect blends from one into another, they have been grouped together under a single code-name. Vessels have a sandy surface texture and range from soft- to hard-fired. Sherds are usually reduced to a grey to dark grey colour, with surfaces varying from reduced greys to oxidised orange and red-browns. The fabric contains common to abundant rounded quartz that is mainly up to 0.4mm, sparse to abundant rounded micrite up to 0.4mm, sparse to moderate fossil shell up to 0.8mm, sparse rounded granitic rock fragments up to 0.4mm, sparse siltstone and sparse rounded chert. Most vessels are wheel-thrown, although some do appear to be partially hand-formed. Glaze is variable with a splashed-type found on some earlier vessels, although usually a green suspension-type is found on most jugs, bowls and some jars.

Forms

Only jugs and single examples of a jar and a bowl have been found in the city. One of the jugs is decorated with applied iron-rich clay strips and another has pressed or faceted decoration.

Source

A single sample of a Bourne-type Fabric from Lincoln was examined in thin-section (L1312). In addition to an abundant quartzose sand, sparse calcareous inclusions were present. Some of these were fine-grained limestone (micrite), others were definitely bivalve shell derived from a shelly limestone, and others were thin-walled bivalve shell whose derivation is uncertain. The quartzose sand includes not only quartz, chert and siltstone but also rounded granitic rock fragments. Two potential sources for this ware are known, at Bourne and Baston (Young 1996d), but neither has yet been petrologically characterised.

Dating

Only twelve vessels have been recovered from excavations in the city. Those that are stratified are found in deposits ranging in date from horizon MH3 to MH6 (the late 12th to mid 14th centuries). The ware-type is one of the three major medieval glazed ware traditions produced in the county, and south of Sleaford it often constitutes the most common type of pottery found on sites dating to the 13th and 14th centuries.

Brandsby-type ware (BRANS) (Fig. 144)

Description

This ware type, originating in the North Riding of Yorkshire, has been described by Jennings (1992, 24–6) and Brooks (1987, 153–4). The few recorded vessels from Lincoln were kindly identified by Sarah Jennings, although other examples may exist within the material classified generally as MEDX. All of the vessels from the city are jugs, with one being quite small, possibly a drinking jug. The seal jug from the Broadgate East site (BE73), (Fig. 144, 1126) is quite crudely made with a simple seal, and is fluted around the lower body.

Source

No petrological analysis has taken place on the material from Lincoln.

Dating

Five vessels have been identified as Brandsby-type ware; the earliest is stratified in a deposit dating to between the late 13th and the mid 14th century (horizon MH5 or MH6), and the other three stratified vessels occur in late 14th- to early 15th-century (horizon MH8) deposits.

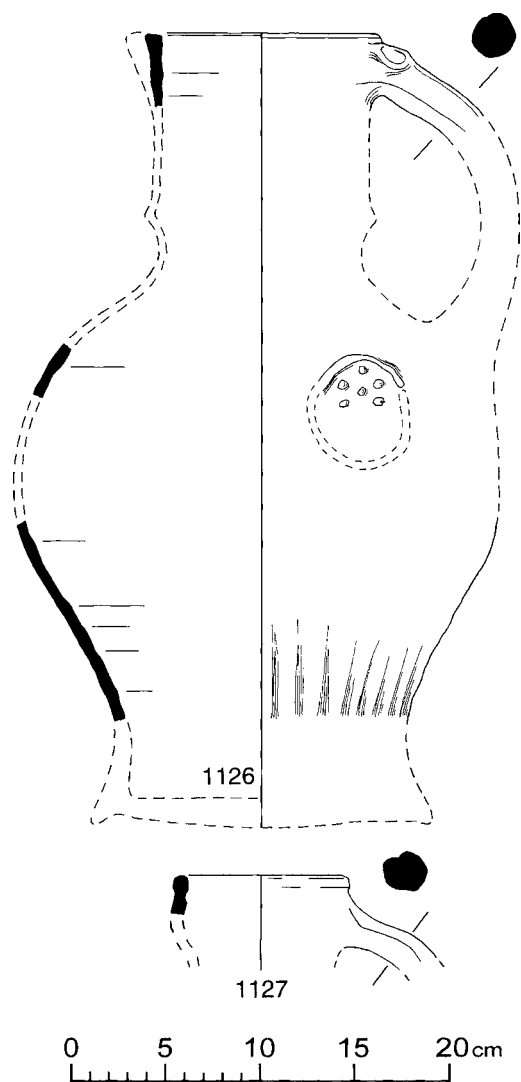


Fig 144 Brandsby-type Ware. Scale 1:4

Humber Basin fabrics (HUMB)

Description

This grouping is very rare within the city, but occurrences increase northwards on rural sites. Fabrics are similar to Humber ware but on the whole have a much coarser texture (Hayfield 1985, 18). The three vessels found in the city, two jugs and a jar, were found together in the same deposit dating to the early 16th century (horizon PMH1), although these fabrics are found dating from the 12th century onwards on rural sites in the county.

Kingston-type ware (KING)

Description

A single sherd from a decorated jug in Kingston-type ware has been identified from the Flaxengate

site (F72). The sherd has a hard pinkish-orange fabric with a yellow glaze that has been coloured bright green with copper over the applied strip decoration. This vessel occurs residually in a late medieval deposit. Kingston-type ware (Hinton 1980, 377–83; Orton 1982b) is tempered with a quartzose sand which includes grains from a variety of sources, including iron-coated, rounded quartz grains, flint, and glauconite. The Lincoln sherd has not been thin-sectioned, however, and there is no scientific confirmation of its source.

Nottingham Glazed ware (NOTG) (Fig. 145) by V Nailor

Fabric and technology

Several groupings have been identified as belonging to the Nottingham glazed ware tradition. Two main types occur at Lincoln, both belonging to the earlier production period at Nottingham. This ware is characterised primarily by fabric and glaze, with a typology of forms, rims, bases, handles and decorative techniques stored as part of the archive at Nottingham Brewhouse Yard Museum.

Early Green Glazed ware

This is a fairly hard (but sometimes softer) fired fabric tempered with common amounts of medium sand, sparse iron, dull white inclusions, and occasional sandstone and quartzite. The fabric is oxidised to a pale cream or pink.

Light-bodied Green Glazed ware

This is a hard/very hard fabric tempered with moderate amounts of medium quartz, sparse iron and dull white inclusions. The fabric appears 'greasy' under the microscope. It fires to a white or off-white, with either cream, pink, or orange surfaces and a pale grey or grey internal margin and surface. The vessels are often thin-walled.

The manufacture of almost all vessels in all fabrics is by wheel-throwing, with most vessels being well-centred and having thin walls, suggesting that they were probably thrown on a fast wheel.

The Light-bodied ware is consistently associated with uniform, well-thrown vessels in specific shapes. This fabric is fired to a higher temperature than the Early Green Glazed ware.

The glaze is predominantly a copper-rich green, occurring as either mottled green, or simply as orange or yellow on the Early Green Glazed ware, but as a fairly thin, glossy green with an uneven density ranging from light to dark green, sometimes mottled on the Light Bodied ware. On the Early Green Glazed ware, the glaze tends to be thick and does not always mature in the kiln.

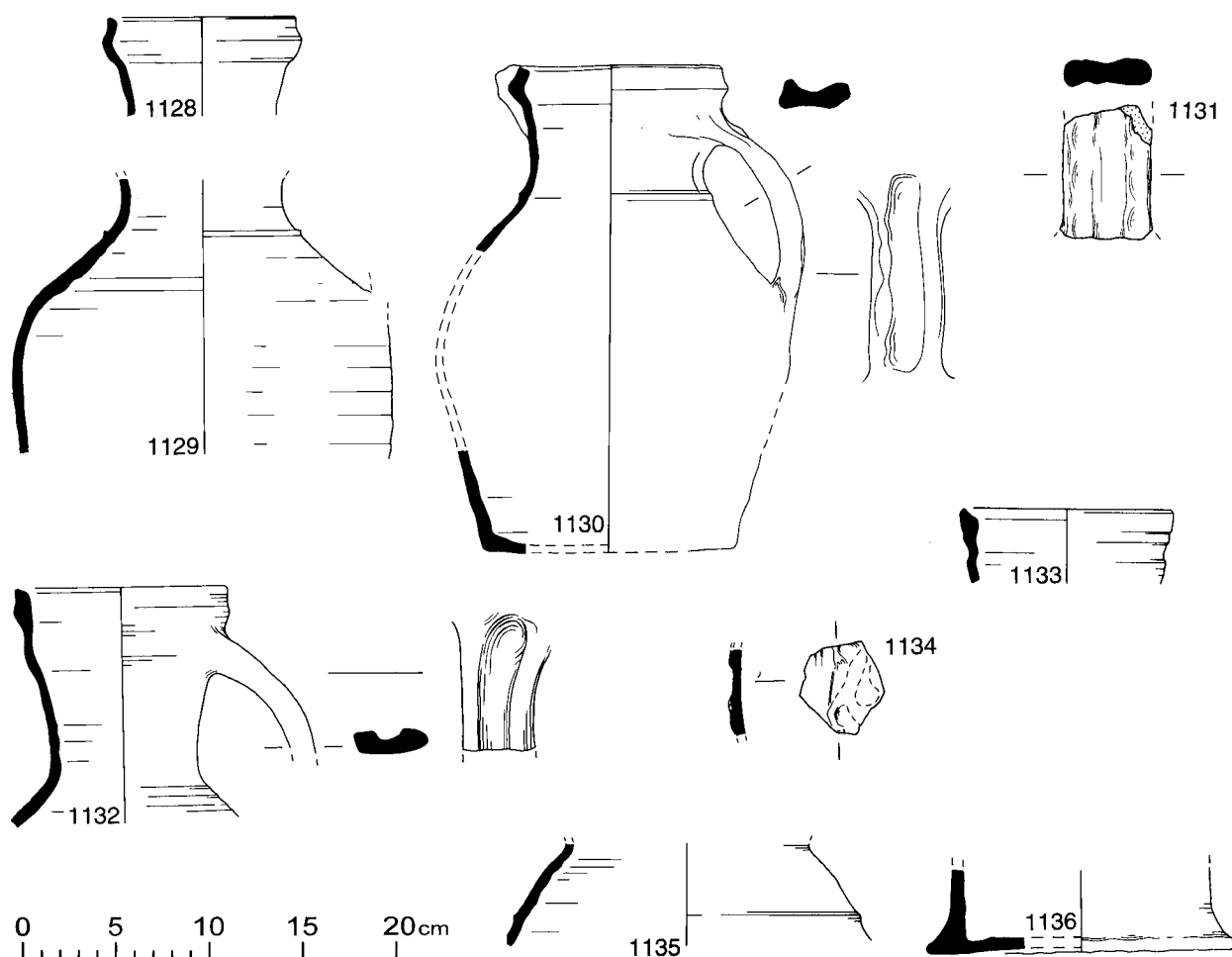


Fig 145 Nottingham glazed ware. Scale 1:4

Decoration on the earlier jugs appears more individualistic. There are a few known examples of face/beard jugs: Fig. 145, 1134 may be from part of one. Other applied decorative motifs occur. Techniques include the use of iron oxide strips. The Early Green Glazed ware is more decoratively varied, and this may also apply to earlier examples of the Light Bodied ware. This variety is replaced by great consistency in the use of standardised, and quickly produced, simple cordons (eg, Fig. 145, 1129), or decorative rilling on the main pot body.

Vessel types

Jugs are the dominant form in this ware, the earliest being rounded shapes (eg, Fig. 145, 1130) with inturned rims, simple strap-handles, and sometimes applied and/or oxide decoration. Development of jugs includes the introduction of taller shapes

including balusters with triangular-shaped rims (eg, Fig. 145, 1132) and splayed bases (eg, Fig. 145, 1138). Differently sized, wider-bodied vessels were also produced. There are two distinct rim types, an early inturned one (eg, Fig. 145, 1128 and 1130) continuing the tradition of splashed ware, and a ubiquitous triangular shaped rim (eg, Fig. 145, 1133), which with minor variation continues in use throughout the production period. A few rims betray elements of both types. Handles are usually simple strap types, although a few early ones have evidence for thumbing, a technique more common on splashed ware examples (eg, Fig. 145, 131).

Source

Two samples of Nottingham Glazed ware were examined in thin-section (L2218, L2219). They share an identical clay matrix, a low iron clay with very

few inclusions, probably derived from the Coal Measures – although it is noteworthy that no relict clay pellets were noted: these are normally a characteristic of Coal Measure white-firing clays. The sand tempering of the samples differs in detail, in both size range and composition, but more analysis is required to determine whether or not there are meaningful differences in temper within Nottingham Glazed ware.

Nottingham Glazed ware fabrics and forms can be identified with the considerable quantity of waster and other material in the Nottingham Castle Museum collections. Much of this material was found during the late 19th-century excavation of the Great Central Railway, the area of the present-day Victoria Shopping Centre. Records indicate five kilns in the area of Clinton Street, and a deposit of waster material adjacent to the town ditch (Parker, 1932). Early 19th-century records suggest the discovery of other tile and pottery kilns, and in the 20th century a further kiln was excavated at Newmarket Hotel in Broad Street (*op. cit.*). Material dating to the later period of the Nottingham green-glazed industry was excavated in George Street in 1993 by Wessex Archaeology.

Dating and frequency

There is very little Nottingham green glazed pottery from Lincoln (235 sherds), and that which occurs is dominated by a few early jugs. It first occurs in Ceramic Horizon MH4 (early to early/mid 13th century) as less than 1%; in MH5 (early/mid to late 13th century) it is 2%, but by MH6 (late 13th to mid 14th century), it is only 0.2%.

In Nottingham, Early Green Glazed ware is known to occur stratified within some late NSP groups and is the earliest of the medieval green glazed wares utilising light firing clays to be used in the city. Light Bodied Green Glazed ware subsequently becomes the dominant type by the mid 13th century. It has always been considered that the earliest production of Nottingham green glazed ware began towards the middle of the 13th century, however the occurrence of early examples of Nottingham Glazed ware in horizon MH4 deposits, dating to between the early and early/mid 13th century may indicate that the origins of the Nottingham Glazed ware industry date slightly earlier than previously believed. The presence of a higher number of sherds in horizon MH5 confirms the suggested flourishing of the Nottingham Glazed ware industry in the middle and second half of the 13th century.

Stanion/Lyveden-type ware (STANLY)

Description

These vessels have a hard fabric and a slightly sandy surface texture. The fabric colour is dark grey with

orange unglazed surfaces and a dull green glaze. Inclusions are abundant rounded quartz up 0.8mm, moderate rounded iron-rich grains, moderate micrite pellets that may have leached out leaving small rounded voids, sparse angular flint and sparse angular sandstone. Vessels are both hand- and wheel-formed. Only one sherd from Lincoln is decorated, with applied vertical white clay strips. All the vessels found in Lincoln are jugs. The single rim is slightly inturned with a corrugated neck and a long pulled lip.

Source

A single sherd of Stanion/Lyveden-type ware from Lincoln was examined in thin-section (L1295). The fabric was tempered with a sand composed of quartz, rounded opaque inclusions and micrite pellets (often identified as ooliths in hand specimens). Some of these pellets were encased in a calcite matrix, demonstrating that they are derived from a peloidal limestone. Kilns producing Stanion/Lyveden-type wares have been excavated at several places in Northamptonshire including both Stanion and Lyveden (Steane and Bryant 1975, 60–95; Bellamy 1983, 153–61), but no comparative samples have been examined.

Dating

Only six vessels have been found at sites in the city, although this ware type is common in the very south of the county including Stamford Castle (Miles forthcoming). Apart from one sherd from a 13th-century deposit at the St. Mark's Station site (Z86), all of the vessels occur residually.

Toynton Medieval ware (TOY) (Fig. 146)

Fabric and technology

This is a hard-fired, wheel-thrown sandy ware (Healey 1975) with a reduced grey to dark grey fabric and buff to orange surfaces. A cream to buff surface skin or slip is commonly found on external unglazed areas of both Toynton Medieval ware and the later Late Medieval Toynton ware (TOYII) and Toynton/Bolingbroke-type ware (TB) fabrics. The fabric is tempered with sparse rounded quartz up to 1.2mm, including Greensand quartz, abundant subangular quartz up to 0.4mm, sparse rounded chert and occasionally sparse to moderate calcareous inclusions. Glaze is usually thickly applied in a slip and is an olive-green to apple-green colour. A wide range of decoration is found (Healey 1984, 73–8) including extensive use of iron-rich clay to give a contrasting brown glaze. It can be difficult with small undiagnostic sherds to differentiate between medieval (TOY), late medieval (TOYII) and post-medieval (TB) production.

Forms

With the exception of four vessels, all of the Lincoln examples of this ware are jugs. Fewer than 20% of the sherds are decorated, although considering the large size of most Toynton Medieval ware jugs and the fragmentary nature of the Lincoln material, this is hardly surprising. The remaining vessels are fragments of a bottle, a cistern, a lamp and a dripping dish with a zoomorphic spout (Fig. 146, 1137).

Source

Two sherds of Toynton Medieval ware from Lincoln were examined in thin-section (L1328 and L1329). Both had a very similar appearance in which the most distinctive elements were sparse rounded chert and sparse polished, rounded quartz ("Greensand quartz"). Both of these features indicate a Cretaceous origin for at least some of the sand inclusions. Numerous finds of wasters and several kilns have been found at the village of Toynton All Saints in the south of Lincolnshire, the most famous of which, Kiln 1 (The Roses), produced highly-decorated jugs that were widely marketed both in England and on the continent (Healey 1975).

Dating

Nearly 100 vessels have been found in Lincoln, enough to indicate that the ware was being marketed to the city, albeit in small numbers. The earliest stratified vessels occur in horizon MH6 deposits (late 13th to mid 14th century) and the latest in horizon MH10 (mid to late 15th century). Kilns 1 and 3 at Toynton All Saints are thought to have been in use during the late 13th and early 14th centuries (Aitken and Hawley 1966, 190–1), although typologically the products of Kiln 3 belong more to the late 15th to early 16th century, and when found in the city occur in horizons MH10 to PMH1 and are classified as Late

Medieval Toynton ware (TOYII). More recent excavations in the village (Field 1996) have produced vessels that typologically belong to the 14th or 15th century.

Unspecified Medieval Imports (MIMP) (Fig. 147)

Description

Six vessels found in the city may be medieval imports. Three of them are from the as yet unarchived Castle West Gate site (CWG86) at Lincoln Castle, and the initial assessment notes nothing about them beyond the fact that they may be imports. The remaining sherds are all from unstratified or modern deposits. The base of a bowl or dish (L1978) from the Hungate site (H83) (Fig. 147, 1139) is in a fine white fabric tempered with sparse rounded quartz up to 0.4mm and abundant angular quartz up to 0.1mm. The vessel is covered with a thick mottled copper-green glaze and has a sgraffito design of grapes and vine leaves inscribed on the interior of the base. One sherd, in a hard grey fabric tempered with moderate rounded quartz up to 0.4mm, abundant angular quartz below 0.1mm and moderate muscovite up to 0.1mm, is from a costrel (L1305). The remaining vessel (L1821), a small finely thrown base with slight footring, is unusual and may prove to be of Roman date (Fig. 147, 1138). The vessel has a hard, bright orange red fabric covered with a thick white slip. The fabric contains sparse rounded quartz up to 0.6mm, sparse rounded clay pellets in a matrix that includes abundant angular quartz, and sparse mica up to 0.1mm.

Source

Three Unspecified Medieval Import sherds were examined in thin-section (L1305, L1821 and L1978).

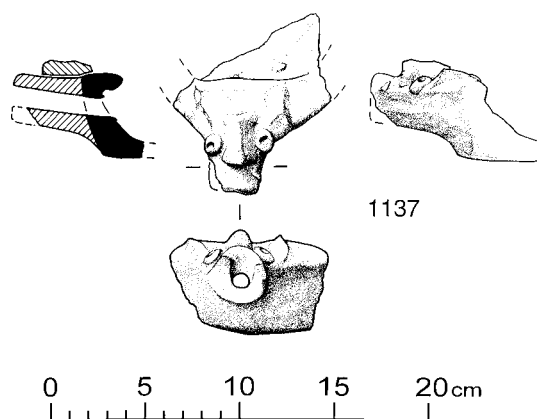


Fig 146 Toynton Medieval Ware Scale 1:4

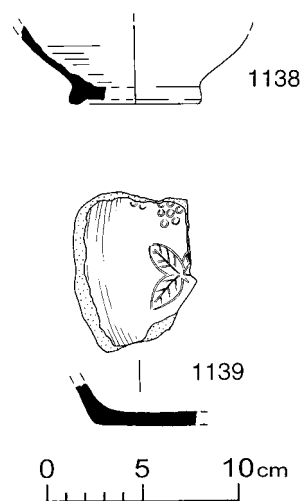


Fig 147 Unspecified Medieval Imports. Scale 1:4

In no case did the petrological composition help to clarify the potential source of the vessel. L1305 contained quartz sand and had a micaceous clay matrix. Its petrological characteristics fall within the range for local products but neither chert nor sandstone fragments were noted. L1821 also contained a quartz sand but the clay matrix is quite different, containing abundant angular quartz and moderate muscovite, sparse biotite and altered glauconite up to 0.1mm. Silty clay of this type is also present locally (for example, Beverley ware and 12th/13th-century Lincoln Glazed ware. Several years ago, John Hurst (pers comm.) suggested a Mediterranean, possibly Italian, source for L1821. Whilst this is not ruled out by the thin-section evidence, there is nothing to suggest that is of non-local origin. The third sample also contained quartz sand, including grains which resemble those from the Greensand and similar cretaceous deposits. It too had abundant quartz silt in the clay matrix, together with sparse rounded opaque grains up to 0.1mm across. The fabric is not paralleled in the Lincoln area but could nevertheless have been produced quite close by (in the Wolds, for example). This certainly does not mean that the vessel was locally produced, only that here too petrological evidence does not prove that the vessel was imported.

Low Countries Highly Decorated ware (AARD) (Fig. 148)

Description

This type of pottery has previously been described as 'Aardenburg ware' (Verhaeghe 1983a, 29; 1983b, 70–3; Janssen 1983, 137–43), and has a fine oxidised fabric with a thick bright copper-green or orange glaze applied over a slip. Vessels are usually jugs and are highly decorated, involving the use of polychrome glazes as well as stamped and applied motifs. None of the seven small fragments from the city is securely stratified.

Andalusian Lustreware (ANDA)

Description

A single sherd from a jug found on the Greyfriars Library site (GLB94), in a deposit containing a range of 13th- to 18th-century material, may be of this type.

Source

Andalusian Lustreware has an off-white or pinkish body and is tempered with sparse to moderate rounded fragments of reddish schist. Such schist outcrops in the hills around Malaga, on the southern coast of Spain, and it is likely that all Andalusian Lustrewares found in North-West Europe are Malagan products. John Hurst has distinguished an early

group of Lustrewares, found in North-West Europe from the late 13th century to the late 14th century, and a late group (Hurst *et al* 1986). The latter group was contemporary with the Valencian Lustreware industry (q.v.), and is evidence that the earlier industry was not totally superseded by that based at Manises.

Archaic Maiolica (ARCH) (Fig. 149)

Description

Sherds from four vessels in Archaic Maiolica have been found in the city. The jug sherd with possible foliage design from the Danes Terrace site (DT74II) (Fig. 149, 1141), and that with a curvilinear design from the Flaxengate site (F72) (Fig. 149, 1142) are stratified in MH8 horizon deposits (late 14th to early 15th century). A sherd from a larger vessel with striped green and light blue decoration (Fig. 149, 1141) may be from a larger jug or an albarello, and was found in a pit probably dating to horizon MH10 or PMH1 (late 15th to early 16th century). The fourth vessel is a faceted albarello, with blue stripe decoration (Fig. 149, 1143) and was found unstratified.

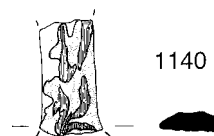


Fig 148 Low Countries Highly Decorated Ware. Scale 1:4

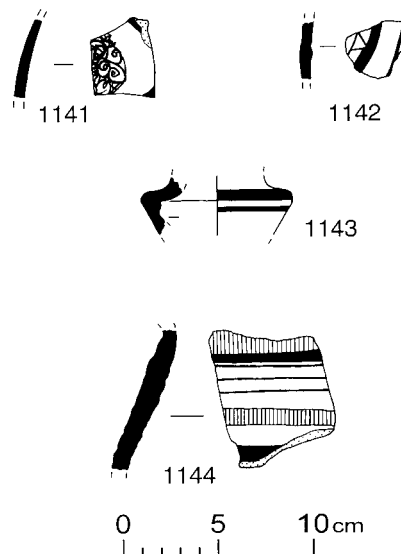


Fig 149 Archaic Maiolica. Scale 1:4

Source

All four Archaic Maiolica sherds from Lincoln have distinctive appearances and are probably from different sources. That from the Mint Wall site (MW79) (Fig. 149, 1143; L645) has a low-iron, calcareous clay matrix with numerous voids (probably air rather than burnt-out organics or calcareous temper). That from excavations at Swan Street/ Grantham Street (SW82) (Fig. 149, 1141; L644) has a redder body and contains several large iron-rich fragments. The fabric of this vessel is similar in appearance to that of sherds from 14th-century deposits at Custom House, City of London (Tatton-Brown 1974;1975). The sherd from Danes Terrace (DT74II) (Fig. 149, 1141) has a low-iron calcareous clay matrix but, unlike that from the Mint Wall (MW79), is tempered with a subangular quartz sand. It also has a distinctive purple tinge, although this may have been acquired after deposition. Finally, the sherd from Flaxengate (F72) (Fig. 149, 1142) has a grey fabric with abundant, unidentified black inclusions.

The range of fabrics indicated even in this small assemblage shows that green- and purple-painted wares with white glazes (which might be opacified with added tin, or be clear lead glaze over a white clay slip or simply a clear glaze on a white-firing body) were arriving in England from several sources. Until much more comparative data is available, both from consumer sites in North-West Europe and from potential production sites, the precise sources must remain uncertain. It is for this reason that John Hurst has suggested that Mediterranean Maiolica would be a better name for the ware than Archaic Maiolica, which to art historians would imply an Italian source. However, even the term Maiolica may be misleading, since detailed analysis has shown that several vessels of this kind did not have opacified glazes.

*Early German Stonewares (EGSW)**Description*

Fragments of three proto-stoneware vessels have been found in Lincoln, two of which are possible Limburg products (see Bruijn 1966, 44). One vessel is a beaker and the other two are small jugs. None of the vessels is securely stratified.

Source

During the later 12th and early 13th centuries, a number of centres in the Rhine and Meuse valleys began to manufacture vessels from low-iron clays with a sand temper which were fired to high enough temperatures to vitrify the surface. Sources include Siegburg and the Vorgebirge area to the south-west of Cologne, as well as the Limburg. Their arrival coincided with a period of decline in the importation

of Rhenish/Meuse pottery to the British Isles. There is no consensus as to the origin of the British finds, nor has any scientific analysis of their fabrics been undertaken.

*Unspecified French wares (FREN)**Description*

Three vessels from the city can possibly be attributed to unidentified French sources. All three vessels are either jars or jugs with buff-coloured fabrics. One vessel from the Castle West Gate site (CWG86) includes occasional large quartz grains in its fine unglazed fabric and has a light orange exterior surface. A sherd from the West Parade site (WP71) has a fine fabric and a green copper mottled glaze, whereas the vessel from the Silver Street site (LIN73A) has a gritty fabric with a yellow glaze mottled with copper specks. Only the sherd from WP71 is stratified in a medieval deposit which is dated to between MH3 and MH4 (late 12th to early 13th century).

Source

These three sherds have been attributed to a French source on grounds of style and general appearance of the fabric. They have not been subjected to scientific analysis.

*Islamic Glazed (ISLG) (Fig. 150)**Description*

A single sherd of an Islamic Glazed bowl was recovered from the unpublished excavations at Flaxengate in 1969 (FLAX69: Box J46, bag/layer 8). The sherd has an alkaline glaze and is decorated in blue and black.

Source

A sample of the Islamic Glazed bowl was submitted for thin-section analysis to Dr Rob Mason, Oxford Research Laboratory for the History of Art and Archaeology, but the results are not yet available. Visually, the vessel appears very similar to one from a 14th-century deposit at Trig Lane, City of London (Vince 1985, Fig.33, No 5).

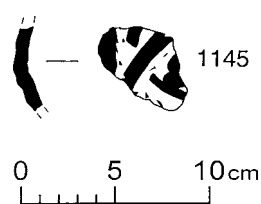


Fig 150 Islamic Glazed. Scale 1:4

Magrebi ware (MAGR) (Fig. 151)*Description*

A single sherd identified as a green-glazed polygonal-sided albarello was found associated with a few sherds of late medieval pottery on the West Parade site (WP71).

Source

Vessels from the reclamation dumps along the Thames waterfront in the City of London, with a thick green-coloured glaze and an off-white, sandy, body have been identified by Dr D Whitehouse, Corning Glass Museum, as Magrebi ware (Vince 1985, 54 and Fig. 22, no. 2). By comparison with these sherds, the Lincoln example has been identified as the same ware. It is believed that the ware comes from somewhere along the North African coast.

North French Monochrome (NFM)*Description*

Only three vessels in this ware type have been identified from excavations in the city. Two jugs in this fabric have a fine white fabric and a monochrome mottled copper-green interior and exterior glaze. Both examples are fragmentary and have scale decoration. A small base sherd is probably from a cup. All three vessels were from unstratified or residual contexts.

Rouen-type ware (ROUEN) (Fig. 152)*Introduction*

The term "Rouen-type ware" is used here for vessels manufactured in white or light-firing clay with clear lead glaze and polychrome decoration produced using white and red-firing clays. Such vessels are best known in the English-speaking world through the publication of vessels in the Rouen museum collection by Barton (1966) and Southampton (Platt & Coleman-Smith 1975, 23–7, 132–47). There is a clear division of these vessels into two groups which differ in typology, decoration and date. The earlier group, termed here Early Rouen-type ware, is typified by two vessels from Quilter's Vault, Southampton (Platt & Coleman-Smith 1975, Pl.150), found with a green-glazed north French jug, while the later group, termed here Late Rouen-type ware, is typified by a complete jug from the High Street, Southampton (Platt & Coleman-Smith 1974, Fig. 189, No.1050) found with a green-glazed Saintonge ware jug of late 13th- or early 14th-century type.

Examples of the Early Rouen-type ware have been found in Lincoln, but in very small quantities (only 19 sherds in total). These have been subdivided into three different fabric groups based on visual appear-

ance only. All have a fine quartz tempered fabric and a thick glaze.

*Fabric A**Description*

The two jugs in this group have a fine, light orange fabric and a thick orange-yellow glaze. One vessel is decorated with applied iron-stained strips that are tan in colour and plain square roller-stamped strips. The other jug also has square roller-stamped strips as well as an iron-stained blob.

Source

Neither of the sherds of Rouen-type ware Fabric A was examined in thin-section. However, they appear very similar to those of early Rouen-type ware sherds from elsewhere in England and Scandinavia.

*Fabric B**Description*

This fabric is a fine white one with no inclusions visible by eye. The glaze varies from a pale to bright yellow over the white fabric, and from orange to dark

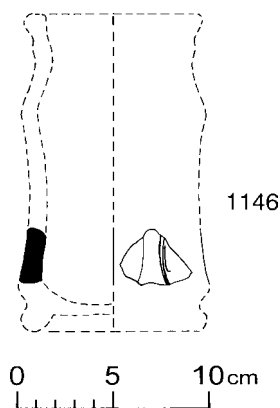


Fig 151 Magrebi Ware. Scale 1:4

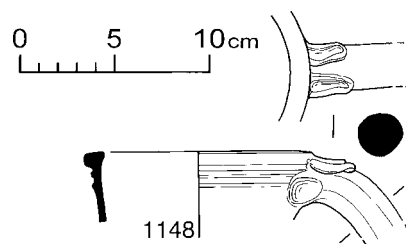
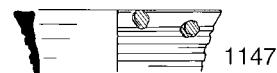


Fig 152 Rouen-type Ware. Scale 1:4

brown over iron-stained areas. Decoration includes the use of applied, roller-stamped strips and pads in white clay, together with iron-stained areas or vertical strips on the body of the jug.

Source

Neither of the sherds of Rouen-type ware Fabric B was examined in thin-section. However, they appear very similar to those of early Rouen-type ware sherds from elsewhere in England and Scandinavia.

Fabric C (Fig. 152)

Description

All four vessels in this fabric group have a fine white fabric that also includes occasional larger, prominent quartz inclusions. The jugs are covered with a yellow glaze and have both iron-stained decoration applied directly to the body as well as applied pads and roller-stamped strips. The two jug rims illustrated are both typical Rouen-type shapes, and one vessel has a solid rod handle that is attached at the join with the rim by two finger pressings either side and two decorative 'ears' on top.

Source

Although not examined in thin-section, the examples of Rouen-type ware Fabric C from Lincoln have a similar appearance to sherds of early Rouen ware from sites in England and Scandinavia examined by the author (AGV). There is no obvious difference in fabric between these sherds and those of Rouen-type ware Fabric A and Rouen-type ware Fabric B, with the exception that they contain large lumps of quartzite, which erupt from the surface of the vessels and have a noticeably pink tinge.

Dating

Nineteen Rouen-type ware sherds are recorded from excavations in the city, although only 16 could be located for more detailed fabric analysis. The most common fabric group identified was group B with eight vessels. Both group A jugs occurred in horizon MH4 deposits (early to early/mid 13th century), while three group B vessels came from horizon MH5 or MH6 features (mid 13th to mid 14th century), and two of the group C jugs came from horizon MH5 (early/mid to late 13th century); the remaining Rouen-type ware vessels were either found residually or were unstratified.

Saintonge All-Over Green-Glaze ware (SAIG)

Description

Small fragments from four vessels, all presumably jugs, have been found in the city (for a detailed description of this type see Watkins 1987, 133–4).

Only one vessel is decorated, with an applied strip. Two of the vessels were found in horizon MH5 or MH6 deposits (mid 13th to mid 14th century) and the other two are associated with late 14th- or 15th-century material.

Source

These vessels are products of the Saintonge area of south-west France and were exported in large quantities through Bordeaux.

Saintonge ware with a mottled green glaze (SAIM) (Fig. 153)

Description

Sherds from seven small Saintonge ware (SAIM) jugs have been found in the city. All are fairly fragmentary and only one has traces of decoration. Only the jug base from St Mary's Guildhall (SMG82) (Fig. 153, 1149) is securely stratified, in a horizon MH6 deposit (late 13th to mid 14th century).

Source

These vessels are also products of the Saintonge area of south-west France and were exported in large quantities through Bordeaux (for a detailed description of this type see Watkins 1987, 125–129).

Analytical work by Deroeux and Dufournier suggests that, whereas the overall green-glazed and polychrome Saintonge wares have a clear chemical signature, these mottled-glazed vessels are more variable. They suggest that the name Saintonge ware should be restricted to the former wares and a broader south-western French attribution be given to the mottled-green glazed wares. Nevertheless, sherds of both types have been found on one of the production sites, at La Chapelle des Pots, excavated by Mayes (Barton 1963).

Saintonge Polychrome (SAIP) (Fig. 154)

Description

Despite the fairly common occurrence at Hull of this type (Watkins 1987, 129), only three sherds have been recovered from Lincoln. All are tiny fragments

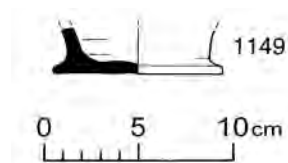


Fig 153 Saintonge Ware with a mottled green glaze.
Scale 1:4

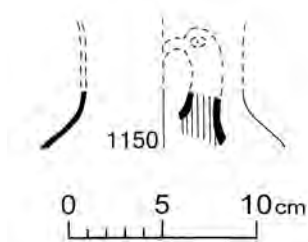


Fig 154 Saintonge Polychrome ware. Scale 1:4

and only on one can any decorative detail be discerned. The illustrated jug from St Mary's Guildhall (SMG82) is the only securely stratified vessel and was found in a horizon MH6 deposit (late 13th to mid 14th century).

Source

These vessels are products of the Saintonge area of south-west France and were exported in large quantities through Bordeaux (Chapelot 1983, 49–53).

Siegburg-type Stoneware (SIEG) (Fig. 155)

Description

Most of the Siegburg-type Stoneware found in the city is fragmentary and can only be identified generally as coming from jugs. Those vessels that can be further identified are mainly Jacobkanne (12 vessels). Other types of vessel are each only represented by one (Trichterhalsbecher, straight-sided jug, miniature vessel, bowl, and Schnelle) or two examples (beakers, eg, Fig. 155, 1151).

Source

Production of stoneware and proto-stoneware is attested in Siegburg from the later 12th century until the 16th century. During this period a number of distinct fabrics were produced, varying in sand content, iron content and firing (see Hurst *et al* 1986, 176–84, for a good summary of this ware). The Lincoln examples all belong to the “classic” period of production from the middle of the 14th to the middle of the 15th century. Siegburg-type stoneware of this period has a very fine fabric and an off-white or grey colour. With so few distinguishing characteristics, it is identified here mainly on the basis of treatment and form. Stonewares of similar appearance were produced in north Germany and in the Beauvais region of north France but there is no reason to suspect that the Lincoln collection includes material from these sources.

Dating

Although 39 vessels have been recovered from

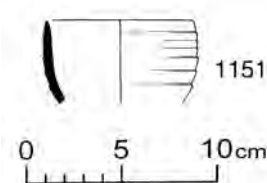


Fig 155 Siegburg-type Ware. Scale 1:4

excavations in the city, fewer than half are stratified in pre-17th-century deposits. The earliest vessel from Flaxengate (F72) comes from a late 13th- to mid 14th-century MH6 horizon deposit (LUB 123, cgS103). The majority of the rest of the securely stratified vessels come from deposits dating to between the mid 15th and late 16th centuries (horizons MH10 to PMH3). A further complete vessel, found in the centre of the Upper City in 1884 (O'Neill 1885), was associated with a group of what were (until disturbed) probably complete late medieval jugs of late 14th- or 15th-century date.

Spanish Tin Glaze (SPTG)

Description

A single sherd with a light red fabric and a light blue internal and external tin glaze, possibly from an albarello, was recovered from excavations at the Castle West Gate (CWG86).

Albarellos with an overall blue or green tin-opacified glaze are rare finds in the British Isles, although a group of such vessels was recovered from Acton Court, Iron Acton, near Bristol (Vince & Bell 1992, pl.2) and similar vessels have been found at Southampton (Platt and Coleman-Smith 1975, No.1325 is said to be a green alkali-glazed jar but is more likely to be a lead glaze deriving its colour from copper and its opacity to tin). No analytical work has taken place on any of these vessels but they are most likely to be Seville Morisco wares and of early 16th-century date.

Late Medieval (c.1350–c.1500)

Introduction

National Context

Nationally, the pottery of the late medieval period is marked by increased standardisation, nucleation, and a tendency for products to be plainer than their predecessors, often including a reduction in the

glaze cover on the vessels. Vessels by this time were definitely being made to set sizes which varied little in dimensions and capacity. The period also saw the re-emergence of the Rhineland as a major source of finewares, following the depressed importation of the 13th and earlier 14th centuries. Spanish imports probably increased in frequency during this period (although the total quantities are so low that this is arguable), whilst French wares probably declined. There is, indeed, some doubt as to how much of the French pottery found in late medieval deposits was actually in use in this period, rather than being residual from the later 13th and earlier 14th century.

Vessel forms used in the late medieval period are in general the same as those used in the preceding period, with jugs and cooking vessels predominating and other forms comprising a very small fraction of assemblages. Two notable innovations, both actually present before but much less common than in the late medieval period, were the bung-hole jar or jug, and the lid-seated cooking pot or jar. The former may well be associated with the introduction of hopped beer in the later 14th century and the need to have a storage vessel which would allow the beer to be drawn off without disturbing the sediment. The latter form, sometimes known as the bifid rim, has no known functional explanation but seems to have been a very sudden and widespread introduction, datable in London to *c.*1400.

Lincoln Production

Several distinct wares were produced in Lincoln during the late medieval period (LLSW, LMF St Mark's type, LSW3, LSW4). They were of two main types: sand-tempered red-firing earthenwares and fine whitewares. Much of what we know of pottery production at this period comes from a preliminary examination of the finds from St Mark's Yard East (ZE87), excavated in 1987 (Hooper *et al* 1988). Of particular note is the fact that a significant amount of the Lincoln production of this period is elaborately decorated, in both redwares and whitewares. Alongside these products, however, the tendency for standardisation and plainness is also recognisable. Innovations in production include the use of biscuit firing.

Local Production

Potterhanworth shell-tempered pottery remains in common usage until at least the end of this period. Other local (non-Lincoln) pottery production consists entirely of unsourced vessels (LMLOC). No late medieval production sites are known within the immediate environs of the city. It is possible that the wares identified as being of local origin were in fact produced within the city, but at sites as yet un-

discovered. All three main fabric groups are probably imitations of the products of other traditions: Dutch Red Earthenwares, late medieval Toynton wares, and Midlands Purple wares, and it is possible that they represent evidence for the immigration of potters to Lincoln or the Lincoln environs during the late medieval period, in the same way that LLSW appears to constitute the products of a Humberside potter resident in the city.

Regional Imports

Imports from outside the immediate area are less common in the late medieval period than they were previously, and in some cases consist of single sherds. Even the production site at Toynton All Saints was only supplying a tiny fraction of the pottery used in the town. This tendency for the inhabitants of late medieval settlements to rely on a smaller number of suppliers than their predecessors is recognisable nationally, and is only partly explicable in terms of the smaller number of centres producing pottery at this time (CMW, EALMT, HUM, LMX, MP, TOYII, and LMF Tudor Green-type fabric).

Continental Imports

Continental imports were rare in late medieval Lincoln. They include vessels from the Rhineland and perhaps the Meuse valley (SIEG, SIEB, LANG and LARA), the low countries (DUTR), Spain (MVAL, SEVIL and SPTG), and Italy (ARCH and CITG).

Vessel Forms

Jugs were overwhelmingly the most popular vessel form in late medieval Lincoln. Within this general class, however, there were specific forms which may have had distinct functions. In particular, small jugs capable of holding a pint or less of liquid are thought to have been used as drinking vessels, whilst bung-holed vessels were probably used to store beer. Cooking vessels are also present but may be less common than in the preceding periods.

14th- to 15th-century Lincoln Glazed ware (LSW3) (Figs. 156–62)

Introduction

This ware is characterised by glaze type; by rim, base, and handle typology; by decoration, manufacture, and to some extent fabric.

Fabric and technology

Vessels have a sandy texture with fabric colours ranging from completely oxidized orange examples to those with light to dark grey cores, and orange to red unglazed surfaces. From the late 14th century

(horizon MH8) an increased proportion of jugs tends to have a dark, reduced internal surface. Glaze colours are various, with most jugs before the late 14th century (horizons MH6 and MH7) having a copper-green glaze, and later vessels (horizon MH8 onwards) tending to have dark reduced greens. Vessel forms other than jugs commonly have an apple-green to amber glaze.

The fabric is variable and tempered with moderate to abundant rounded quartz of up to 0.4mm, together with sparse to moderate iron-rich grains, sparse chert, sparse rounded sandstone, moderate to common, rounded and laminated clay pellets, and occasional rounded calcareous inclusions. Whilst the fabric is basically similar to that of LSW2, under x20 magnification a direct comparison of the two ware types shows that the LSW3 fabric is much more poorly sorted and visibly has a more dirty appearance.

Almost all except a few vessels are wheel-thrown, with the quality of manufacture declining through time. Only early vessels (horizon MH6 – late 13th to mid 14th century) are well centred and have thin walls, and odd body sherds of this date can be difficult to separate from the LSW2 industry. From the mid 14th century (horizon MH7 onwards), vessels have thicker walls and less care appears to be taken generally with their manufacture. Firing temperature is variable, although most vessels have a hard fabric and a well-matured suspension-type glaze.

Forms

Jugs

It is often difficult, without a substantial part of a vessel being present, to be certain to exactly which sub-type sherds belong. None of the shouldered jug sub-types can be linked with any certainty to a rim or neck, although a large number of plain collared rims are known to have come from this type of jug. Vessels from horizon MH6 (late 13th to mid 14th century) can have thin walls and be well made and are more difficult to distinguish from LSW2 examples. Generally from the mid 14th century (horizon MH7 onwards), vessels become less well made and even small fragments are obviously from LSW3 vessels.

1. SHOULDERED TYPE 8 (FIG. 156, 1152–4)

These mainly thick-walled jugs are not particularly well thrown and tend to have irregular profiles. Most are internally reduced to a grey colour, with unglazed and unslipped exterior surfaces being a bright orange. A thick copper-green glaze, over a buff slip, is found on some jugs, while others have a reduced green coloured glaze, although in both cases the glaze tends to be slightly mottled. The glaze is

intended to extend over the top half to two-thirds of the jug; in several cases there are also runs of a different glaze from the vessel stacked above it in the kiln. No rims have been positively identified from this type of jug. Bases are flat and usually have four groups of three slightly overlapping finger-pullings. The thick plain rod handles are attached at the lower join by pressing the vessel wall into the base of the handle and securing it on the exterior with two large thumb-pressings. Decoration is various, consisting of motifs (commonly horse-shoes and fleur-de-lis) formed from applied strips and pellets. This type of jug is found in horizon SMH8 and MH9 deposits (late 14th to mid 15th century).

2. SHOULDERED TYPE 9 (FIG. 156, 1155–6)

This jug type, although similar in most aspects to type 8, has several slight differences, including a slightly restricted base and a narrower profile with a less apparent shoulder. The jugs commonly have a reduced grey interior, with a small number (mainly decorated examples) having a light orange surface. Almost all vessels have a pink or buff external slip covering unglazed areas. Glaze colours and extent are identical to those found on type 8 jugs. The thick, plain rod handles are almost oval in shape, and are secured at the lower join with two splayed thumb-pressings. Decoration is rare and the illustrated face-jug (Fig. 156, 1155) is unique. Unfortunately, the vessel was found residually in a post-medieval deposit, although it occurs in association with horizon MH9 material (early to mid 15th century). It has a thick sooty deposit on the base indicating that it has been heated, probably on a bed of charcoal. Evidence suggests that the type belongs to the last phase of production of LSW3, in horizon MH9 (early to mid 15th century).

3. SHOULDERED TYPE 10 (FIG. 156, 1157–8)

This type has the narrowest profile of the LSW3 ovoid jugs and has a slightly splayed base. As with the other LSW3 shouldered jugs, they are quite crudely made, with thick walls and uneven profiles. All known examples have orange internal surfaces and either red or buff-slipped exteriors where unglazed. Glazes are either apple-green (sometimes mottled with copper) over a buff slip, or a copper-mottled amber to olive, over a red slip. Handles are similar in shape to those on shouldered type 9 jugs, except that the lower handle join is not always secured by thumbing. The slightly splayed base may have four sets of four-to-six small, overlapping finger-pullings. No decorated examples have been noted. These jugs are found associated with horizon MH8 and MH9 material (late 14th to mid 15th century).

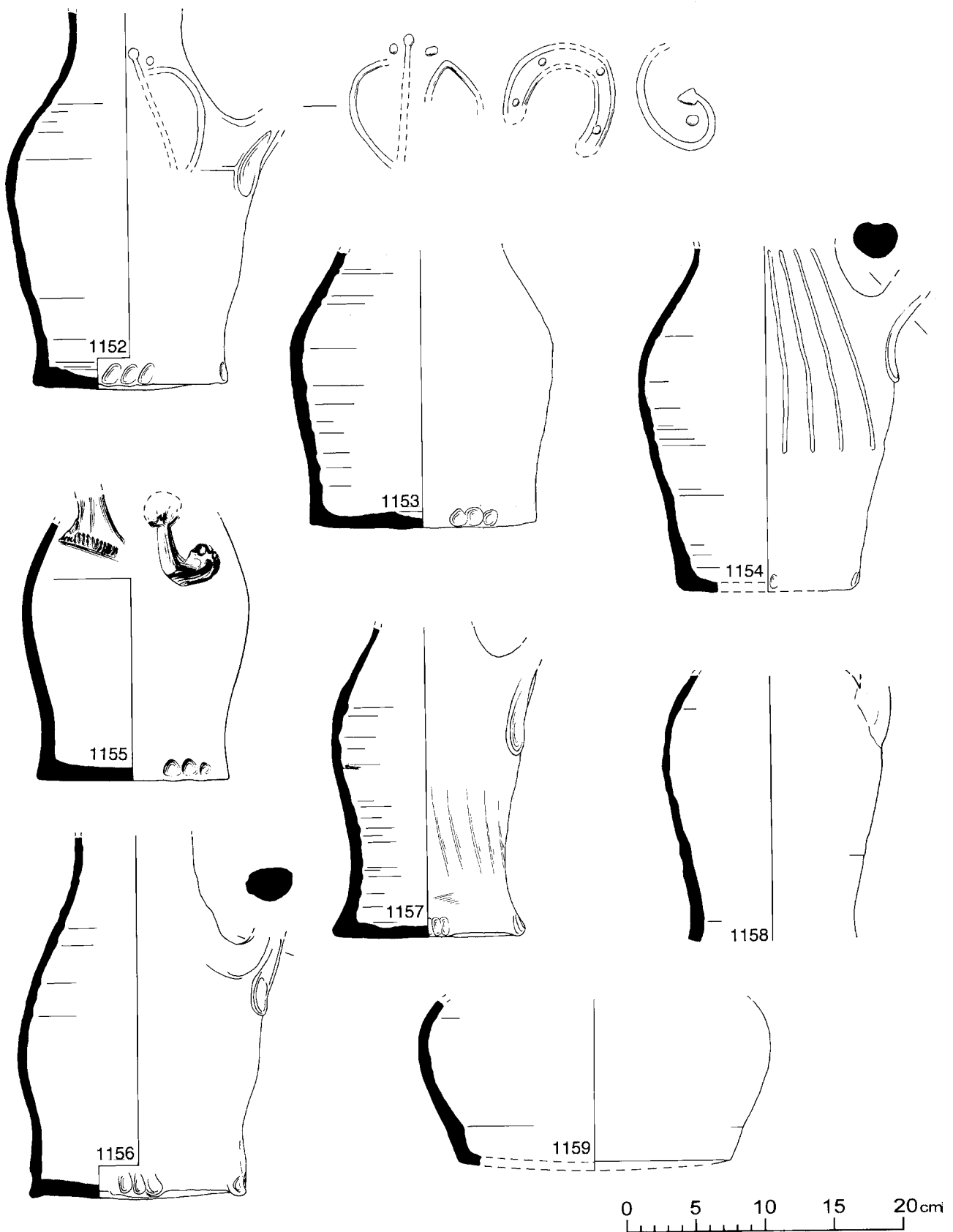


Fig 156 14th to 15th century Lincoln Glazed Ware: shouldered type 8 jugs 1152–1154; shouldered type 9 jugs 1155–156; shouldered type 10 jugs 1157–1158; squat type 1 jug 1159. Scale 1:4

4. ROUNDED TYPE 1 (FIG. 157, 1160)

Jugs of this type are identical in shape to those made in LSW2, except that a plain rod handle, secured with eyelet thumbings, is used instead of a strap type. The only other differences, apart from the general decline in quality of manufacture, include uneven internal colouring and the use of two overlapping finger-pullings on the base. This type of jug, made in LSW3, is found in horizon MH6 and MH7 deposits (late 13th to mid 14th century) and is almost always undecorated.

5. ROUNDED TYPE 2 (FIG. 157, 1161)

These jugs are basically a development of the same form produced in LSW2. Production from the mid 14th century (horizon MH7) onwards is of a much poorer quality and the illustrated example has had a new base set inside, presumably because the original one was too thin. LSW3 jugs from horizon MH6 (late 13th to mid 14th century) are still thin-walled and well made, often resulting in difficulties in distinguishing undiagnostic parts of the vessel from LSW2 production. Examples from this period found outside the city show that these early LSW3 jugs still have a bulging neck, but the corrugations typical of LSW2 production have been transformed into rilling on the lower part of the neck below the plain bulge. All LSW3 jugs of this type have thick plain or grooved rod handles and overlapping finger-pullings on the basal edge; otherwise they are identical to the LSW2 form. Decoration is common and extremely variable, with applied motifs including: horseshoes, arms, cartwheels and fleur-de-lis, as well as many abstract designs, formed by using strips and scales combined and the use of plain or twisted false handles. The illustrated jug (Fig. 157, 1161) is typical of many of the LSW3 jugs in having a thick, internal, white deposit and a heavily sooted base. The form is common between the late 13th and late 14th centuries (horizons MH6 and MH7), becoming less common by the late 14th century (horizon MH8) and rare by the 15th century (horizon MH9).

6. ROUNDED TYPE 3 (FIG. 157, 1162)

Unlike the other types of rounded jugs, this type retains the thin walls typical of those found on the LSW2 jugs, making it very difficult to identify body sherds as LSW3 products without detailed examination of the fabric. LSW3 jugs of this type still have a slightly bulging neck, although it is no longer corrugated. The handles are either a plain or grooved rod handle, attached at the upper join by slightly pushing the neck wall with two or three fingers into the handle, and then smoothing over on the interior. On the exterior, the handle is secured by two deep, eyelet-shaped thumb-pressings. The lower join has

the internal wall of the jug pushed into the handle with the thumb, and is attached on the exterior with two large vertical thumb-pressings. Bases are intended to be flat, although sometimes the weight of a jug stacked on top during firing produces a concave base (eg, Young 1991, Fig. 55, 4). Decoration mainly consists of multiple cordons, starting at the bottom of the neck and continuing down to the widest part of the jug. More elaborate decoration such as that found on the LSW2 jugs is only rarely found. This type of jug in LSW3 seems to be limited to horizon MH6 deposits (late 13th to mid 14th century) and possibly to early MH7 (mid 14th century).

7. ROUNDED TYPES 5 AND 7 (FIG. 157, 1163 AND 1165)

These small, rounded jug types appear to be limited to the LSW3 production represented by wasters found at the St. Mark's Kiln site (ZE87) (Steane *et al* 2001). Individual body sherds would be hard to distinguish from other LSW3 productions, as it is the very individualistic, lower handle join attachments that characterise these jugs. Vessels are always fully oxidized to a bright orange and have a lustrous, smooth, slightly speckled dark or light copper-green glaze. Rims are rounded with only a slight trace of the collar found on most other LSW3 jugs, and the rod handles have an irregular round shape. Upper handle attachments are plugged into the vessel wall, smoothed over inside and then secured on the exterior with two rounded thumb-pressings. The lower join on the rounded type 5 jug (eg, Fig. 157, 1163) is formed by pushing the jug wall deeply into the handle, and on the smaller type 7 jug by merely smearing the handle to the exterior of the vessel. The lower handle join on both types is secured by two large thumb and two small finger pressings. Decoration consists of cordons and multiple horizontal grooves. Not enough of these types have been found away from the production area to be certain of dating, although the evidence at St Mark's suggests that they belong to late horizon MH7 or early MH8 deposits (late 14th century).

8. ROUNDED TYPE 6 (FIG. 157, 1164)

This jug type is possibly also a product of the St. Mark's workshop, although wasters of this shape were not recovered. The oxidized jug is distinctive, with its short neck, slightly beaded or collared rim and slightly sagging base. A thick, lustrous olive to copper-green glaze, sometimes full of large quartz impurities, covers more than three-quarters of the vessel. The handle is an uneven round or oval shape, is plugged in and then smeared over at the upper join, and the body of the jug is deeply pressed into the handle at the lower join. The upper join is secured externally with two rounded thumb-

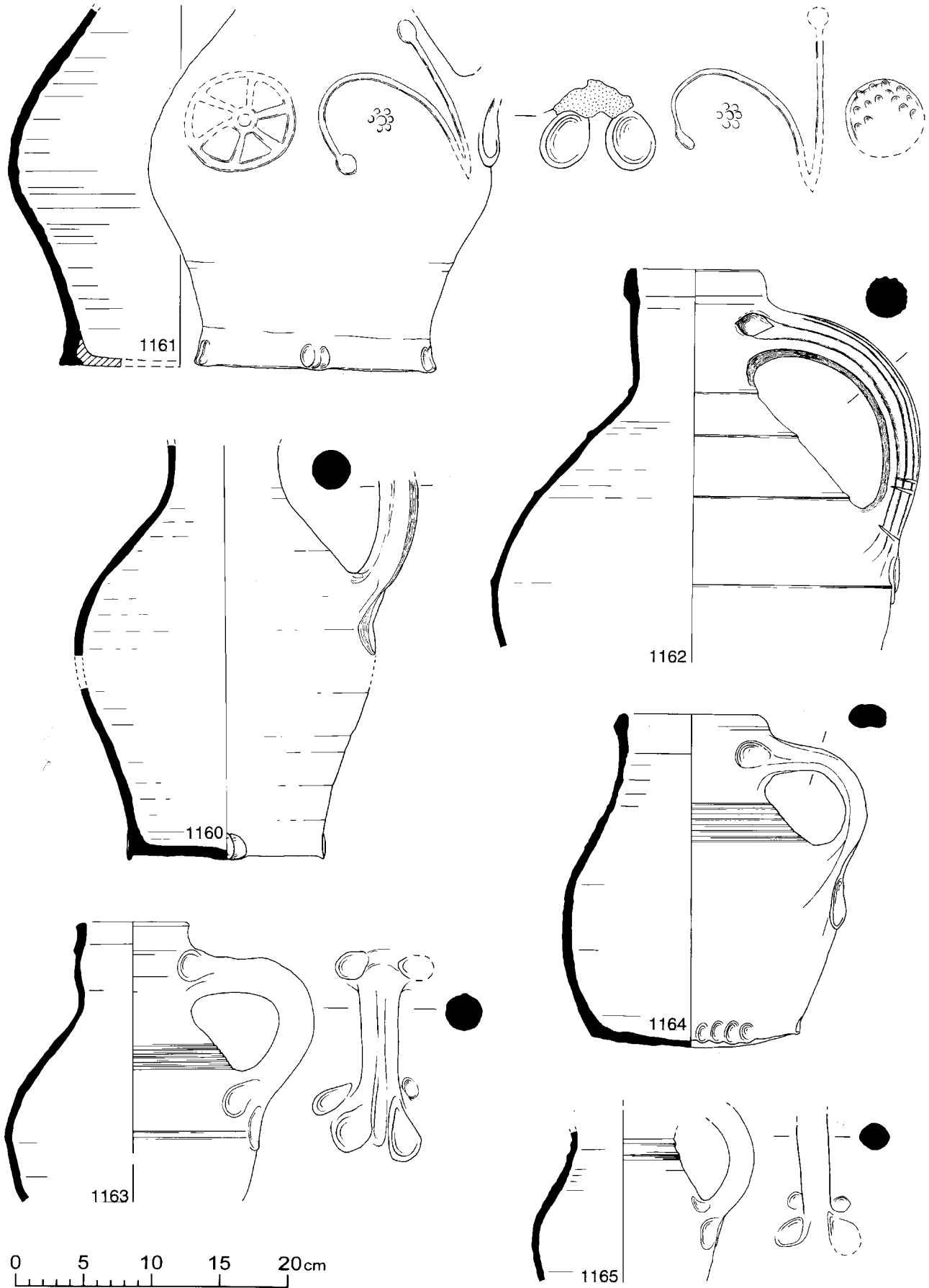


Fig 157 14th to 15th century Lincoln Glazed Ware: rounded type 1 jug 1160; rounded type 2 jug 1161; rounded type 3 jug 1162; rounded type 5 jug 1164; rounded type 6 jug 1165; rounded type 7 jug 1165 Scale.1:4

pressings and the lower join with two large vertical pressings. The sagging base shows no signs of stacking scars, and glaze runs indicate that the vessel stood upright while being fired. Decoration is limited to horizontal grooved lines. Unfortunately these jugs are uncommon and have only been found in deposits that are generally datable to between horizons MH7 and MH9 (mid 14th to mid 15th centuries). The type would appear typologically to belong to horizon MH8 (late 14th to early 15th century).

9. BICONICAL TYPE 2 (FIG. 158, 1168–9)

Biconical type 2 jugs similar in shape to those in LSW2 are made in LSW3, although not all are of a large size. One example is represented in the waster LSW3 material from St Mark's (Fig. 158, 1168); however, none of the other vessels of this type found in the city seems to be from this production source. The type is very rare and manufacturing details are varied, indicating a number of potters producing this kind of jug. The only consistent detail, apart from the basic shape, is the presence of multiple cordons. The small illustrated jug of the type (Fig. 158, 1169) has a reduced internal body, light orange slip and a heavily pitted, copper speckled, light green glaze. This jug has a white internal deposit and is sooted on the base. The lower handle join has the deep, internal pushing-in of the lower wall into the handle and the four external pressings, typical of this production. The upper join has a distinctive small third pressing at the top of the handle between the two usual larger side pressings. The base is slightly sagging and the sharp basal angle has sets of four overlapping finger-pullings that appear to have been formed with the left hand. The few datable examples belong to horizon MH8 (late 14th to early 15th century).

10. BICONICAL TYPE 3 (FIG. 158, 1166)

The illustrated jug, found at the Bishops' Palace Excavations (LBP72) (Chapman *et al* 1975, Fig. 9, 79) is the only vessel that can be firmly attributed to this type, although several body sherds from around the city can be fitted into the profile. The jug has thin walls, a bright copper-green glaze and is quite well made, but the fairly crude rod handle spoils the overall effect of the vessel. The handle is applied at the upper join, with two eyelet pressings and the internal vessel wall appears to have been pushed into the handle, and then the resulting hole plugged and smoothed over. The jug wall has also been pushed in at the lower join and then secured on the outside with two small thumb-pressings. The narrow base has three sets of three and one set of two finger-pullings. Decoration is in the form of scales, enclosed within triangles that are set within three panels formed by the multiple cordons. Each panel

contains four of these triangles, set spaced around the jug. The typology of this type and other vessels found associated with this jug indicate that it belongs to horizon MH6 (late 13th to mid 14th century).

11. BICONICAL TYPE 4 (FIG. 158, 1167)

This type is similar to type 2 except that the jugs have a much wider base and the vessel is generally much squatter. Few vessels are known, so it is difficult to summarise characteristics, except to say that the jugs found so far have a reduced interior, a bright copper-green glaze over a white slip and the multiple cordons typical of biconical types. The type is found in deposits datable to horizon MH8 (late 14th to early 15th century).

12. SQUAT TYPE 1 (FIG. 156, 1159)

Only a small number of LSW3 sherds from the city can be attributed to this form. All have oxidized, orange internal surfaces and a thick copper glaze, which extends to within c.5cm of the basal angle. Except where there is enough of the base, or a substantial part of the vessel present, this form is unlikely to be recognised. None of the Lincoln vessels is decorated, although an example from Short Ferry, Fiskerton (White 1977) has vertical, applied strips.

13. CONICAL TYPE 1 (FIG. 159, 1170)

This type of jug is extremely rare in LSW3, being represented by a single profile and a few base fragments. The illustrated jug is from an MH6 horizon (late 13th to mid 14th century) and differs from all other LSW3 jugs in that it has a thin, centrally-grooved strap handle that narrows from 3.5cm at the top to 2.5cm at the bottom. The vessel is oxidized to a bright orange internally and has purple unglazed external surfaces. A thick lustrous copper-green glaze covers all but a few patches of the exterior, and appears to have been applied over a white slip. Adhering to the base is part of a rim from a similar-sized jug that had been stacked on top during firing. The weight of the stacked jug has caused the base of the conical jug to be pushed inwards, giving a concave profile to what was intended as a flat base. The strap handle is secured to the outside of the jug by smearing the ends of the handle to the body. A single, shallow, internal thumb impression below the rim and above the handle shows how the jug was held during this process. Decoration consists of three bands of shallow grooves around the body of the jug.

14. PEAR-SHAPED TYPE 1 (FIG. 159, 1171–2)

This type of jug is not common in LSW3 and is only found in horizon MH6 (late 13th to mid 14th century). The form is found in a range of sizes with the smaller

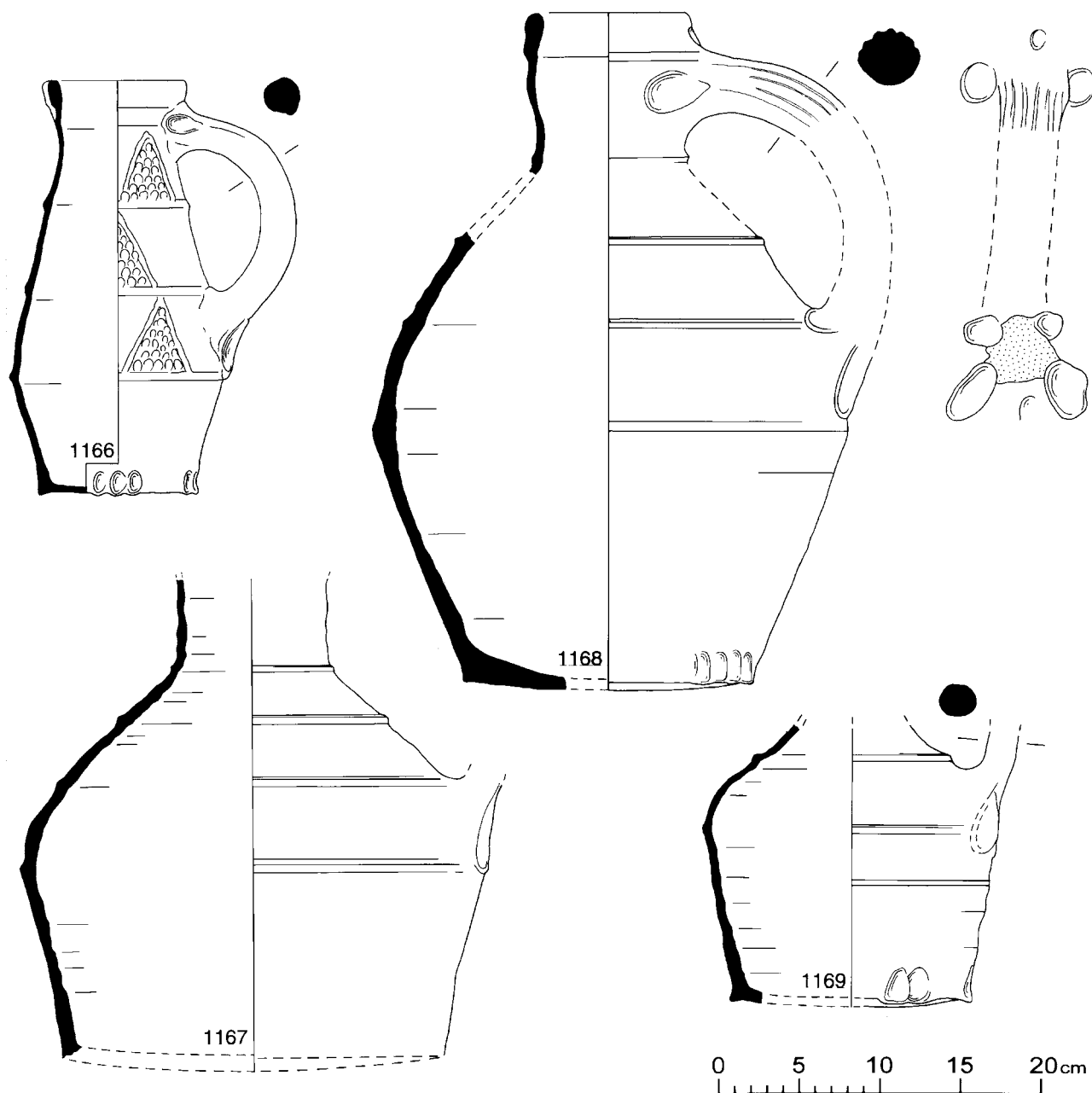


Fig 158 14th to 15th century Lincoln Glazed Ware: biconical type 3 jug 1166; biconical type 4 jug 1167; biconical type 2 jugs 1168–1169. Scale 1:4

vessels having thinner walls. They are always oxidized and have an amber or olive-green glaze. It is interesting to note that the large illustrated jug (Fig. 160, 1172) has been fired together with copper-glazed jugs, as is evidenced by glaze runs on the base. The plain or grooved rod handle is attached at both joins by pushing the jug wall into the handle. The upper hole left by this method has been plugged and smoothed over. The top join is secured by two eyelet-pressings at the top and two large thumb-pressings at the bottom. Bases have four sets of four or five finger-

pressings. Decoration is usually with small iron-stained spots or, very rarely, with iron-stained scales. The jug from St. Mary's Guildhall (SMG82) (Fig. 159, 1172) is uniquely decorated with alternating vertical rows of iron-stained strips and scales. This jug also has an iron-stained applied blob on the front, below the missing rim, and it may be that a small face originally existed at this point.

15. PEAR-SHAPED TYPE 2 (FIG. 159, 1173)

Only a few of these small, thin-walled, pear-shaped

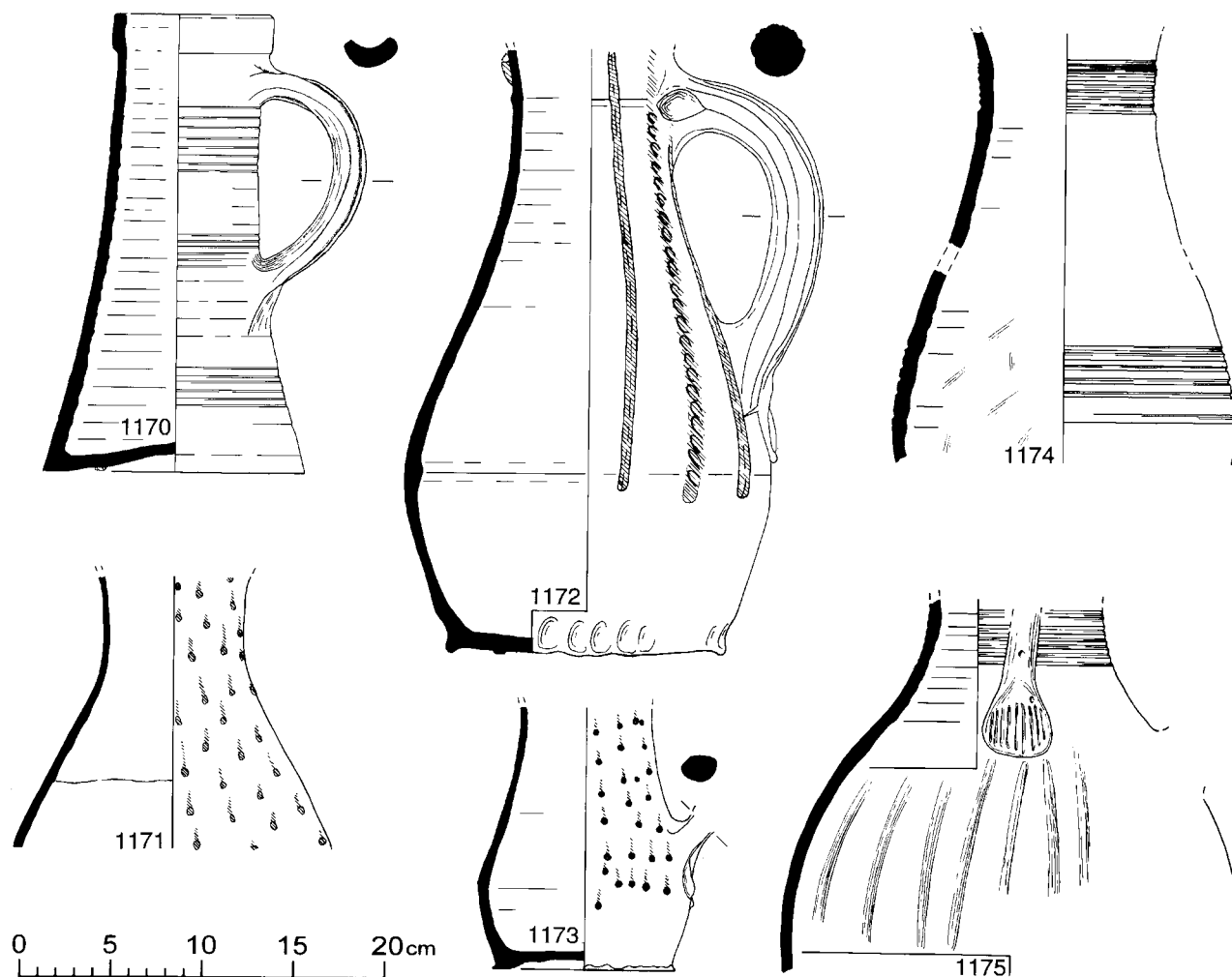


Fig 159 14th to 15th century Lincoln Glazed Ware: conical type 1 jug 1170; pear-shaped type 1 jugs 1171–1172; pear-shaped type 2 jug 1173; pear-shaped type 3 jugs 1174–1175. Scale 1:4

jugs are known and all examples come from deposits dating to, or containing, horizon MH6 material (late 13th to mid 14th century). All the vessels are oxidized and have a lustrous amber to olive-green glaze covering all but the base. Rims are either a small rounded collar, or are upright with a slight bead. Bases are unlike those on other LSW3 jugs in that they are left rough and untrimmed in the manner of those found on jars/pipkins and drinking jugs. The small rod handle is attached by smearing on to the jug and securing with two small finger-pressings at both ends. Decoration is of small iron-stained pellets arranged more or less randomly around the jug.

16. PEAR-SHAPED TYPE 3

(FIG. 159, 1174–5 AND FIG. 160, 1182)

These jugs differ from the other LSW3 pear-shaped jugs, in that they always have a copper glaze. The

type is later and belongs to horizon MH8 (late 14th to early 15th century). Vessels are thick-walled and are reduced internally, although external unglazed surfaces are red or bright orange. This type of jug is rare and no whole profiles have been found. Decoration is variable and may consist of simple grooved lines (eg, Fig. 159, 1174), or be more complex and have applied decoration. One vessel from the Danes Terrace site (DT74II) (Fig. 159, 1175) has applied arm decoration positioned in such a way as to indicate the presence of an applied face or a bridge spout fashioned as a face. This jug may be a waster, as it appears to have blown during firing. One of the arms has glaze across a break above the hand, and below the hand there is a spalled area. Another jug from the same site (Fig. 160, 1182) has false handles set below the rim and a bridge spout that may also have been in the form of a face.

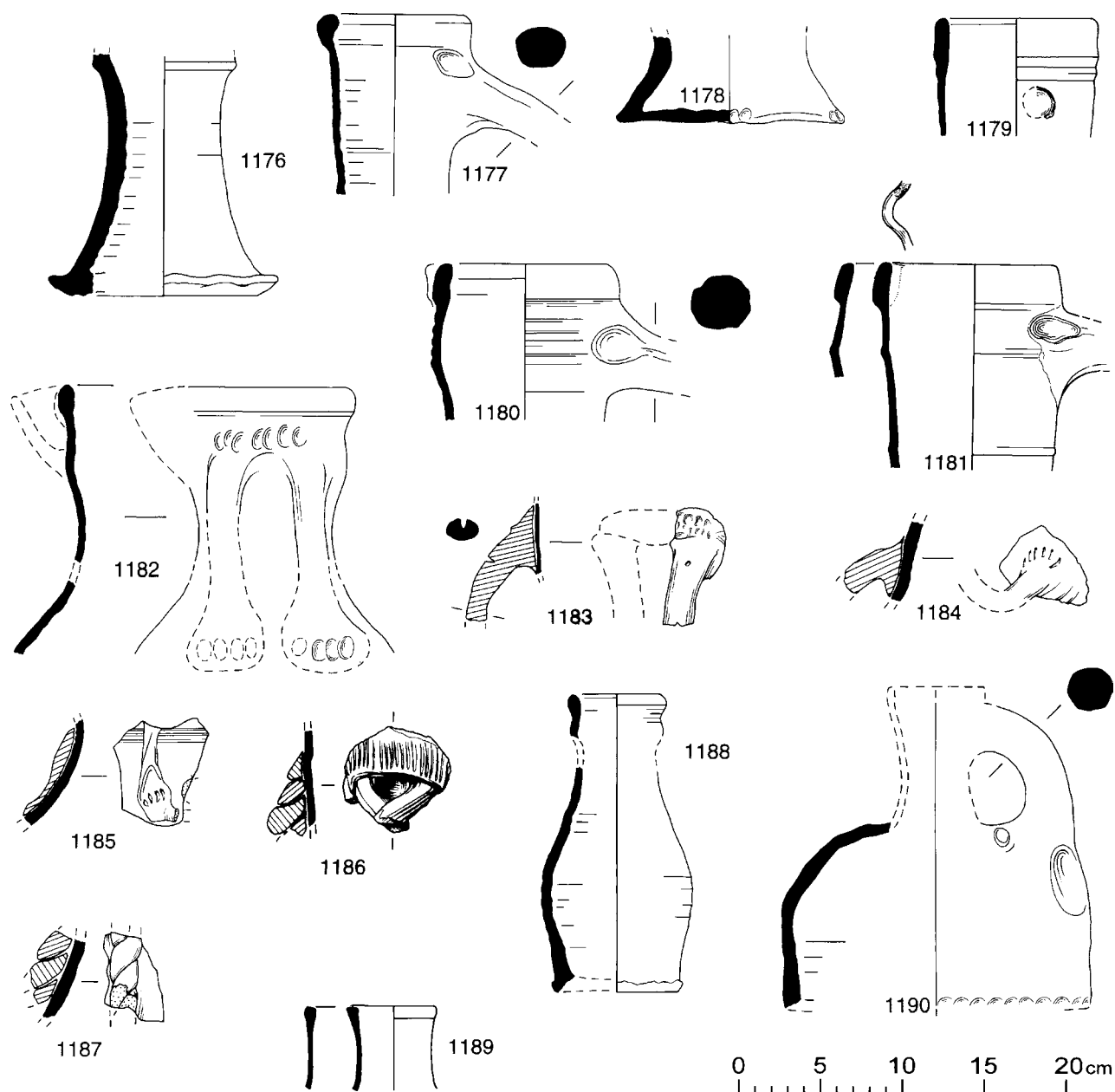


Fig 160 14th to 15th century Lincoln Glazed Ware: baluster jugs 1176–1178; rim types 1179–1181; anthropomorphic decoration 1182–1187; drinking jug 1188; bottles/narrow-necked jugs 1189–1190 Scale 1:4

17. BALUSTER (FIG. 160, 1176–8)

A small number of tall narrow necks and splayed bases recovered from the St. Mark's kiln site (ZE87) indicate that a baluster jug was made in LSW3. The vessels are quite crudely made and have a thick copper glaze.

RIMS AND SPOUT TYPES

Most rims found on LSW3 jugs are a development of the upright collar type found on LSW2 vessels,

with the collar becoming longer and less sharply defined (eg, Fig. 160, 1179–81). The bulging corrugated neck found on the LSW2 jugs has almost entirely disappeared except for a few isolated examples (eg, Fig. 160, 1180), although plain bulging necks are still common on several types of jugs until well into horizon MH7 (mid to late 14th century). The most common form of spout is a pulled lip, formed by pulling forwards part of the rim with the index finger, while holding back the rest of the

rim with the thumb and third finger. Bridge spouts are found more commonly than on the LSW2 jugs, although they are still almost always associated with highly decorated jugs, usually those with some sort of anthropomorphic decoration.

BASES

Base shapes are totally dependent on the type of jug on which they occur. Most are flat, and the basal angle has some sort of thumb- or finger-pressing or pulling. In horizon MH8 (late 14th to early 15th century) sagging bases appear on one type of rounded jug, but otherwise bases are intended to be flat. On one type of small pear-shaped jug, a typical jar or pipkin type base is used. This type of base is left untrimmed and is often rough on the underside.

HANDLES

To some extent handle types are dependent on the jug type. Generally, all except a few LSW3 jugs have plain or grooved rod handles. These handles are initially quite thin and well made, but by the late 14th century (horizon MH8) almost all of them are thick and poorly made. Distinctive eyelet-shaped pressings, formed with the inner edges of both thumbs, and pressed into the upper handle join while the jug is held upside-down, are typical of most late 13th- to mid 14th-century vessels (horizon MH6 and early MH7). Some jugs from the St. Mark's kiln site (ZE87) have a different pressing style, using four lower pressings, a feature that seems to be unique to that production.

DECORATION

Decoration of some form is found on most jugs during horizons MH6 and MH7 (late 13th to mid 14th century) and becomes rarer by horizon MH8 (late 14th century). Decorative techniques on LSW3 are more limited than those used on LSW2 and less imaginative than those on LLSW. Most decoration consists of applied strips, scales, and spots, often combined together to form simple motifs such as horseshoes, cartwheels and fleur-de-lis. Motifs are far more sloppily executed than those on LSW2 vessels and are more schematic, with several different motifs placed randomly around the vessel. Little use is made, except in horizon MH6 (late 13th to mid 14th century), of different coloured clays, although a white slip is still used to enhance the bright copper-green colour of some decorated jugs. Anthropomorphic decoration, including applied faces, beards (eg, Fig. 160, 1187), arms (eg Fig. 160, 1184–5) and legs fashioned as false handles (eg, Fig. 160, 1182–3 and 1186), is still commonly used, although it is seldom put together to form a meaningful figure (eg, Fig. 156, 1155).

Small Drinking Jugs (Fig. 160, 1188)

Fragments from fewer than 20 vessels of this form have been identified from the city. The most common profile to occur is a pear-shaped vessel. The jugs are always oxidized and usually have an amber or reduced green glaze, sometimes mottled with copper specks. They have simple collar, or beaded rims and an untrimmed base. The few handles that have been found are of a thin, rod type, secured at the upper and lower attachment points with two small finger pressings.

Bottles/narrow-necked Jugs (Fig. 160, 1189–90)

A small number of narrow necked vessels can probably be identified as bottles. They are varied in manufacture, ranging from thin-walled, well-made vessels (eg, Fig. 160, 1189) to the crude example found at the St. Mark's kiln site (ZE87) (Fig. 160, 1190).

Bunghole Jugs (Fig. 161, 1191–2)

Only four of this vessel type in the LSW3 fabric are recorded in the database; three are from the Danes Terrace site (DT74II) and one is from the St. Mark's kiln site (ZE87). The single plain bung from the DT74II site has been smoothed on to the outside wall of the cistern and a small hole pierced through the bung into the vessel wall. The surplus clay from this operation has been roughly smeared to the inside wall. All the other three examples are from upper parts of the vessel, and appear to represent waste production. Although they are all slightly different, they do have some stylistic similarities. They are all covered in a thick, lustrous copper-green glaze, have two large grooved or plain rod handles, and the rim and neck of the vessel are ornamented with two rows of thumb-pressed strips. They appear to belong to horizon MH8 or possibly early MH9 (late 14th to early 15th century).

Small Jars and Pipkins

The problem of attributing these forms to individual Lincoln Glazed ware productions has already been discussed (page 108). Only 20 LSW3 vessels (less than 0.25%), can be identified as either small rounded jars or pipkins, although, as has already been pointed out, *c.*14% of vessels classed as LSW2/3 are of these forms. Vessel shape is similar to that of jars or pipkins made in LSW2, the only real difference being the presence of an internal glaze, concentrated on the base of most of the LSW3 examples.

Bowls

Fragments of 12 LSW3 bowls have been found in the city, with five examples coming from the St. Mark's area sites (Z86, ZE87 and ZEA95) and three from one of the Danes Terrace sites (DT74II). It is perhaps

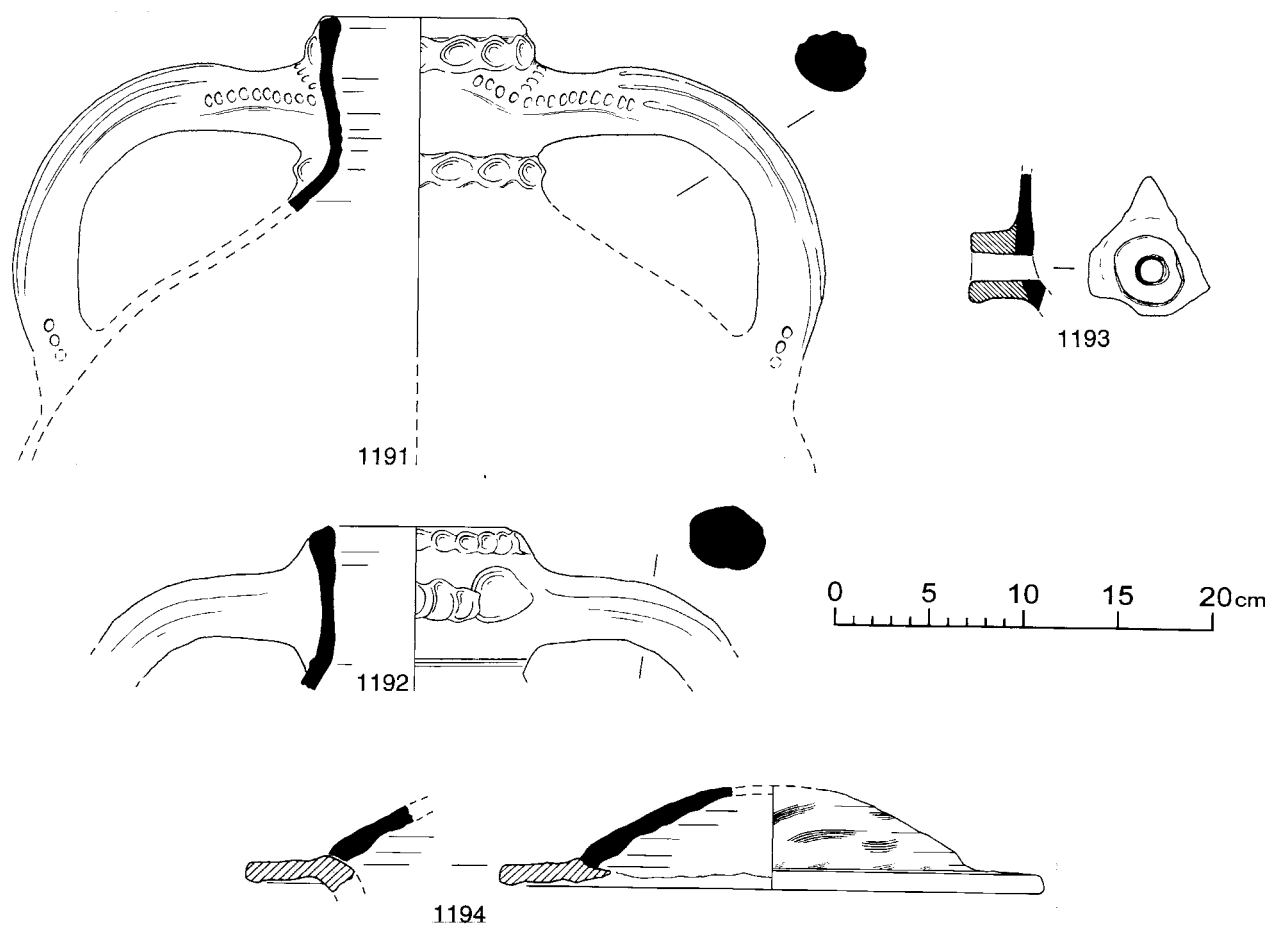


Fig 161 14th to 15th century Lincoln Glazed Ware: bung-hole jugs 1191–1193; lid 1194. Scale 1:4

coincidental that both of these areas have produced wasters, but it makes representation of the form elsewhere in the city very rare. Only two vessels are stratified in contemporary deposits, dated to horizons MH8 or MH9 (late 14th to mid 15th century).

1. PLAIN BOWLS (FIG. 162, 1195–7)

All but four of the bowls found are of a simple, medium-sized, wide-mouthed flared type (eg, Fig. 162, 1195–7). Rims are of a simple, plain, rounded type, or are folded over and everted. Vessels are oxidized to a bright orange colour and have a thick internal, copper-green glaze applied over a light orange-to-buff slip. The glaze appears to have been poured into the base and swirled around, giving a thick cover on the bottom and patchy or unglazed areas nearer to the rim. The bowls are similar to the utilitarian shell-tempered POTT examples and were probably for use in the kitchen or dairy.

2. BASKET-HANDLED BOWLS (FIG. 162, 1199)

Three basket-handled bowls, one with zoomorphic decoration, seem to be a more elaborate type, possibly used at the table, if they were not intended for some other purpose such as displaying flowers. They have a thick copper-green glaze on both the internal and external surfaces. One of the applied and then impressed eyes of the illustrated zoomorphic figure has been infilled with white clay. A similar anthropomorphic bowl was found at Thornholme Abbey (Hayfield 1985, fig. 83, 9).

3. STAMPED BOWLS (FIG. 162, 1198)

A single flared bowl of this type was found at the St. Paul-in-the-Bail site (SP72). The reduced vessel is thick walled and crudely made, possibly not on a wheel. The oxidized base has been formed on a flat sanded surface and the underside of the bowl is the only part of the vessel not covered with a thick copper-green glaze. The rim has faint traces of

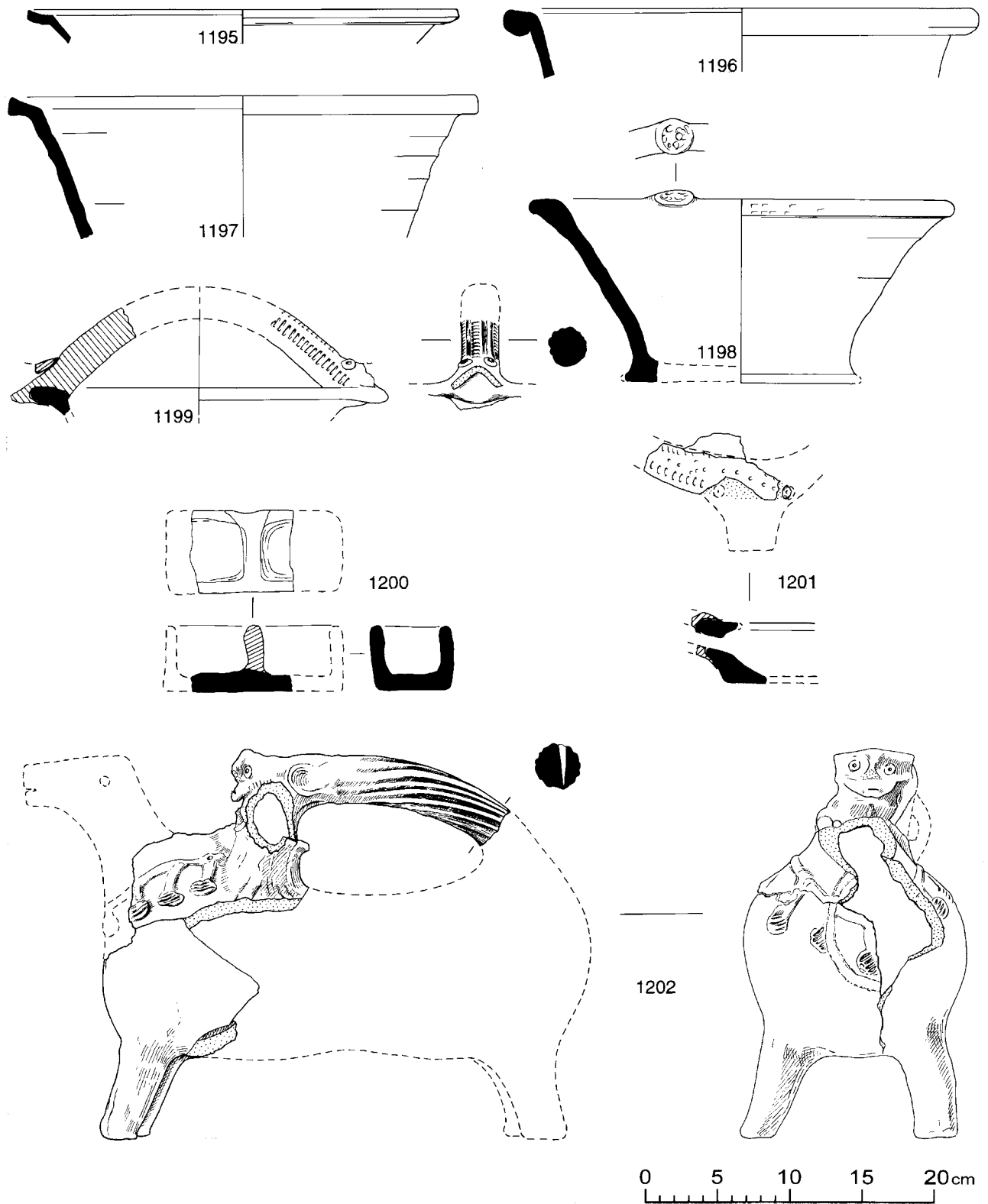


Fig 162 14th to 15th century Lincoln Glazed Ware: bowls 1195–1199; divided dish 1200; dripping dish 1201; aquamanile 1202. Scale 1:4

rectangular roller-stamping, and a circular pad of clay, with a poorly formed grid stamp, has been applied to the rim.

Lids (Fig. 160, 1194)

Only three LSW3 lids have been identified amongst the material from the city. Of these, only the illustrated example has enough of the vessel present to determine shape. This elaborate flanged lid from the Danes Terrace site (DT74II) is a waster, and comes from horizon MH8 deposits (late 14th to early 15th century). The vessel is formed from a thrown dome applied to a thrown ring of clay. Unfortunately, the lid is broken underneath the flange, although enough remains to show a wide cut-out present in the collar, indicating perhaps a locking mechanism. The exterior and part of the interior are covered with a thick, lustrous copper-green glaze. Diagonal lines have been combed on both the dome and the flange of the vessel.

Divided dishes (Fig. 162, 1200)

A single divided dish in LSW3 came from a 14th- or 15th-century deposit (horizon MH8 to MH10) at the Hungate site (H83). The main sides and the base have been formed as one slab, on a sanded flat surface, and then the two sides have been bent upwards and the whole of the sanded surface trimmed. A partition has been inserted and the whole vessel, except for the underside of the base, has been covered with a thick copper-green glaze.

Dripping Dishes (Fig. 162, 1201)

Fewer than 20 vessels in LSW3 have been noted, and all except the illustrated example are plain and undecorated. Similar-slab made and glazed vessels are part of the LSW2 production. No complete width or length sections are present, but it is possible to generalise that they are larger than the LSW2 vessels. The illustrated form may have been wheel-thrown and has an inturned rim decorated with rectangular roller-stamping and the remains of a zoomorphic spout. Examples of LSW3 dripping pans are found from the late 13th to 15th centuries (horizons MH6 to MH9).

Aquamanile (Fig. 162, 1202)

A few unusually-shaped sherds may be from an aquamanile similar to the illustrated LSW3 copy from Boston (kindly brought to our attention by Hilary Healey). This vessel is extremely crudely made, although there is plenty of expression in the modelling. Wide cracks in the side and the fact that the neck is covered over with glaze, indicate that this vessel is a waster. A scar has been caused on the front of the horse by knocking off the rim of another vessel fused to it during firing.

Pedestal Lamp

A single sherd from a handled pedestal lamp is recorded.

Source

Eight samples of LSW3 from Lincoln were examined in thin-section (L1327, L1330, L1841, L1842, L1843, L1844, L1845, L1846). All contained a typical Trent Valley quartzose sand and most also contained moderate rounded and laminated clay pellets. There were variations in the appearance of the clay matrix, due to firing conditions. Kiln wasters have been found at the St. Mark's kiln site (ZE87) stratified below LLSW production. A small number of definitely wasted vessels were recovered from the Danes Terrace site (DT74II) indicating that production probably took place in or near to the Lower City as well as in Wigford.

Dating

Nearly 7000 sherds of LSW3 have come from excavations in the city, with *c.*24% from the Danes Terrace (DT74II) site and *c.*17.5% from Flaxengate (F72). It is difficult to assess the impact of this ware because assemblages from the mid 14th century (horizon MH7) onwards are governed by two main factors: first, less material is deposited on sites occupied during the late medieval period, and secondly, much of the pottery has been recovered either from deposits that cannot be dated to a single horizon, or that represent destruction material and therefore contain a high residual element. The ware is first introduced in the horizon MH6 (late 13th to mid 14th century) where it represents between *c.*7% and 21% of the sherds recovered. Too few large horizon MH7 deposits (mid to late 14th century) are available to be confident about this period, although LSW2 should be residual by this time, leaving LSW3 as the main glazed ware in the city. Horizon MH8 deposits (late 14th to early 15th century) indicate that LSW3 forms at least *c.*30% of the material. Quantified groups show that LSW3 still forms *c.*10% of horizon MH10 assemblages (mid to late 15th century), although by this time the ware has probably become residual. Unfortunately, however, these groups and the only well-dated group of mid 15th-century material (horizon MH9 to MH10), from the Bishop's Palace (LBP72) (Chapman *et al* 1975, Group D) contain too high a residual element to show this.

Late Lincoln Glazed ware (LLSW) (Fig.163–79)

Fabric and technology

This ware type represents a totally different tradition from other medieval Lincoln glazed wares. Until the discovery of the kiln site at St. Mark's Yard East

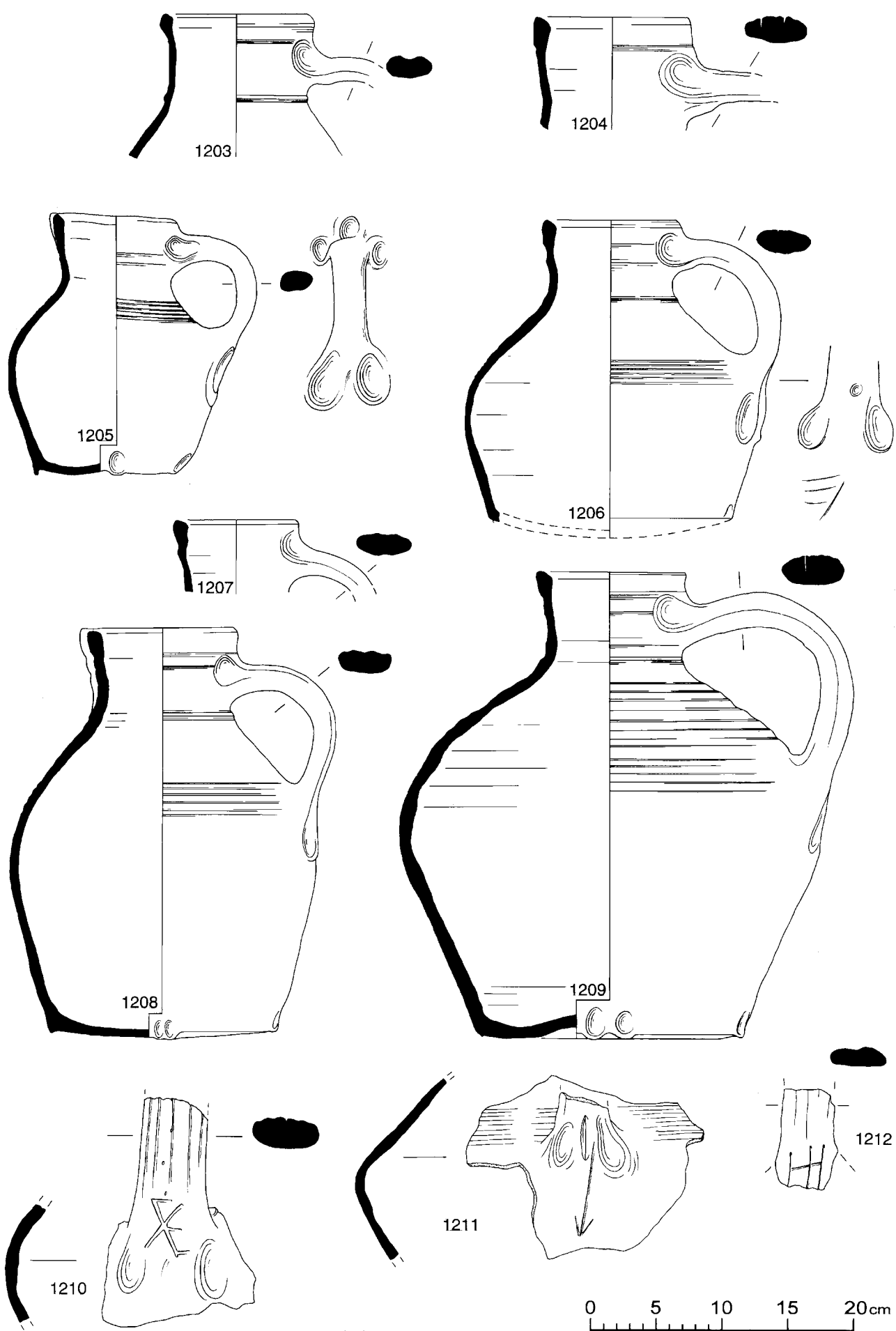


Fig 163 Late Lincoln Glazed Ware: squat type 2 jugs 1203–1209; makers marks 1210–1212. Scale 1:4

(ZE87; Chitwood 1988, 1990; Hooper *et al* 1988), most of this pottery was considered to be a regional import from the Humberside area. Less than 10% of the material from the kiln site has been archived or analysed, and the illustrated material represents vessel types located in an initial scan of the pottery following excavation. St. Mark's was not the only centre in the city producing LLSW, and it is not always possible to isolate the production source of individual vessels. The fabric of all LLSW is similar and consists of abundant, rounded quartz up to 0.4mm together with moderate, rounded and laminated clay pellets, sparse angular quartz up to 0.04mm, sparse muscovite and occasional rounded sandstone. The fabric colours, glazes, and manufacturing technology are all extremely varied; they are described below for individual vessel types. Possibly the only general difference that can be identified between the products of Wigford and those possibly produced in the Lower City near to the Saltergate site (LIN73E) is that the latter tend to have a heavily pocked, almost splashed-type glaze.

Forms

Jugs

1. SQUAT TYPE 2 (FIG. 163–4) (FIG. P3D)

These jugs are the most common form produced in LLSW. The jugs have a short neck and a wide-shouldered body. They were made in a range of sizes, with rim diameters ranging from 8cm to 12cm and heights from 20cm to 36cm. Vessels are primarily reduced to a very dark grey, with red to purple unglazed external surface, and have an external reduced olive-green glaze applied over

a white slip. The rims have a triangular profile and are usually chipped at some point around, as a result of the stacking of the jugs upside-down for firing. Handles vary according to the size of the vessel and to the different production centres. The smaller St. Mark's-type jugs have an uneven, plain, oval-shaped handle (eg, Fig. 163, 1205) while the larger jugs have a large oval grooved handle that is pierced down its length (eg, Fig. 163, 1204). All the handles are smeared to the outside of the jug, with some of the interior wall being pushed into both the upper and lower joins. The handles are secured on the outside with two small thumb-pressings at the top and two larger thumb-pressings at the bottom. Some vessels have additional small pressings at the top (eg, Fig. 163, 1205). Waster jugs found at Saltergate (LIN73E), however, have a wide strap handle with a central groove, plugged in at the top join (eg, Fig. 163, 1208). The bases of all this type of jug are slightly sagging, and have four sets of one or two finger- and thumb-pressings on the basal angle. Around the jug at or above the shoulder is a series of incised lines, and some vessels have a cordon at the neck.

It is extremely rare for these jugs to be decorated, and it is interesting that all examples so far found have elaborate motifs. In 1847–8, moulds for a male and a female head, together with trial pieces, were found in the Wigford suburb. Examples of two of these male heads have been found on excavations in the city (Fig. 163, 1214–5; Fig. P5a). The more complete vessel from Rand Church (Fig. 164, 1213; Fig. P4d) (Field 1983) indicates that they were placed alternately with the female head around a jug of this

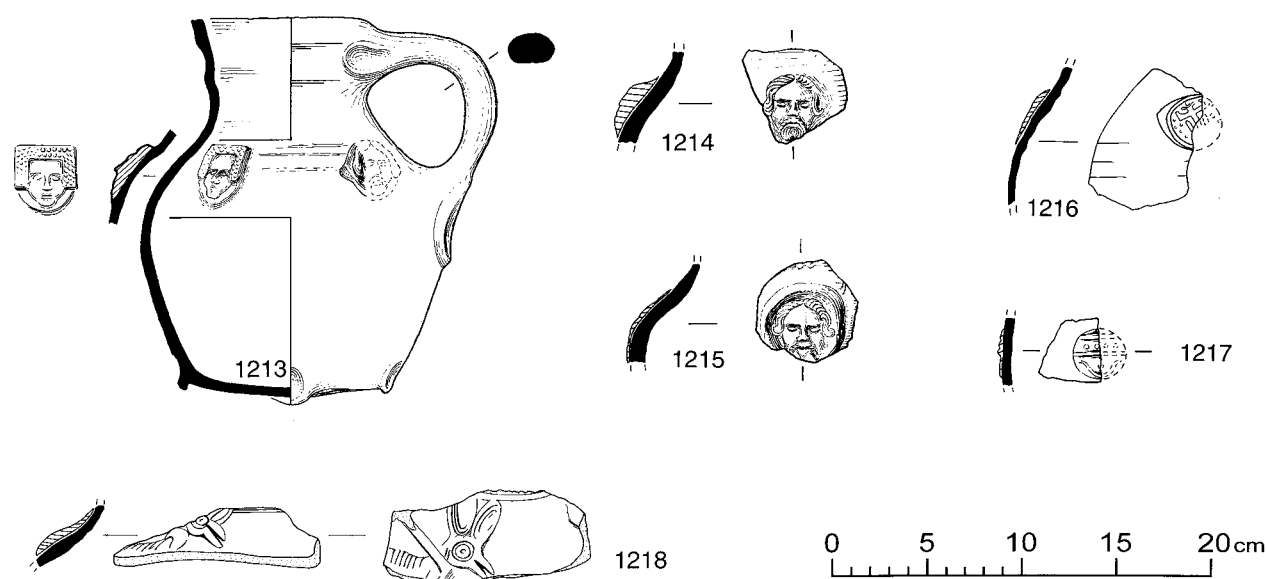


Fig 164 Late Lincoln Glazed Ware: decorated squat type 2 jugs 1213–1218. Scale 1:4

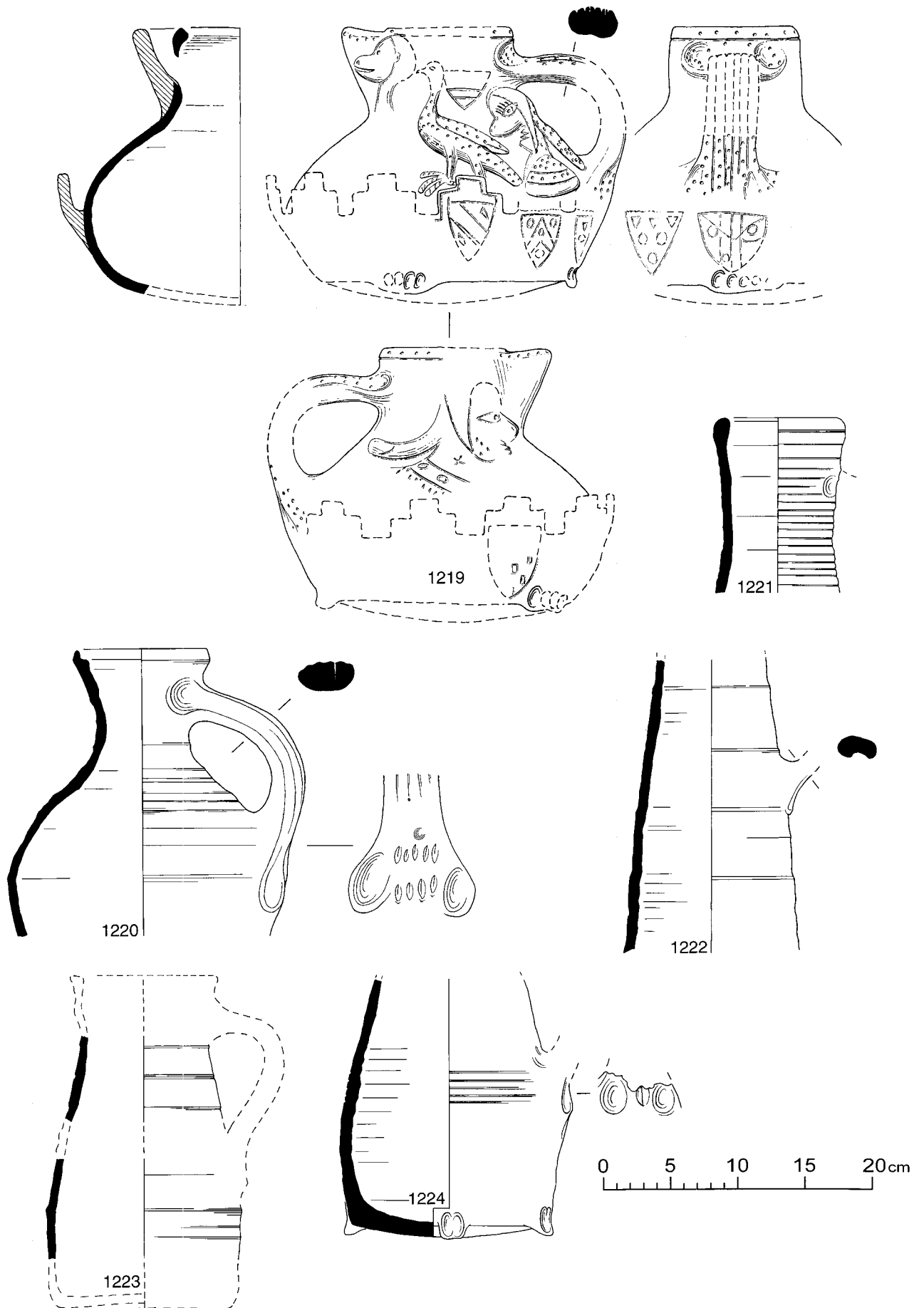


Fig 165 Late Lincoln Glazed Ware: squat type 3 jug 1219; rounded type 8 jug 1220; conical type 2 jug 1221–1222; conical type 3 jug 1223; pear-shaped type 5 jug 1224. Scale 1:4

type. Two further female heads have been found in the county, at Stow Church (Field 1984) and WLP92 (Tann 1994). Other motifs include an applied dog on a leash (Fig. 164, 1218) and medallions, one of which is formed of white clay (Fig. 164, 1217). Some of these decorated jugs are oxidized internally, are much more finely thrown than the plain jugs, and may belong to the LSW4 production. A number of the plain jugs from the St. Mark's kiln site (ZE87) were inscribed at the base of the handle before firing with makers' or batch marks, a range of which is illustrated (Fig. 163, 1206 and 1210–2).

2. SQUAT TYPE 3 (FIG. 165, 1219)

As only one profile of this type of jug has been recovered, it may be a unique type, with the shape of the jug designed specifically to meet the decorative style. The bridge-spouted jug is quite poorly thrown and the amber to olive-green glaze has been burnt in the kiln, making it difficult to decipher all of the decoration. A band of clay has been applied around the lower body and this has been cut to form a series of crenellations. Each crenellation has a different shield incised below. On the main part of the jug, two male figures attired in liripipe hats and two birds are modelled in relief. A further shield is incised on the neck of the jug, between one of the men and the birds. The rim edge, spout, handle and the relief decoration are all decorated with stabbing.

3. ROUNDED TYPE 8 (FIG. 165, 1220)

This type of jug is not common, although small body sherds would be impossible to identify. The jug is well thrown, with thin, even walls, and the fabric is usually oxidized to a light to bright orange. The exterior of the vessel is covered with a light to dark red slip, over which an apple-green to amber glaze has been applied. The rounded body is surmounted by a conical neck with a lid-seated rim. The grooved oval strap handle has been secured by pressing the wall of the jug into the handle at both the upper and lower joins. A plug of clay has been inserted into the upper hole left by this operation and then smoothed over. The lower handle of the illustrated jug is decorated with two rows of finger-end pressings and a single small round pressing, probably done with a tool, although other handles only have the two usual upper and lower thumb-pressings. The body of the jug is characteristically grooved. No base or lip/spout fragments have as yet been identified for this form.

4. CONICAL TYPE 2 (FIG. 165, 1221–2)

Wasters of this type were found on the St. Mark's kiln site (ZE87). None of the recovered vessels is glazed: all appear to be biscuit-fired in a light grey

to orange fabric. Fragments of conical jugs found on domestic sites are always glazed, although not enough of any one vessel survives to allow certainty about the exact form.

5. CONICAL TYPE 3 (FIG. 165, 1223)

Fragments of several jugs of this type have been found on sites in the city. They are more crudely thrown and are thicker walled than examples made in LSW4. Vessels are highly fired and are reduced to a very dark grey with unglazed external surfaces being purple. The olive-green glaze is often thin and patchy, becoming translucent where thinnest, giving a glossy purple surface. These jugs belong to horizon MH10 (mid to late 15th century).

6. PEAR-SHAPED TYPE 5 (FIG. 165, 1224)

This type of jug has so far only been identified on the St. Mark's kiln site (ZE87). All recovered examples are oxidized to a bright orange and are unglazed. The illustrated jug does have runs of glaze down the sides, but these are from another vessel stacked on its base during firing. This jug was poorly thrown and was patched up above the handle, at which point it split during firing.

7. BALUSTER (FIG. 166)

These jugs are made in a variety of sizes, with minor variations in detail occurring on jugs of differing sizes. All of the jugs are fully oxidized to a bright orange and have an amber to dark olive-green glaze, applied over a white slip, on the upper half of the vessel. Larger vessels tend to have rilling around the widest part (eg, Fig. 166, 1227), whereas the small jugs are plain (eg, Fig. 166, 1225). Rims are triangular in profile and can have a slight collar. Handles are oval in shape and are always grooved on the larger jugs, but may be plain on the smaller ones. The method of securing all the handle joins at the top is by two thumb-pressings, while the lower joins are varied, and as the type does not seem to correlate with the size of the jug, this is possibly an individual characteristic of each potter. In contrast, bases are a feature that vary with the size of the jug; the largest vessels have a splayed out base that is convex (eg, Fig. 166, 1227–8) and quite often found to be patched up, or inserted after throwing (Fig. 166, 1229); the smaller jugs have an untrimmed flat base (eg, Fig. 166, 1225–6). The large splayed bases may have overlapping thumbing on the basal angle, but this is entirely random. These jugs appear from the late 14th century (horizon MH8 onwards).

8. TALL, HIGHLY-DECORATED BALUSTER JUGS (FIGS. 167–70, AND 171, 1235–40)

The decoration of these tall-necked jugs is highly individualistic, and although more than 25 different

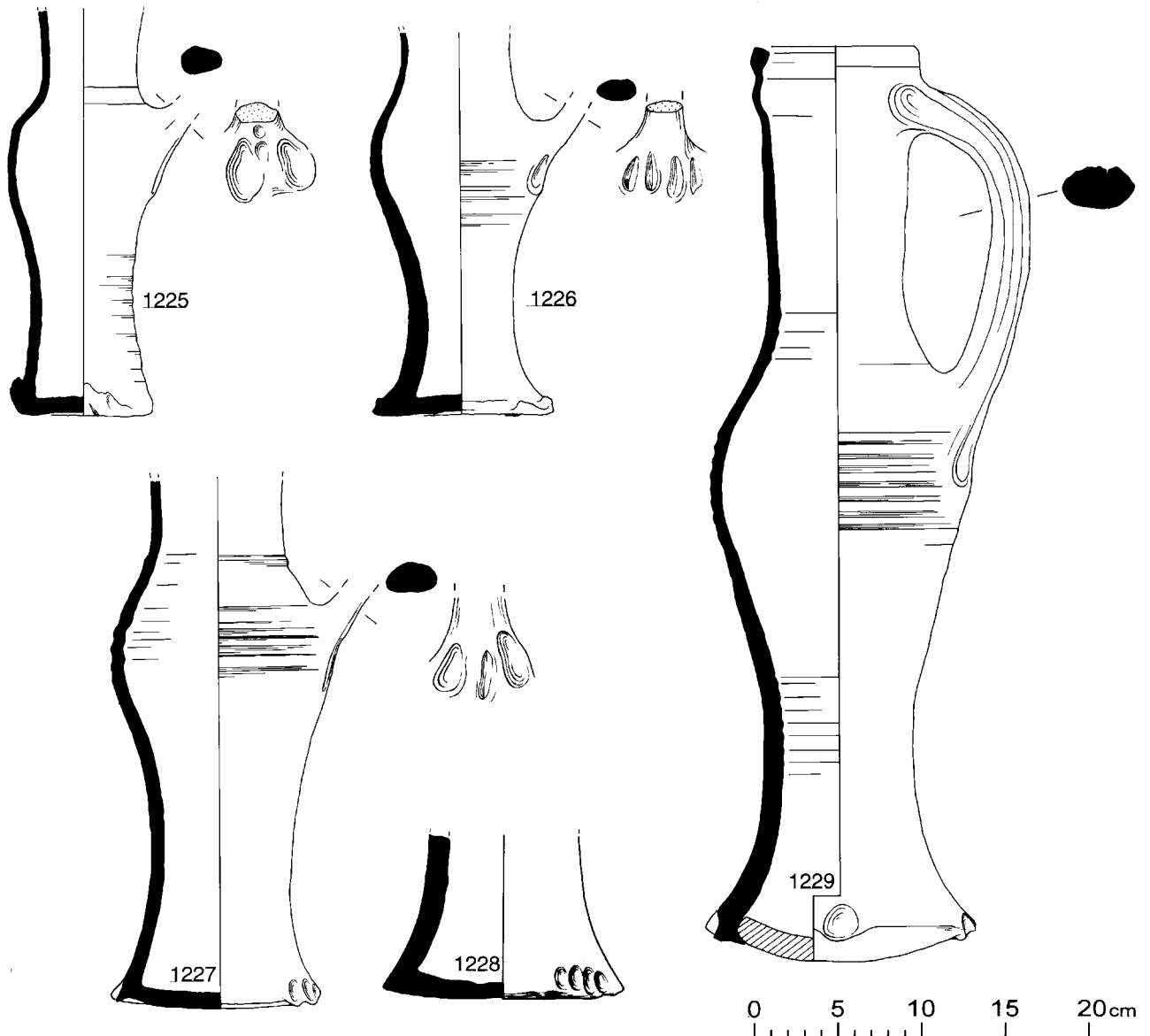


Fig 166 Late Lincoln Glazed ware: Baluster Jugs 1225–1229. Scale 1:4

vessels are represented by false handles alone, no two are identical. From the number of wasters found at St. Mark's, this type of jug seems to have been difficult to fire successfully. A number of sherds exhibit evidence for biscuit-firing. All examples have a bridge spout, large grooved oval handle, elongated splayed base and two pairs of decorated false handles. The jugs are usually oxidized to a bright orange, although unglazed external surfaces may be purple on harder-fired vessels. Glaze colours range from olive to brown, with only one unusual vessel (Fig. 170, 1234) having a copper-green glaze. Not all of them have the bridge-spout modelled as a human head (eg, Figs. 168 and 171, 1239–40; Plate 4c), although much of the decoration is reminiscent of

clothing with two rows of buttons down the front (eg, Figs. 167 and 169, 1233; Plate 4a). Some of the jugs have the applied decoration in white clay (eg, Fig. 170; Fig. P4b), giving a polychrome effect to the vessel. The most unusual example (Fig. 170) was found reused in a drain, associated with a building on the High Street frontage at the St. Mark's kiln site (ZE87). This jug is underfired and the soft, bright orange fabric is covered externally with a copper-green glaze. The vessel is made of three cylinders, one of which forms a hollow ring around the lower body and is perforated with several shapes. Three male faces are applied to the front and sides of the vessel and a fourth forms the spout. The false handles are in the form of twisted legs, and two

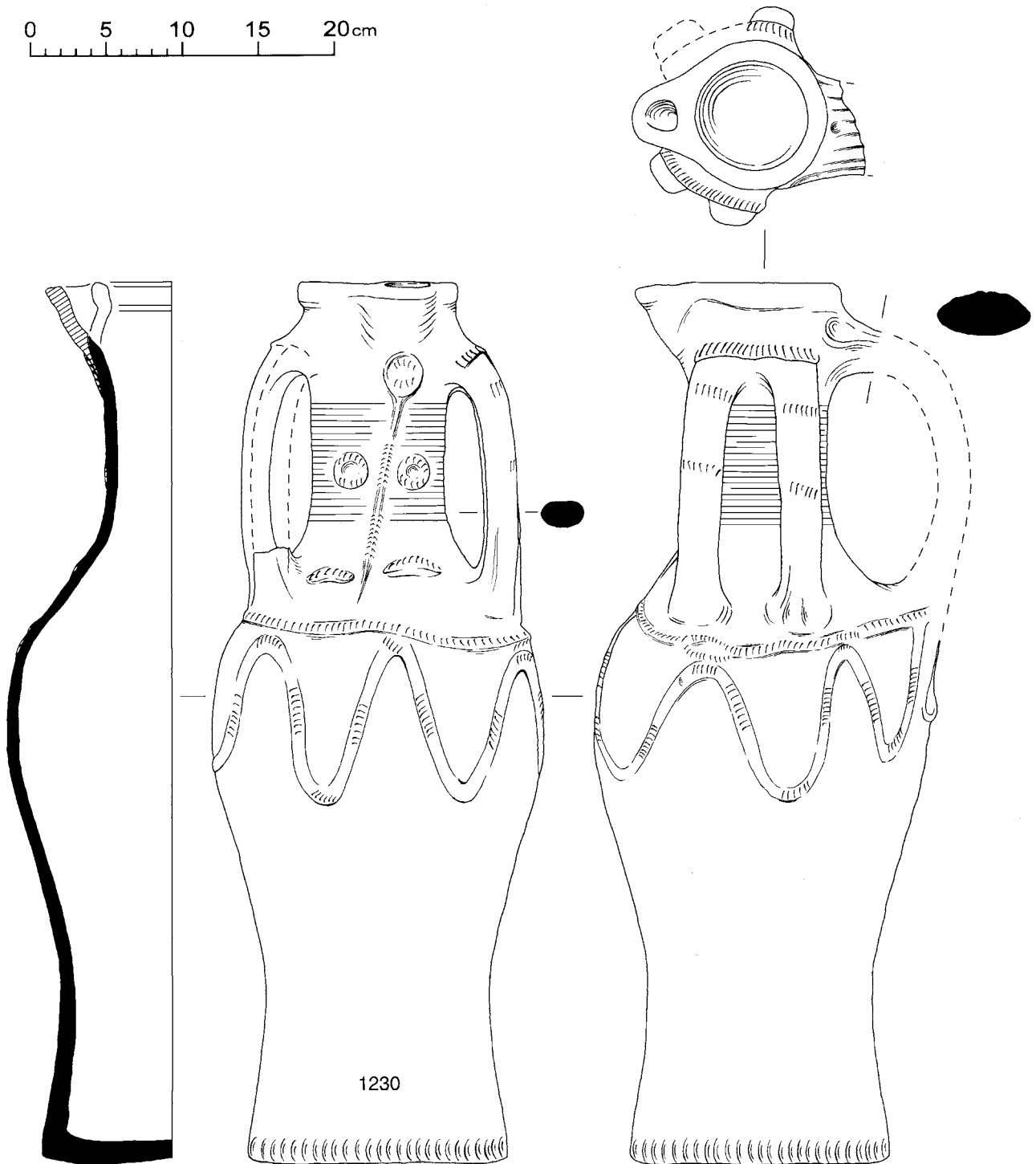


Fig 167 Late Lincoln Glazed Ware: tall highly decorated baluster jug 1230. Scale 1:4

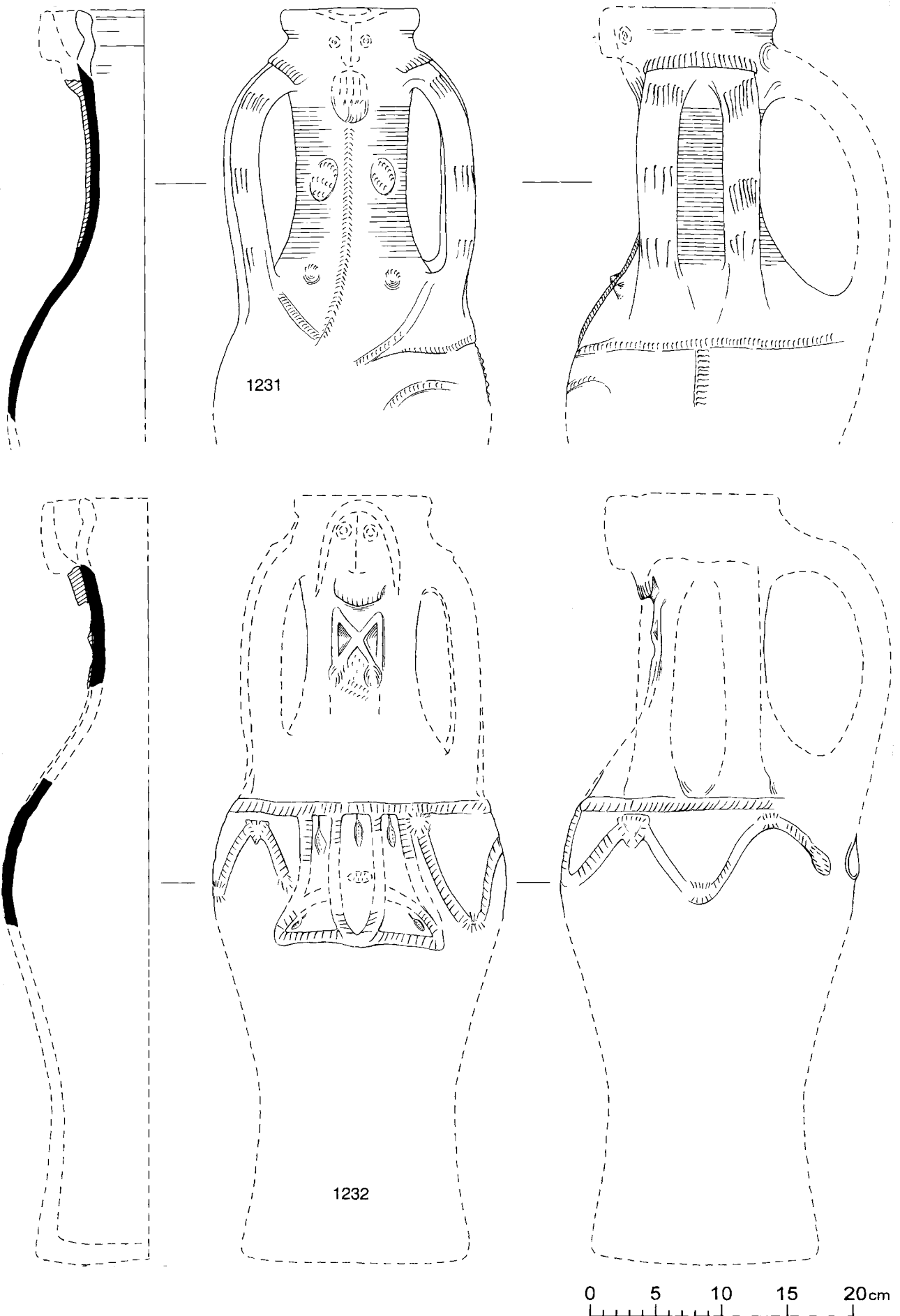


Fig 168 Late Lincoln Glazed Ware: tall highly decorated baluster jugs 1231–1232. Scale 1:4

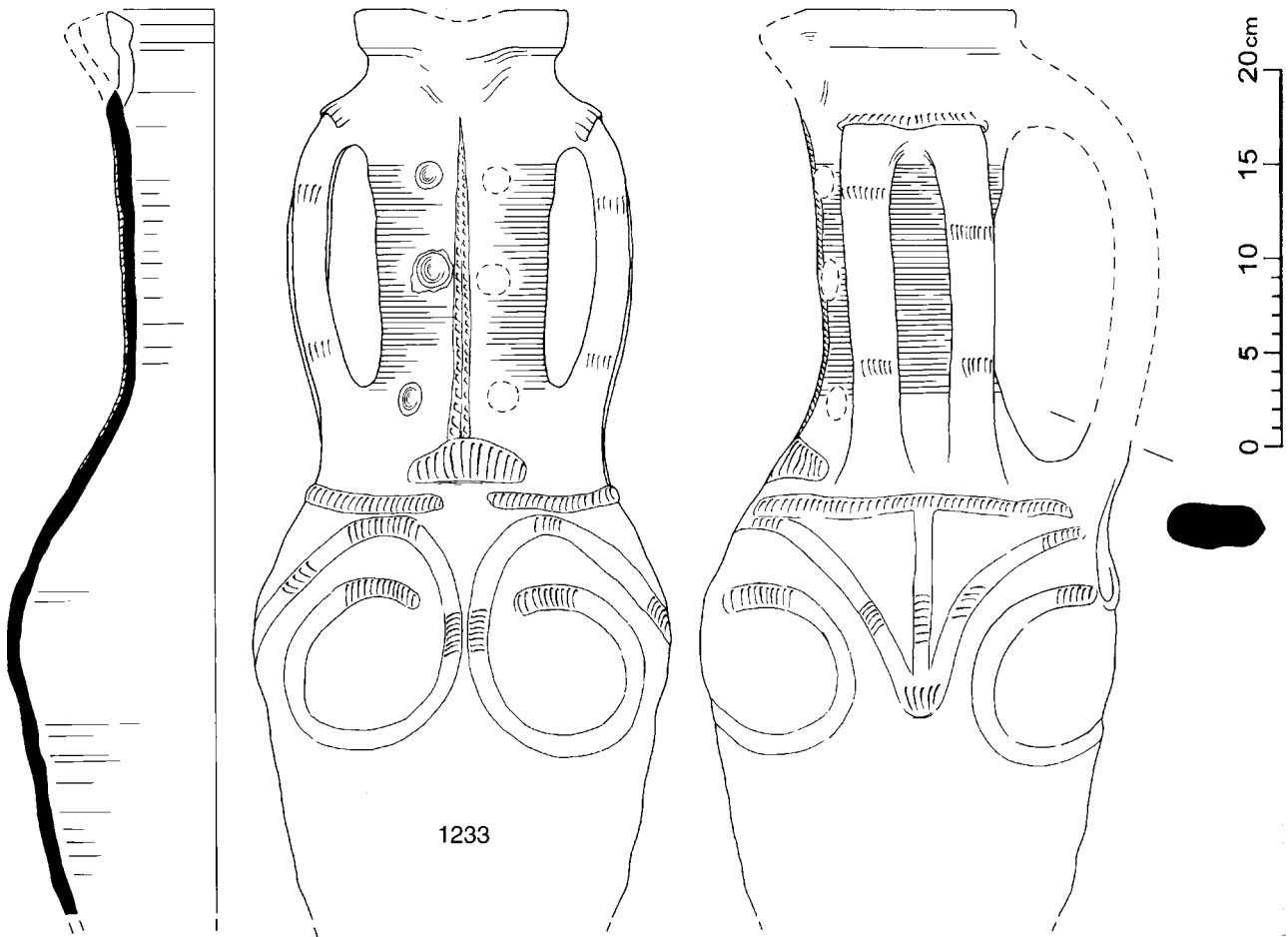


Fig 169 Late Lincoln Glazed Ware: tall highly decorated baluster jug 1233. Scale 1:4

shields are inscribed below the rim. These decorated jugs have mainly been found in deposits dated generally to between MH8 and MH10 (the late 14th to late 15th centuries). The occurrence of a few examples in exclusively horizon MH10 deposits (mid to late 15th century) does not preclude their belonging to an earlier period.

9. MINIATURE HIGHLY-DECORATED BALUSTER JUGS (FIG. 171, 1241)

One internally- and externally-glazed, small splayed base, and a few body sherds from this type of vessel were recovered from the St. Mark's kiln site (ZE87). The illustrated jug has a scene depicting a modelled human figure wearing a long robe, standing behind three modelled and incised large birds, possibly swans. One of the birds appears to be pecking the tail of another bird: it may be that this is a representation of the legend of the Saint Hugh of Lincoln (Bishop of Lincoln 1186–1200) and his tame swan (Farmer 1985, 109–11).

10. OTHER JUGS

As noted above, less than one tenth of the material from the St. Mark's kiln site (ZE87) has been archived, and amongst the unrecorded material a number of new jug shapes remain to be pieced together.

SMALL DRINKING JUGS (FIG. 172, 1242–51)

These small oxidized jugs have some individual traits (handle application and rim shape), but on the whole conform to a standard shape. They are quite crudely thrown and the bases are left rough and untrimmed. A small bib of glaze occurs on the front of the jug, opposite the handle, where the vessel has obviously been dipped into a liquid slip, followed by the glaze. The production of this form in graded sizes from 11cm to 27cm high suggests that one function for these jugs may have been as standard measures.

LOOP-HANDLED DRINKING JUGS (FIG. 172, 1252–4)

These narrow based, loop-handled drinking jugs are

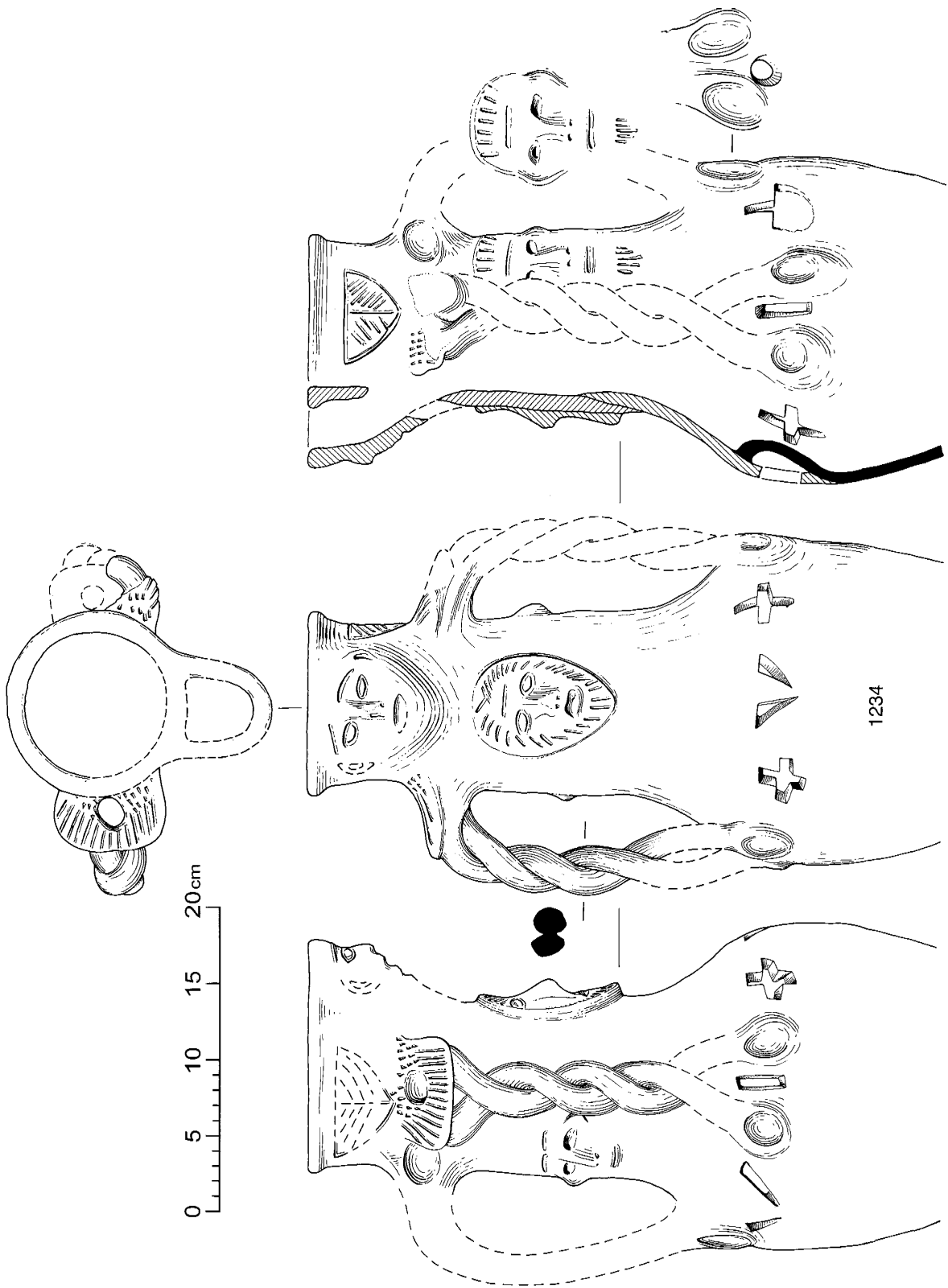


Fig 170 Late Lincoln Glazed Ware: tall highly decorated baluster jug 1234. Scale 1:4

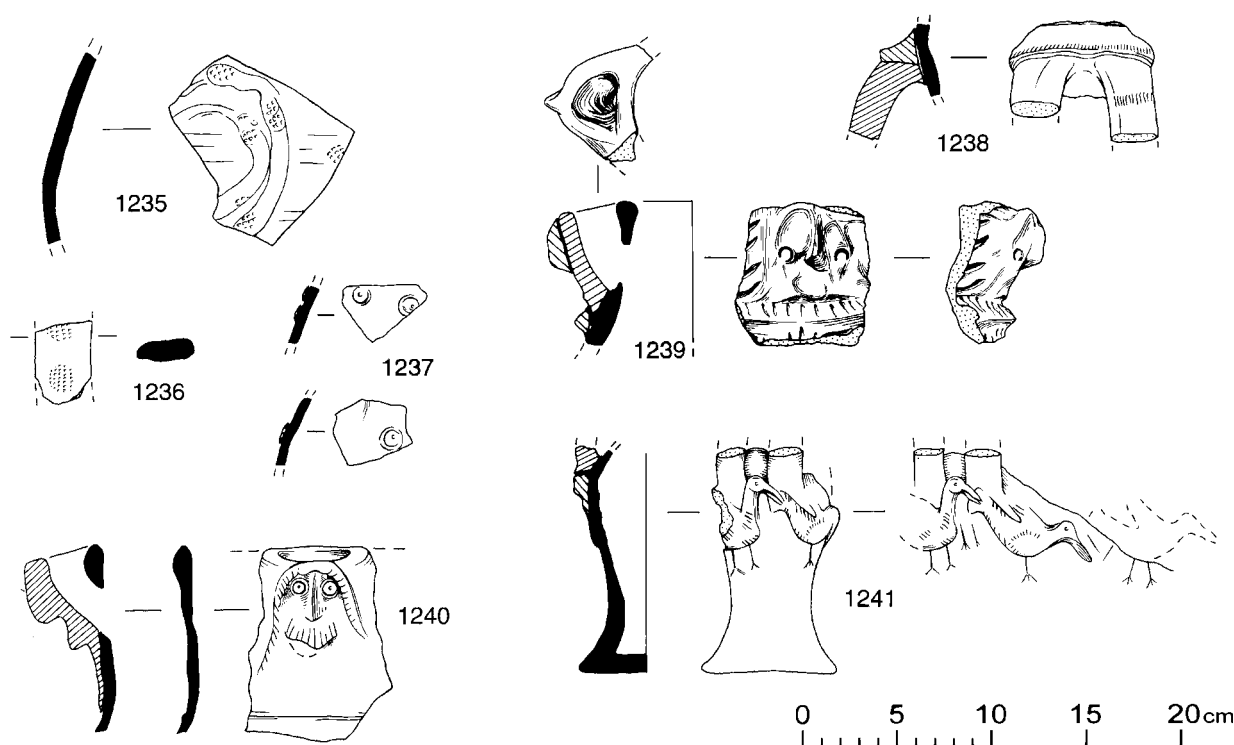


Fig 171 Late Lincoln Glazed Ware: tall highly decorated baluster jugs 1235–1240; miniature highly decorated baluster jug 1241. Scale 1:4

only found in later deposits on the St. Mark's kiln site (ZE87), and from the small number occurring on domestic sites appear to belong to the late 15th century (horizon MH10). All the jugs are well thrown, with thin walls, and are fully oxidized to a colour varying between bright orange and purple. A white slip is applied to most of the vessel except the handle, and the presence of this slip on the interior indicates that the jugs were dipped into it. A bright amber to dark green glaze covers at least the top third of the vessel and the inner part of the neck, again indicating that the jugs were dipped in a liquid glaze. The narrow bases are left untrimmed and few of the jugs are actually very stable, perhaps contributing to their short lifespan. One jug has an adhering blob of white clay, seemingly used as a spacer, rather than as any intended decoration.

PUZZLE MUGS (FIG. 172, 1255)

This form is very rare and is similar in shape to a Humberware vessel found at York (McCarthy and Brooks 1988, Fig. 240, 1660). The vessel is predominantly oxidized to a bright orange with a reduced grey core occurring at the base. A thick amber to green glaze is found covering both the internal and the external surfaces. The form is

thrown as a small bowl with a folded-over, hollow, rim that has small spouts attached at four or five points around the outer edge. Below the rim, a series of small round holes was pierced, making it impossible to tip the vessel without spilling the liquid contained. A narrow tube leads from a small hole just above the baseline up the side of the vessel to the hollow rim.

BOTTLES/NARROW-NECKED JUGS (FIG. 172, 1256–60)

A number of different shaped narrow-necked vessels can be grouped together as intended for liquid containment – although not all may be bottles. It is possible, for example, that if the missing fragments of some of the illustrated vessels (eg, Fig. 172, 1256 and 1259–60) were present, they would turn out to have been adapted for use as watering pots. The most commonly found type is a squat shape with a slightly flaring neck and grooved shoulder (eg, Fig. 172, 1257). Most of these vessels have an all-over internal and external olive-green glaze, although some vessels are only glazed externally. The vessels from the Saltergate site (LIN73E) in the Lower City have a heavily pitted external glaze and are not glazed internally, as opposed to the St. Mark's vessels that have a smoother glaze surface and an

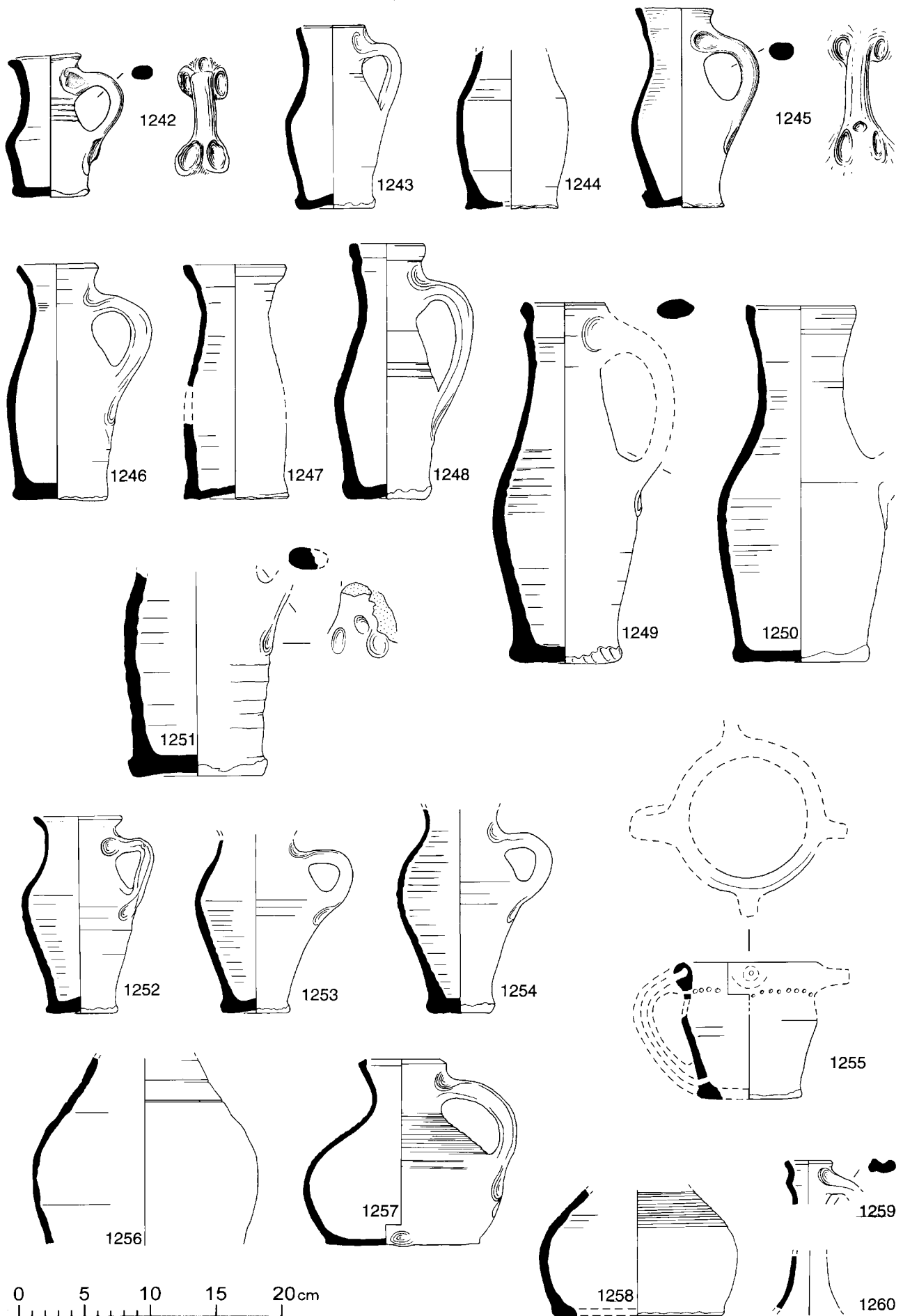


Fig 172 Late Lincoln Glazed Ware: small drinking jugs 1242–1251; loop-handled drinking jugs 1252–1254; puzzle mugs 1255; bottles/narrow-necked jugs 1256–1260. Scale 1:4

internal glaze. Bottles are found rarely and occur throughout the late medieval period (horizon MH8 to MH10), becoming more common in horizon MH10 (mid to late 15th century).

BUNGHOLE JUGS (FIG. 178, 1328–30)

This form is not a common find in LLSW, but its rarity may merely be a reflection of the difficulty of distinguishing bughole from plain jugs unless both handles, or a bung, are present. The form is an adaptation of a large, squat type 2 jug, with the exception that, due to the presence of the bung hole, most examples have partially oxidized interiors. The bungs vary in thickness, although all are about 4.5cm in diameter, and distinctively decorated around the circumference with a row of circular stabblings.

Jars, Cooking Pots and Pipkins

It is impossible to determine with most body sherds which type of jar is represented, resulting, in most cases, in an underestimation of frequency of the different specific forms found.

1. TINY JARS (FIG. 173, 1261–2)

These tiny jars are rare and, as they are commonly found heavily sooted, appear to have been used for some sort of heating process, possibly industrial. They have a thick glossy amber to green glaze over the top third of the outside and one vessel from St. Mark's has inscribed symbols on the shoulder.

2. GROOVED JARS (FIG. 173, 1263–4)

This is the most common type of LLSW jar found in horizon MH10 deposits (mid to late 15th century). The jars are made in a bright orange to purple fabric and are unglazed externally, although they often have an internal amber glaze over a white slip covering the internal basal area. They are rarely found sooted and appear to have been used mainly for storage.

3. HANDLED JARS (FIG. 173, 1265)

These are an adaptation of the grooved jars, with an applied pipkin-type handle looped over from the rim to the shoulder. The form is only known from St. Mark's and may have been intended as a chamberpot.

4. PLAIN UNGLAZED JARS (FIG. 173, 1266–8)

These are the most common type of jar found in LLSW, occurring throughout the production period. Jars range in size from 12cm to 20cm in diameter and, although they may have splashes and runs of glaze, these are incidental. The fabric is usually oxidized to a bright orange, although some vessels have an internally reduced surface. This form occurs both sooted and unsooted on domestic sites and probably had several functions.

5. LARGE GLAZED JARS (FIG. 173, 1269)

This form is uncommon in the city, although it may have been misidentified as a post-medieval product in early records. These oxidized jars are completely glazed, internally and externally, with a thick glossy olive-green glaze, and are usually found unsooted.

6. JAR OR CHAMBER-POT (FIG. 173, 1270)

A small number of thick, internally-glazed jars with flanged rims may have been intended to be used as chamber- or stool-pots. Vessels are oxidized to a bright orange and have a purple to brown external surface and a thick amber to olive-green internal glaze.

7. INDUSTRIAL JARS (FIG. 173, 1271)

These unglazed jars with slightly inturned rims are crudely made in a bright orange fabric. They are a rare occurrence, but seem to have been used in some process involving heavy sooting and not needing a perfect vessel, as the body of the pot is often repaired with patches of clay during manufacture.

8. INTERNALLY LID-SEATED JARS (FIG. 173, 1272)

These jars are rare before horizon MH10 (mid to late 15th century) and, like the large glazed jars, strongly resemble post-medieval vessels. The jars are basically oxidized but have a grey core at the thicker parts of the vessel, and are covered externally with a thick olive-green glaze, and internally with a partial glaze.

9. EXTERNALLY LID-SEATED JARS (FIG. 173, 1273)

These jars also appear to be late in the sequence, although most examples occur residually in destruction deposits. The vessel is oxidized to a bright orange, with unglazed surfaces usually a purple-brown colour. Glaze varies between apple-green and amber in colour and is only applied internally, often only on the base. Most of this type of jar is found heavily sooted up to the lid-seating, indicating that it was used with a lid in place.

10. PLAIN GLAZED JARS (FIG. 173, 1274–5)

A few jars, mainly with squared rims, have a partial internal glaze. Not enough of these jars are present to determine the extent of the glaze, or even if it was intentional. The occasional vessel has incised wavy decoration on the rim or shoulder.

11. PIPKINS (FIG. 174, 1276–84)

A wide variety of pipkins were made in LLSW throughout the production period. No discernible, clear chronological differences have been detected, although generally speaking, internal glaze occurs more frequently the later the horizon, and the flaring rims of some vessels (eg, Fig. 174, 1281 and 1284)

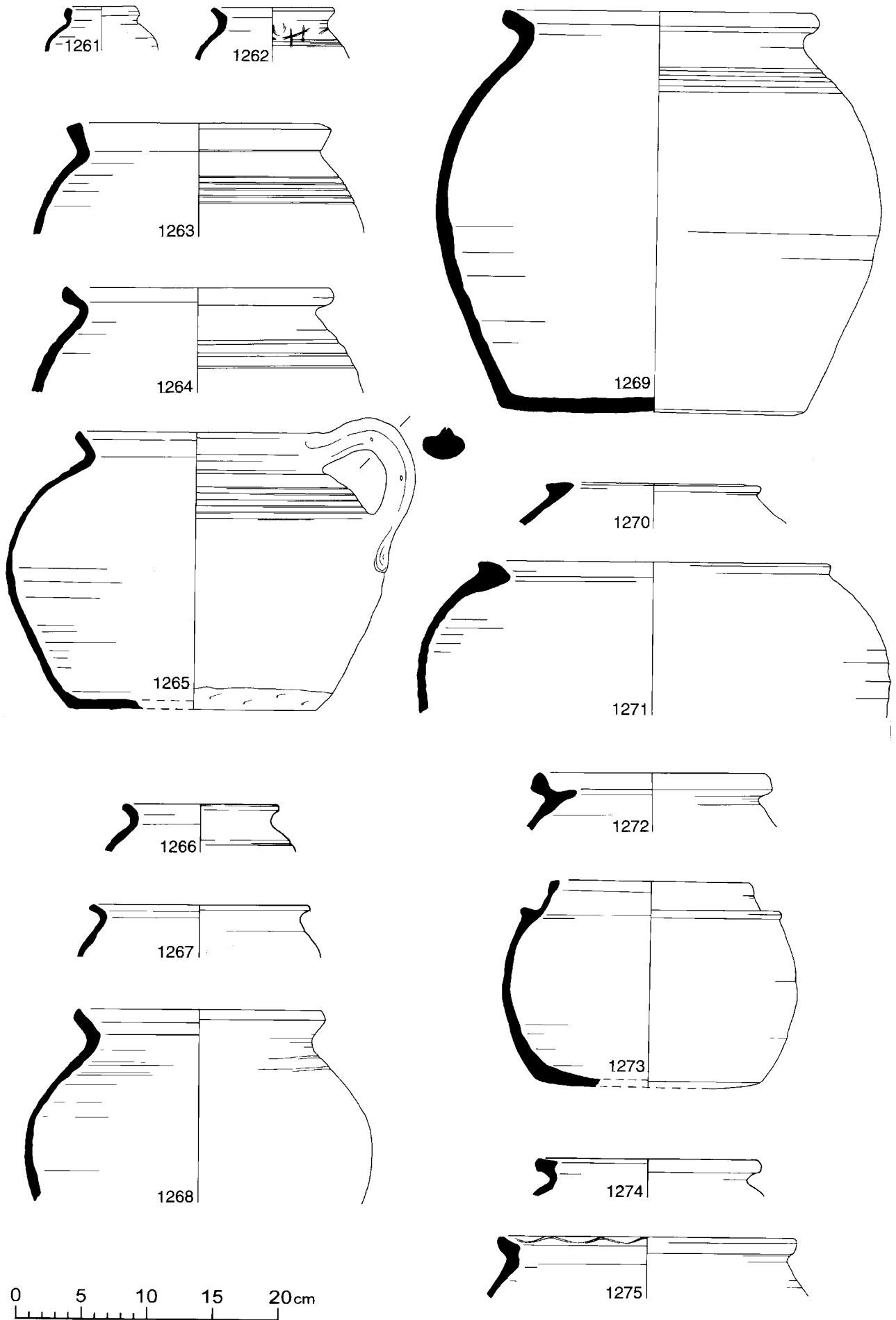


Fig 173 Late Lincoln Glazed Ware: tiny jars 1261–1262; grooved jars 1263–1264; handled jars 1265; plain unglazed jars 1266–1268; large glazed jars 1269; jar or chamberpot 1270; industrial jars 1271; internally lid-seated jars 1272; externally lid-seated jars 1273; plain glazed jars 1274–1275. Scale 1:4

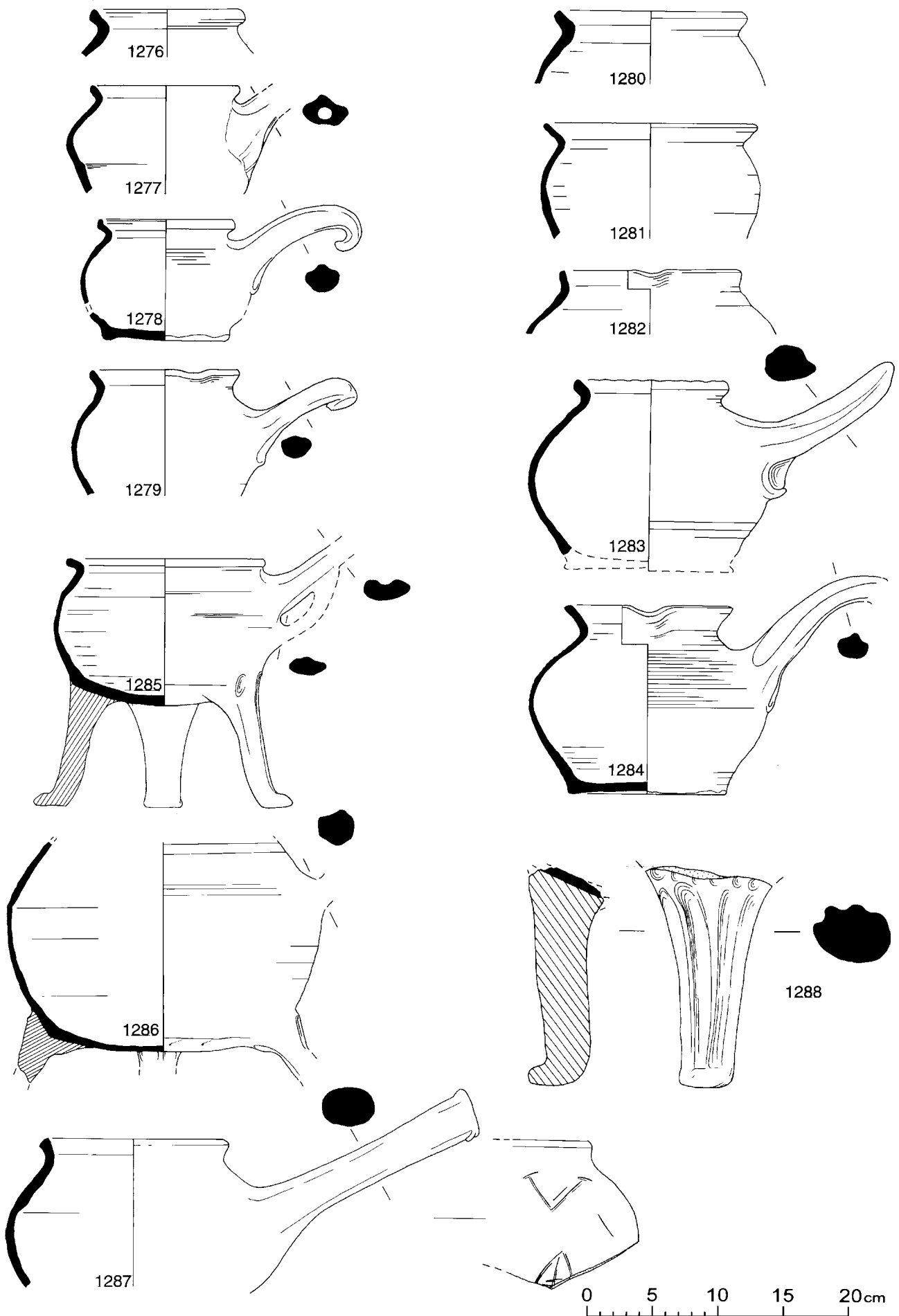


Fig 174 Late Lincoln Glazed Ware: pipkins 1276–1284; footed pipkins 1285–1286; long handled jars 1287; cauldrons 1288. Scale 1:4

seem to be typical of horizons MH9 and MH10 (15th century). Vessels are often difficult to distinguish from those made in LSW3, the only clear difference being that the LLSW examples have a white slip under the glaze.

12. FOOTED PIPKINS (FIG. 174, 1285–6)

Only a few footed pipkins have been found. More may exist unrecognised as the profile of the feet is similar to that of many pipkin handles. The pipkins have an internal glaze that only extends to covering the bottom of the larger vessels. Only the two illustrated vessels have handles, so no generalisation about handle types can be made. The smaller of the two illustrated vessels (Fig. 174, 1285) has a plain straight handle with a central groove and scars from a smaller loop handle set below. The handle scar from the larger vessel (Fig. 174, 1286) indicates a thin rod handle probably looping up to the rim, similar to examples on Low Countries Redware pipkins.

13. CAULDRONS (FIG. 174, 1288)

Fragments of large feet set on the bottom of a large jar form indicate that a type of cauldron was produced at the St. Mark's kiln site (ZE87).

14. LONG HANDLED JARS (FIG. 174, 1287)

This form is a basic, unglazed, oxidized jar with a long straight rod handle applied to one side. A similar form was made in kiln 1 at Toynton All Saints (Healey 1975). The LLSW examples are unique, however, in that the interior of the vessel has been coated before firing with what appears to be a substance similar to pitch. The illustrated example has a crude letter 'V' incised on the shoulder and an upside-down shield with a central cross incised below the handle. Both motifs were executed before the vessel was fired.

Bowls and Dishes

1. LARGE FLARED BOWLS (FIG. 175, 1289–93)

This shallow type of bowl is found on sites in horizons dating mostly to MH9 and MH10 (15th century), although examples have been found in horizon MH8 deposits (late 14th to early 15th century). The bowls are oxidized to a bright orange, except at the thicker points of the vessel, such as the rim and basal angle, where a grey core is sometimes found. They are well thrown, well finished, and have simple everted or hooked-over rims, which are easy to mistake for post-medieval examples. The bowls have an internal glaze, varying from amber to olive-green, applied over a white slip.

2. SMALL BOWLS OR DISHES (FIG. 175, 1296–7)

These small oxidized bowls must have had a multiplicity of uses, as they are found both sooted and

unsooted, and may have fulfilled such diverse uses as lamps, condiment dishes and drinking bowls. All the LLSW examples seem to be quite poorly made and finished, although the vessels have thin walls and neat, rounded rims. They are usually a bright orange colour, with red unglazed surfaces and an amber or green internal glaze, applied haphazardly. Vessels appear to have been fired both vertically and upside-down, possibly stacked base to base and then rim to rim. Occasionally two of the small bowls have been joined together to form multiple dishes.

3. SMALL LOBED BOWLS (FIG. 175, 1298–9)

Several of the small plain bowls were adapted by pressing in the sides, to form a five-lobed vessel. They tend to have a more careful cover of glaze on the inside and may occasionally be partially glazed on the outside.

4. LARGE LOBED BOWLS (FIG. 175, 1300)

This is a very rare form in LLSW and may be an early attempt by the St. Mark's potters at making the form before the white firing Late Medieval Fine ware fabric was used. The oxidized vessels are finely thrown and are covered with an amber or olive-green glaze on both the interior and exterior. The rim of the bowl is pinched together at several points on the inside of the vessel, producing a lobed effect.

5. DOUBLE-HANDLED BOWLS (FIG. 175, 1295)

A few examples of bowls have a round-sectioned handle applied horizontally over the rim. These oxidized bowls have an internal amber or olive-green glaze and are usually found heavily sooted on the exterior. The illustrated example has a row of stabbing along the top of the handle.

6. LIDDED BOWLS (FIG. 175, 1294)

A small number of internally glazed bowls have a ridge about 4cm below an upright rim to enable a lid to be placed over the vessel.

DIVIDED DISHES (FIG. 175, 1301–2)

These small, slab-made, sub-rectangular dishes are an uncommon find and seem to serve at least two different functions. One type of dish is finely made with thin walls, and is covered both internally and externally with a thick, reduced green glaze. The illustrated example (Fig. 175, 1301) has the stub of an applied handle on the rim and was probably intended as a condiment dish. The other type of dish is less well made and does not have intentional glazing. The illustrated example (Fig. 175, 1302) has a central hollow in the bottom of the vessel and the surviving three sides have incised motifs. These unglazed dishes are more likely to have had a medicinal or industrial function.

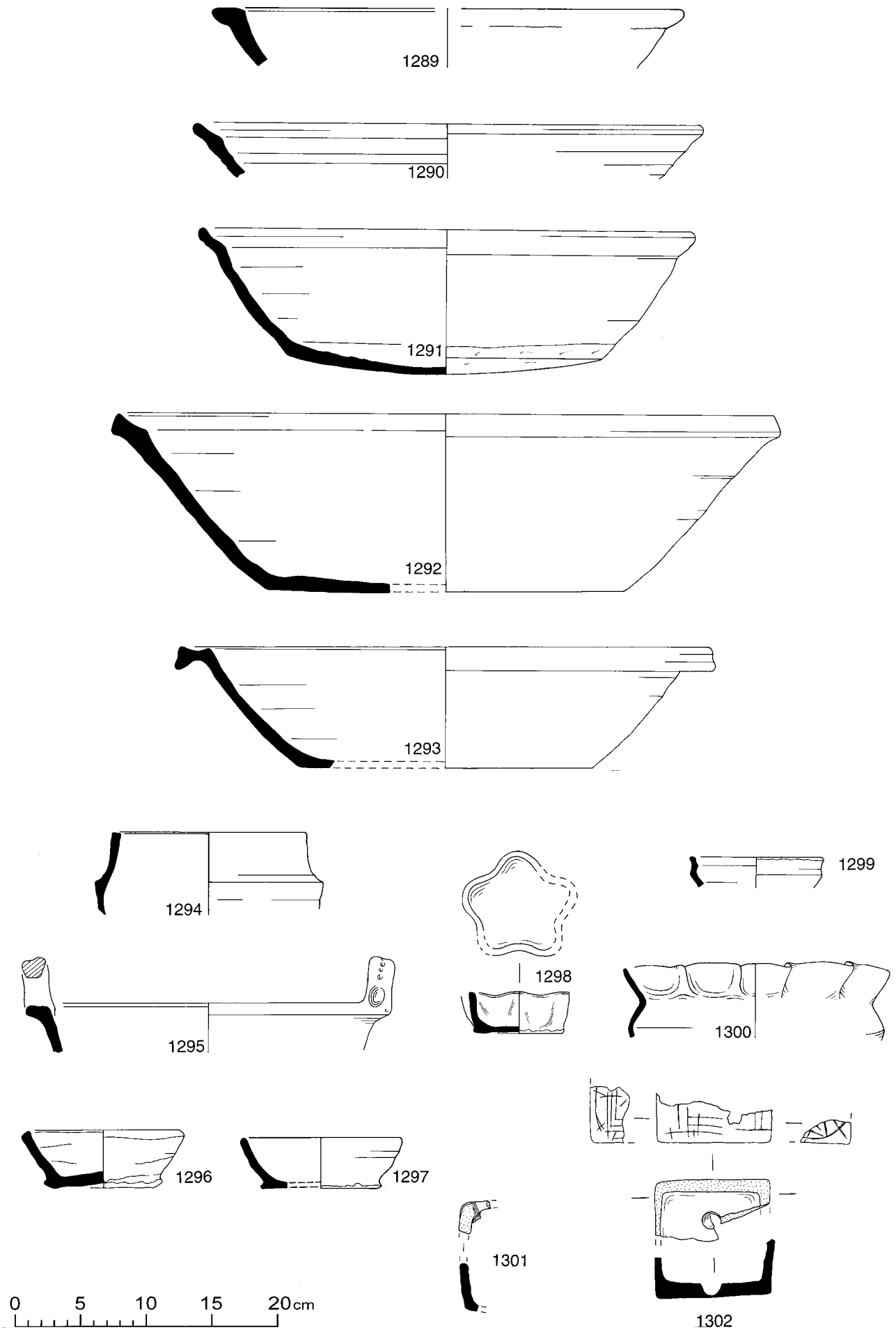


Fig 175 Late Lincoln Glazed Ware: large flared bowls 1289–1293; lidded bowls 1294; handled bowls 1295; small bowls or dishes 1296–1297; small lobed bowls 1298–1299; large lobed bowls 1300; divided dishes 1301–1302. Scale 1:4

DRIPPING DISHES (FIG. 176, 1303–5)

This vessel type forms about 1% of LLSW recorded, and is distinguished from other Lincoln types by being well formed. The base of the dish has been formed from a long oval-shaped slab of clay, pressed down on a sanded surface, whilst the side walls are wheel-thrown as a cylinder, and then cut and

applied to fit around the base. One long end is pulled to form a pouring spout and the other end is squared off. A variety of handle types have been found, including a horizontal strap and looped side handles. All the vessels are oxidized to a bright orange and have a thick amber to brown, internal glaze, applied over white slip. Most vessels have a

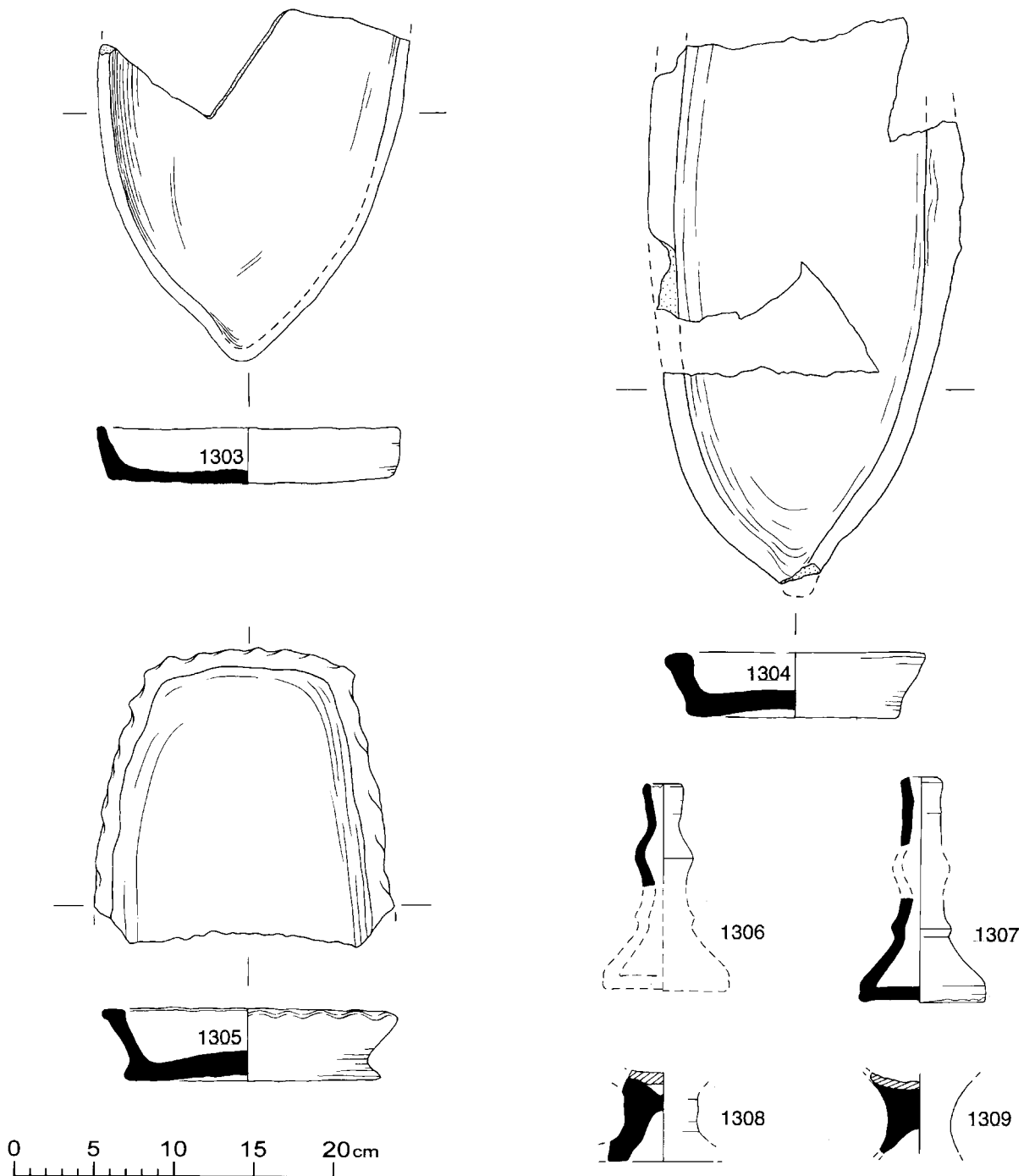


Fig 176 Late Lincoln Glazed Ware: dripping dishes 1303–1305; candlesticks 1306–1307; pedestal lamps 1308–1309. Scale 1:4

plain flat-topped rim, although a few have pressed edges (eg, Fig. 176, 1305).

Candlesticks (Fig. 176, 1306–7)

Although several fragments of this form were recovered from the St. Mark's kiln site (ZE87), none has yet been found elsewhere in the city. The candlesticks are wheel-thrown in a bright orange fabric and are unglazed.

Pedestal Lamps (Fig. 176, 1308–9)

A small number of pedestal lamps were made in LLSW; all are of the single saucer type. The wheel-thrown lamps are oxidized to a bright orange, and have an internal and external amber to olive-green glaze applied over a white slip.

Lids

1. GLAZED FLAT-TOPPED LIDS (FIG. 177, 1311–4)

These are the most common type of lid found and are formed by inverting a small, wheel-thrown dish and applying a small loop handle to the top of the vessel. A thick, olive or reduced green glaze is applied over a white slip on the interior of the lid. Most of the lids are plain, although a few have been found that were ornamented by pressing the basal angle of the vessel. This type is designed to be used with bowls and jars that have an external lid seating (eg, Figs. 175, 1294, and 173, 1273).

2. UNGLAZED DISH LIDS (FIG. 177, 1316)

This type of lid is also formed from an inverted dish, but the vessels are left unglazed and do not appear to have had a handle. Only a few examples have been found and most show signs of sooting.

3. SMALL DECORATED FLAT-TOPPED LIDS (FIG. 177, 1317)

This type of lid is very rare and was possibly intended for use with a cup. A small, wheel-thrown dish has been adapted by inverting the vessel and applying a small knob handle. The illustrated example has stabbed, incised and applied decoration and is only glazed externally.

4. FLAT LIDS (FIG. 177, 1318–21)

This is the second most common type of lid and comes in a variety of sizes and styles, with no two vessels found so far being identical. All of the lids are roughly circular in shape, are hand-formed and subsequently trimmed to shape. Most examples have an external amber or reduced green glaze, although a few vessels are also glazed internally (eg, Fig. 177, 1320). The lids have either a central knob (eg, Fig. 177, 1318) or an applied loop handle (eg, Fig. 177, 1321; Fig. P5b) to facilitate removal. Most of them are decorated, usually with finger-pressing to the edges and pressed strips. One lid has incised

decoration (Fig. 177, 1320) typical of the St. Mark's kiln. Some show signs of sooting along the edges and on the base where they overhung the vessel they were covering. The smallest of the illustrated examples (Fig. 177, 1318) has wear marks that suggest a secondary use as a pestle.

5. SUB-RECTANGULAR FLAT LIDS (FIG. 177, 1310)

Fragments of a few unusual, crude, sub-rectangular lids have been found. As no complete example has so far been recovered, it is hard to speculate what sort of vessel they were intended to cover. That illustrated is formed from a slab of clay that has been trimmed to shape. A roll of clay has been applied along the central length of the vessel to form a lifting device. The upper surface is glazed, and has been perforated with rows of small circular holes. It is possible that these lids were intended for use with a candlemaker's trough.

6. CONICAL LIDS (FIG. 177, 1315)

This type of wheel-thrown lid is uncommon, although small fragments could easily be mistaken for the shoulder of a jug. The lids are oxidized to a bright orange colour, have red-to-purple unglazed surfaces, and an amber or olive-green glaze covers the upper surface of the lid. The illustrated lid has a letter 'I' or 'H' inscribed on the top of the vessel. This type of lid fits neatly on to the top of a medium-sized pipkin.

Curfews or Fish-Smokers (Fig. 177, 1322)

A number of unglazed fragments of characteristic hemispherical curfew shape were found at the St. Marks kiln site (ZE87). The illustrated vessel has a small hole perforated through the wall of the vessel just above the rim.

Garden-Pots (Fig. 178, 1323–4)

An unusual conical vessel (Fig. 178, 1323) with a large central hole in the base was possibly for use in the garden. The vessel is fairly crudely thrown and has a roughly applied, all-over amber glaze over a white slip. An alternative interpretation of this vessel is as an aludel, a conical form used for distillation, however, the presence of a flange at the narrow end makes this less likely. A similar vessel with a copper-green internal glaze, found at excavations at Lincoln Castle West Gate (CWG86; Fig. 178, 1324), may also have had a horticultural use.

Watering-Pots (Fig. 178, 1325–1327)

A single vessel can positively be identified as the upper part of a watering-pot, of similar form to the modern watering-can. The vessel is oxidized and has both internal and external amber and green glaze. The strap handle has been luted to the rim of

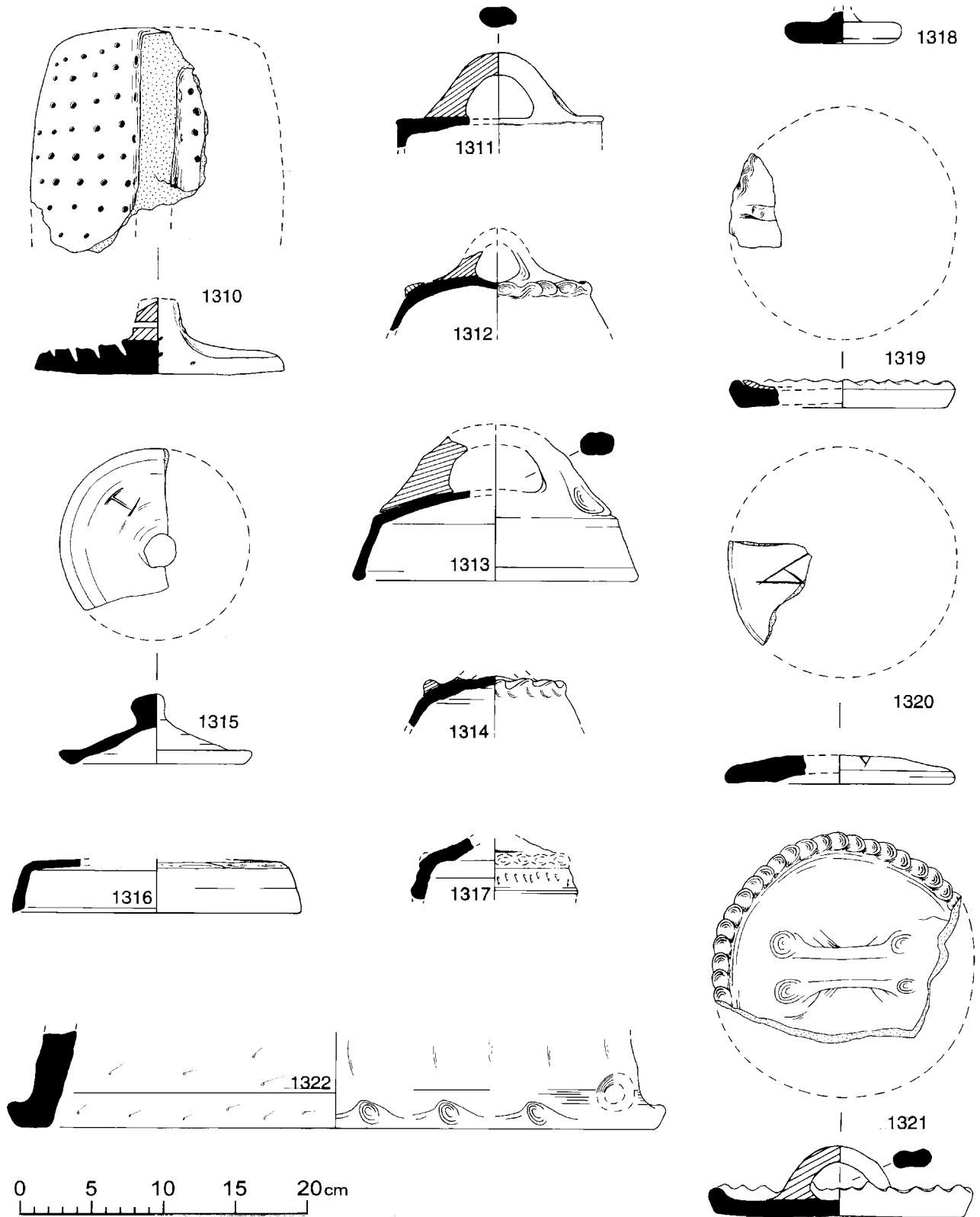


Fig 177 Late Lincoln Glazed Ware: lids 1310–1321; curfew/fish smoker 1322. Scale 1:4

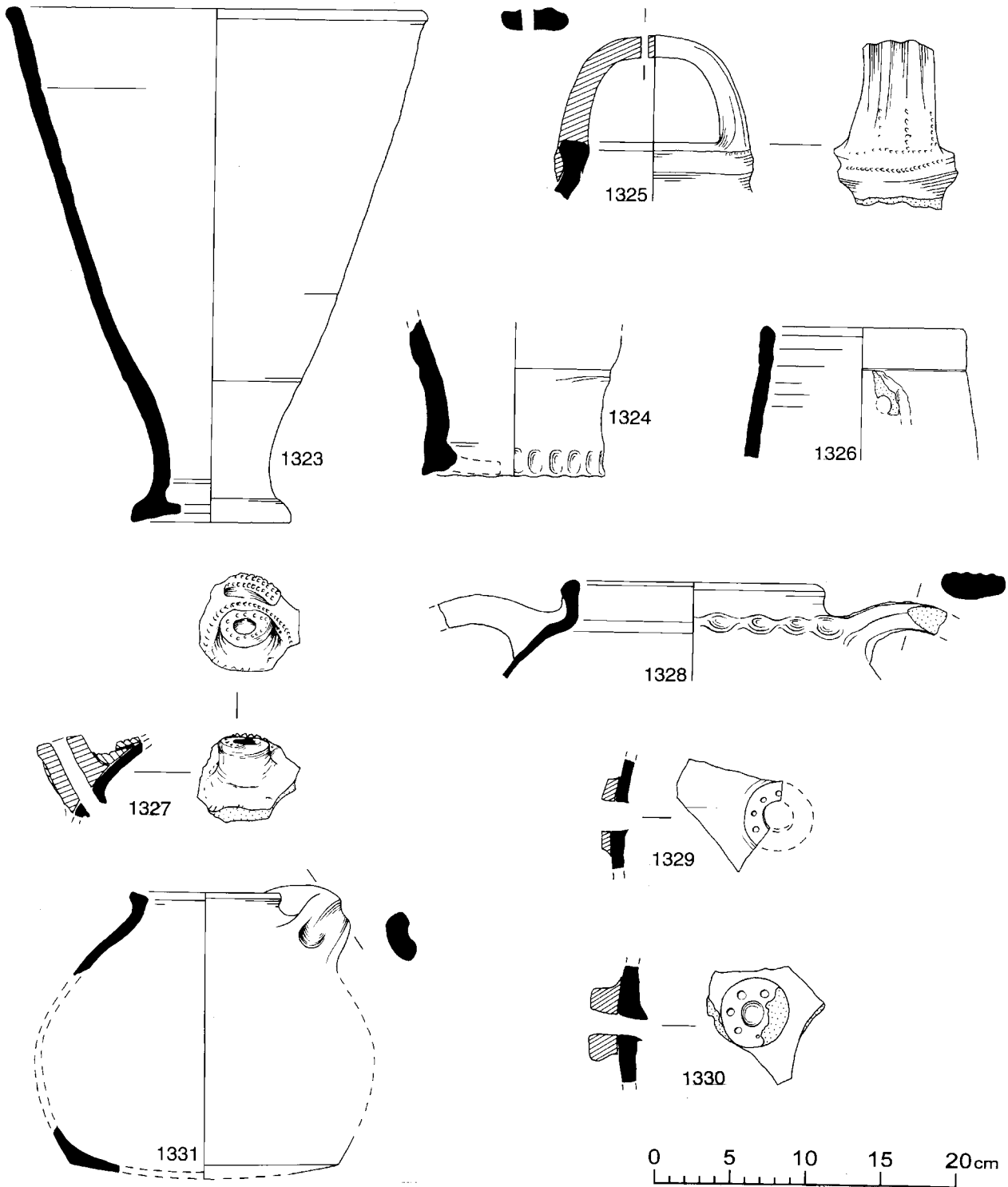


Fig 178 Late Lincoln Glazed Ware: garden pots 1323–1324; watering pots 1325–1327; bunghole jugs 1328–1330; urinal 1331. Scale 1:4

the vessel and then looped over to the opposite side. The handle is perforated by at least one off-centre hole and decorated with stabbing. Other sherds that might possibly be identified with this form include the illustrated wall sherd (Fig. 178, 1326) which has a scar from an applied spout, and, more tentatively, the small tubular spout decorated on the shoulder with square stabbing (Fig. 178, 1327).

Aquamanile (Fig. 179, 1339–40)

These are a rare form in LLSW and all the vessels so far identified come from the St. Mark's kiln site

(ZE87) and appear to represent animals, mainly horses. They are made in a bright orange fabric and have an amber to green glaze applied over a white slip. Not enough of any vessel survives to be sure of exactly how they were manufactured, but the body of the animal appears to have been thrown as a cylinder, and then the legs, tail, and wheel-thrown neck and head luted on to the main body. Ears, a mane, and reins were then applied to the horses, and the vessel finished off with incised and stabbed decoration. It is possible that the horse figure had a rider, similar to LSW3 examples (eg, Fig. 162, 1202).

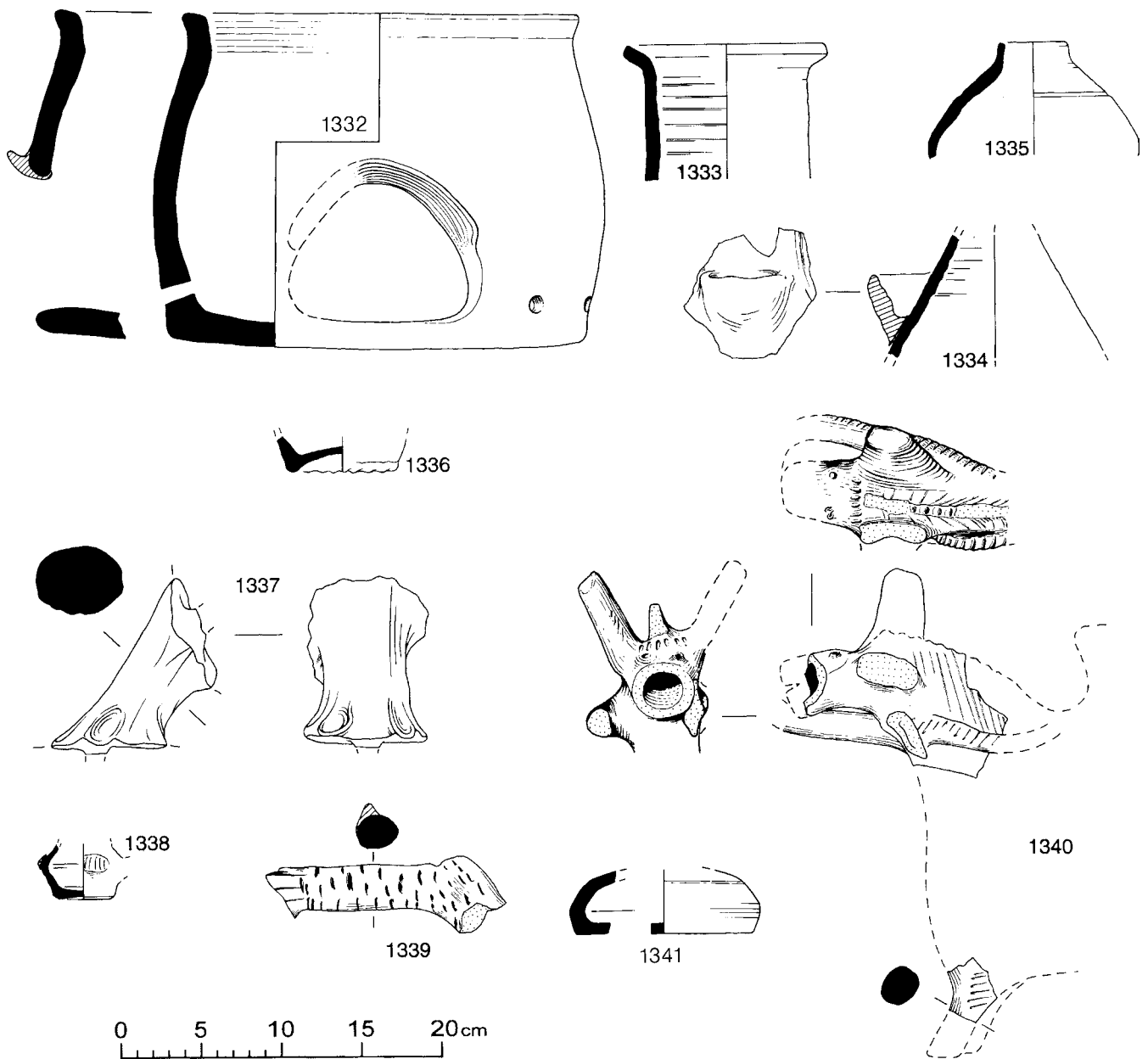


Fig 179 Late Lincoln Glazed Ware: miscellaneous 1332–1338; aquamanile 1339–1340; money box 1341. Scale 1:4

Money Boxes (Fig. 179, 1341)

This form is difficult to identify without the cut slot, owing to its similarity to the LLSW wheel-thrown finials. The form is unusual in having the slot cut into the base of the vessel, where it would have been hidden from view. The vessels are thrown as a closed, squat, or globular shape, often with concentric incised lines. A thick, glossy, green glaze covers the exterior of the vessel.

Urinals (Fig. 178, 1331)

Several urinals were found at the St. Mark's site (ZE87), although only one other vessel has been identified from elsewhere in the city. The urinals are made in a bright orange fabric and have an external amber glaze. The vessel is thrown as a narrow-necked, medium-sized jar with an upright or squared rim and an upwards sweeping, horizontal strap handle luted to the shoulder and secured with a single thumb-pressing.

Miscellaneous (Fig. 179, 1332–9)

A wide range of miscellaneous vessels, either too fragmentary to identify or of an unknown form, was recovered from the St. Mark's kiln site (ZE87). Only a small number of these vessels are illustrated here. Several small decorated fragments are derived from miniature (eg, Fig. 179, 1338) or small forms (eg, Fig. 179, 1336). All are well-thrown and finished, with most having both an internal and external glaze. The jester whistle found at Tattershall Castle (Hayfield and Hurst 1983) is very probably a LLSW product, and it may well be that some of these small vessels are whistles. Unglazed sherds from a globular, narrow-necked form (eg, Fig. 179, 1335) may represent a type of bottle. A most unusual externally-glazed vessel (Fig. 179, 1334), thrown as a conical shape, has a pouch applied to the side. To the right of this pouch is a strip of applied decoration, but unfortunately not enough remains to distinguish any identifiable motif.

Some most unusual glazed handles defy interpretation (eg, Fig. 179, 1337). The handles vary considerably in size and finish, but all have several common features. They have a plug at both ends and are intended to be attached to two asymmetrically different bodies. One end is attached to a flat surface with little or no curvature, while the other is attached to a wheel-thrown vessel, possibly of jar shape.

Three types of vessel may be types of kiln furniture (Fig. 179, 1332–3). The large illustrated vessel is unique, and could either be a type of oven, mantle or an early sagger, for use with the fine wares produced on the site. The oxidized vessel was formed as a thick-walled jar, and had an aperture cut in one side, just above the base. A strip of clay has been applied over the aperture to form a small

baffle, and a row of holes pierced around the vessel just above the basal angle. The vessel has no intentional glaze, but is covered with pitted glaze spots over both the internal and external surfaces, and has a thick run of glaze on the base running down to the right of the aperture, indicating that it was fired upside-down with a glazed vessel on top. The smaller, unglazed, conical vessels (Fig. 179, 1333) are quite common on the site and could possibly be a form of kiln prop; they are, however, well made and may just represent biscuit-firing of an unknown form. Unillustrated are large, flat, oval-shaped covers that have perforated holes over the surface. These may have been used as bats or shelves in the kiln, or in the preparation areas. They have glazed surfaces but this may not be intentional.

Other unillustrated forms that can be identified include unglazed strainers, glazed water pipes, and weights (Mann 1988).

Roof Furniture and Tiles

A wide range of tiles and roof furniture was produced in LLSW. Distinctive types of flat nib tile, ridge tile and bird finials were among the output at the St. Mark's kiln site (ZE87), along with several different types of louver, floor tiles, and thin tile strips with pressed decoration on one side (Kemp and Vince 1995).

Source

Six samples of LLSW from Lincoln were examined in thin-section (L1879, L1880, L1881, L1882, L1883, L1884). Their petrological characteristics were almost identical and very similar to those of LSW3 and other Lincoln products.

LLSW was certainly produced at several centres around the city. Excavations at St. Mark's Yard East (ZE87) in 1987 uncovered a mass of waste material, together with the remains of a multi-flue pottery kiln and a tile kiln. In 1847 the remains of a kiln site recorded as being in St. Mary's Parish, Wigford, were found during work for the new railway (ILN 1848). The drawings of the kiln do not survive, although some of the material, including the moulds for making the face masks, is now in the British Museum. Waster sherds of LLSW were found on the LIN73E site between Silver Street and Saltergate, and further sherds with glaze across breaks came from the LIN73A site, about 200m to the east.

Dating

The pottery type first appears in horizon MH8 deposits (late 14th to early 15th century) when it forms c.4% of the pottery found. By horizon MH10 (mid to late 15th century), quantified deposits show that at least c.35% of material found is LLSW.

**15th- to 16th-century Lincoln Glazed ware (LSW4)
(Figs. 180–1)**

Introduction

This ware type can be divided into three main fabric groups. All three groups have a similar petrological make-up, and may have been produced at one centre, the differences being accounted for by variable manufacturing and firing techniques. The fabric of all groups consists of abundant, rounded quartz up to 0.4mm, sparse rounded chert, sparse rounded sandstone, and in some sherds, moderate, rounded and laminated clay pellets. Fabric sub-types have

only been recorded in the archive for material chosen for illustration.

Fabric A (Fig. 180)

Fabric and technology

This group consists of vessels oxidized to a bright orange colour and sometimes having an off-white surface skin, similar to some products of the kilns at Toynton All Saints. The glaze is often quite thick and ranges from olive to purple in colour, although several vessels are entirely unglazed. All known vessel types are wheel-thrown (often not very well)

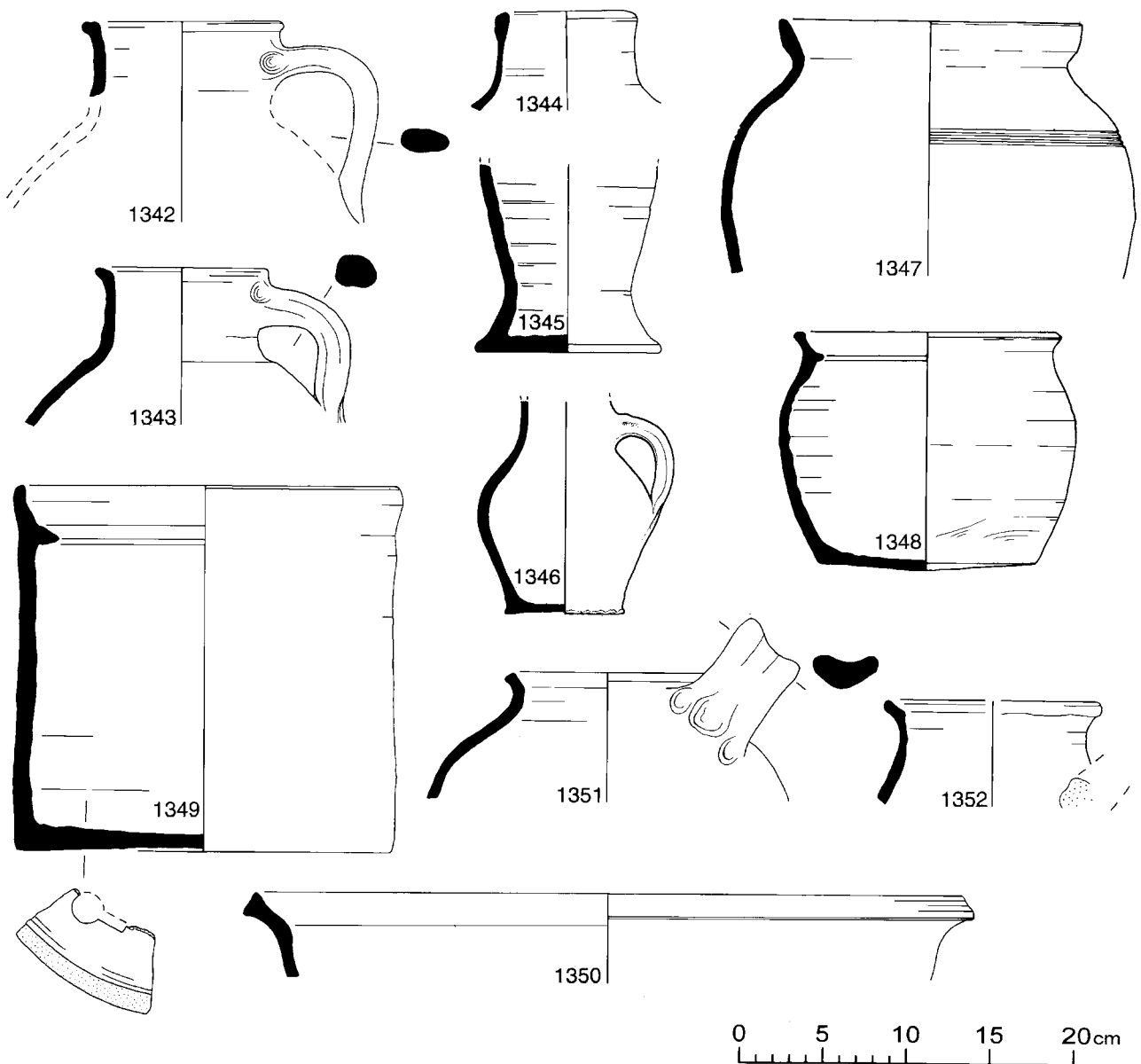


Fig 180 15th Century Lincoln Glazed Ware: Fabric A jugs 1342–1345; drinking jug 1346; jars 1347–1349; bowl 1350; urinals 1351–1352. Scale 1:4

and none is decorated. The whole group has a very utilitarian look.

Forms

JUGS (FIG. 180, 1342–5)

Two main types of jug are made in this fabric group. The first is a medium-sized squat rounded jug (Fig. 180, 1342–3; Plate 5d), with a slightly everted rim and a rod or oval-sectioned handle. The junction between the neck and the shoulder is marked by a sharp angle and this is characteristic of the fabric. The handles are luted to the body at the lower join, and have the upper join plugged through the neck of the jug. The upper join is secured with two side pressings, formed with the index finger and thumb, giving one small and one large pressing. The lower join has a single central pressing. A brown to olive glaze patchily covers the upper part of the jug. The second type of jug is smaller (Fig. 180, 1344–5), has a plain rim and a splayed base. Glaze cover on the smaller jugs is often very thin and patchy and may contain copper specks.

SMALL DRINKING JUGS (FIG. 180, 1346)

These plain, unglazed jugs are not a common form in this fabric type. They are quite well thrown and effort has been made to neaten the exterior of the vessel after manufacture. The thin rod handle is plugged through at the upper join and smeared on at the lower join; neither join is secured with pressings.

JARS (FIG. 180, 1347–9)

There are basically two different types of jars found in this fabric. The most common type is a plain, medium-sized, unglazed rounded jar (Fig. 180, 1347), not dissimilar to those produced in LLSW. The second type of jar is also unglazed, has an internal lid seating to the rim, and is found both in rounded and cylindrical shapes. The rounded jars are finely thrown, well trimmed, and neatly finished, and must have been intended for domestic use, whereas the cylindrical jars are thicker-walled, more industrial in appearance, and were possibly intended for use as industrial bases. The illustrated cylindrical jar has sooting to the external base, and internal sooting up to the internal ledge. This vessel was adapted after initial use by carefully making a key-shaped hole in the base.

BOWLS (FIG. 180, 1350)

Only two bowls have so far been identified in this fabric; both are large shallow vessels similar to those produced in LLSW. The bowls have a patchy amber or olive glaze on the interior.

URINALS (FIG. 180, 1351–2)

A few fragments of urinals have been found in this

fabric and two different types appear to have been made. The first type is simply a narrow mouthed jar with an upward-sloping horizontal handle (eg, Fig. 180, 1351). The second type is thrown as a jug shape, a narrow opening with a slightly everted rim is formed off-centre at the top of the vessel (Fig. 180, 1352), and a horizontal side handle is placed on the upper shoulder. This second type is similar to vessels made at Toynton All Saints (eg, Chapman *et al* 1975, Fig. 20, 4–5). Both types are only glazed on the external surface and are usually found with a white internal deposit.

Fabric B (Fig. 181, 1353–6)

Fabric and technology

Vessels in this fabric type have a hard, semi-vitrified, purple fabric and a purple glaze. The grouping may merely represent overfired vessels from Fabric groups A and C. This is the rarest of the three types of LSW4.

Forms

Only medium- and small-sized, squat, rounded jugs have so far been found in this fabric type. They have a flat-topped, slightly everted rim and a centrally grooved strap handle.

Fabric C (Fig. 181, 1357–67)

Fabric and technology

This group, although similar in appearance to LLSW, has a harder and finer fabric. Typically, sherds have a red external surface, buff margin and black inner surface. The glaze is thick and lustrous and may be brown, olive or copper-green in colour. All vessels are competently wheel-thrown and well finished.

Forms

JUGS

A range of jug types was made in this fabric type, with a plain, squat, rounded jug with a slightly everted rim (eg, Fig. 181, 1358–9) being the most common type. This type has a characteristic thin, centrally-ribbed strap handle, that is secured with two small finger-pressings at the upper join and one large thumb-pressing at the lower join. A groove on the shoulder is the only ornamentation to be found, with the exception of a single vessel recovered from the nearby St Mark's Station site (ZEB95) which has two IHS seals applied to the shoulder.

Two different types of conical jugs have been found, but only the larger of the two (Fig. 181, 1357) is represented by a complete profile. The larger jug has a series of four cordons evenly spaced up the body, and a simple, centrally-grooved, strap handle. The base has five single finger-pullings around the circumference. The smaller of the two types (Fig. 181, 1363) has a copper-green glaze over a white slip and

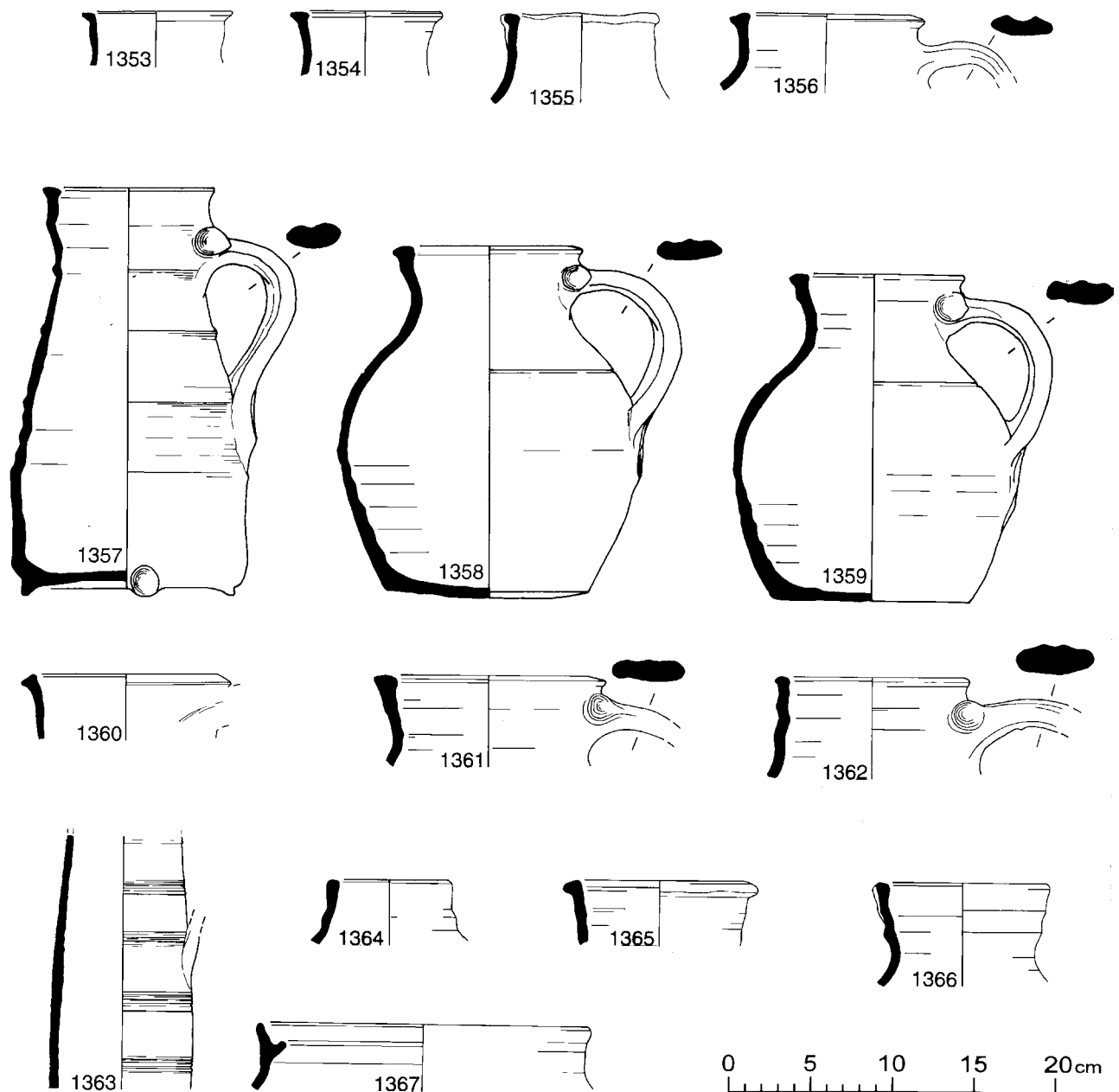


Fig 181 15th Century Lincoln Glazed Ware: Fabric B jugs 1353–1356; Fabric C jugs 1357–1366; jar 1367. Scale 1:4

rows of five pronged combing spaced up the body.

Other jug types are only represented by rims but are probably of rounded shape (Fig.181, 1360–62 and 1364–6).

JARS (FIG. 181, 1367)

A single internally-glazed jar with an inner lid-seating has been found in this fabric.

Source

Five samples of LSW4 from Lincoln were examined in thin-section (L1885, L1897, L1898, L1899 and

L1900). In comparison with other late medieval Lincoln products, these vessels were lower fired and contained fewer laminated clay pellets. The clay matrix of four of the samples included abundant specks of unidentified brown material (iron-rich faecal pellets?).

At least two wasters were recovered from the 1986 St Mark's Station site (Z86) opposite the St. Mark's kiln site (ZE87), and it is probable that LSW4 was a later product of kilns in this area. A link between the LSW4 and the St. Mark's LMF industries is demonstrated by the presence of IHS monogrammed

seals on the shoulder of a squat jug recovered from St Mark's Station (ZEB96). An identical seal was found on a St. Mark's type LMF vessel found in Minster Yard (Hurst 1966, 54–6), which was thought to date stylistically to the late 15th or early 16th century.

Dating

LSW4 first appears in later MH10 horizons in the late 15th century, when it forms *c.*1% of sherds recovered, and is current in PMH1 (early to mid 16th century) (*c.*5%) and early PMH2 (mid 16th century) groups.

Late Medieval Finewares (LMF) (Figs. 182–4)

Introduction

This grouping incorporates all late medieval fine whitewares, including those made locally and those

that are regional imports. As it has not been possible to re-assess some of the material in order to divide it into fabric types, and also because many tiny sherds are not distinctive enough to be certain of attribution, all Late Medieval white ware sherds have been left in the archive as one ware type (LMF) with a fabric type noted (where known) in the comments field.

St. Mark's type Fabric (Figs. 182–3)

Fabric and technology

The fabric of the St. Mark's type whitewares includes sparse subangular quartz up to 0.4mm, sparse dense low-iron clay pellets, and occasional sparse rounded chert in a background of moderate angular quartz up to 0.1mm. Few of the sherds have a pure white colour to the fabric, but are more likely to have areas that are pink or grey. The standard of glazing is not consistent, with colour variations from a glossy,

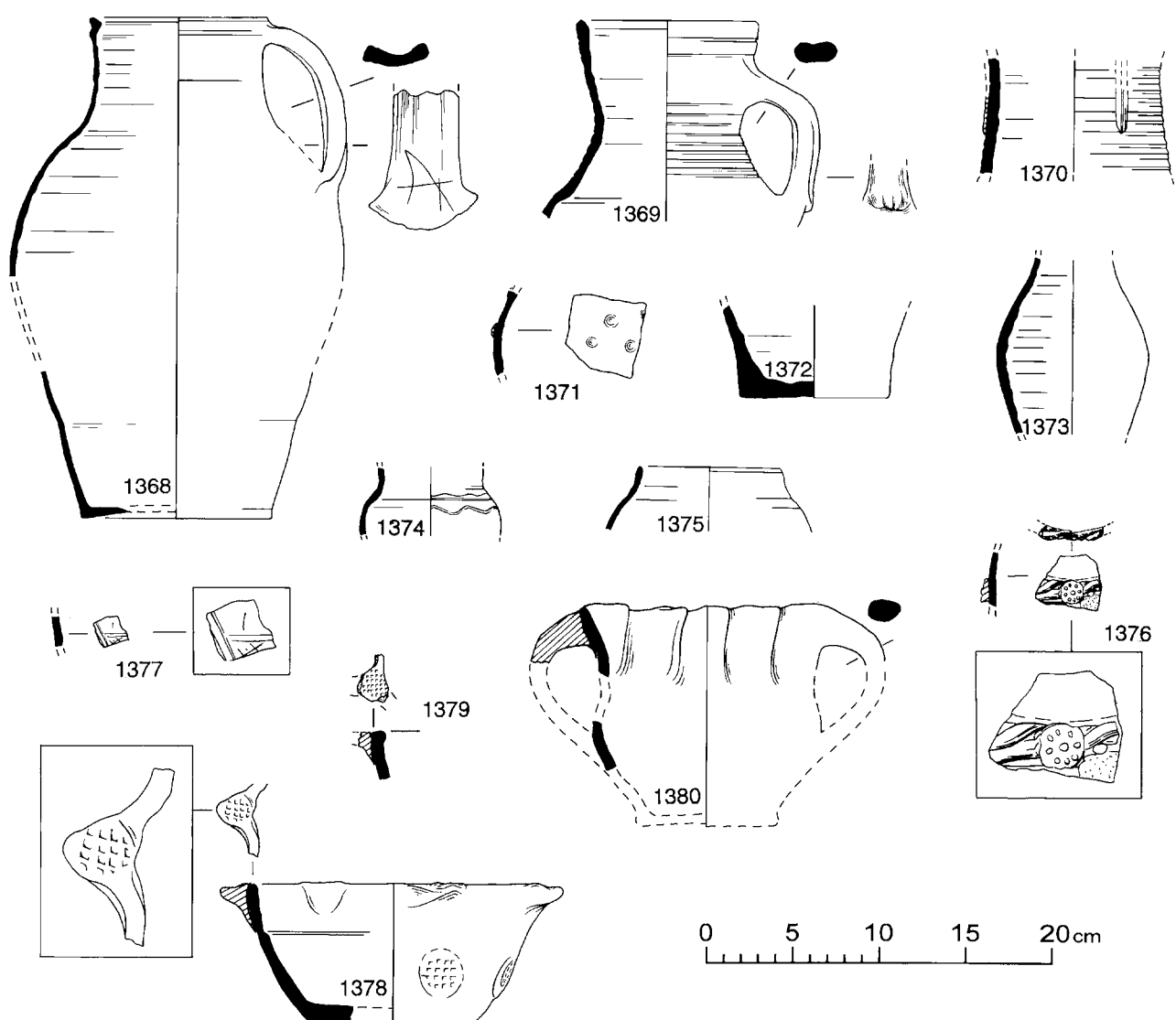


Fig 182 Late Medieval Finewares: St Marks Fabric jugs 1368–1372; drinking jug 1373; cups 1374–1377; lobed vessels 1378–1380. Scale 1:4 except detail at 1:2

bright copper-green, through a yellow-green with copper specks, to an orange-yellow. All known forms have been formed on a fast wheel, although many are further embellished with hand-formed modelling. Many of the vessels are copying complex metal forms and decoration, and show great skill on the part of the potter.

Vessel types

JUGS (FIG. 182, 1368–72)

Apart from vessels found at the St. Mark's kiln site (ZE87), fragments of only three other jugs are known, none of which are large enough to illustrate. All of the jugs appear to be of different types. The most complete and finest of the St. Mark's jugs (Fig. 182, 1368) is unlike any other Lincoln-produced jug, with its ovoid body, high shoulder, and extremely thin walls. The jug appears to have broken in the kiln as it shows evidence of differential firing. The aim seems to have been to produce a jug with an internal and external glossy, copper-green glaze. The thin strap handle has a pre-fired letter 'A' inscribed just above the lower handle join. An almost identical jug, recovered from the Augustinian Friary Garden site, Hull (Watkins 1993, Fig. 98, 93), was identified as a Saintonge product. A less complete jug, from the St. Mark's site (ZE87) (Fig. 182, 1369), appears to be a metal copy with its heavily-grooved neck and incised terminal at the lower end of the narrow, rectangular-profiled handle. This jug has a greenish-yellow external glaze with copper flecks and, judging by the pooling of glaze at one edge of the handle, appears to have been fired on its side. Only two jugs have any form of decoration (Fig. 182, 1370–1), consisting simply of applied strips and pellets.

DRINKING JUGS (FIG. 182, 1373)

Only a few identifiable fragments of this form exist. All are well executed on a fast wheel, unlike examples in LLSW. The illustrated vessel appears to be purposefully glazed with a bichrome glaze, copper-green on the exterior, and a plain lead glaze giving a yellow or apple-green colour on the interior. One example has a concave base, although this may not have been intentional.

CUPS (FIG. 182, 1374–7)

Only small fragments of this form are known: it may be that these vessels had a pedestal base. A wide variety of decoration is found on this form, varying from simple incised wavy lines (Fig. 182, 1374) to elaborate moulded and applied decoration (Fig. 182, 1376). All have an internal and external copper-green glaze varying in depth of colour.

LOBED CUPS AND BOWLS (FIG. 182, 1378–80)

Two main shapes of lobed vessels are found in the

St. Mark's Late Medieval Finewares fabric. The main type is a small bowl with an upright rim, to which small triangular lugs have been applied. The bowl rim has been pushed outwards at the point of joining, forming a lobed vessel. Small grid stamps decorate the tops of the lobes, and one vessel also has applied grid-stamped seals to the side of the bowl (Fig. 182, 1378). The second type of lobed vessel is a large cup shape; the lobing is formed by pushing in the rim of the vessel and pinching it together forming an inner lobe (Fig. 182, 1380). All examples so far found have been undecorated, except for a base thought to date to the late 15th or early 16th century found in Minster Yard (Hurst 1966, Fig. 2), which has an IHS seal bearing the inscription AVE MARIA GRACIA A PLEN set in the bottom. Both the bowls and the cups are, on the whole, quite thickly and crudely formed and both are covered by a thick, all-over copper-green glaze.

LIDDED CUPS (FIG. 183, 1381–3)

The exact form types of these very elaborate lidded vessels are not clear, and any reconstruction of the forms can accordingly be only tentative. The intricate workmanship involved in the manufacture indicates that they were not just for everyday use. They seem to be copying contemporary metal vessels, with the use of incised decoration and pierced holes to imitate engraving and tracery. All the vessels have an all-over glaze that is copper-green where thick and copper-speckled apple-green where thin. The foot recovered from North Ormsby Abbey (Fig. 183, 1382) is octagonal, has eight concave chamfered sides, and is even incised underneath to imitate the underside of a metal vessel. As the only time when this decoration would be seen is when the vessel was lifted up, it is possible that it was intended to be used as a chalice or *ciborium*. This identification is further enhanced by the shape of the foot, as with the introduction in the 14th century of the practice of laying the chalice on its side to drain (Jackson 1911). A hexagon, or more rarely, an octagonal-shaped foot (eg. Jackson 1911, Fig. 368), was used to prevent the vessel from rolling. Sherds from both a lower vessel and a lid were recovered from the Danes Terrace site (DT74II) (Fig. 183, 1381), and these include part of a complex, part-twisted stem below a knob that is covered with applied pellets, intended to represent knobs. The terminal from a lid (Fig. 183, 1383) recovered from near the St. Mark's kiln site (ZE87) is burnt and probably represents a waster. The carefully-incised flower decoration and hatched background on the top of the knob is only just visible in the bubbled glaze.

DIVIDED DISH (FIG. 183, 1384)

A single fragment comes from a small divided dish with an internal and external copper glaze.

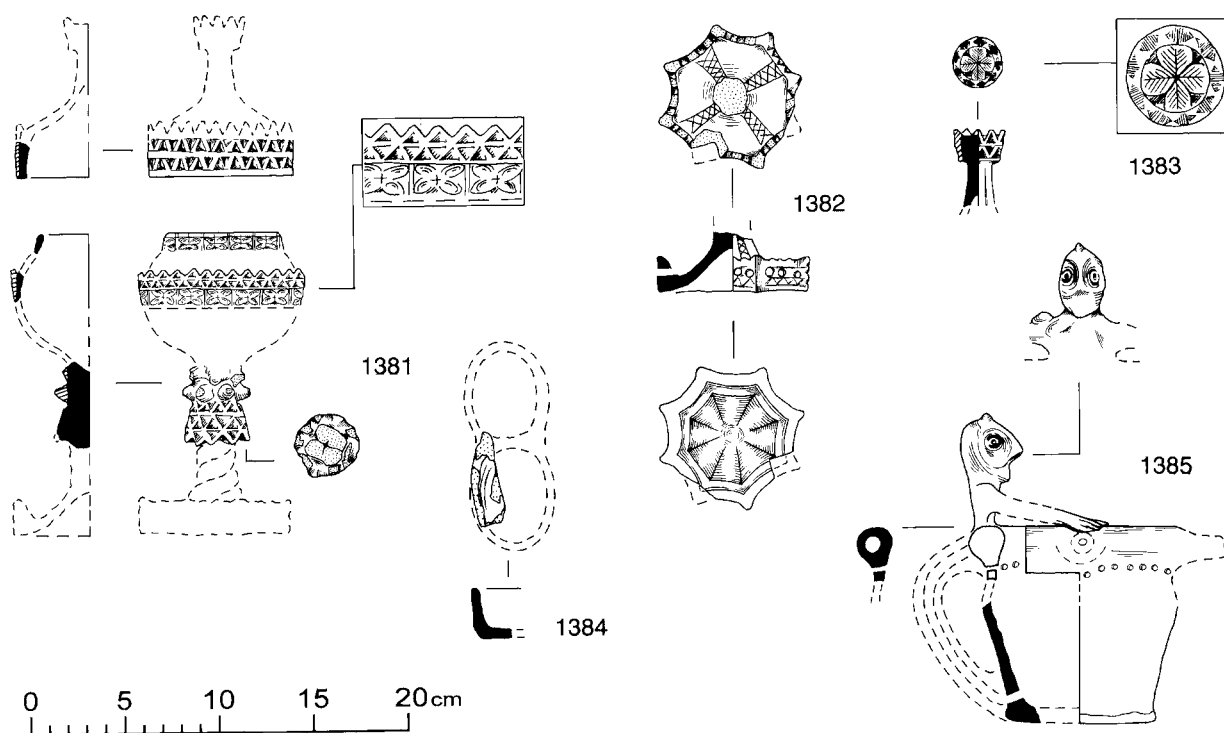


Fig 183 Late Medieval Finewares: St Marks Fabric lidded vessels 1381–1383; divided dish 1384; puzzle mug 1385. Scale 1:4 except detail at 1:2

PUZZLE MUG (FIG. 183, 1585)

Fragments of puzzle mugs similar to those made in LLSW were found at St. Mark's. One mug had the top part of a male figure placed, arms outstretched, on the hollow rim (Pl. 5c). The figure is crudely modelled and has no defined mouth.

PIPKIN

A single fragment from an unillustrated pipkin was noted from the Cottesford Place site (CP56; as yet unpublished).

Tudor Green-type Fabric (Fig. 184, 1386–8)

Fabric and technology

The term is used here as defined by Pearce and Vince in their volume *Surrey Whitewares* (Pearce and Vince 1988, 79–81). These vessels can usually be distinguished from Lincoln-made examples by their thinner walls, whiter fabric colour, and the often slightly-mottled glaze found where the glaze thins on the exterior of the vessel. Examination of the fabric reveals sparse subangular quartz up to 0.4mm with a background of moderate angular quartz and sparse rounded opaques below 0.1mm.

Vessel types

LOBED CUPS (FIG. 184, 1386–7)

The lobed cup is the most common form noted in this fabric. Sherds are often tiny, and consequently it is difficult to reconstruct the exact profile of vessels. The lobes are formed by the pinching-in of the rim of a finely wheel-thrown cup to form the lobes on the interior of the vessel. These cups are set on a small, restricted, flat, or slightly concave base that in one example has been pressed around the edge. Apart from the decorated base, the vessels are entirely plain.

PLAIN CUPS (FIG. 184, 1388)

A single vessel can be shown to belong to a plain cup. Only one handle is present, and this is joined over the top of the rim at the upper end and smeared to the body at the lower end.

Other fabrics (Fig. 184, 1389)

Several vessels could not be definitely classified as either Lincoln or Tudor Green types. The fabric of only one of these has been examined in detail and a possible Midlands [Nuneaton] source is now suggested for the

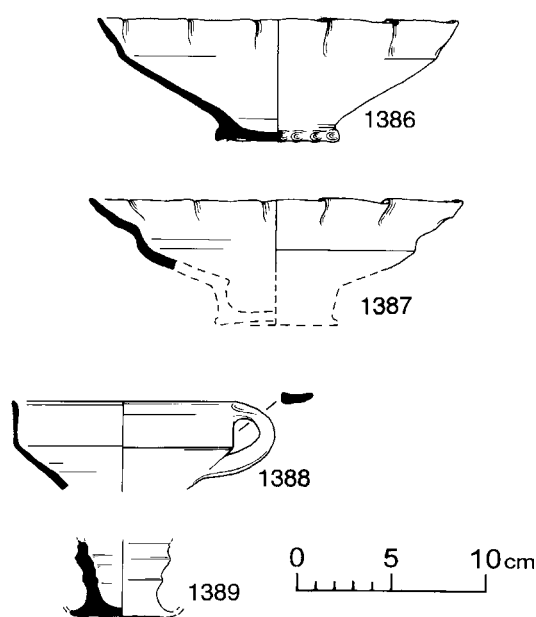


Fig 184 Late Medieval Finewares: Tudor Green-type 1386–1388; Midlands-type 1389. Scale 1:4

illustrated pedestal base, previously thought to have been a French import.

Source

Six samples of Late Medieval Finewares St. Mark's type were examined in thin-section (L1902, L1903, L1907, L1909, L1911 and L1912). The only consistent difference between these sherds and those of putative south-eastern origin was the presence of dense, rounded low-iron clay pellets.

Six samples of Tudor Green-type Late Medieval Finewares were examined in thin-section (L1904, L1905, L1906, L1908, L1910 and L1913). Although all were very similar white-firing clays containing many quartz silt, they varied in texture and range of inclusions. The only consistent difference between these samples and those of Lincoln origin was the absence of dense, white clay pellets.

The whiteware pedestal base was thin-sectioned (L1914). It contained abundant subangular quartz up to 0.3mm (including one with abundant chlorite inclusions), sparse rounded chert up to 1.0mm, in a groundmass of anisotropic low-iron clay minerals with moderate silt-sized angular quartz, sparse muscovite and sparse rounded opaques. These characteristics are not very diagnostic, although the absence of medium/coarse-grained sandstone fragments and overgrown quartz grains derived from these rocks distinguishes the fabric from that of many northern English whitewares

whilst most French whitewares (from both northern and southwestern sources) have abundant silt-sized quartz. It is probably a Coal Measures clay but unlike CMW does not have any characteristics to confirm this identification. The chlorite inclusions in one of the quartz grains have been noted in quartz sands from the west midlands, which might suggest the Chilvers Coton (Nuneaton) industry. However, no comparative sampled from that site have been examined.

Whitewares wasters were found on the kiln site at St. Mark's Yard East (ZE87), and the presence of adhering blobs of white clay to several LLSW vessels may indicate that both types of ware are being fired together.

Dating

Late Medieval Finewares first make an appearance in deposits thought to date to between horizons MH9 and MH10 (the early to mid 15th century), forming less than 0.5% of MH10 and PMH1 assemblages (mid 15th to mid 16th century). On sites away from the St. Mark's kiln, Tudor Green-type sherds outnumber the Lincoln-produced St. Mark's type by about three to one, with the three Danes Terrace sites in the Lower City (DT74I, DT74II and DT78) producing *c.*50% of all of the Tudor Green type and *c.*3% of the St. Mark's type Late Medieval Finewares in the city.

Late Medieval Local fabrics (LMLOC) (Fig. 185)

Introduction

This grouping mainly consists of fabrics that appear to be of local origin, but cannot be linked to any known production centre. Three main, distinct groupings can be identified, divided mainly on stylistic grounds, as none of the fabrics at this period is particularly characteristic, containing mostly abundant, rounded quartz up to 0.4mm, together with common to sparse iron-rich grains, sparse sandstone and occasional clay pellets. Fabric subtypes have only been recorded in the archive for material that was initially chosen for illustration, or that was further quantified. All vessels are wheel-thrown to varying degrees of competency, and have glazes that vary from thick, smooth, and glossy to those that are thin and heavily-pocked in a way similar to the early medieval "splashed wares". Vessel forms are mainly jugs, but also include: drinking jugs, bowls, pipkins, lids, urinals, cisterns, dripping pans, and skillets.

Fabric A

Fabric and technology

Vessels in this fabric group are easily mistaken for Low Countries Red Earthenwares (DUTR) until

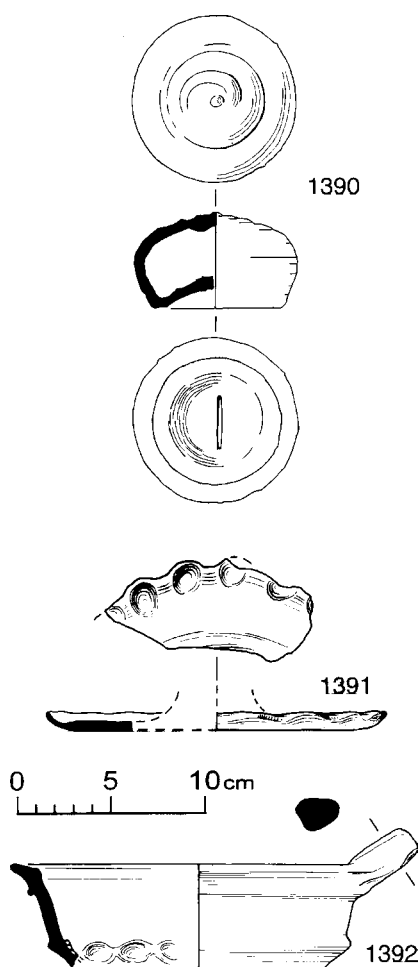


Fig 185 Late Medieval Local Fabrics: Fabric B. Scale 1:4

examined under a microscope. The fabric is hard, and colours are reds or bright oranges, occasionally with a grey core or inner surface. A thin, glossy, but pocked, brown or olive-green external glaze is found on the upper parts of vessels. The fabric contains abundant rounded quartz up to 0.4mm, sparse rounded chert, sparse rounded sandstone, and occasional to moderate rounded, dark brown, laminated clay pellets, together with a background of sparse angular quartz up to 0.1mm.

Vessel types

Only body sherds have been recovered from vessels, and all that can be determined from these is that jugs and pipkins were being made.

Source

Four samples of Late Medieval Local Fabric A from Lincoln were examined in thin-section (L1872, L1873, L1876 and L1878). In appearance the texture and colour of this ware are very similar to that of

Low Countries redwares, but the quartzose sand temper and the laminated clay pellets are indistinguishable from Lincoln-area products. Visually, Late Medieval Local Fabric A is similar to vessels produced at Kirkstead (White 1989), which are of later date.

Fabric B (Fig. 185)

Fabric and technology

This is the largest fabric group and may represent material of a similar tradition produced at several centres. Sherds are oxidized usually to a bright orange, although unglazed surfaces may be a red or purple colour and most sherds have a grey core. The fabric is medium-hard and contains abundant rounded quartz up to 0.4mm, sparse rounded chert, sparse rounded sandstone and moderate rounded, dark brown, laminated clay pellets with a background of sparse angular quartz and muscovite up to 0.1mm. Glaze is of the type termed 'splashed' and is either orange, brown or green in colour.

Vessel types

The range of forms is wide and includes jugs, drinking jugs, bowls, lids, chafing dishes (eg, Fig. 185, 1392), candlesticks (eg, Fig. 185, 1391), skillets, and a moneybox (Fig. 185, 1390).

Source

Although Late Medieval Local Fabric B is an important element in late medieval assemblages in Lincoln, the fabric had not been characterized and isolated at the time that thin-section analysis took place and consequently no samples of Fabric B were examined in thin-section.

Fabric P

Fabric and technology

This group is similar to purple-glazed wares found in Yorkshire (Jennings 1992, 32) in the late medieval period. The hard fabric is oxidized to a bright orange throughout, and only rarely is a reduced core found. The fabric contains common to abundant, sub-rounded quartz up to 0.3mm, and sparse iron-rich grains. Jugs usually just have a bib of glaze on the front, although the entire upper half can sometimes be glazed as it is on jars.

Vessel types

Vessel types are limited to jugs or a few jars.

Source

Late Medieval Local Fabric P was not examined in thin-section but has a distinctive silty texture not paralleled in products from Lincoln or the Trent Valley, whose sand temper is slightly coarser. Flakes of muscovite are visible by eye.

Dating

More than 1000 sherds of Late Medieval Local fabrics have been found in the city. Further work on this ware type needs to take place on county material to help create typologies and isolate possible sources. The type first appears in MH8 horizons (the late 14th century), and remains in use until horizon PMH1 or possibly PMH2 (the mid 16th century), only reaching a significant proportion in early to mid 16th-century horizon PMH1 deposits (at c.8%).

Non-local Late Medieval fabrics (LMX) (Fig. 186)

Description

This is a grouping of miscellaneous material of late medieval tradition that does not appear to come from local sources. The sherds are tempered mostly with subrounded to rounded quartz grains, and few have any other distinctive inclusions. Both fine and coarse fabrics are represented, and fabric colours range from white to orange and grey to black. Glaze is found on most vessels but colour and extent are very variable. Most vessels appear to be jugs, but examples of bowls, jars (eg, Fig. 186, 1393–4), drinking jugs, bughole vessels, and a skillet have also been found.

Source

None of the Non-local Late Medieval fabrics from Lincoln was examined in thin-section, nor do they include sherds with visually distinctive fabrics.

Dating

Almost 100 sherds have been found in the city, ranging in date from the mid 14th to the mid 16th century (horizon MH7 to PMH1), only ever forming a very minor part of an assemblage.

White Coal Measure fabrics (CMW)

Description

This grouping includes medieval, late medieval and post-medieval fabrics from unknown sources that are

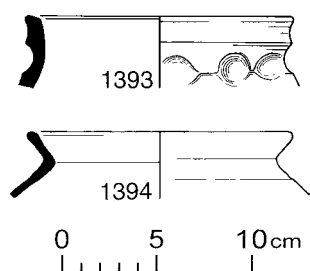


Fig 186 Non Local Late Medieval Fabrics. Scale 1:4

made using white firing Coal Measure clays (Hayfield 1985). Fabrics are mainly white or cream but do include shades of pink, orange and grey. Most sherds have evidence of glaze ranging from olive to purple in colour. Forms include jugs, jars, footed pipkins and a cistern. Of the 37 vessels recovered from the city 30 are of the fabric previously known as Rawmarsh type (Fabric R, Moorhouse 1983, footnote 26). Almost all of the vessels came from horizon MH10 (mid to late 15th century) or later deposits, becoming residual by horizon PMH4 (mid 17th century).

Source

CMW was produced at a number of sites in South Yorkshire, notably Firsby and Rawmarsh. Both of these sites are situated on the Coal Measures. Firsby is known from documentary sources to have been operating from the late 13th century but material recovered from fieldwalking probably dates to the later medieval period. The Rawmarsh industry is known mainly from a single large deposit of waste, which appears to be of later 15th or 16th-century date. Visually, the main distinction between the fabrics of these two wares is firing temperature. The Rawmarsh wares are fired at near-stoneware temperatures, causing iron-rich inclusions to blister and turn to a slag (Fabric R). A single thin-section of a CMW vessel was studied (L1823). It contained sparse quartz grains up to 1.0mm across, some of which were overgrown in a matrix of isotropic clay minerals with sparse silt-sized quartz grains. This is consistent with the attribution of the sample to Rawmarsh.

East-Anglian Late Medieval and Transitional ware (EALMT) (Fig. 187)

Description

A single base sherd from a jug has been identified by Sarah Jennings as being of this ware type (Jennings 1981, 61–71). It was found residually in a post-medieval deposit on the West Parade site (WP71).

Source

The sherd of East-Anglian Late Medieval and Transitional ware was not thin-sectioned but visually is

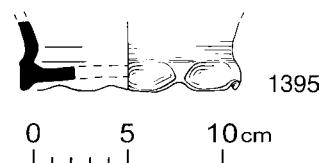


Fig 187 East Anglian Late Medieval and Transitional Ware. Scale 1:4

quite distinctive, containing abundant voids (original contents unknown) and having a fairly low iron content.

Humberware (HUM) (Fig. 188)

Description

The term Humberware is used here as defined by Watkins (1987, 53–181), and collectively includes types 1 to 4. Later Humberwares (Watkins type 5) are classified as LHUM, which is considered with the post-medieval wares. All four types of Humberware are found in Lincoln, with type 1 (Cowick type) being the most common. Most vessels in Humberware are small or medium-sized jugs (Fig. 188, 1396–7), although a range of other forms is also found including; jars, bunghole vessels, drinking jugs, bowls, a dripping dish and a lobed cup (Fig. 188, 1398).

Source

Five samples of Humberware from Lincoln were examined in thin-section (L1886, L1887, L1888, L1889 and L1890). They are tempered with a quartzose sand which in general is similar to that found in local products, although the grain size distribution is distinctive, giving some of the vessels a silty appearance in the hand specimen. All but one sample contain flakes of muscovite and biotite up to 0.2mm across. Two of the thin-sectioned sherds have a silty matrix not seen in the other three samples.

Dating

More than 900 sherds of Humberware have been found in the city, with more than 50% (469 sherds) coming from the three Danes Terrace sites (DT74I, DT74II and DT78). The earliest sherd of Humberware occurs in a horizon MH7 deposit (mid to late 14th century). Sherds are rare, however, until horizon MH10 (mid to late 15th century), when Humberware forms c.1.5% of assemblages, and reach a peak in horizon PMH1 (early to mid 16th century) at c.12%. By horizon PMH3 (the late 16th century), sherds are probably residual.

Midland Purple-type ware (MP) (Fig. 189)

Fabric and technology

This is a long-lived tradition encompassing a range of hard-fired, often semi-vitrified fabrics found in the Midlands (Woodland 1981, 83). Colours can vary from light orange to red, buff to grey or brown to purple, and, although most fabrics are coarse, later examples may have few visible inclusions. No detailed fabric or typological work has taken place on the finds from Lincoln, as it was felt that this should form part of a wider regional research project.

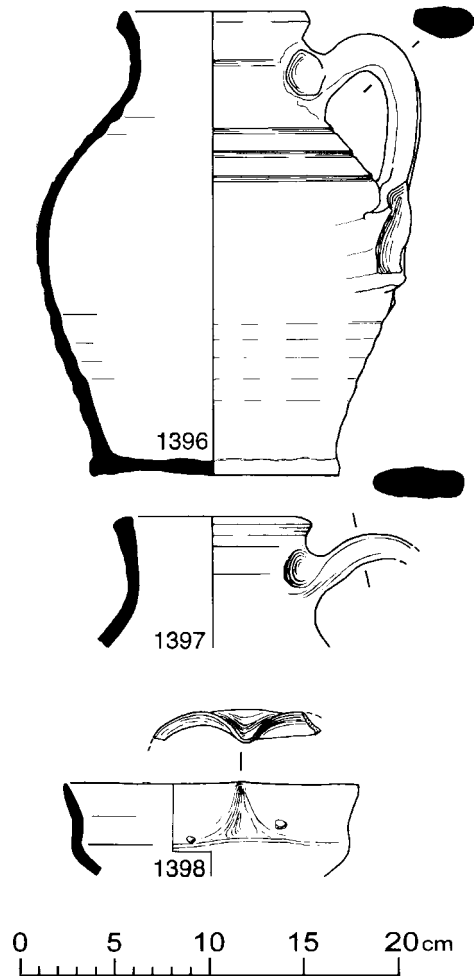


Fig 188 Humberware. Scale 1:4

Forms

Most sherds cannot be associated with a definite form (c.74%) and can only be seen to belong to either jugs, jars or bunghole vessels. Plain jugs are the most common form identified (c.13%) with bunghole vessels also being quite common (c.10%). The diverse range of jug types (Fig. 189, 1399–1401) indicates several different production centres for the Lincoln material. The range of bunghole vessel types (Fig. 189, 1402–4), however, is more conservative, the main variety being in the range of sizes. Plain rounded jars are uncommon and are the earliest form to occur. A few flared bowls are found, mainly belonging to the 16th century (horizons PMH1 to PMH3), and similar to examples found at the Austin Friars site, Leicester (Woodland 1981, eg, Fig. 39, 189 and 191). A single unusual vessel may be a watering pot.

Source

Wasters of Midland Purple-type ware have been found in Nottingham (Alvey, pers comm) and at

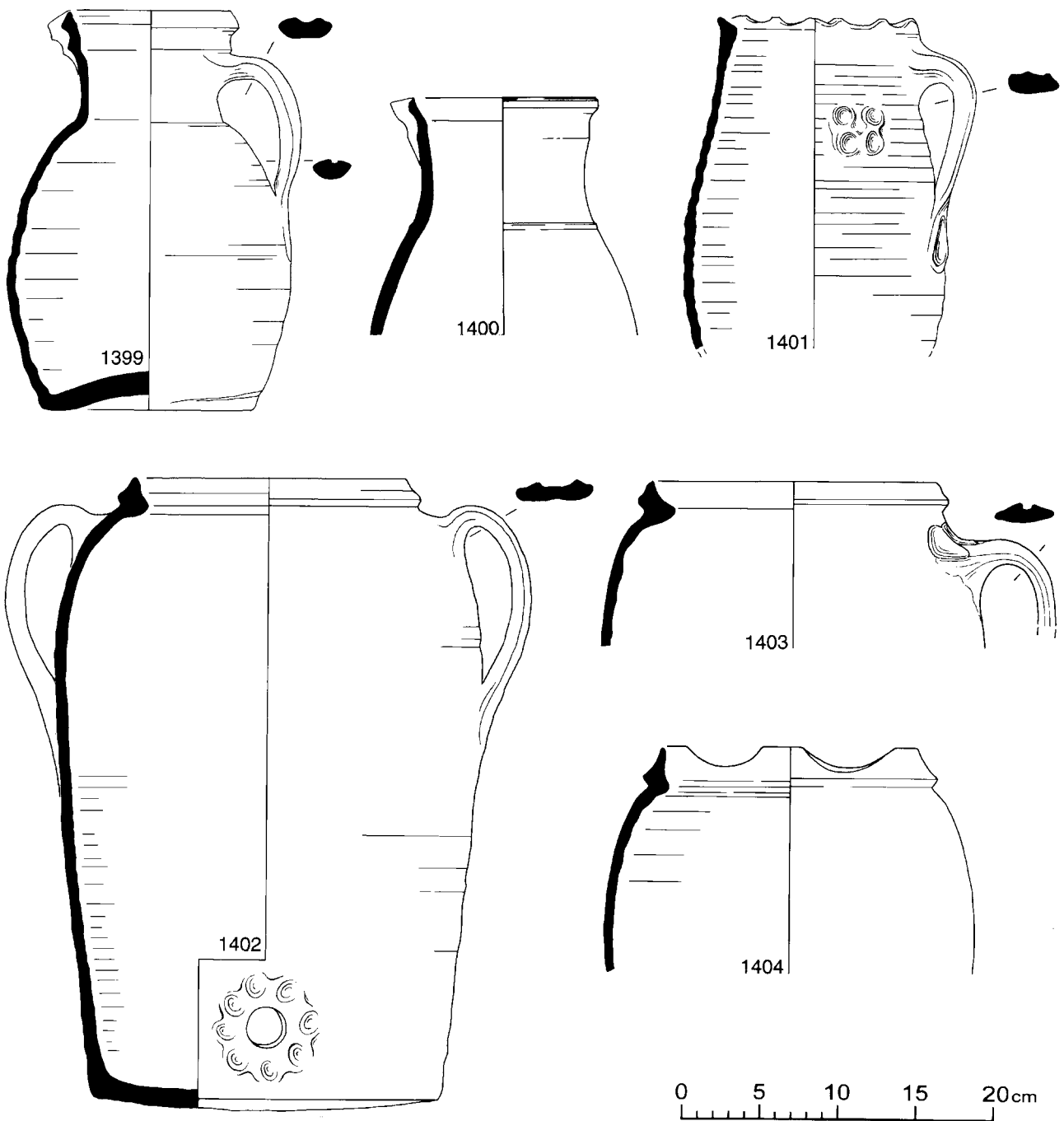


Fig 189 Midlands Purple-type Ware. Scale 1:4

Ticknall in Derbyshire (Brears 1971, 175), but no detailed comparison of these wares with those from Lincoln has taken place, and it is not possible to say for certain where the Midland Purple-type ware vessels in Lincoln were made.

Dating

More than 1200 sherds of Midland Purple-type ware have been recovered from city excavations, with the majority of the material coming from sites with 16th-

century occupation. The earliest sherds to be recovered from Lincoln come from a horizon MH5 deposit (mid to late 13th century) and are definitely intrusive. The first stratified sherds come from deposits dated to horizon MH7 or MH8 (mid to late 14th century), when occasional sherds of light firing MP are present. The ware then only occurs as a very minor element until horizon PMH1 (early to mid 16th century), in which period it forms up to c.4.5% of groups. Incidence of the ware increases to c.9% in

PMH2 (mid to mid/late 16th century) and then falls to c.6% in PMH3 (mid/late 16th to early 17th century); sherds occur sporadically in PMH4 deposits (early to mid 17th century), after which the ware is probably residual in the city. Vessels with a fine, semi-vitrified fabric similar to Staffordshire-type wares of the 17th and 18th century, and previously referred to as Midland Purple types, have been recorded as a type of Blackware (BL).

Late Medieval Toynton ware (TOYII) (Fig. 190)

Fabric and technology

A small number of vessels have been isolated as being probable products of kiln 3 at Toynton All Saints. The fabric is indistinguishable from other products made at Toynton All Saints, and it is the

distinctive forms, decoration and glazing that distinguish this type. The heavily-pocked, olive-green glaze is applied to the external upper third of hollow vessels and the interior of bowls. On jugs and bunghole vessels the glaze is thickest at the top of the vessel and thins towards the shoulder. As on most other products of the Toynton kilns, vessels have a white or buff external skin or slip to unglazed surfaces. Decoration consists of applied pressed strips under the rim and a wavy pattern on the shoulder. Also distinctive is the series of horizontal grooves around the shoulder of larger jugs and cisterns.

Forms

The main vessel type found is a rounded bunghole jug or jar (Fig. 190, 1405–6), with either an upright

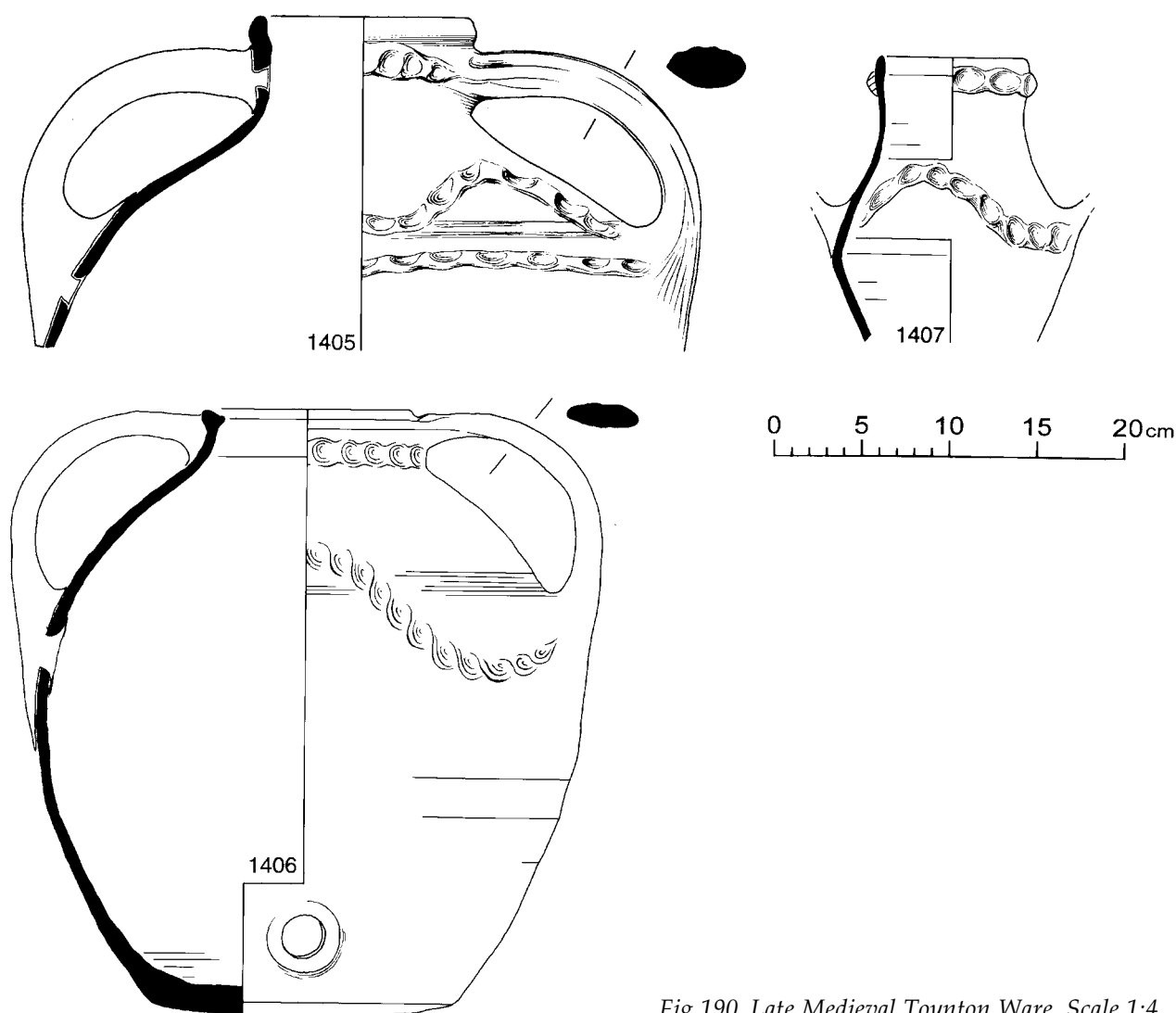


Fig 190 Late Medieval Toynton Ware. Scale 1:4

or a triangular ledged rim. A small double-handled vessel (Fig. 190, 1407) may be a small bunghole vessel or a drinking jug. Bowls from this specific production have not yet been identified in the city, but were found at the kiln site (Healey 1975) and commonly occur on sites in the county.

Source

A single sample of Late Medieval Toynton ware from Lincoln was examined in thin-section (L1337). Like the earlier Toynton products found in Lincoln, this sample contained inclusions of Cretaceous origin (Greensand-derived quartz, flint, and chert) and is clearly distinguishable from Lincoln and Trent Valley products. Kiln 3 at Toynton All Saints was producing similar forms (Healey 1975) to those defined as TOYII.

Dating

Only 14 vessels from the quantified material have been archived as Late Medieval Toynton ware. Others exist under the more general Toynton/Bolingbroke-type ware (TB) category, but were not identified during initial recording. Pottery from kiln 3 has previously been thought to belong to the late 13th or early 14th century (Healey 1975). Finds from Lincoln and other sites in the county, however, show that Late Medieval Toynton ware is consistently stratified with other Late Medieval or Early Post-Medieval pottery. TOYII first appears in Lincoln in deposits dated to horizon MH10 (mid to late 15th century), and is residual by horizon PMH3 (mid/late 16th century).

Late Medieval Imported fabrics (LMIMP)

Description

A single sherd from Danes Terrace (DT74II), now lost, had been identified as a possible late medieval import.

Central Italian Tin-glazed ware (CITG)

Description

A single, now crushed, sherd from a deposit (cg168) containing a large amount of kiln waste at the St. Mark's kiln site (ZE87), has tentatively been identified as this type. The sherd has a hard buff body, an internal and external off-white tin glaze, and is thought to come from an albarello. The deposit cannot be dated more closely than between horizons MH8 and MH10 (late 14th to late 15th centuries).

It is impossible to attribute accurately undecorated tin-glazed wares with a buff body in the absence of scientific analysis. Depending on their date, finds of this type from the British Isles might be Spanish, Italian, or, after c.1500, South Netherlandish. Given

a 15th-century date, a central Italian origin is perhaps the most likely (Wilson 1987, 34–8).

Low Countries Red Earthenwares (DUTR) (Fig. 191)

Fabric and technology

Vessels found in Lincoln have a hard red or orange fabric tempered with fine quartz (Hurst *et al* 1986, 130; Janssen 1983, 133–137), and are mostly glazed with a brown to orange glaze.

Forms

Tripod cooking vessels are the most common form found in the city (c.32%). Unless most of the upper part of the vessel is present, however, it is not possible to classify the vessels as either cooking pots or pipkins (Hurst *et al* 1986, 130, Fig.59). Several examples exist of cooking pots with both handles present (eg, Fig. 191, 1408), although no single-handled pipkins have yet been identified. Skillets (Hurst *et al* 1986, 136, Fig.61, No 198) are the second most common form found (c.12%), with a few examples each of bowls (eg, Fig. 191, 1409), jars (eg,

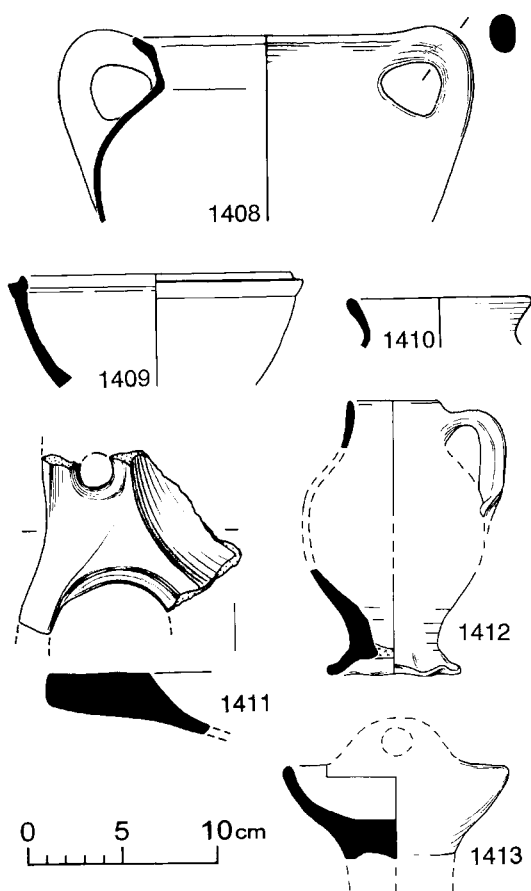


Fig 191 Low Countries Red Earthenwares. Scale 1:4

Fig. 191, 1410), jugs, bottles (eg, Fig. 191, 1412), and lamps (eg, Fig. 191, 1413). Single examples of colander, stinkpot, lid, and dripping pan forms (Fig. 191, 1411) have also been found. Almost all vessels are sooted, indicating that the main use for the Low Countries Red Earthenwares vessels was as kitchen wares. A hole in the base of the illustrated bottle (Fig. 191, 1412) has been repaired with a plug of lead.

Source

The source of Low Countries Red Earthenwares has been discussed elsewhere (Janssen 1983, 121–186; Verhaeghe 1983b, 63–94; Watkins 1987, 140–145). Lincoln presumably obtained material through the ports of Boston and/or Hull.

Dating

Nearly 200 vessels have so far been found in the city in late medieval and post-medieval deposits. The earliest vessel occurs in a horizon MH6 deposit (late 13th to mid 14th century) and examples continue to occur in small numbers until horizon PMH1 (early to mid 16th century), when the ware reaches a peak at *c.*3%. By horizon PMH3 (the mid/late 16th century), Low Countries Red Earthenwares is uncommon again and is residual by horizon PMH4 (17th century).

Langerwehe-type Stoneware (LANG) (Fig. 192)

Description

Examples from the city include both near-stonewares and fully vitrified true stonewares (Hurst *et al* 1986, 186). All vessels have a characteristic brown or purple iron wash which is sometimes only represented by a few splashes. With the exception of two beakers and four handled cups, all of the vessels are jugs (eg, Fig.

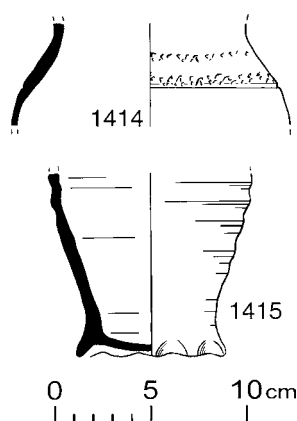


Fig 192 Langerwehe-type Stoneware. Scale 1:4

192, 1414–5). A range of sizes occurs, from small type IV jugs (Hurst *et al* 1986, fig.91, 276–7) to quite large jugs.

Source

The source of these stonewares lies at Langerwehe, on the northern border of the Eifel, between Aachen and Cologne, and has been discussed elsewhere (Hurst 1977, 219–38 and Hurst *et al* 1986, 184–6).

Dating

Just over 100 vessels have been found in Lincoln, mainly on sites in the Lower City. No vessels occur in deposits dated to a single horizon before MH10 (mid to late 15th century), and the first occurrences seem to be in deposits with an earliest possible date of horizon MH8 (late 14th century). The ware reaches *c.*1% in horizons PMH1 and PMH2 (16th century), when it is closely related to the occurrence of Low Countries Red Earthenwares, and possibly only becomes residual by the end of horizon PMH3 in the late 16th century.

Langerwehe/Raeren-type Stoneware (LARA)

Description

A small number of vessels with a salt glaze that cannot positively be attributed to Langerwehe or Raeren types have been classified as Langerwehe/Raeren-type Stoneware (Hurst *et al* 1986, 186; Jennings 1981, 109). With the exception of one cup, all vessels are jugs. Only 12 vessels have been classified as Langerwehe/Raeren-type Stoneware, and all occur in deposits dating later than MH10 (late 15th century), with most examples coming from horizons PMH1 and PMH2 (early to mid 16th century).

Mature Valencian lustreware (MVAL) (Fig. 193)

Description

A near-complete bowl in Mature Valencian lustreware (Hurst *et al* 1986, 42–8) was found during excavations at St. Mary's Guildhall (SMG82: Vince 1991, 69). The bowl probably dates to the early part of the 15th century and is decorated internally and externally in lustre. The bowl was found associated with a moneybox in a Late Medieval Local fabric (Fig. 185, 1390) which cannot be closely dated. A second sherd was found at Broadgate East (BE73 BP) and appears to have been the base of a bowl or plate.

Source

The MVAL bowl from St Mary's Guildhall has been examined by a number of specialists who confirm that it is a product of the Manises area of south-east Spain. The Broadgate East sherd has only been examined by the author (AGV). It has all the charac-

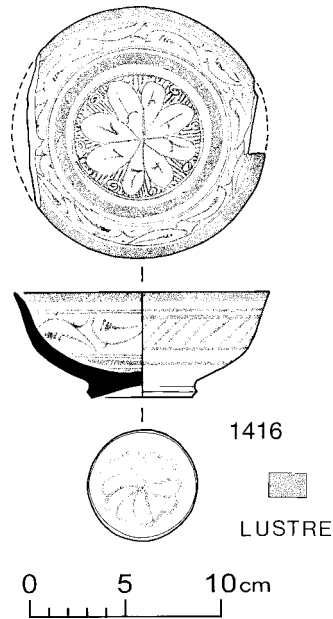


Fig 193 Mature Valencian Lusterware. Scale 1:4

teristics of a Valencian piece but this attribution is not supported by either petrological or chemical analyses.

Seville-type (SEVIL)

Description

A single polygonal albarello, possibly a Seville product, was found during excavations at the Bishop's Palace (LBP72: Chapman *et al* 1975, fig. 8, 46). The associated contemporary pottery belongs to horizon MH10 (mid to late 15th century), and the suggested deposition date for the group is 1457–1458 (*op cit*, 23).

Source

The polygonal albarello from the Bishop's Palace has a relatively coarse fabric, off-white in colour and with an abundant sand with grains of mixed type up to 1.0mm across. The fabric is similar to those of the Olive Jars and other coarseware products of the Seville area, and it is likely that this is the source for the Lincoln vessel too. A sherd from a similar vessel is known from Aldgate, City of London. The Lincoln piece predates the rise to prominence of the Seville pottery industry which followed the discovery of America in 1492 (Hurst *et al* 1986, 53), and no examples of the more common 16th- and 17th-century Seville wares have been found in the city.

Iron-washed Siegburg Stoneware (SIEB)

Description

Three vessels in a Siegburg fabric with a red or brown iron-wash (Blackmore 1994, 37) have been found in the city. All are small vessels, probably bottles, although one may be a standing costrel. None was found in secure contexts but all were associated with residual groups of horizon PMH1 to PMH2 material (early to mid/late 16th century).

Early Post-Medieval (c.1500–c.1600)

Introduction

The early post-medieval period in Lincoln is covered by ceramic horizons PMH1 to PMH3 (the early 16th to early 17th centuries). It is a period of transition from conservative medieval production to a more industrialised post-medieval fineware tradition. This period marks the end of the domination of pottery produced in Lincoln and its environs, and the beginning of a period of constantly changing sources of supply. Chronologically, the period covered is the 16th century, with possible slight overlaps at either end. Lincoln is relatively rich in groups covering the century mainly produced by the large sites in the Lower City: Broadgate East (BE73), Danes Terrace (DT74II), Steep Hill (SH74), and Hungate (H83), although some of the groups may have been redeposited. Pottery of this period in the county has previously been summarised by Healey (1975) and White (1989), where details of kilns, manufacture and marketing can be found.

National Context

Over the whole of England, this is a period of both change and continuum. The border between the end of the medieval tradition and the beginning of its post-medieval successor is an overlapping patchwork of both, sometimes augmented by transitional wares, as in Norwich (Jennings 1981, 61–72). Conservative local coarseware productions often continued to function until the 17th or 18th centuries, only slowly adapting forms and decorative techniques (eg, the kilns at Toynton All Saints).

Lincoln Production

Pottery production of at least two wares, Late Medieval Fine ware and 15th/16th-century Lincoln Glazed ware (LMF and LSW4) and possibly a third, Late Glazed Lincoln ware (LLSW), continues into this period, but is not of major importance and is probably at an end by the time of the Dissolution.

The only pottery types possibly to be made in the city after this event are fine white earthenwares covered with a copper-green or a copper bichrome glaze (PMF and PBIC). The evidence is slight, however, being based on a possible waster vessel found at the site of the Gibney Building, North Lincs College, Monks Road, formerly the School of Art, and the City School (Hurst 1966, Fig.2, 1).

Lincolnshire Production

Important medieval production centres had previously operated at both Bourne and Toynton All Saints. During the later 14th and 15th centuries, however, production from these kilns appears to have slowed down and distribution of the pottery became more localised. New types of pottery began to be produced at each centre (BOU, TB and TOYII) during horizon MH10 (mid to late 15th century), although never occurring in Lincoln more than sporadically until horizon PMH1 (early to mid 16th century).

Post-medieval Bourne ware Fabric D (BOU), (Healey 1975) is at its height in the city during horizon PMH1 (the early to mid 16th century) at *c.*4% of well-stratified material, dropping to below 1% after this. The fine orange fabric is distinctive and easily recognised when not overfired. Forms found in the city include jugs, jars, cisterns, bowls, lids, and a basket handled vessel. Decorative techniques include the use of applied white clay, iron-rich slip and Sgraffito.

Identification of post-medieval pottery made at Toynton All Saints is not always positive, as similar material was also being produced at Bolingbroke and possibly other centres (Healey 1975; White 1989). In the absence of typologically certain vessels, it has therefore been agreed locally to refer to material as Toynton/Bolingbroke-type (TB). The type constitutes *c.*10% of stratified groups in horizon PMH1 (early to mid 16th century), *c.*29% in PMH2 (mid to mid/late 16th century) when the ware is at its peak in the city, and fell to *c.*17% in PMH3 (mid/late 16th to early 17th century). The range of forms in Toynton/Bolingbroke-type is limited within the city, mainly comprising jugs and bunghole vessels, but examples of jars, bowls, drinking jugs, urinals, dripping pans, lamps, and a chafing dish have also been found.

Late Medieval Local wares (LMLOC) continue to be important in this period, forming *c.*7% of horizon PMH1 deposits (early to mid 16th century) and between 2% and 5% of PMH2 and PMH3 groups (mid 16th to early 17th century). The first fabrics to be classifiable as Post-Medieval Local wares (PMLOC) arrive in horizon PMH1 (early to mid 16th century) as a minor element, but form *c.*4% of horizon

PMH2 deposits (mid to mid/late 16th century). Forms include jugs, jars, bowls, dishes, footed pipkins, chafing dishes, dripping pans, and single examples of a strainer, a frying pan, and a pedestal vessel. One distinctive fabric ('K') may have been produced at Kirkstead (White 1989).

In horizon PMH3 (last quarter of the 16th century), a new type of pottery occurs; Glazed Red Earthenwares (GRE). Kilns producing this type of pottery are known at Boston (White 1976), and Grimsby (Didsbury 1989), and wasters of 17th- and 18th-century date have been found in Bolingbroke (Tann 1996). This new type of pottery forms *c.*2% of stratified material in PMH3 deposits, and its introduction seems to herald the decline of Toynton/Bolingbroke-type in the city. A wide range of forms is found in Glazed Red Earthenware, although in this early phase most vessels are bowls, mugs or pipkins. Recent excavations at Boston produced a group of vessels that are remarkably similar to imported Low Countries Red Earthenwares and may date to PMH2 (mid 16th century), indicating the possibility of immigrant potters setting up in the town.

Regional Imports

Cistercian ware (CIST) is the most common type of pottery found in horizon PMH1 (early to mid 16th century), at *c.*10% of assemblages, and increases to *c.*25% by PMH2 (mid to mid/late 16th century), before dropping to *c.*8% in horizon PMH3 (mid/late 16th to early 17th century). Parallels for form and decoration in this period are more commonly found with material from the East Midlands, especially vessels found at The Austin Friars, Leicester (Woodland 1981), and at Nottingham, where production has been postulated (R. C. Alvey, pers comm). Midlands Purple-type fabrics (MP) continue into this period and are less common than Cistercian ware (at *c.*3% in horizon PMH1, *c.*9% in PMH2 and *c.*6% in PMH3), but mirror the pattern of the Cistercian wares and may in fact have been traded with them.

Humberware (HUM) provides a good percentage, at *c.*12%, of the city's jugs during horizon PMH1 (early to mid 16th century), along with a smaller number of bunghole vessels and drinking jugs. The incidence of Humberware falls below 1% by horizon PMH2 (mid 16th century), when this medieval-type tradition is replaced by post-medieval Late Humberware (LHUM) at *c.*4%. Another type of pottery to be imported from north of Lincolnshire is the White Coal Measure fabrics (CMW), which form *c.*1% of pottery in the second half of the 16th century (horizons PMH2 and PMH3).

Black- (BL) and brown- (BERTH) glazed earthenwares, possibly imported from East Anglia, occur for

the first time in this period. Brown-glazed wares are the first to be found, arriving in horizon PMH1 (early to mid 16th century) and forming *c.*0.5%, rising to *c.*2% by PMH2 (mid to mid/late 16th century). Vessels are mainly bowls and jars intended for use in the dairy or kitchen. Blackware forms at this period consist almost entirely of vessels intended for drinking (mugs, cups, tankards, and two-handled tygs) with a few small jugs also present. These may be the 'black potts' identified by White (1989) as occurring as imports into Boston at the beginning of the 17th century, on ships from London and King's Lynn.

Continental Imports

Low countries Red Earthenwares (DUTR) are, at *c.*3%, at a peak in horizon PMH1 (early to mid 16th century), possibly linked to the increased trade in Humberwares, as White (1989) concludes that Low countries Red Earthenwares are more likely to be imported through Hull than through Boston. From horizon PMH2 (mid 16th century) onwards, Low countries Red Earthenwares only ever form a minor element in any assemblage, although they continue to be found until the end of PMH3 (early 17th century).

During this period the quantity and variety of German stoneware jugs found in the city increase. Langerwehe-type (LANG) reaches *c.*1% in assemblages in horizons PMH1 and PMH2 (the first half of the 16th century), where it is commonly found alongside Low countries Red Earthenwares vessels. Raeren-type jugs (RAER) (Hurst *c.*1986, 194–208), first found as a rare occurrence in horizon MH10 deposits (late 15th century), increase to *c.*2% in PMH1 (early to mid 16th century), *c.*7% in PMH2 (mid to mid/late 16th century), and then drop to *c.*2% in PMH3 (mid/late 16th to early 17th century). Over 200 vessels have been found in the city, the vast majority being medium-sized plain jugs. More unusual vessels include 10 panel jugs (Hurst *et al.* 1986, 202–3), a single motto jug, and the greater part of an earthenware vessel copying a Siegburg-type jug shape. A single Frechen drinking jug (FREC) first appears in a horizon PMH2 group (mid 16th century), and by PMH3 (mid/late 16th to early 17th century), the jugs form up to *c.*1% of the pottery. Cologne-type (KOLS) jugs are not common in the city, with only 12 examples found. All sherds are undecorated, except for one with a female head on a medallion. A single early Westerwald (WEST) jug occurs in a horizon PMH3 deposit (late 16th century).

Imports from elsewhere are rare in this period, examples including North Holland Slipwares (NH SLIP), South Netherlands Tin-Glazed altar vases

(SNTG), Maiolica dishes (TGEM), Saintonge chafing dishes (SAIU and SAIPM), Martincamp flasks (MARTI, MARTII and MARTIII), and a single sherd from a small jug or mug with a hard-fired white fabric and a bright copper-green glaze that has been identified as being a Beauvais product (pers comm John Hurst).

Post-Medieval to Early Modern (c.1600–c.1770)

National Context

This period sees great changes in pottery production with the introduction of new technology and forms. The potteries utilising the new production methods, fabrics, forms, and decorative techniques all eventually influenced local production in varying degrees, although often not until sometime after their original introduction. The main evidence for this period comes from the large groups from the St. Paul-in-the-Bail churchyard site (SP72) and well excavations (SP84; Mann forthcoming). Many groups of this period are affected by the discard policy applied to some sites in the early 1970s, leaving assemblages heavily biased towards the coarsewares.

Lincoln Production

There is no evidence for pottery production within the city during this period, although it is possible that one of the brickyards operating at the time may have also produced coarse pottery intended for the garden.

Lincolnshire Production

Pottery production is known from a number of centres in this period: there is evidence not only from kilns and production waste but also from documents (White 1989). The presence at Bolingbroke of waster sherds in a variety of fabrics indicates that potters there diversified and produced more than one type of coarseware pottery, making it more difficult to link a traditional type of ware with a single production centre. At the beginning of the period in the city, coarsewares intended for use in the kitchen and dairy account for *c.*50% of assemblages, but by the end of the 18th century this has fallen to less than 20%.

The traditional Toynton/Bolingbroke-type ware (TB) only ever forms up to *c.*2% in this period, although other ware types, such as Glazed Red Earthenwares (GRE), Blackwares (BL), and Post-medieval Local fabrics (PMLOC), are probably also products of kilns at Bolingbroke. Glazed Red Earthenwares (GRE) are the main coarseware used until

the early part of the 18th century when they are replaced by Blackwares (BL). The range of GRE vessels increases, to include chafing dishes, flower pots, fuming pots, bird pots, bottles, butter pots, chamber pots, dripping pans, strainers, frying pans and watering pots. Bourne ware Fabric D (BOU) is only ever rarely found in 17th-century deposits in the city and potting may have ceased to exist there altogether after a disastrous fire in 1637 (White 1989, 90).

Some of the slipwares (SLIP) appear to be local and must have been produced in the county, although no source has yet been found. One particular type of slipware occurs in horizon PMH4 (early to mid 17th century). It has a fine soft red fabric similar to that of the Glazed Red Earthenwares (GRE), and consists of cups and dishes with a brown or dark green glaze and a white trailed slip decoration that appears yellow under the glaze. Both forms are similar in shape to North Holland Slipware examples (Hurst *et al* 1986 fig. 81, 248, and fig. 74, 234).

Regional Imports

All except a few fineware forms were imported into the city from elsewhere in the country, mainly from Staffordshire, but also from other centres including Nottingham, Derby, Yorkshire, and the London area. Brought in with these finewares was a range of vessels intended for more utilitarian use such as storage jars and chamber pots. Brown (BERTH) and Black (BL) earthenwares from Staffordshire first appear in horizon PMH4 (early to mid 17th century), followed by slipwares (SLIP and STSL) in horizon PMH5 (mid to mid/late 17th century). With the exception of the material from the St. Paul-in-the-Bail Well (SP84), the exact percentage of these wares varies only slightly from site to site. It is the forms that alter, with the more affluent assemblages containing a higher proportion of highly decorated dishes and cups, as well as more unusual forms such as posset pots and porringers. English brown stonewares (BS) are rare until horizon PMH8 (early to mid 18th century), and most early examples seem to be of Nottingham-type. Almost all early Brown Stoneware vessels are mugs, with chamber pots becoming the more popular vessel by the end of the period. Tin-glazed earthenwares (TGE and TGEM) are one of the most variable types of pottery to be found in this period, with some sites having very little, and others, such as some of the well deposits at St. Paul-in-the-Bail (SP84 LUB 110), having up to c.32%. No work has been undertaken as part of this

project to attribute the material to various centres, although previous study of some of the material from the St. Paul-in-the-Bail well shows that some of the 17th-century vessels are likely to be of Dutch as well as English manufacture.

Staffordshire white salt-glazed stonewares (WS) and Creamwares (CRMWARE) first appear in horizons PMH8 (early to mid 18th century) and PMH9 (mid to late 18th century) respectively. Unfortunately, few groups remain intact, as much material of this date was previously discarded. The first stratified Pearlwares (LPM) appear in the demolition deposits of the medieval church at the St. Paul-in-the-Bail site (SP72 LUB 111), dated on documentary evidence to 1786.

Continental Imports

Overall the amount of imported material in the city at this period is quite small. Frechen-type German stonewares (FREC) are found in small quantities on most sites with 17th-century deposits and only three sites, (St Paul-in-the-Bail well (SP84), Broadgate East (BE73), and Danes Terrace (DT74II)) produced large numbers of vessels. Westerwald-type stoneware (WEST) is found less commonly, and material from the two St. Paul-in-the-Bail sites (SP72 and SP84) accounts for c.59% of all the material found in the city. Other material imported from Germany includes Werra (Hurst *et al* 1986, 242–8) and Weser (Hurst *et al* 1986, 250–9) slipwares, other German Slipwares (GERMS) and German Whitewares (GERMW).

Chinese Export Porcelain (CEP) was found on only eight sites outside the Upper City, although c.76 vessels, mainly decorated underglaze blue, have been found in total. This concentration of c.82% of a mainly 18th-century import in the Upper City mirrors the pattern of the 17th- and 18th-century Westerwald stonewares, where c.80% was also found on sites in the Upper City. This is to be compared with c.54% of Frechen-type and c.16% of the mainly 16th-century Raeren-type stonewares. Taken together with the proportion of the two main earlier 16th-century imports into the Upper City (Langerwehe-type stoneware at c.11% and Low countries Red earthenwares at c.4%), this perhaps hints at a relatively gradual decline in the status of the Lower City during this period. Other imported pottery includes a few sherds each of North Holland Slipware (NHSLIP) and Portuguese Faience (PORTF), and single examples of Ligurian Berettino (LIGU) and North Italian Sgraffito (NITALS).

V Discussion

Quality of the evidence

Examination of the large amount of excavated post-Roman pottery from the city has enabled relative typologies of ware and form types to be constructed. It must be borne in mind, however, that the quality of evidence is not constant throughout and that, as yet, few closed or sealed groups associated with primary dating evidence have been found.

A sequence has been proposed that covers the 5th to 19th centuries. Only the 5th to 15th century is presented in detail in this volume. The earliest period covered (c.450–850) is the weakest part of the typology, with the assumption being made that pottery consumption in Lincoln would follow that of the surrounding area. Pottery of this date, so far only found residually within the city, seems to support this hypothesis, although, until stratified Early and Middle Saxon sites are excavated, this sequence is no more than a presumption. The few groups which exist that date to the earliest Anglo Scandinavian/Late Saxon period (Ceramic Horizon ASH7) may reflect limited settlement within the city at that time. At present, the exact relationship between the main pottery types in this horizon is uncertain; waster sherds may distort the importance of a single type and the small sample size may affect what is seen as associated material. Excavation of further groups of this date may provide a hierarchy of ware types that are at present confined within a single horizon.

The 10th century was a period well covered ceramically in the city, with a large number of diverse sites providing evidence for repeated association of ware and form types. The situation in the early part of the 11th century was somewhat different. Few groups of this date (Ceramic Horizon ASH12) are free from a large residual element of 10th-century material derived from earlier deposits and this makes it difficult to determine how much, if any, of the Late Saxon shell-tempered pottery was

still in production. An intuitive judgement, based on the condition of the material and the rim types found, was that the LKT industry had ended, but that LSH production may have continued into the early part of this period. A close examination of material found on the recently discovered kiln site at the Sessions House (SES97), apparently producing both shell and quartz-tempered wares, may help to elucidate this problem, but it may not be finally resolved until a site is found that was not occupied until the early to mid 11th century.

Evidence for the 12th century is variable, with little ceramic material available from either the Wigford suburb or the Upper City. Enough, however, is present on Lower City sites to present a fairly confident impression of consumption in the city. A consideration of the 13th and early 14th centuries shows a wealth of evidence from all parts of the city, with minor variations in supply being evident in different areas. The later 14th and the earlier 15th centuries (Ceramic Horizons MH7 to MH9), however, present a number of problems. There is a large and varied sample of pottery from this period, but unfortunately most of the material was deposited in destruction and foundation deposits, making the quality of evidence suspect. The picture is further complicated by evidence that at this period pottery consumption varies from site to site. For example, the content of MH8 to MH9 deposits is often affected by proximity to the St. Mark's kiln site (ZE87), with nearby sites having a higher ratio of Late Lincoln Glazed ware to 14th–15th-century Lincoln Glazed ware (LLSW:LSW3) than is found on sites in the Upper City. Conversely, groups on the Danes Terrace sites in the Lower City (DT74–8) have a much lower LLSW:LSW3 ratio than is found on the neighbouring Flaxengate site. Perhaps it is no coincidence that LSW3 wasters have been found amongst material at Danes Terrace.

Forms, function and status

Throughout the period covered by this corpus, most vessel types found in the city are similar to those found elsewhere in the East Midlands, East Anglia and South Yorkshire. The individual shapes available within each form-type at different times tend mainly to reflect the influences of nearby regional centres. Few instances of direct continental influence occurred outside the early Anglo-Scandinavian/Late Saxon period; they included copies of Paffrath ladles (BLGR) in the Lincoln-made LSWA fabric and the early use of iron-stained decoration copying North French or Rouen types.

Few vessels in the city can be seen to have fulfilled a specific function before the Anglo-Scandinavian/Late Saxon period. In most cases Early Saxon and Middle Saxon sherds can only be identified as coming from an unspecific jar/urn form, or rarely a bowl. Some vessels have applied lugs and this suggests that the form was intended to be suspended above a heat source; other vessels have post-firing perforations below the rim, possibly intended to fulfil the same function, but perhaps for use with a thong for attachment of a lid. Only the imported pitchers/jars (GRBURN, BRBURN, BLSURF, MAY and ORP) and the small Black Burnished vessel (BLBURN) can be possibly be identified as liquid containers.

The range of form types available in the Anglo-Scandinavian/Late Saxon period was limited, although the multiplicity of sizes and shapes indicates that ceramics at this time were intended to fulfil a wide range of functions. Jars are found both sooted and unsooted, suggesting use for both storage and cooking purposes. Some of the shell-tempered storage jars are lined with a thick iron-rich slip and as many of these jars also have an internal surface that has been de-calcified, by contact with an acidic compound: it is possible that this was an attempt to waterproof the interior of the vessel. Jars are also found with an internal red staining, probably caused by contact with madder and more commonly with an internal white deposit, caused by urine or boiling water. Bowls are also found both sooted and unsooted, again indicating usage for both storage or serving and for cooking. The wide dishes and shallow bowls common in the late 9th and early 10th centuries were an ideal shape for use in skimming milk. Other bowls, for example the small, round-based LKT bowls with a spout which are always heavily sooted, must have had a very specific use, which can no longer be determined. Small decorated dishes seem never to occur with sooting and may have either been for table use or for drinking. Differing sooting patterns on a single type of bowl show that the most common form, that of the medium sized, inturned rim bowl, was used to perform several functions. These bowls are found with sooting

on the base and lower body, indicating a cooking function; sooting on the interior suggesting use as curfews; and a few have sooting from the rim towards, but not on the base, perhaps showing their use upside-down as bakers or lids. The presence of glaze on some LKT examples suggests that these bowls may also have functioned as saggars in glazing experiments. Specific forms for liquid containment (pitchers) are found quite commonly in a number of fabrics, as are small pedestal lamps for lighting. Small pedestal vessels, identical to the lamps, are sometimes found with roller-stamped decoration. These never seem to have been sooted and may have been used as drinking vessels, as may have the very small jars found. Industrial vessels were found on most sites of this date and although most crucibles were imported from Stamford, where suitable refractive clays were available some crucibles and other industrial forms (cupels and parting vessels) formed a small, but nevertheless, important part of the local Anglo-Scandinavian/Late Saxon potter's repertoire. Several unusual forms occur within the city, or were produced in Lincoln-made wares and apart from unknown form types these include: costrels; funnels; small discs, possibly used as gaming counters; stands, and very small globular glazed jars with a spout, possibly fulfilling a similar function to the posset pot in the post-medieval period. Pottery indicating status is difficult to determine, the most likely indicators being the presence of small glazed Early Stamford ware (EST) vessels, imported vessels such as the Huy ware pitchers, and possibly Early Lincoln Glazed ware (ELSW) vessels on sites other than Flaxengate.

Few innovations in form took place during the Saxo-Norman period. The emphasis on pottery types and shape within these types did, however, change. Jars were more commonly used for cooking and by the end of the period local products have become wider-based, giving a profile that has more in common with the traditional medieval cooking pot shape than the typical 10th-century jar shape. The range of local jar sizes was slightly more restricted than for the Anglo-Scandinavian/Late Saxon period and this range was supplemented by small vessels from Stamford and larger Thetford-type storage jars. Bowl shapes changed considerably during this period, with spouted bowls disappearing after horizon ASH12 and a gradual increase in bowl size throughout the local industries. Most of the large, deep LFS bowls were heavily sooted and may have been used for a variety of functions from cooking to washing up. Smaller decorated bowls come from Stamford, or occasionally from other sources (e.g. Crowland Abbey-type ware, CROW); these forms were rarely sooted and must have been for table use or for drinking. Pitchers are more commonly found in this period with a range of sizes in use. Pedestal lamps

still occur, but small globular Stamford lamps had become more popular. Stamford-ware crucibles continued to be an important regional import. Until more comparative work can be undertaken on rural site assemblages it is difficult to be sure about the use of specific forms as status indicators. It does seem however that the presence of internally and externally glazed, decorated Stamford-ware pitchers and bowls, the occurrence of imports, and a high ratio of Stamford to Torksey and Lincoln Fine Shelled wares, reflect sites that also have what might be considered high-status artefacts.

The Early Medieval period was one of rapid change for form types. The jar shapes produced in the local shell-tempered ware LFS are now all of a typical wide-based cooking pot shape. The emergent 12th-century shell-tempered LEMS industry continued this tradition and produced a range of small to large wide-based cooking pots, almost always found heavily sooted. Small jars during this period are almost entirely made by the glazed ware industries. These small flat-based jars are found both unsooted and sooted. Some of them were only sooted on the underside of the base, indicating heating by charcoal, and this is also a common trait on NSP jugs. Bowls continue to be important throughout this period, although towards the late 12th century the large, deep bowls were superseded by shallow bowls and dishes. All, however, appear to have been used for cooking. Collared-pitchers became an important part of early 12th-century assemblages and were rapidly replaced by the growth of the new jug form by the middle of the period. Jug shapes, especially the rim types, underwent several changes by the end of the period; basal sooting and interior white deposits caused by the containment of urine or continual heating of water suggest that jugs may have not contained liquids just for drinking. In the early part of the period, decoration on jugs was uncommon, and probably incidental to usage; however, by the later 12th-century, highly decorated jugs from Stamford were in use and their common occurrence on sites of probable high status, often together with decorated North French jugs, seems to be a socio-economic indicator. At the end of the 12th or the early 13th century, a small spouted bottle form was made by several industries. Pedestal lamps re-emerged and were supplemented by spike lamps in the early part of the period. A rare but unique form to this period was an ovoid, globular vessel, similar in shape to a globular crucible or lamp, but larger. These vessels are found sooted on the base and with no trace of residue, so are likely to have been for domestic use. A new form to be found at the end of this period was the purpose-made curfew, initially an adapted bowl, but eventually becoming a domed shape form, made mainly in tile fabric (TILE). Other forms, such as the dripping pan

and the pipkin, first make rare appearances at the end of this period, but do not become common until after Ceramic Horizon MH5.

By the early 13th century, the cooking pot and jar forms constituted only a small proportion of the pottery used in the city. Cooking pots were entirely made in shell-tempered wares and are mainly large in size. A range of jar and pipkin types were in use, all made by the glazed-ware potters. Without the presence of a lip, handle or complete rim circuit, jar and pipkin forms are often difficult to distinguish from each other. Vessel forms identified as small plain jars are rarely sooted and were therefore probably intended as containers. A few unglazed jars, found in the early part of the 13th century, have a wide pulled lip and were usually sooted: they may have been used for domestic or possibly industrial purposes. Bowls are rarely found in the city during the medieval period. Large bowls made in shell-tempered fabrics were intended for use in the kitchen and dairy, whereas the small glazed bowls are often of a high quality that suggests use as a tableware. Jugs are the main ceramic form used in the city throughout the medieval period. A wide variety of shapes, sizes and decorative elements was in use. Decorated jugs are more common at the beginning of the period, although very elaborate jugs are always rare. On most sites, only a small number of jugs is found with internal white deposits and sooting, but there are some groups where these traits are common and must reflect a different use of the ceramics in the assemblage. A high ratio of good quality decorated jugs does seem to correlate with sites thought from other evidence to be of a higher status. These sites are also those producing the rare examples of imported medieval pottery and it is possible that, at a time when transport was difficult, findspots of imports away from the East Coast ports can be used together with other evidence as indicators of wealth, or status. A wide range of minor forms was in use in the city, some such as dripping pans, lids, lamps, bottles and curfews being uncommon rather than rare and possibly used by almost everyone. Other more specialised forms are rare. They included aquamanile, money-boxes, salts, albarellos, horns and sweetmeat dishes, all of which would probably have been used in middling households emulating those who could afford the metal or glassware prototypes, and crucibles, industrial vessels and the chicken feeders which would have had a specific industrial or animal-related use.

The late medieval period in Lincoln saw the introduction of a number of new forms in pottery, many of them copies of vessels previously made in wood or metal. Cooking pots are still almost entirely made in POTT shell-tempered ware, although towards

the end of the period some of the larger jars in LLSW also seem to have been used for cooking. Jars become more common and are easier to distinguish from pipkins than previously. By Ceramic Horizon MH10 at least 12 different types of jar are being made in the city. Towards the end of this period bowls become more common and a wide variety of shapes in a range of sizes is found, with a wide, shallow type that develops into the post-medieval pancheon, the most common. Small, internally-glazed bowls probably fulfilled a variety of uses, ranging from use as salts to a replacement for wooden drinking bowls. Ornate lobed-bowls must have been intended for table use and may also have been used for drinking. Jugs remained the most common form throughout the period and are made in variety of shapes, sizes and decorative techniques. Perhaps the most unusual aspect of Lincoln-made jugs of this period is the resurgence of highly ornate forms, decorated with the use of modelled, incised and moulded motifs. A new form, first found at the beginning of this period, is the so called drinking jug, known to have had a number of uses (e.g., McCarthy and Brooks 1988, Fig.57). Another new form to appear in the city at this time was the bung-hole jug/jar, although finds are rare before Ceramic Horizon MH10. The range of minor forms available in the city during the late medieval period was immense and can be broken down into domestic and cooking/storage vessels, industrial vessels, and finewares intended for table use, display or amusement. Domestic and cooking/storage vessels that have been identified included urinals, dripping pans, bottles, segmented dishes, lamps, cauldrons, mortars, candlesticks, garden pots, and curfews. Specific forms for industrial use included industrial bases and crucibles. The number of fineware forms increases noticeably and identified forms included aquamanile, lobed and plain cups, money boxes, whistles, puzzle mugs, segmented dishes, and possible ecclesiastical vessels. It is more difficult to suggest high status forms at this period: the increased range of forms available are not restricted to what would be considered higher quality sites. Perhaps the only indications that agree with other artefacts are the presence of the fine LMF wares, more than single occurrences of plain imports or exotica such as the MVAL bowl found at St. Mary's Guildhall.

Pottery Production in Lincoln

From the late 9th century onwards pottery production was carried out in Lincoln or its suburbs. It seems that the industry was located on the eastern side of the settlement, where the prevailing wind would blow smoke and flame away from the town. The industry had two distinct phases of production,

dating from the late 9th to the early 11th century and from the early 12th to the 15th century respectively. There is little evidence for continuity between the two and there was a period during the mid 11th to 12th century when the majority of the pottery used in the town is thought to have been made outside the town.

There was a strong connection between the potting industry in Lincoln and tiling in the 12th century and later. This is not simply because both industries had similar requirements for raw materials, fuel and location. There may well have been some tilers who produced pottery and some potters producing tiles.

By contrast, there is little evidence for any connection between the ceramic industries and the production of metalware, despite the fact that many of the bellfounders and braziers of Lincoln were sometimes termed 'potter'. For this reason, every documentary reference to pottery production has to be treated critically and evaluated in the light of topography and archaeological finds.

Archaeological, documentary and place-name evidence shows that Lincoln supported a large pottery industry from the late 9th century to the 11th. This industry went into decline during the 11th century, possibly because competition from the Torksey potters, aided by the recutting of the Fosse Dyke, took the Lincoln pottery trade. Alternatively, the presence of Torksey and Stamford pottery in large quantities in 11th-century Lincoln may be a consequence rather than a cause of the decline of the local industry. The movement of the industry further and further east during the 10th and 11th centuries suggests that it was liminal, located at the eastward-progressing boundary of the city and the countryside. The resurgence of the pottery industry in the 12th century is probably best seen as a re-foundation since there may well be a gap of a generation between the latest production of SNLS on the site later occupied by St Rumbold's church and churchyard, and the earliest LSW jugs. There is little evidence for transition between a Saxo-Norman industry producing spouted pitchers and a medieval industry producing jugs such as occurs at Nottingham, Stamford, Beverley and elsewhere. The location of the earliest medieval potteries is not certain. Petrological evidence suggests that they may have been utilising a different clay source from those used in the 13th to 15th centuries. The latter include frequent unworked clay pellets, some of which were organic. These demonstrate that clay was being extracted from deep pits and thus not subject to weathering, which would have probably removed the organic content. In all likelihood the pits would have been located on South Common, which was certainly the source of clay (and temper) used in the brick and tile industry.

Most of the documentary references to potters in

Lincoln have been shown on closer examination to be referring to metalware potters, many of whom (if not all) were also bellfounders. Isolated groups of over-fired or otherwise wasted pottery from sites in the Lower City suggest that pottery production was indeed practised in this quarter of the town but, if so, then it was probably on a very restricted scale. The main focus of pottery production in the medieval period was undoubtedly in the Wigford suburb, probably in the main on the eastern side of the High Street where the prevailing wind would carry the smoke and flames away from the settlement. This is likely to have been a purely pragmatic decision based on the fire risk rather than any consideration of the nuisance caused by the smoke since the western side of the High Street was occupied by tanneries, notorious for their smell.

Late 9th/early 10th century

Pottery production in Lincoln probably started in the late 9th century and is contemporary with the first substantial evidence for occupation in the Anglo-Scandinavian town. In three instances there is possible evidence for Anglo-Scandinavian activity pre-dating the local pottery industry: The first is St Paul in the Bail in the Upper City, where there is a scatter of metalwork of mid 9th-century date with the latest datable pieces being coins of the early 870s. The second is at Flaxengate in the Lower City, where the final backfilling of the late Roman pond or hollow contains a mixture of imported Mid-Saxon, a few local Mid-Saxon and some late Saxon/Anglo-Scandinavian vessels, and the third is at Monson Street, in Wigford, where a single smashed imported mid Saxon grey burnished vessel was the only vessel earlier than the 10th century from the site. None of the three contexts is conclusive but they do suggest that the Anglo-Scandinavian pottery industry did not go back to the mid 9th century. This is an important point, since it is often suggested that the correlation of Viking activity with the introduction of wheelthrown, kiln-fired pottery is assumed rather than tested on many sites in Eastern and Northern England.

The earliest Anglo-Scandinavian deposits in Lincoln to have produced locally-made pottery contain a mixture of Lincoln Gritty ware (LG), Lincoln Late Saxon Sandy ware (LSLS) and Lincoln Kiln Type shelly ware (LKT). Of these, LG and LSLS are more common than LKT in the material dumped before the construction of the first surface of Flaxengate (F74) and also in a pit excavated on the east side of Flaxengate in 1945–7 (Coppack 1973). Both sites produced large numbers of sherds (362 and 123 sherds respectively) whilst the highest number from any other site is 20, from a site in Silver Street with

in situ late 9th-century occupation (LIN73F). Sherds of Early Lincoln Glazed ware (ELSW) with splashed glaze are also more common on Flaxengate than elsewhere, including at least one waster. This, together with the underfiring of some of the 1945–7 finds and the presence of wasters on that site, suggests that production took place nearby, on the north-east edge of the settlement as it existed in the late 9th century. By contrast, there is no obvious concentration of 'early' LKT sherds, nor evidence in the form of wasters or spalled sherds to indicate where the earliest LKT might have been produced. Nevertheless, the similarity of these early vessels to those from Silver Street, dating to the early to mid 10th century, is strong evidence to show that the ware was indeed produced in the settlement or on its fringes.

Early to mid 10th century

The location of the Lincoln pottery industry in the early to mid 10th century is well-established as a result of the excavations at Silver Street (LIN73B), just inside the eastern entrance to the Lower City at Clasketgate (Miles *et al* 1989). Excavations on several other sides in the block bounded by the city wall, Clasketgate and Free School Lane show that production was limited to the northern part of the block, although waste was dumped on the tail of the eastern Roman rampart further south (LIN73C). There is no evidence for continued production north of Clasketgate, to the east of Flaxengate, and it may be that the laying out of this street (the medieval *Haraldstigh*, Perring 1981) and the development of tenements on either side of it forced the potters to move.

Similarly, it is clear that production at Silver Street was of relatively short duration (although still probably two or three generations) and that here too by the late 10th or early 11th-century domestic occupation had superseded the production of pottery.

Mid 10th to early 11th century

Recent finds of wasters and kiln structures on sites to the north of Monks Road and east of Lindum Road indicate that pottery production began in this area in the mid 10th century and continued into the 11th century, although dying out before the Norman Conquest. St Rumbold's Church and its churchyard occupied much of this site in the medieval period and the church is almost certainly of early to mid 11th-century date. Several distinct fabrics were being produced at this site, notably a sandy ware (SNLS) and a shelly ware (LSH). Finds of pottery waste have been noted in this area on sites further east (the Technical College), but those that can be

re-examined are unconvincing. Here too, in all likelihood, the spread of settlement marked the end of the pottery industry.

If this is indeed the case, then we can provide a date for the street name, Pottergate. The medieval Pottergate ran sinuously down the steep limestone scarp from the eastern gate of the Upper City to Clasketgate. Its line was rationalised in the late 18th century and the lower part was subsequently renamed Lindum Road and the upper part the New Road. The earliest recorded use of the name *Pottergate* was in the 12th century but it is most likely that the street was originally the 'Street of the potters' and thus no later than c.1050 and perhaps as early as 930. The street itself can be seen as a continuation of Silver Street, providing a gentler incline for ascending the hill than the direct route along the line of Ermine Street, and was therefore probably in existence at the time of the foundation of the Anglo-Scandinavian settlement.

There is little evidence that the Silver Street and lower Pottergate sites were operating simultaneously and it is likely that production at any one time was in a discrete area. There is no evidence for the number of kilns in operation nor for any internal organisation or property division within the sites. Only the Silver Street site has been dug on any scale and even here the excavation investigated only a small fraction of the likely extent of the production site.

12th to 15th century

There is no evidence that Lincoln Fine Shelly ware was produced in the city, although the similarity in fabric between this ware and wheelthrown shelly wares of proven Lincoln origin shows that the raw materials needed to make this ware would have been available in the city. Production may therefore have shifted to the surrounding countryside, or to sites on the fringes of the city yet to be archaeologically investigated. The first evidence for pottery production within the city can be dated to the early 12th century and consists of splash glazed red earthenwares (LSW1). Petrological examination of these wares suggests that river silt may have been present in the clay, although the main body was composed of clay from the Lias which outcrops on the lower slopes of the Jurassic scarp. The top third of the hillside consists of Lincolnshire limestone and, below that, Northampton Sands. Below that was middle and upper Lias clay which at the base of the hillside is masked by thick deposits of terrace sand and, lower still, alluvial deposits of silt and peat. No archaeological evidence for the location of the LSW1 production sites has been found but wasters from the successor industries, LSW2, LSW3, LSW4 and LLSW have been found at various sites in the city. These are best considered in two groups: sites in the Wigford

suburb and sites in the Lower City. Documentary evidence for 'potters' exists for both areas but must be treated with caution, given the known use of the term 'potter' for the producers of metalware, mainly bronze and brass workers.

The Lower City

Sherds of wasters or seconds of glazed vessels have been found on four sites in the Lower City but not in large quantities. LSW2 wasters have been found at Flaxengate (F72) and a second was found at the Bishop's Palace (LBP92). These finds hint at production within the north-east quarter of the Lower City but single vessels could be transported some distance from the production site, even if unsuitable for use, and seconds were probably sold alongside perfect products.

Undoubted evidence for pottery production was recently discovered on the hillside at St Michael's Hill (MGC00). The base of a kiln with a spread of ash containing wasters of LSWA, LSW1 and LSW2 vessels was found cut into the hill although there was very little evidence for pottery production in the area. Presumably this was a short-lived experiment, perhaps attracted by the Lias Clay and the proximity of potential markets.

Later wares occurred at Danes Terrace (DT74), in the form of three definite wasters of LSW3 ware. This site too is in the north-east quarter of the Lower City but yet again the presence of three vessels may simply show the use of potting waste as hardcore rather than production.

Finally, a single waster and several mis-fired vessels of Late Lincoln Glazed ware, LLSW, were found at a site in Silver Street (LIN73C). In the hand, these sherds can be distinguished from St Marks products by their manufacturing method and glazing technique and so probably come from a separate production site.

Alongside these archaeological finds are a handful of references to 'potters'. However, in all cases it is possible to demonstrate that the individuals concerned were metalworkers (see below).

Butwerk

There is no evidence for pottery production in the Butwerk suburb following the demise of the Sessions House kilnsite in the early to mid 11th century until the late 13th or 14th century. Even then the evidence is sparse, consisting of a small group of vessels attributed to the Technical College (ie very close to the Sessions House site). These vessels in the City and County Museum include a definite waster of a pipkin of 14th-century type and sherds from late 13th or 14th-century jugs in 13th to 14th-century Lincoln Glazed ware (LSW3). Some of these have been illustrated by Healey (Healey 1975).

Wigford

Archaeological evidence for the production of pottery in the Wigford suburb extends from the late 13th to the 15th or early 16th centuries. The earliest material is waste from a site to the west of the High Street, at Gaunt Street (ON362, recorded in 1991). Wasters of LSW2/3 ware were excavated at St Mary's Guildhall and St Mark's Station and wasters of LSW3 ware were found at St Mark's station to the west of the High Street (Z86) and St Mark's Yard East to its east (ZE87). LSW4 and LLSW wasters were both found at the St Mark's Station site. In most cases these sherds were isolated examples found alongside others which probably included domestic debris. However, at Gaunt Street and St Mark's Station deposits probably composed mostly of kiln waste were found. Similar deposits occurred in trial excavations at the eastern end of the St Mark's Yard East site. All these finds are concentrated in a block in the centre of the Wigford suburb and central to this block is the St Mark's Yard East site where a late medieval pottery kiln was excavated in 1987–8 (Hooper *et al* 1988). Some of the potting waste predates this kiln, although some of the St Mark's Station wasters might be derived from it.

A kiln was apparently recorded close to the Central Station site in 1847–8 by Capt. Arthur Trollope (AI 1850). The exact location of this kiln is uncertain, and it might be thought suspicious that both the Midland and Northern Railways should have cut across medieval pottery kilns. Nevertheless, the near-contemporary references are explicit in referring to the Central station and to the parish of St Mary le Wigford (eg Jewitt 1883, 580, quoting Marryat). Amongst the finds were moulds used to decorate pottery vessels which are now in the British Museum (Hobson 1903).

Documentary evidence for pottery production in Wigford starts with a Hugh le Potter, who held the tile house at the south end of the suburb from Thurgarton Priory around the middle of the 13th century (Foulds 1994). Slightly later is a reference to the lands of William the Potter which were situated immediately north of the churchyard of Holy Trinity in Wigford (RA 2463, c.1290. see Fig. 194). Although close to the St Mark's Yard East site, this is clearly a separate property lying immediately to its south. Two other medieval documents refer to potters in Wigford, both in St Mark's parish: early in the 14th century, Isabella Potter and John le Potter held land in the parish (Chantries Cartulary 183–184) and in 1349 Richard Potter was executor of Isabel Adinet (D&C MS 169 fo 190v No. 619).

Taken together, the archaeological and documentary sources suggest that potting was carried out from at least the mid 13th century to the early 16th century on the east side of the High Street, quite

likely sporadically from north to south of the suburb rather than in a discrete zone. All the finds made to date on the west side of the High Street could be explained as the dumping of potting waste. The reclamation of the Brayford Pool and river along this stretch would have provided a ready home for potting waste. Similar dumping clearly took place to the east of the St Mark's Yard East site, in a particularly marshy area (ZE90) although in this case the disposal took place within the same tenement.

The Upper City

There is no documentary evidence for pottery production in the Upper City and its location makes it an unlikely site. However, in 1884 a 'furnace' was found during excavations at the corner of Bailgate and Eastgate, on the site of the Angel Inn (O'Neill 1885; 182–4; ON 119). The remains included walls and concrete floors of a Roman building. Three chambers were found, termed at the time A, B and C. A was a *sarcophagus containing pitchers embedded in lime containing burnt bones*. It had a concrete floor. B was entered through a low doorway or flue, 3' 6" tall. It was described as a *sarcophagus containing 73 ancient urns. Level 2' 6" below floor of other sarcophagus*. C was an empty chamber 4' 10" by 4' 2". At a higher level was a long, narrow structure with a rounded arch and a curved flue, extending upwards to just below the current floor level, and above the then road level.

At the time, these remains were interpreted as a crematorium incorporated into the foundations for a Norman house but an illustration of some of the urns makes it clear that they were of late medieval date. The vessels are in the Lincoln City and County Museum collection and are not obvious wasters (Healey 1975). The most likely explanation for these finds is that they were garderobe pits associated with the Angel Inn and that the so-called flue was the downpipe from a garderobe on an upper floor (S R Jones *et al* 1996, 144–55); nevertheless, there were clearly signs of burning and the remains have at times been suggested informally as a possible pottery production site.

Tile production

Production of flat roof tiles, and decorated ridge tiles, took place in Lincoln from the 12th century onwards. To date, there are no well-dated contexts of the late 11th/early 12th centuries which might clarify the starting date of the Lincoln tiling, but it was clearly in operation by the middle of the century. Archaeological evidence for tile production comes from the St Mark's Yard East site, where a rectangular tile kiln post-dating the multi-flue pottery kiln was excavated. This kiln probably dated to the 15th century and was producing tiles whose distinctive style of nib enables its products

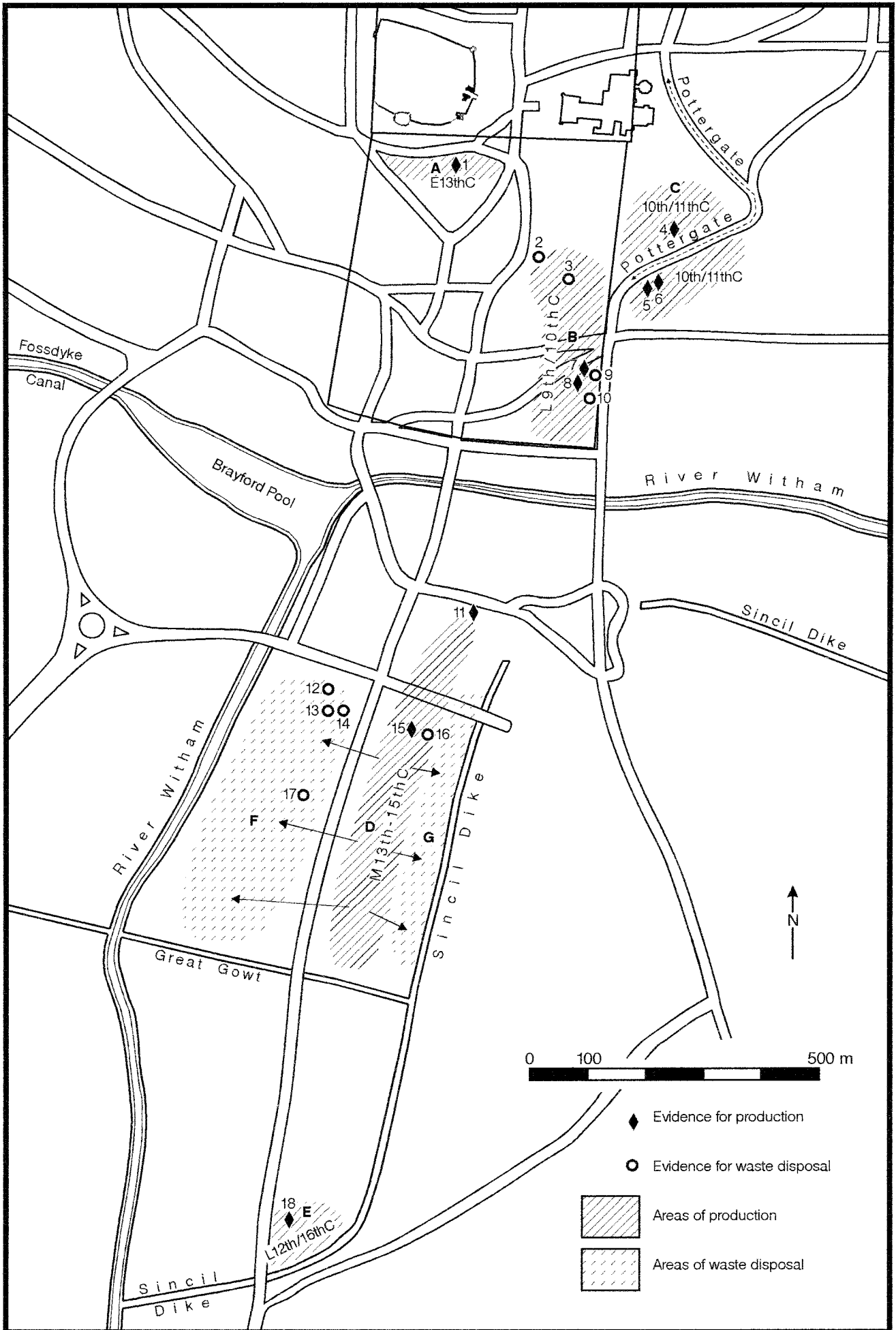


Fig 194 Location map of known or suspected pottery production

to be recognised on consumer sites. Documentary evidence, however, comes from further south, where the tile house was located. This site was associated with tile production from at least the late 12th century to the end of the medieval period. In the 17th century, for example, the site was leased to a brickmaker whose probate inventory survives (INV 73/303). The tile house was located to the south-east of St Botolph's church, between the High Street and a lane running from the north side of churchyard to Little Bargate. As such it was on the very edge of the settlement bounded by Sincil Dyke to the south and probably with no housing on its east side.

The end of the pottery industry in Lincoln

Evidence from consumer sites in the city shows that the proportion of city-made pottery in use declined from a high point in the late 12th/early 13th century onwards. By the early 16th-century Lincoln was being supplied with country-made pottery from a number of sources, none of them dominant. There are, however, indications that a pottery industry was still operating in the city. For example, a Lincoln-made jug (fabric LSW4) has an applied medallion stamped with the 'IHS' monogram. This monogram becomes a common symbol on pottery vessels in the late 15th and early 16th centuries but is in itself not conclusive evidence for a later 15th/16th-century date. A second vessel, noted by Hurst, is a chafing dish in a white-firing fabric which had glaze running over some of the edges (Hurst 1984). This vessel, from the Art College site on Lindum Road, ought to date to the mid 16th century at the earliest as it is probably a copy of type produced at that time in the Saintonge. White-firing clay was used in the Lincoln industry for fineware vessels, such as cups, so there is no *a priori* reason why the vessel could not have been made locally. However, no scientific analysis has yet been undertaken to test this hypothesis. Even if it is proven that this vessel is a mid-16th-century Lincoln product, there can be little doubt that pottery production had declined almost to extinction by this time.

Bellfounders and braziers

A number of metalworkers were identified by the term *potter* in documentary sources and in some cases it is impossible to say for certain whether an isolated reference to a potter referred to a metalworker or someone making ceramic vessels. Nevertheless, it is clear that those recorded with properties in the Lower City were, without exception, metalworkers.

A major site associated with metal casting was Palfrey Place, in that part of Silver Street bounded by Bank Street and Free School Lane. In the late 14th

century, this property was in the possession of Beatrice, daughter of William the Belgeter, whose name indicates that he was a bell-founder. Beatrice's husband was John Mayson (aka Maynham and Messam), termed *potter* in the probate of his will, proved 23rd Nov 1360 (see also LRS 65, 39, where he is recorded as a perpetual night-wanderer and malefactor in 1353). The Franciscan Friary lay to the east.

Other metal casters are known in the mid 16th to early 17th centuries: William Johnson, potter and brazier, died in 1546 (L1/1/1/2: city minute book fol. 38). His property is unlocated. Edward Bowler, of St Martin's parish, also a potter, had a probate inventory dated 1599/1600 (INV 94/206). Thomas Bowler, potter and probable relative, had property in Grantham Street between 1605 and 1614.

Richard de la Dyke was another *potter*, with property in the parish of St Peter at Pleas in 1365 (D&C Dij 80/3/70). This property is thought to have been situated just north of St Peter's church, fronting onto the High Street. The likelihood is that he was a metalworker.

Three other braziers are known from the Lower City, all in the mid 16th century: Hamond Pay (LCC WILLS 1532-4/112) and Alex Wytton (will LCC WILLS 1541-3/170).had land in St Martin's parish whilst John Papulwyk had land in St Laurence's parish (as shown in his will, LCC WILLS 1532-4/144).

It seems, therefore, that the documentary sources point to the central parishes of the Lower City, in other words the commercial hub of the town, as being the location of the metal casting industry in the late medieval and early post-medieval period. Why these metalworkers should be based centrally when they too needed furnaces and create noxious smoke and fumes is not clear but may be connected to the high value of the raw materials and the lower output. It is also likely that only the domestic vessels and smaller bells would have been made in the Lower City, with the large bells being cast on site.

Future potential

The publication of this corpus, while a major advance, is not the last word on post-Roman ceramic studies in the Lincoln area. It should form the beginning of studies on the growth of the city and its hinterland, and be used to identify trade networks and distribution patterns, as well as the economic status and chronology of sites. A number of ceramic groups in the city from key sites, including those at the waterfront, the Castle and the St. Mark's kiln site, remain unarchived or unassessed. Work on the pottery from these sites will help fill some of the gaps

in our knowledge, although most of the remaining questions about source, typology and point of manufacture can only be answered by further excavation. A group of material from a site at Short Ferry, Fiskerton, situated on the Witham several miles east of the city, should be given priority for publication. Here, more complete or near complete vessels than have been found during the whole of the city excavations, have been recovered from a single findspot. Occupation on the site covers the medieval to post-medieval period, although the bulk of the pottery dates from the mid 13th to the mid 14th centuries and includes a range of high quality LSW2 vessels not yet paralleled within Lincoln, together with a number of Scarborough vessels. A number of kiln props were also recovered from the site, perhaps indicating production in the area.

Beyond the city much remains to be done. Until recording of material in the area is standardised, comparisons and the interactions between city and

town, and town and rural countryside cannot be made. The lack of published material from sites at Boston, Stamford, Bourne, Newark, and Nottingham hinders our understanding of economic relationships between the main urban centres in the area. Many of the minor medieval and late medieval ware types found in the city can only be understood by looking at these wares as part of wider county and regional surveys. Only then will the interaction between the three major medieval pottery types in the county – Lincoln, Toynton and Bourne – be understood. The same is true of the late medieval industries centred at these places and also the regional Midlands purple and Cistercian traditions, which constitute an important element of late medieval and early post-medieval assemblages in the county. A excellent study of post-medieval pottery in the county has been written as a doctoral thesis by Andrew White (1989). This should be updated with the addition of a usable fabric typology and published.

VI The Pottery Catalogue

Corpus No	Cname	Fabric	Comments	Sitecode	Context
Fig. 27 Local Anglo-Saxon fabrics					
1	ESAXLOC	-	Plain circular stamps and pre-fired holes	WNW88	310
Fig. 28 Sandstone-tempered fabrics					
2	SST	-	Previously published in Adams Gilmour 1988; Fig.44:1	F72	AYJ; AGG; +
3	SST			WO89	516
4	SST		Previously published in Thompson 1956; Fig.5:19	EB53	00
5	SST			LG89	+
Fig. 29 Non-local Anglo-Saxon fabrics					
6	ESAXX	Fabric M		SH74	GU
7	ESAXX	Fabric MISC		EB70	B1SW
8	ESAXX	Fabric A		LH84	C11
9	ESAXX	Fabric G	Previously published in Adams Gilmour 1988; Fig.53:23	F72	KE; BCL
Fig. 30 Charnwood-type fabrics					
10	CHARN			LH84	A16
11	CHARN	-	Previously published in Adams Gilmour 1988, Fig.56:2	F72	BXR
Fig. 31 Sparry calcite-tempered fabrics					
12	SPARC			F72	CAI
13	SPARC	-	Previously published in Adams Gilmour 1988; Fig.58:35	F72	H48
Fig. 32 Anglo-Saxon greensand-tempered fabrics					
14	ESGS	-	Previously published in Adams Gilmour 1988, Fig.44:44	F72	BDU
15	ESGS	-	Previously published in Adams Gilmour 1988; Fig.44:2	F72	APQ
Fig. 33 Local Middle Saxon fabrics					
16	MSAXLOC	-	Previously published in Adams Gilmour C 1988; Fig.56:37	F72	BDU; BNG
17	MSAXLOC	-	Previously published in Adams Gilmour C 1988; Fig.56:36	F72	J56
Fig. 34 Northern Maxey-type ware					
18	MAX	Fabric A		LH84	C7
19	MAX	Fabric A		LIN73DI	120
20	MAX	Fabric A		LH84	CC21
21	MAX	Fabric A		LH84	A7
22	MAX	Fabric A		LH84	CC21
23	MAX	Fabric A		LIN73DI	116; 120
24	MAX	Fabric B		LH84	C11
25	MAX	Fabric B		CY89	201
26	MAX	Fabric B		CY89	201
27	MAX	Fabric B		LH84	AA20
28	MAX	Fabric B	post firing perforation	L86	56
29	MAX	Fabric C		LIN73DI	39; 22/23; 75;
				LIN 73F-112;	22
30	MAX	Fabric C		LIN73C	105
31	MAX	Fabric C		BE73	I:AJ

Corpus No	Cname	Fabric	Comments	Sitecode	Context
Fig. 35 Early Lincolnshire Fine-Shelled ware					
32	ELFS	–	Previously published in Coppack 1987; Fig.131:15	GM74	988
33	ELFS	–	Previously published in Coppack 1987; Fig.131:14	GM74	988
34	ELFS			BN89	393
35	ELFS			H83	748; 757; 879; 979; 991; 1003; 1007; 1008
36	ELFS			GM74	869
37	ELFS	–	Previously published in Adams Gilmour 1988; Fig.45:25	F72	BCU
38	ELFS			CL85	32
39	ELFS	–	Previously published in Adams Gilmour	F72	H71
40	ELFS	–	Previously published in Coppack 1987; Fig.144:507	GM74	870
Fig. 36 Non-local Middle Saxon fabric					
41	MSAXX	–	Previously published in Adams Gilmour 1988; Fig.56:35	F72	BNB
Fig. 37 Black Burnished Ware					
42	BLBURN			LIN73A	13
Fig. 38 Grey Burnished Ware					
43	GRBURN			M82	201; 29
Fig. 39 Brown Burnished Ware					
44	BRBURN	–	Previously published in Adams Gilmour 1988; Fig.58:1	F72	BVT
Fig. 40 Black Surfaced Ware					
45	BLSURF	–	Previously published in Adams Gilmour 1988; Fig.58:4	F72	BVU
Fig. 41 Oxidized Red-Painted Ware					
46	ORP	–	Previously published in Adams Gilmour 1988; Fig.58:32	F72	BVT
Fig. 42 Lincoln Gritty Ware					
47	LG	–	Previously published in Adams Gilmour 1988; Fig.24:27	F72	BHU; AIM; BEU; BGZ; BHP; BOU; B QT; BQZ; BSY; BY C; E66; J50
48	LG	–	Previously published in Coppack 1987; Fig.124:45	GM74	954; 955
49	LG	–	Previously published in Coppack 1973; Fig.13:15	FLAX45–8	Pit 5
50	LG	–	Previously published in Coppack 1973; Fig.13:2	FLAX45–8	FD15 PIT5
51	LG	–	Previously published in Adams Gilmour 1988; Fig.24:1	F72	BQO
52	LG	–	Previously published in Adams Gilmour 1988; Fig.24:24	F72	BQZ; BEU; BOU
53	LG			LIN73F	226; 244
54	LG	–	Previously published in Adams Gilmour 1988; Fig.24:25	F72	BQZ
55	LG	–	Previously published in Coppack 1973; Fig.14:40	FLAX45–8	Pit 13
56	LG	–	Previously published in Adams Gilmour 1988; Fig.24:3	F72	BQZ
57	LG	–	Previously published in Adams Gilmour 1988; Fig.24:4	F72	XB
58	LG			LIN73F	159
59	LG			LIN73F	159; 244; 282
Fig. 43 Lincoln Late Saxon Sandy Ware					
60	LSLS	Fabric A		HG72	BH; AI; BG; AJ; DE
61	LSLS	Fabric A		F72	ABN
62	LSLS	Fabric B	Previously published in Adams Gilmour 1988; Fig.25:2	F72	BQZ; BDG; BEU; E 101
63	LSLS	Fabric B	Previously published in Coppack 1987; Fig.134:111	GM74	959
64	LSLS	Fabric B	Previously published in Adams Gilmour 1988; Fig.25:42	F72	BHU; BXP
65	LSLS	Fabric B	Previously published in Adams Gilmour 1988; Fig.25:46	F72	BQZ
66	LSLS	Fabric B	Previously published in Adams Gilmour 1988; Fig.25:3	F72	BHV
67	LSLS	Fabric B	Previously published in Adams Gilmour 1988; Fig.25:13	F72	BDU
68	LSLS	Fabric B		LIN73DI	54
69	LSLS	Fabric B		H83	905
70	LSLS	Fabric B	Previously published in Adams Gilmour 1988; Fig.58:66	F72	AZU; F75
71	LSLS	Fabric A		LIN73BI	35
72	LSLS	Fabric B	Previously published in Adams Gilmour 1988; Fig.25:14	F72	BNE
73	LSLS	Fabric A		LIN73F	376
74	LSLS	Fabric A		WNW88	368
75	LSLS	Fabric A		SMG82	2034
76	LSLS	Fabric A		ZE87	338
77	LSLS	Fabric A		WB80	1039

Corpus No	Cname	Fabric	Comments	Sitecode	Context
78	LSLS	Fabric A		F72	+
79	LSLS	Fabric A		SW82	271
80	LSLS	Fabric A		H83	573
81	LSLS	Fabric B	Previously published in Adams Gilmour 1988; Fig.25:30	F72	BEU
82	LSLS	Fabric B	Previously published in Adams Gilmour 1988; Fig.25:29	F72	E34
83	LSLS	Fabric A		LIN73EII	10
84	LSLS	Fabric B	questionable identification; previously published in Jennings & Jones in Jones 1999; Fig.53:2	P70	JL
Fig. 44 Lincoln Late Saxon Pale-bodied Sandy Ware					
85	LSPLS	-	Previously published in Adams Gilmour 1988; Fig.58:53	F72	B94
86	LSPLS	-	Previously published in Adams Gilmour 1988; Fig.58:6	F72	G96
87	LSPLS	-	Previously published in Adams Gilmour 1988; Fig.58:52	F72	BHR
88	LSPLS	-	Previously published in Adams Gilmour 1988; Fig.44:35	F72	BOH; ZA
89	LSPLS	-	Previously published in Adams Gilmour 1988; Fig.58:60	F72	BHP; G104
90	LSPLS	-	Previously published in Adams Gilmour 1988; Fig.58:59	F72	CAD
Fig. 45 Lincoln Kiln-type Shelly ware					
91	LKT	-	Previously published in Adams Gilmour 1988; Fig.19:40	F72	E49
92	LKT	-	Previously published in Adams Gilmour 1988; Fig.19:43	F72	AUM
93	LKT	-	Previously published in Adams Gilmour 1988; Fig.19:25	F72	BGA
94	LKT	-	Previously published in Miles et al 1989; Fig.31:7	LIN73BI	52
95	LKT	-		MCH84	254
96	LKT	-		LIN73F	118
97	LKT	-	Previously published in Miles et al 1989; Fig.31:20	LIN73BI	1P; 121; 1N
98	LKT	-	Previously published in Miles et al 1989; Fig.31:10	LIN73BI	138
99	LKT	-	Previously published in Miles et al 1989; Fig.31:12	LIN73BI	121
100	LKT	-	Previously published in Adams Gilmour 1988; Fig.31:16	LIN73BI	121
101	LKT	-	Previously published in Miles et al 1989; Fig.31:4	LIN73BI	114
102	LKT	-	Previously published in Miles et al 1989; Fig.31:5	LIN73BI	111
103	LKT	-	Previously published in Miles et al 1989; Fig.31:9	LIN73BI	35
104	LKT	-	Previously published in Miles et al 1989; Fig.31:13	LIN73BI	52
105	LKT	-	Previously published in Miles et al 1989; Fig.31:8	LIN73BI	138
106	LKT	-	Previously published in Miles et al 1989; Fig.31:3	LIN73BI	1B
107	LKT	-	Previously published in Adams Gilmour 1988; Fig.19:1	F72	BNG
108	LKT	-	Previously published in Adams Gilmour 1988; Fig.19:39	F72	BNK
109	LKT	-	Previously published in Adams Gilmour 1988; Fig.19:36	F72	BNK; BNG
110	LKT	-	Previously published in Adams Gilmour 1988; Fig.19:32	F72	H71
111	LKT	-	Previously published in Adams Gilmour 1988; Fig.19:44	F72	BNK
112	LKT	-		SB85	45
113	LKT	-		SB85	81
114	LKT	-		SB85	49
115	LKT	-		SB85	81
Fig. 46 Lincoln Kiln-type Shelly ware					
116	LKT	-		LIN73F	118
117	LKT	-		LIN73F	118
118	LKT	-		LIN73F	118
119	LKT	-		LIN73F	118
120	LKT	-		LIN73F	118
121	LKT	-		LIN73F	118
122	LKT	-		LIN73F	118
123	LKT	-		LIN73F	118
124	LKT	-		LIN73F	118
125	LKT	-		LIN73F	118
126	LKT	-		LIN73F	118
127	LKT	-		LIN73F	118
128	LKT	-		LIN73F	118
129	LKT	-		LIN73F	118
130	LKT	-		HG72	AF; CP
131	LKT	-		HG72	+
132	LKT	-		LIN73EI	178
133	LKT	-		LIN73EII	16
134	LKT	-		WNW88	304
135	LKT	-		WO89	502
136	LKT	-	Previously published in Adams Gilmour 1988; Fig.19:12	F72	G104
137	LKT	-		LIN73F	118

Corpus No	Cname	Fabric	Comments	Sitecode	Context
Fig. 47 Lincoln Kiln-type Shelly ware					
138	LKT			BWE82	3
139	LKT	–	Previously published in Miles et al 1989; Fig.31:11	LIN73BII	4
140	LKT	–	Previously published in Adams Gilmour 1988; Fig.20:11	F72	BDM
141	LKT	–	Previously published in Adams Gilmour 1988; Fig.20:12	F72	BNG
142	LKT	–	Previously published in Adams Gilmour 1988; Fig.20:23	F72	ALN
143	LKT	–	Previously published in Adams Gilmour 1988; Fig.20:18	F72	G28
144	LKT	–	Previously published in Adams Gilmour 1988; Fig.20:30	F72	BAA
145	LKT	–	Previously published in Adams Gilmour 1988; Fig.20:31	F72	F105; G71
146	LKT	–	Previously published in Adams Gilmour 1988; Fig.20:28	F72	J16
147	LKT	–	Previously published in Miles et al 1989; Fig.33:43	LIN73BI	1N
148	LKT	–	Previously published in Adams Gilmour 1988; Fig.20:26	F72	BEX; ABB; ARJ; A WR; BEU; E28; H5
149	LKT	–	Previously published in Miles et al 1989; Fig.33:44	LIN73BI	52; 30; 32; 51; 23
150	LKT	–	iron-slipped and leached interior	LIN73EI	133; 153
Fig. 48 Lincoln Kiln-type Shelly ware					
151	LKT	–	Previously published in Miles et al 1989; Fig.33:41	LIN73BI	47
152	LKT	–	Previously published in Adams Gilmour 1988; Fig.20:29	F72	G6
153	LKT	–	Previously published in Adams Gilmour 1988; Fig.20:22	F72	BNG
154	LKT			LIN73EI	153
155	LKT	–	Post-firing perforation; previously published in Adams Gilmour 1988; Fig.20:24	F72	BEX; G34; H48; H 54; H56; J16
156	LKT	–	Previously published in Miles et al 1989; Fig.33:42	LIN73BI	111
157	LKT			LIN73F	43
158	LKT	–	Previously published in Adams Gilmour 1988; Fig.18:25	F72	BEU; ACE; AFY; AYF; H71
159	LKT	–	Previously published in Adams Gilmour 1988; Fig.18:22	F72	BEX; AJP; AUE; E 29; H58; J32
160	LKT	–	Previously published in Adams Gilmour 1988; Fig.18:24	F72	AQQ
161	LKT	–	Previously published in Coppack 1987; Fig.138:260	GM74	948
162	LKT			HG72	BH
163	LKT			GM74	883
Fig. 49 Lincoln Kiln-type Shelly ware					
164	LKT	–	Previously published in Adams Gilmour 1988; Fig.15:18	F72	BHR; BQC
165	LKT	–	Previously published in Adams Gilmour 1988; Fig.14:4	F72	BEU
166	LKT			F72	BZF; BGA
167	LKT	–	Previously published in Adams Gilmour 1988; Fig.14:1	F72	AYJ
168	LKT			SB85	49
169	LKT			LIN73F	118
170	LKT	–	Previously published in Miles et al 1989; Fig.32:37	LIN73BI	129; 128
171	LKT	–	Previously published in Miles et al 1989; Fig.32:36	LIN73BI	52
172	LKT	–	Glazed	H83	979
173	LKT	–	Previously published in Miles et al 1989; Fig.32:38	LIN73BII	8
174	LKT	–	Previously published in Miles et al 1989; Fig.32:39	LIN73BI	52
175	LKT	–	Previously published in Miles et al 1989; Fig.32:40	LIN73BI	111; 116
Fig. 50 Lincoln Kiln-type Shelly ware					
176	LKT	–	Glazed	LIN73EI	157
177	LKT	–	Previously published in Miles et al 1989; Fig.32:29	LIN73BI	137
178	LKT	–	Previously published in Miles et al 1989; Fig.32:25	LIN73BI	136
179	LKT	–	Previously published in Adams Gilmour 1988; Fig.16:10	F72	E6; E7
180	LKT	–	Previously published in Miles et al 1989; Fig.32:35	LIN73BI	39; 15; 36
181	LKT	–	Previously published in Adams Gilmour 1988; Fig.15:1	F72	BGA
182	LKT	–	Used as a curfew	SPM83	251
183	LKT	–	Previously published in Adams Gilmour 1988; Fig.15:7	F72	BDM
184	LKT	–	Previously published in Miles et al 1989; Fig.31:24	LIN73BI	138
185	LKT			LIN73EI	164
186	LKT			LIN73F	118
187	LKT	–	Post firing perforation; previously published in Adams Gilmour 1988; Fig.18:15	F72	E102
188	LKT	–	Previously published in Adams Gilmour 1988; Fig.15:5	F72	BML
189	LKT	–	Previously published in Adams Gilmour 1988; Fig.15:21	F72	E4
190	LKT	–	Previously published in Adams Gilmour 1988; Fig.16:28	F72	BEX

Corpus No	Cname	Fabric	Comments	Sitecode	Context
Fig. 51 Lincoln Kiln-type Shelly ware					
191	LKT	–	Previously published in Adams Gilmour 1988; Fig.15:5	F72	BML
192	LKT	–	Previously published in Miles et al 1989; Fig.32:34	LIN73BI	52
193	LKT	–	Previously published in Adams Gilmour 1988; Fig.18:2	F72	ATV
194	LKT	–	Previously published in Miles et al 1989; Fig.32:33	LIN73BI	51
195	LKT	–	Previously published in Miles et al 1989; Fig.32:28	LIN73BII	5
196	LKT	–	Previously published in Miles et al 1989; Fig.32:32	LIN73BII	8
197	LKT	–	Previously published in Coppack 1987; Fig.141:364	GM74	
198	LKT	–		GM74	948
199	LKT	–	Previously published in Adams Gilmour 1988; Fig.7:40	F72	G72
200	LKT	–	Previously published in Adams Gilmour 1988; Fig.7:34	F72	F72; E29; E71; E72
201	LKT	–	Previously published in Adams Gilmour 1988; Fig.7:33	F72	BHX
202	LKT	–	Previously published in Adams Gilmour 1988; Fig.7:31	F72	G35; D30; E71; G71
Fig. 52 Lincoln Kiln-type Shelly ware					
203	LKT			H83	1007
204	LKT			P70	+
205	LKT			MCH84	70
206	LKT			LIN73DI	94
207	LKT			H83	962; 1000
208	LKT			LIN73F	44
209	LKT	–	Previously published in Adams Gilmour 1988; Fig.20:8	F72	BKX; AGG; ASD; D4; F4
210	LKT	–	Previously published in Adams Gilmour 1988; Fig.20:7	F72	AWR
211	LKT	–	internal iron slip and white deposit	SW82	+
212	LKT	–	Previously published in Adams Gilmour 1988; Fig.20:27	F72	H84; ASO; AVI; A99
213	LKT			LIN73F	106
214	LKT			GM74	974
215	LKT		Previously published in Coppack 1987; Fig.144:489	GM74	Group GM22
216a	LKT	–	Previously published in Coppack 1987; Fig.144:489	GM74	
216b	LKT	–	Previously published in Coppack 1987; Fig.144:490	GM74	
217	LKT			LIN73F	57
218	LKT			H83	723
219	LKT			LIN73F	112
220	LKT	–	Previously published in Adams Gilmour 1988; Fig.20:6	F72	F91
221	LKT	–	Previously published in Adams Gilmour 1988; Fig.20:4	F72	J74
222	LKT			HG72	AF
223	LKT	–	Post firing perforation; previously published in Adams Gilmour 1988; Fig.20:3	F72	J48
224	LKT	–	Previously published in Adams Gilmour 1988; Fig.20:2	F72	F98
225	LKT	–	Previously published in Coppack 1987; Fig.138:274	GM74	1004
Fig. 53 Lincoln Late Saxon Shelly Ware					
226	LSH	Fabric A	Previously published in Adams Gilmour 1988; Fig.22:5	F72	BDI
227	LSH	Fabric A		MCH84	372
228	LSH	Fabric A	Previously published in Miles et al 1989; Fig.33:51	LIN73BI	138
229	LSH	Fabric A	Previously published in Adams Gilmour 1988; Fig.22:8	F72	H48
230	LSH	Fabric A	Previously published in Adams Gilmour 1988; Fig.22:7	F72	E49
231	LSH	Fabric A		LIN73C	SN; SH
232	LSH	Fabric A	Previously published in Adams Gilmour 1988; Fig.22:10	F72	B106
233	LSH	Fabric A	Previously published in Adams Gilmour 1988; Fig.22:10	F72	IG
234	LSH	Fabric A	Previously published in Adams Gilmour 1988; Fig.22:22	F72	E49
235	LSH	Fabric A	Previously published in Adams Gilmour 1988; Fig.22:25	F72	F100; AKP; E100
236	LSH	Fabric A	Previously published in Adams Gilmour 1988; Fig.22:24	F72	BGA; ATM
237	LSH	Fabric A	Previously published in Adams Gilmour 1988; Fig.21:23	F72	BKX
238	LSH	Fabric A		SMG82	2030
239	LSH	Fabric A	Previously published in Adams Gilmour 1988; Fig.21:17	F72	H48
240	LSH	Fabric A	Previously published in Adams Gilmour 1988; Fig.21:2	F72	B105
241	LSH	Fabric A	Previously published in Adams Gilmour 1988; Fig.21:26	F72	F70
242	LSH	Fabric A	Previously published in Adams Gilmour 1988; Fig.21:25	F72	H33
243	LSH	Fabric A	Previously published in Adams Gilmour 1988; Fig.21:28	F72	E25; E7
244	LSH	Fabric A	Previously published in Adams Gilmour 1988; Fig.21:29	F72	BRT
245	LSH	Fabric A	Previously published in Adams Gilmour 1988; Fig.21:30	F72	BEU

Corpus No	Cname	Fabric	Comments	Sitecode	Context
<i>Fig. 54 Lincoln Late Saxon Shelly Ware</i>					
246	LSH	Fabric B	Previously published in Adams Gilmour 1988; Fig.23:25	F72	G51; F71
247	LSH	Fabric B	Previously published in Adams Gilmour 1988; Fig.23:26	F72	G52
248	LSH	Fabric B	Previously published in Adams Gilmour 1988; Fig.23:29	F72	ASH
249	LSH	Fabric B		HG72	AG
250	LSH	Fabric B	Previously published in Adams Gilmour 1988; Fig.23:6	F72	E7; E6; J28
251	LSH	Fabric B	Previously published in Adams Gilmour 1988; Fig.23:33	F72	H77; ATS; AZX; B CU; E83; F55; F75; F78; F90; G58; G7 7; H35; J49; K17
252	LSH	Fabric B	Previously published in Adams Gilmour 1988; Fig.23:20	F72	J28
253	LSH	Fabric B	Previously published in Adams Gilmour 1988; Fig.7:35	F72	ARO
254	LSH	Fabric B	Previously published in Adams Gilmour 1988; Fig.23:22	F72	AXK
255	LSH	Fabric B	Previously published in Adams Gilmour 1988; Fig.23:23	F72	+
256	LSH	Fabric B	Previously published in Adams Gilmour 1988; Fig.23:24	F72	AWR
257	LSH	Fabric C		F72	G33
258	LSH	Fabric C	Previously published in Adams Gilmour 1988; Fig.22:28	F72	F68; AOU; AZK; E 13; E14; F14; F34; F35; F54; G13; G3 4; H38; J14
259	LSH	Fabric C		LIN73F	118
260	LSH	Fabric C	Previously published in Adams Gilmour 1988; Fig.22:27	F72	F97
<i>Fig. 55 Lincoln Late Saxon Shelly Ware</i>					
261	LSH	Fabric E	Previously published in Adams Gilmour 1988; Fig.13:4	F72	ATS
262	LSH	Fabric E		F72	BDC
263	LSH	Fabric E		WNW88	309
264	LSH	Fabric E		HG72	CT; AF; AV
265	LSH	Fabric E		LIN73F	57
266	LSH	Fabric E		SB85	81
267	LSH	Fabric E		SB85	81
268	LSH	Fabric E		SB85	72; 72/74
269	LSH	Fabric E – Haematite on interior		HG72	AF
270	LSH	Fabric E		LIN73EI	133
271	LSH	Fabric E		SB85	81
272	LSH	Fabric E		SB85	67
273	LSH	Fabric E		LIN73F	118
274	LSH	Fabric E		LIN73F	59
275	LSH	Fabric E		SB85	45
276	LSH	Fabric E	Previously published in Adams Gilmour 1988; Fig.13:30	F72	B97
277	LSH	Fabric E	Previously published in Adams Gilmour 1988; Fig.13:25	F72	B107
278	LSH	Fabric E	Previously published in Adams Gilmour 1988; Fig.13:29	F72	F83
279	LSH	Fabric E	Previously published in Adams Gilmour 1988; Fig.13:28	F72	H90
280	LSH	Fabric E		LIN73F	120
281	LSH	Fabric E	Previously published in Adams Gilmour 1988; Fig.13:34	F72	G94
282	LSH	Fabric E	Previously published in Adams Gilmour 1988; Fig.13:33	F72	F91
283	LSH	Fabric E	Previously published in Adams Gilmour 1988; Fig.13:35	F72	+
284	LSH	Fabric E		WNW88	314
285	LSH	Fabric E		LIN73F	57
286	LSH	Fabric E		SB85	47
<i>Fig. 56 Lincoln Late Saxon Shelly Ware</i>					
287	LSH	Fabric E		F72	H84
288	LSH	Fabric E		LIN73F	57
289	LSH	Fabric E	Previously published in Adams Gilmour 1988; Fig.12:13	F72	G105
290	LSH	Fabric E	Previously published in Adams Gilmour 1988; Fig.12:13	F72	G84
291	LSH	Fabric E		WN87	77; 43; 14
292	LSH	Fabric E		LIN73F	118
293	LSH	Fabric E		SB85	45; 49
294	LSH	Fabric E		SB85	49
295	LSH	Fabric E		LIN73F	57
296	LSH	Fabric E	Previously published in Adams Gilmour 1988; Fig.12:8	F72	G91
297	LSH	Fabric E		LIN73EII	11
298	LSH	Fabric E		WO89	543

Corpus No	Cname	Fabric	Comments	Sitecode	Context
Fig. 57 Lincoln Late Saxon Shelly Ware					
299	LSH	Fabric E	Previously published in Adams Gilmour 1988; Fig.12:9	F72	G90
300	LSH	Fabric E	Previously published in Adams Gilmour 1988; Fig.12:12	F72	H83
301	LSH	Fabric E		SB85	45
302	LSH	Fabric E		LIN73EII	10
303	LSH	Fabric E		LIN73EII	10
304	LSH	Fabric E	Lugged; previously published in Adams Gilmour 1988; Fig.12:1	F72	G90
305	LSH	Fabric E	Previously published in Coppack 1987; Fig.137:217	GM74	
306	LSH	Fabric E		LIN73F	57
307	LSH	Fabric E	Previously published in Adams Gilmour 1988; Fig.13:1	F72	BOH
308	LSH	Fabric E	Previously published in Adams Gilmour 1988; Fig.13:2	F72	BER
309	LSH	Fabric E		SB85	72
310	LSH	Fabric E		H83	273
311	LSH	Fabric E		SB85	81
312	LSH	Fabric E		WNW88	310
313	LSH	Fabric E		WNW88	+
Fig. 58 Early Lincoln Glazed Ware					
314	ELSW	Fabric A	Previously published in Adams Gilmour 1988; Fig.27:8	F72	BEU; ASO
315	ELSW	Fabric A	Previously published in Adams Gilmour 1988; Fig.26:19	F72	G103
316	ELSW	Fabric A		LIN73EI	178
317	ELSW	Fabric A	Previously published in Adams Gilmour 1988; Fig.27:6	F72	BDM
318	ELSW	Fabric B	Previously published in Adams Gilmour 1988; Fig.27:1	F72	BEU; ARI; AUM; BEX; BGA; BHW; BMA; BOL; B93; B 97; B107; E88; E9 7; F100; G50; G97; G104; G105; H84; H90; J77
319	ELSW	Fabric B		LIN73A	24
320	ELSW	Fabric B		LIN73F	120; 118
321	ELSW	Fabric B		LIN73F	57
322	ELSW	Fabric B	Previously published in Adams Gilmour 1988; Fig.7:38	F72	BDT; E9; D29
323	ELSW	Fabric C	Previously published in Adams Gilmour 1988; Fig.27:3	F72	BEX; EM; AQQ; B GA; BML; BOL; C AD; E91; E102; F1 02; G30; G96; G97; G101; G106; H84
324	ELSW	Fabric C	Unglazed; previously published in Adams Gilmour 1988; Fig.27:16	F72	BEU; BDM; BEA; BEB; BEK; BER; B GB; BKZ; E105; G 91; G104; J38; J50
325	ELSW	Fabric C	Previously published in Adams Gilmour 1988; Fig.26:23	F72	BDU; BDS; BEE; B EU; BML; BNI; B9 7; B106; E46; E67; E97; E102
Fig. 59 Late Saxon crucible fabrics					
326	LSCRUC			LIN73DI	50
327	LSCRUC	-	Previously published in Adams Gilmour 1988; Fig.7:17	F72	B104
328	LSCRUC	-	Previously published in Adams Gilmour 1988; Fig.7:15	F72	G12
329	LSCRUC	-	Previously published in Adams Gilmour 1988; Fig.7:1	F72	BCL
330	LSCRUC	-	Previously published in Adams Gilmour 1988; Fig.7:5	F72	G12
331	LSCRUC	-	Previously published in Adams Gilmour 1988; Fig.7:2	F72	BDG
332	LSCRUC	-	Previously published in Adams Gilmour 1988; Fig.7:24	F72	AZX
333	LSCRUC	-	Previously published in Adams Gilmour 1988; Fig.7:28	F72	E13
Fig. 60 Local Late Saxon Fabrics					
334	LSLOC	Fabric A	Previously published in Adams Gilmour 1988; Fig.46:21	F72	H4
335	LSLOC	Fabric A	Previously published in Adams Gilmour 1988; Fig.46:22	F72	BGZ
336	LSLOC	Fabric A	Previously published in Adams Gilmour 1988; Fig.46:5	F72	BEU; BER; F75
337	LSLOC	Fabric A	Previously published in Adams Gilmour 1988; Fig.46:1	F72	BNK
338	LSLOC	Fabric A	Previously published in Adams Gilmour 1988; Fig.47:9	F72	B103
339	LSLOC	Fabric A	Previously published in Adams Gilmour 1988; Fig.46:15	F72	BNI
340	LSLOC	Fabric A	Previously published in Adams Gilmour 1988; Fig.46:28	F72	BGZ
341	LSLOC	Fabric A	Previously published in Adams Gilmour 1988; Fig.46:27	F72	AAA

Corpus No	Cname	Fabric	Comments	Sitecode	Context
342	LSLOC	Fabric A	Previously published in Adams Gilmour 1988; Fig.46:34	F72	ARS
343	LSLOC	Fabric A	Previously published in Adams Gilmour 1988; Fig.46:37	F72	BDG
344	LSLOC	Fabric A	Previously published in Adams Gilmour 1988; Fig.46:39	F72	BEU
345	LSLOC	Fabric B	Previously published in Adams Gilmour 1988; Fig.46:41	F72	BHR
346	LSLOC	Fabric B	Previously published in Adams Gilmour 1988; Fig.47:17	F72	E13
347	LSLOC	Fabric B	Previously published in Adams Gilmour 1988; Fig.47:9	F72	B103
348	LSLOC	Fabric B	Internal iron slip; previously published in Adams Gilmour 1988; Fig.47:5	F72	F81
349	LSLOC	Fabric B	Previously published in Adams Gilmour 1988; Fig.47:24	F72	YE
350	LSLOC	Fabric B	Internal iron slip; previously published in Adams Gilmour 1988; Fig.47:36	F72	G75
351	LSLOC	Fabric B	Leeched interior previously published in Adams Gilmour 1988; Fig.47:38	F72	ACE
352	LSLOC	Fabric B	Previously published in Adams Gilmour 1988; Fig.47:27	F72	ASH
353	LSLOC	Fabric B	Previously published in Adams Gilmour 1988; Fig.47:33	F72	AFD
354	LSLOC	Fabric B	Previously published in Adams Gilmour 1988; Fig.47:35	F72	YZ
355	LSLOC	Fabric B	Previously published in Adams Gilmour 1988; Fig.47:40	F72	G35; ALK
356	LSLOC	Fabric B	Previously published in Adams Gilmour 1988; Fig.47:39	F72	B94; AUI; D29; D4

Fig. 61 Local Late Saxon Fabrics

357	LSLOC	Fabric C	Previously published in Adams Gilmour 1988; Fig.45:38	F72	AWJ
358	LSLOC	Fabric C	Previously published in Adams Gilmour 1988; Fig.45:32	F72	B99
359	LSLOC	Fabric D	Previously published in Adams Gilmour 1988; Fig.45:18	F72	A98
360	LSLOC	Fabric D	Previously published in Adams Gilmour 1988; Fig.56:34	F72	BDG
361	LSLOC	Fabric D	Previously published in Adams Gilmour 1988; Fig.45:23	F72	BFC
362	LSLOC	Fabric D	Previously published in Adams Gilmour 1988; Fig.45:29	F72	E6
363	LSLOC	Fabric D	Previously published in Adams Gilmour 1988; Fig.45:28	F72	BEX; KV
364	LSLOC	Fabric D	Previously published in Adams Gilmour 1988; Fig.56:45	F72	AGG
365	LSLOC	Fabric D	Previously published in Adams Gilmour 1988; Fig.45:24	F72	BOU
366	LSLOC	Fabric D	Previously published in Adams Gilmour 1988; Fig.45:30	F72	AGR
367	LSLOC	Fabric F	Previously published in Adams Gilmour 1988; Fig.58:64	F72	AZK
368	LSLOC	Fabric F	Previously published in Adams Gilmour 1988; Fig.58:63	F72	BHX; AZN; A98; G36
369	LSLOC	Fabric F	Previously published in Adams Gilmour 1988; Fig.58:55	F72	AUY; ARJ; ARS; AUF; AUU; AWR
370	LSLOC	Fabric M	Previously published in Adams Gilmour 1988; Fig.45:3	F72	DA
371	LSLOC	Fabric M	Previously published in Adams Gilmour 1988; Fig.45:6	F72	BER
372	LSLOC	Fabric S	Previously published in Adams Gilmour 1988; Fig.44:6	F72	BOD
373	LSLOC	Fabric S	Previously published in Adams Gilmour 1988; Fig.44:5	F72	BHV
374	LSLOC	Fabric S		HG72	HT; CL
375	LSLOC	Fabric S	Previously published in Adams Gilmour 1988; Fig.44:13	F72	AUE; E8
376	LSLOC	Fabric S	Previously published in Adams Gilmour 1988; Fig.44:15	F72	G7; E52
377	LSLOC	Fabric S	Previously published in Adams Gilmour 1988; Fig.44:4	F72	XU; XB
378	LSLOC	Fabric W	Previously published in Adams Gilmour 1988; Fig.56:40	F72	G32
379	LSLOC	Fabric W	Previously published in Adams Gilmour 1988; Fig.56:33	F72	G105
380	LSLOC	Fabric W	Previously published in Adams Gilmour 1988; Fig.56:47	F72	AVE
381	LSLOC	Fabric MISC MISCS	Previously published in Adams Gilmour 1988; Fig.56:44	F72	AZL
382	LSLOC	Fabric MISC MISQC	Previously published in Adams Gilmour 1988; Fig.44:11	F72	ASH

Fig. 62 Non Local Late Saxon fabrics

383	LSX	Fabric A	Previously published in Adams Gilmour 1988; Fig.54:4	F72	BQZ; BEU; BHR; BML; BOI; CAJ
384	LSX	Fabric A	Previously published in Adams Gilmour 1988; Fig.53:30	F72	BJZ
385	LSX	Fabric A	Previously published in Adams Gilmour 1988; Fig.58:54	F72	E13; AEE; AJR; ATM; AWR; E14; F14; F54; G14; J14
386	LSX	Fabric L	Previously published in Adams Gilmour 1988; Fig.44:47	F72	AZK
387	LSX	Fabric B	Previously published in Adams Gilmour 1988; Fig.53:22	F72	BOI
388	LSX	Fabric B	Previously published in Adams Gilmour 1988; Fig.53:21	F72	CDQ

Fig. 63 Early Stamford Ware

389	EST	-	Previously published in Adams Gilmour 1988; Fig.42:2	F72	E8
390	EST			F72	AK
391	EST			CP56	A3

Corpus No	Cname	Fabric	Comments	Sitecode	Context
392	EST	-	Previously published in Adams Gilmour 1988; Fig.43:18	F72	AZK
393	EST			HG72	ML
394	EST			HG72	DS
395	EST	-	Red paint	MCH84	61
396	EST			SB85	29
397	EST	-	Unglazed previously published in Adams Gilmour 1988; Fig.42:11	F72	+
398	EST			LIN73F	98
399	EST	-	Unglazed; previously published in Adams Gilmour 1988; Fig.42:10	F72	E13
400	EST			LIN73DI	61/54; 87; 93; 77; 76; 79
401	EST	-	Previously published in Adams Gilmour 1988; Fig.42:7	F72	BEX; BHR; BHB; BHS; CAH; AVV; BML; CAJ; BDK; BOH; E12; E103; G91; G98; G102; G10
Fig. 64 Leicester-type Ware					
402	LEST	-	Previously published in Adams Gilmour 1988; Fig.56:5	F72	CAT
403	LEST	-	Previously published in Adams Gilmour 1988; Fig.56:6	F72	AUF; H38
Fig. 65 Nottingham-type Ware					
404	NOTTS	-	Previously published in Adams Gilmour 1988; Fig.50:27	F72	BAF
405	NOTTS			DT74I	2
406	NOTTS	-	Re-used as a lid	SW82	16
407	NOTTS			HG72	AF; CO; DF
408	NOTTS	-	This vessel may be a NEWS	DM72	BV
Fig. 66 York Ware					
409	YW	-	Previously published in Adams Gilmour 1988, base possibly from another vessel; Fig.55:10	F72	BUU; BEU; BFB
410	YW	-	Previously published in Adams Gilmour 1988; Fig.55:8	F72	BGA
411	YW	-	Previously published in Adams Gilmour 1988; Fig.55:9	F72	BEX
Fig. 67 Late Saxon Miscellaneous Imported Fabrics					
412	LSIMP			BE73	I:GR
413	LSIMP	-	Red paint	F72	YV
Fig. 68 Early Glazed Ware					
414	ESG			HG72	EG
Fig. 69 Huy-type ware					
415	HUY	-	Previously published in Adams Gilmour 1988; Fig.58:26	F72	BDG; DN; BGZ; D25; F103
416	HUY			LIN73EI	107
417	HUY			LIN73DI LIN73EI	105:133
Fig. 70 Lincoln Saxo-Norman Sandy Ware					
418	SNLS	-	Previously published in Adams Gilmour 1988; Fig.29:28	F72	+
419	SNLS			Z86	44
420	SNLS			LIN73EI	104
421	SNLS	-	Previously published in Adams Gilmour 1988; Fig.28:25	F72	E13
422	SNLS			H83	1097
423	SNLS			DM72	BT
424	SNLS	-	Previously published in Adams Gilmour 1988; Fig.29:44	F72	AUW
425	SNLS	-	Previously published in Adams Gilmour 1988; Fig.28:33	F72	G12
426	SNLS			H83	1024
427	SNLS			HG72	CP
428	SNLS			LIN73F	44
429	SNLS			HG72	AF
430	SNLS			H83	907
431	SNLS	-	Previously published in Adams Gilmour 1988; Fig.28:30	F72	ZN
432	SNLS	-	Previously published in Adams Gilmour 1988; Fig.30:28	F72	AIT; XU; ZU
433	SNLS			LIN73F	118; 101
434	SNLS			BWE82	91
435	SNLS	-	Previously published in Adams Gilmour 1988; Fig.29:14	F72	AUF

Corpus No	Cname	Fabric	Comments	Sitecode	Context
436	SNLS			BE73	V:FW
437	SNLS	-	Previously published in Adams Gilmour 1988; Fig.29:43	F72	ARU; AUL
438	SNLS			LIN73F	44
439	SNLS			Z86	506
Fig. 71 Lincoln Saxo-Norman Sandy Ware					
440	SNLS	-	Previously published in Adams Gilmour 1988; Fig.29:42	F72	AFD; AFY; YX; Y
441	SNLS			LIN73F	26
442	SNLS	-	Previously published in Adams Gilmour 1988; Fig.26:44	F72	H37; F34; G34; J18
443	SNLS			LIN73EI	89
444	SNLS	-	Previously published in Adams Gilmour 1988; Fig.29:34	F72	E8
445	SNLS			LIN73EI	89
446	SNLS			DT74II	TC
447	SNLS	-	Previously published in Adams Gilmour 1988; Fig.29:33	F72	AZU; ABV; ANE
448	SNLS			MCH84	25
449	SNLS			H83	269
450	SNLS			WF89	699
451	SNLS			ZE87	331
452	SNLS			WNW88	+
453	SNLS			LIN73EI	133
454	SNLS	-	Previously published in Adams Gilmour 1988; Fig.30:41	F72	ZN; YG
455	SNLS			WNW88	287
456	SNLS	-	Previously published in Adams Gilmour 1988; Fig.26:27	F72	BNI
457	SNLS			LIN73F	76
458	SNLS	-	Previously published in Adams Gilmour 1988; Fig.26:28	F72	ANZ
459	SNLS	-	Previously published in Adams Gilmour 1988; Fig.26:46	F72	AYF
Fig. 72 Lincoln Saxo-Norman Sandy Ware					
460	SNLS	-	Previously published in Adams Gilmour 1988; Fig.29:41	F72	E13; AWR; AZK; F33; F50
461	SNLS			SW82	16
Fig. 73 Local Saxo-Norman Fabrics					
462	SNLOC		Previously published in Coppack 1987; Fig.140:312	GM74	877
463	SNLOC		Previously published in Coppack 1987; Fig.140:313 940; 911; 916	GM74	877; 847; 873; 875;
Fig. 74 Lincoln Fine-Shelled Ware					
464	LFS			SPM83	164
465	LFS	-	Previously published in Adams Gilmour 1988; Fig.32:1	F72	E9
466	LFS	-	Previously published in Adams Gilmour 1988; Fig.32:13	F72	G35
467	LFS			HG72	DY
468	LFS	-	Previously published in Adams Gilmour 1988; Fig.32:8	F72	AUC
469	LFS			LIN73EI	150
470	LFS	-	Previously published in Adams Gilmour 1988; Fig.32:10	F72	BAB
471	LFS	-	Previously published in Adams Gilmour 1988; Fig.32:18	F72	AVF
472	LFS	-	Previously published in Adams Gilmour 1988; Fig.32:6	F72	AWS
473	LFS			CWG86	844
474	LFS			CWG86	889
475	LFS			CWG86	855
476	LFS			CWG86	889
477	LFS			CWG86	844
Fig. 75 Lincoln Fine-Shelled Ware					
478	LFS	-	Previously published in Adams Gilmour 1988; Fig.33:17	F72	AFC
479	LFS	-	Previously published in Adams Gilmour 1988; Fig.32:21	F72	AWZ
480	LFS	-	Previously published in Adams Gilmour 1988; Fig.33:16	F72	ATK
481	LFS	-	Previously published in Adams Gilmour 1988; Fig.32:16	F72	AAA; AAH
482	LFS	-	Previously published in Adams Gilmour 1988; Fig.32:27	F72	AJE
483	LFS	-	Previously published in Adams Gilmour 1988; Fig.32:23	F72	AWZ
484	LFS			H83	230; 244
485	LFS			SW82	440
486	LFS			LIN73A	28
487	LFS	-	Previously published in Adams Gilmour 1988; Fig.33:18	F72	AMD
488	LFS			LIN73DI	54
489	LFS	-	Previously published in Adams Gilmour 1988; Fig.33:34	F72	AMG
490	LFS	-	Previously published in Adams Gilmour 1988; Fig.33:14	F72	ABN
491	LFS	-	Previously published in Adams Gilmour 1988; Fig.33:33	F72	AKD

Corpus No	Cname	Fabric	Comments	Sitecode	Context
Fig. 76 Lincoln Fine-Shelled Ware					
492	LFS			EME92	107
493	LFS	–	post firing perforations	WN87	20; 41; +
494	LFS			H83	930
495	LFS			F72	WP
496	LFS	–	Previously published in Young in Jones 1999; Fig.102:4	WP71	IEM
497	LFS	–	Previously published in Adams Gilmour 1988; Fig.33:37	F72	AWZ
Fig. 77 Lincoln Fine-Shelled Ware					
498	LFS	–	Previously published in Adams Gilmour 1988; Fig.34:20	F72	AVP
499	LFS			WNW88	332
500	LFS	–	Previously published in Adams Gilmour 1988; Fig.34:17	F72	AWL
501	LFS	–	Previously published in Adams Gilmour 1988; Fig.34:7	F72	AEY
502	LFS			H83	768
503	LFS	–	Previously published in Adams Gilmour 1988; Fig.34:21	F72	ARO
Fig. 78 Lincoln Fine-Shelled Ware					
504	LFS	–	Two post firing perforations; previously published in Adams Gilmour 1988; Fig.34:1	F72	E13
505	LFS	–	Previously published in Adams Gilmour 1988; Fig.34:13	F72	BWR
506	LFS	–	Previously published in Adams Gilmour 1988; Fig.34:2	F72	AWR
507	LFS	–	Previously published in Young in Jones 1999; Fig.102:5	WP71	IDM
508	LFS			H83	952
509	LFS	–	Possibly used as a curfew	MCH84	85
510	LFS			F72	ED
Fig. 79 Lincoln Fine-Shelled Ware					
511	LFS	–	Previously published in Adams Gilmour 1988; Fig.35:19	F72	AEJ
512	LFS	–	Previously published in Adams Gilmour 1988; Fig.35:21	F72	ABH
513	LFS			CWG86	889
514	LFS	–	Previously published in Adams Gilmour 1988; Fig.35:6	F72	DA
515	LFS			SW82	440
516	LFS	–	Previously published in Adams Gilmour 1988; Fig.35:10	F72	AFD
517	LFS	–	Previously published in Adams Gilmour 1988; Fig.35:18	F72	WO
518	LFS	–	Previously published in Adams Gilmour 1988; Fig.34:5	F72	IH
519	LFS	–	Previously published in Adams Gilmour 1988; Fig.35:7	F72	ABB
520	LFS			H83	953
521	LFS	–	Previously published in Young in Jones 1999; Fig.102:1	WP71	IDM
522	LFS			GP81	251
523	LFS	–	Previously published in Adams Gilmour 1988; Fig.33:24	F72	ALN
524	LFS	–	Previously published in Adams Gilmour 1988; Fig.33:23	F72	IH
525	LFS			LIN73C	15
526	LFS	–	Previously published in Adams Gilmour 1988; Fig.32:38	F72	IK
527	LFS	–	Previously published in Adams Gilmour 1988; Fig.32:37	F72	YZ
528	LFS	–	Previously published in Adams Gilmour 1988; Fig.32:35	F72	AGG
529	LFS			CWG86	889
530	LFS	–	Previously published in Adams Gilmour 1988; Fig.32:29	F72	AVV
531	LFS	–	Previously published in Adams Gilmour 1988; Fig.32:30	F72	AWS
532	LFS	–	Previously published in Adams Gilmour 1988; Fig.33:15	F72	YZ
533	LFS			LIN73DI	1
534	LFS			SB85	+
535	LFS			WP71	II AH
536	LFS	–	Previously published in Adams Gilmour 1988; Fig.33:27	F72	YX
537	LFS	–	Post firing perforation previously published in Adams Gilmour 1988; Fig.33:25	F72	ABN; XG
538	LFS	–	Previously published in Adams Gilmour 1988; Fig.33:26	F72	IH
Fig. 80 Torksey Ware					
539	TORK			H83	802
540	TORK			DM72	BT
541	TORK	–	Previously published in Adams Gilmour 1988; Fig.37:6	F72	AUE
542	TORK	–	Previously published in Adams Gilmour 1988; Fig.37:7	F72	F55
543	TORK	–	Previously published in Adams Gilmour 1988; Fig.37:1	F72	E28
544	TORK	–	Previously published in Adams Gilmour 1988; Fig.37:4	F72	APY; G78; H28
545	TORK	–	Previously published in Adams Gilmour 1988; Fig.37:29	F72	ACK; ARS
546	TORK	–	Previously published in Adams Gilmour 1988; Fig.37:34	F72	AUF; AJM; ARS; A RW; ARZ; AXM; AXZ; G37

Corpus No	Cname	Fabric	Comments	Sitecode	Context
547	TORK	–	Previously published in Adams Gilmour 1988; Fig.37:32	F72	G37; AOS; ARU; A ZU; F36; G34; G55
548	TORK	–	Previously published in Adams Gilmour 1988; Fig.56:14	F72	BVN
549	TORK	–	Previously published in Adams Gilmour 1988; Fig.37:23	F72	AFD; YZ
550	TORK			HG72	BC
551	TORK	–	Previously published in Adams Gilmour 1988; Fig.37:24	F72	BDH
552	TORK	–	Previously published in Adams Gilmour 1988; Fig.37:21	F72	F70
553	TORK	–	Previously published in Adams Gilmour 1988; Fig.38:12	F72	ATV
554	TORK			HG72	AU
555	TORK			HG72	BL; BA; BK
556	TORK	–	Previously published in Adams Gilmour 1988; Fig.37:26	F72	A104; B98
557	TORK	–	Post firing perforation; previously published in Adams Gilmour 1988; Fig.38:5	F72	G77; E8
558	TORK	–	Previously published in Adams Gilmour 1988; Fig.38:7	F72	AVI; E8; E10; D29
559	TORK	–	Previously published in Adams Gilmour 1988; Fig.38:9	F72	BAF; E28; E32
560	TORK	–	Previously published in Adams Gilmour 1988; Fig.38:10	F72	E8
Fig. 81 Torksey-type Ware					
561	TORKT	–	Previously published in Adams Gilmour 1988; Fig.44:16	F72	ARJ
562	TORKT	–	Previously published in Adams Gilmour 1988; Fig.44:21	F72	F52; E9; E81; H71
563	TORKT	–	Previously published in Adams Gilmour 1988; Fig.44:17	F72	AZU
564	TORKT	–	Previously published in Adams Gilmour 1988; Fig.44:22	F72	+
Fig. 82 Non-Local Saxo-Norman fabrics					
565	SNX	–	Previously published in Adams Gilmour 1988; Fig.44:19	F72	ANU
Fig. 83 Crowland Abbey-type bowls					
566	CROW	–	Previously published in Jennings & Jones in Jones 1999; Fig.102:5	P70	WE
567	CROW	–	Previously published in Adams Gilmour 1988; Fig.30:43	F72	BBW; G18
Fig. 84 Derby-type Ware					
568	DERB	–	Previously published in Adams Gilmour 1988; Fig.56:15	F72	BDO
569	DERB	–	Previously published in Adams Gilmour 1988; Fig.56:8	F72	E13
Fig. 85 Newark-type Ware					
570	NEWS	–	Previously published in Adams Gilmour 1988; Fig.50:6	F72	AFE
Fig. 86 11th century Stamford Ware					
571	ST			P70	SG; SF; SD
572	ST			SPM83	302
573	ST			SPM83	302
574	ST			BE73	I:LC
575	ST			SPM83	302
576	ST			BE73	I:LC
577	ST			SPM83	53; 215
578	ST			LIN73EI	79
579	ST			WN87	41
580	ST			LIN73EI	580
581	ST	–	Previously published in Adams Gilmour 1988; Fig.42:1	F72	E13
582	ST	–	Previously published in Adams Gilmour 1988; Fig.42:13	F72	YE
583	ST	–	Previously published in Adams Gilmour 1988; Fig.42:8	F72	AVI
584	ST	–	Previously published in Adams Gilmour 1988; Fig.42:14	F72	ASO
585	ST	–	glass making crucible; recorded find WP71 IIAH	WP71	II AH; II AJ IIAJ <P43–47>
586	ST	–	glass making crucible; recorded find MCH84 32 140	MCH84	32; 140 <590–1>
587	ST			WF89	699 588
588	ST			ZE87	321
589	ST			H83	154
590	ST			WP71	I EK
591	ST	–	Previously published in Adams Gilmour 1988; Fig.39:10	F72	E13
592	ST	–	Previously published in Adams Gilmour 1988; Fig.40:16	F72	AWL
Fig. 87 Late 11th to early 12th century Stamford Ware					
593	ST	–	Previously published in Jennings & Jones in Jones 1999; Fig.53:1	P70	FV
594	ST	–	post firing perforation	SH74	+

Corpus No	Cname	Fabric	Comments	Sitecode	Context
595	ST			DT74II	NQ
596	ST			H83	233; 237; 625; 627; 952
597	ST	–	Previously published in Adams Gilmour 1988; Fig.43:9	F72	+
598	ST	–	Previously published in Adams Gilmour 1988; Fig.43:8	F72	YG
599	ST			H83	191
600	ST			DT74II	+
Fig. 88 12th century Stamford Ware					
601	ST			H83	189; 196
602	ST			LIN73A	28; 35; 49
603	ST	–	Previously published in Adams Gilmour 1988; Fig.43:10	F72	BLX
604	ST			DT74II	QY
605	ST			LIN73DI	72
606	ST	–	Previously published in Young in Jones 1999; Fig.102:14	WP71	II AB; I AA; II AA
607	ST			SW82	472
608	ST			LA85	14
609	ST	–	Previously published in Young in Jones 1999; Fig.102:9	WP71	I CW
610	ST			H83	178
611	ST			F72	APX
612	ST	–	Previously published in Adams Gilmour 1988; Fig.43:6	F72	AFV
613	ST	–	Previously published in Young in Jones 1999; Fig.102:3	WP71	I EM
614	ST	–	Previously published in Young in Jones 1999; Fig.102:2	WP71	I EM
615	ST	–	Previously published in Young in Jones 1999; Fig.102:14	WP71	I BZ
616	ST			Trollope Collection	Lincoln City and County Museum ACC NO 88–50/315/5
617	ST			Z86	221
618	ST	–	Previously published in Young in Jones 1999; Fig.102:15	WP71	II AA
619	ST			CWG86	+
620	ST			DT74II	JS
621	ST			DT74II	XF
622	ST			CWG86	152
623	ST	–	Previously published in Adams Gilmour 1988; Fig.43:14	F72	+
624	ST			WP71	I EK
Fig. 89 Stamford Ware-type Crucibles					
625	STCRUC	–	Previously published in Adams Gilmour 1988; Fig.8:26	F72	AUJ
626	STCRUC	–	Previously published in Adams Gilmour 1988; Fig.8:8	F72	H4
627	STCRUC	–	Previously published in Adams Gilmour 1988; Fig.8:15	F72	AWR; AZE
628	STCRUC	–	Previously published in Adams Gilmour 1988; Fig.9:35	F72	YZ
Fig. 90 Thetford-type fabrics					
629	THETT	Fabric C	Previously published in Adams Gilmour 1988; Fig.54:5	F72	AXW; AEA; ATS; E9; XF; OO
630	THETT	Fabric C	Previously published in Adams Gilmour 1988; Fig.54:1	F72	G16; F16
631	THETT	Fabric C	Previously published in Adams Gilmour 1988; Fig.54:3	F72	A EJ; ED
632	THETT	Fabric C	Previously published in Young in Jones 1999; Fig.102:11	WP71	I BZ
633	THETT	Fabric T		HG72	AD
634	THETT	Fabric T	Previously published in Adams Gilmour 1988; Fig.53:1	F72	AHR
635	THETT	Fabric T	Previously published in Adams Gilmour 1988; Fig.53:6	F72	BEX
636	THETT	Fabric G	Previously published in Adams Gilmour 1988; Fig.53:26	F72	ZV
637	THETT	Fabric G	Previously published in Adams Gilmour 1988; Fig.53:29	F72	+
638	THETT	Fabric I	Previously published in Adams Gilmour 1988; Fig.53:16	F72	BDM
Fig. 91 Winchester-type ware					
639	WINC	–	Previously published in Adams Gilmour 1988; Fig.56:12	F72	ABN
640	WINC	–	Previously published in Adams Gilmour 1988; Fig.56:13	F72	AUO
Fig. 92 Pingsdorf-type Ware					
641	PING	–	Painted; Previously published in Adams Gilmour 1988; Fig.58:27	F72	BDG; +
642	PING			HG72	CQ; DY
643	PING	–	Previously published in Adams Gilmour 1988; Fig.58:18	F72	ABN; YK
644	PING	–	Previously published in Adams Gilmour 1988; Fig.58:17	F72	YE; YZ
645	PING	–	Previously published in Adams Gilmour 1988; Fig.58:15	F72	XO
646	PING	–	Previously published in Adams Gilmour 1988; Fig.58:16	F72	ATN

Corpus No	Cname	Fabric	Comments	Sitecode	Context
<i>Fig. 93 12th to 13th century Lincoln Glazed Ware</i>					
647	LSW1			Lincoln Castle 1974	Reynolds 1975
648	LSW1			F72	WP
649	LSW1	–	Previously published in Adams Gilmour 1988; Fig.55:1	F72	IH
650	LSW1	–	Previously published in Young in Jones 1999; Fig.103:22	WP71	I CK; II AK; II AX; I DB; II AJ
651	LSW1	–	Previously published in Adams Gilmour 1988; Fig.31:6 BA; ABB; ALV	F72	AIZ; VL; XF; XG; A
<i>Fig. 94 12th to 13th century Lincoln Glazed Ware</i>					
652	LSW1			F72	SZ
653	LSW1			WB80	1041
654	LSW1	–	Previously published in Young in Jones 1999; Fig.105:66	WP71	III CG; III CH
655	LSW1			F72	VQ
656	LSW1			WP71	II AA
657	LSW1			BE73	I;JH; I:LC; I:EX
658	LSW1	–	Previously published in Adams Gilmour 1988; Fig.	F72	APS
659	LSW1	–	Previously published in Young in Jones 1999; Fig.103:37	WP71	II BD
660	LSW1			F72	DS
661	LSW1	–	Previously published in Adams 1977; Fig.13:106	BE73	I:OQ
662	LSW1			LIN73DI	73
663	LSW1	–	Previously published in Adams 1977; Fig.12:93	BE73	I:JK
<i>Fig. 95 12th to 13th century Lincoln Glazed Ware</i>					
664	LSW1			LIN73DI	54
665	LSW1			CWG86	63
666	LSW1			WP71	II AB
667	LSW1			F72	ADV
668	LSW1	–	Previously published in Young in Jones 1999; Fig.105:58	WP71	II BJ; II AA; II AD
669	LSW1	–	Previously published in Young in Jones 1999; Fig.105:57	WP71	II BJ; II AD
670	LSW1	–	Previously published in Young in Jones 1999; Fig.103:30	WP71	II AK
671	LSW1	–	Previously published in Adams 1977; Fig.19:171	BE73	I:BU; I:BZ; I:NU; I:I:P; I:JK; I:GN
672	LSW1	–	Coppack 1973 Fig.16:99	FLAX45–8	+
673	LSW1			F72	IE; HT
674	LSW1			F72	DS
675	LSW1			ZE87	752
676	LSW1			MCH84	140; 24
<i>Fig. 96 12th to 13th century Lincoln Glazed Ware</i>					
677	LSW1	–	Previously published in Adams Gilmour 1988; Fig.50:9	F72	ZT; CI; CJ; XC
678	LSW1			F72	ABM
679	LSW1	–	Previously published in Adams Gilmour 1988; Fig.31:23	F72	XT; GJ; LD; XK; Z
680	LSW1			F72	XE; GJ; DR
681	LSW1	–	Previously published in Adams Gilmour 1988; Fig.50:28	F72	ABQ; TU
<i>Fig. 97 12th to 13th century Lincoln Glazed Ware</i>					
682	LSW1			H83	565
683	LSW1			MCH84	145
684	LSW1			WP71	II BU
685	LSW1	–	Previously published in Young in Jones 1999; Fig.105:67	WP71	I BD
686	LSW1			F72	SW
687	LSW1	–	Previously published in Adams Gilmour 1988; Fig.31:22	F72	MT
688	LSW1			H83	747
689	LSW1	–	Previously published in Young in Jones 1999; Fig.102:17	WP71	II AZ
690	LSW1			LIN73DI	50
691	LSW1			LIN73C	60
692	LSW1			F72	VE
693	LSW1			LIN73DI	1
694	LSW1			F72	WJ
695	LSW1			MCH84	324
696	LSW1		Previously published in Coppack 1987; Fig.149:629	GM74	Group GM26
<i>Fig. 98 12th to 13th century Lincoln Glazed Ware</i>					
697	LSW1/2			SP72	DS
698	LSW1/2			F72	LL

Corpus No	Cname	Fabric	Comments	Sitecode	Context
699	LSW1/2	-	Previously published in Young in Jones 1999; Fig.103:29	WP71	II BD
700	LSW1/2	-		Z86	+
701	LSW1/2	-	Previously published in Young in Jones 1999; Fig.105:62	WP71	I AC
702	LSW1/2	-		WP71	I DB
703	LSW1/2	-		FB88	216
704	LSW1/2	-	Previously published in Jennings & Jones in Jones 1999; Fig.53:13	P70	EU
705	LSW1/2	-		WP71	I BX
706	LSW1/2	-		LIN73C	+
707	LSW1/2	-		MCH84	329
708	LSW1/2	-		F72	LL
709	LSW1/2	-		DT78	ADT
710	LSW1/2	-		H83	540
711	LSW1/2	-		WB80	2002
Fig. 99 Local Early Medieval Fabrics					
712	EMLOC	Fabric A	Previously published in Coppack 1987; Fig.149:615	GM74	848
713	EMLOC	Fabric A	WP71	II AA	
714	EMLOC	Fabric A	F72	VJ; XC	
715	EMLOC	Fabric MISC	LT72	CC	
716	EMLOC	Fabric MISC	WN87	20	
Fig. 100 Local Early Medieval Shelly Ware					
717	LEMS	-		LIN73C	24
718	LEMS	-	Previously published in Adams Gilmour 1988; Fig.48:3	F72	ATK; AFD
719	LEMS	-		H83	588
720	LEMS	-		LIN73C	36
721	LEMS	-		LIN73C	36
722	LEMS	-		H83	676; 679
723	LEMS	-		H83	588
724	LEMS	-		H83	543
725	LEMS	-		MCH84	145; 140
726	LEMS	-		SB85	XIV 1
727	LEMS	-	Previously published in Adams Gilmour 1988; Fig.49:16	F72	WO; WN; +
728	LEMS	-	Previously published in Adams Gilmour 1988; Fig.49:18	F72	WO; WN
Fig. 101 Local Early Medieval Shelly Ware					
729	LEMS	-	Previously published in Young in Jones 1999; Fig.103:25	WP71	I CB; II AJ
730	LEMS	-	Previously published in Coppack 1987; Fig.147:591	GM74	853
731	LEMS	-	Previously published in Adams Gilmour 1988; Fig.49:11	F72	ALP
732	LEMS	-	Post firing perforations	F72	KG
733	LEMS	-		H83	559
734	LEMS	-		MCH84	145
735	LEMS	-	Previously published in Adams Gilmour 1988; Fig.48:15	F72	WO
736	LEMS	-		P70	WY; WE
737	LEMS	-	Previously published in Adams Gilmour 1988; Fig.48:14	F72	APA
738	LEMS	-	Previously published in Adams Gilmour 1988; Fig.48:13	F72	XU
739	LEMS	-	Previously published in Young in Jones 1999; Fig.104:55	WP71	II AD
740	LEMS	-		DT74II	UV
Fig. 102 Sparsely Glazed ware					
741	LOCC	-	Previously published in Coppack 1987; Fig.149:635	GM74	Group GM26
742	LOCC	-		ON218	EB
743	LOCC	-	Previously published in Young in Jones 1999; Fig.103:19	WP71	I CY
744	LOCC	-	Previously published in Adams Gilmour 1988; Fig.57:2	F72	AWZ; ZB
745	LOCC	-		LT72	DJ
746	LOCC	-	Previously published in Young in Jones 1999; Fig.57:4	WP71	II AT; I EK; I DB; I EG; I EP
747	LOCC	-	Previously published in Adams Gilmour 1988; Fig.57:4	F72	ATK; CJ; DA; VI; A BE; AGR; API; ATN
748	LOCC	-	Previously published in Young in Jones 1999; Fig.102:8	WP71	I BZ
749	LOCC	-	Previously published in Young in Jones 1999; Fig.102:10	WP71	I BZ
750	LOCC	-	Previously published in Adams Gilmour 1988; Fig.57:18	F72	ZS; ABN; XG; VW; AKF

Corpus No	Cname	Fabric	Comments	Sitecode	Context
751	LOCC	–	Previously published in Young in Jones 1999; Fig.102:12	WP71	I BZ
752	LOCC	–	Previously published in Young in Jones 1999; Fig.102:16	WP71	I DZ
753	LOCC			CWG86	184; 209; 204
754	LOCC	–	Previously published in Adams Gilmour 1988; Fig.57:19	F72	DA; JC; ZS
755	LOCC	–	Previously published in Adams Gilmour 1988; Fig.57:10	F72	AKF; AND; YE; ZM
756	LOCC			H83	576
Fig. 103 Non Local Early Medieval fabrics					
757	EMX	Fabric A		SP72	DOA
758	EMX	Fabric A	Previously published in Adams Gilmour 1988; Fig.55:16	F72	AEA; DA; ZJ; ABW
759	EMX	Fabric A	Previously published in Adams Gilmour 1988; Fig.55:15	F72	DA; XO
760	EMX	Fabric A	Previously published in Adams Gilmour 1988; Fig.55:14	F72	ATM; DA
761	EMX	Fabric A	Previously published in Adams Gilmour 1988; Fig.55:20	F72	AFD; ACE
762	EMX	Fabric C		MCH84	146
763	EMX	Fabric C		MCH84	178; 181
764	EMX	Fabric C	Previously published in Adams Gilmour 1988; Fig.58:21	F72	APG; DU; AGR; A PX
765	EMX	Fabric C	Previously published in Young in Jones 1999; Fig.103:36	WP71	I BC
766	EMX	Fabric C	Previously published in Adams Gilmour 1988; Fig.58:24	F72	ABN
767	EMX	Fabric MISC		DT74II	ES
768	EMX	Fabric MISC		LIN73DI	50; 73; 68
769	EMX	Fabric MISC		LIN73EI	107; 90
770	EMX	Fabric MISC		F72	BLD
771	EMX	Fabric MISC		BE73	I:BU; I:EN; I:CH; I: AY; I:FD; I:BF
772	EMX	Fabric MISC	post firing perforation	SB85	XIV1
773	EMX	Fabric MISC		WN87	7; 20; 41
774	EMX	Fabric MISC	Previously published in Adams Gilmour 1988; Fig.55:22	F72	IH; DU
Fig. 104 Beverley ware					
775	BEVO	Fabric 1A	Previously published in Young in Jones 1999; Fig.102:7	WP71	I DV
776	BEVO	Fabric 2B	Previously published in Adams 1977; Fig.18:165	BE73	I:HK
Fig. 105 Hallgate-type ware					
777	DONC	Fabric A	WNW88	200	
778	DONC	Fabric B	H83	83	
779	DONC	Fabric B	Previously published in Adams Gilmour 1988; Fig.55:7	F72	AJZ; BE; FH; KV; A JL; AJW; AMM; A PA
Fig. 106 Developed Stamford ware					
780	DST			F72	DU
781	DST			LT72	DH
782	DST			LT72	CY
783	DST	–	Previously published in Adams Gilmour 1988; Fig.43:13	F72	AGR
784	DST			LIN73DI	29; 50
Fig. 107 Early Medieval Handmade fabrics					
785	EMHM	Fabric A	post firing perforation	LIN73DI	75
786	EMHM	Fabric A		MCH84	145
787	EMHM	Fabric A		WNW88	284
788	EMHM	Fabric A		DT74I	SV
789	EMHM	Fabric B	Previously published in Adams Gilmour 1988; Fig.53:10	F72	XG
790	EMHM	Fabric T	Previously published in Coppack 1987; Fig.146:545	GM74	1036
791	EMHM	Fabric T		LIN73A	51; 28
Fig. 108 Fine Splashed ware					
792	FINSP			MCH84	140; 146; 156
Fig. 109 Oolitic Limestone-tempered fabrics					
793	SLSNO			F72	VQ

Corpus No	Cname	Fabric	Comments	Sitecode	Context
Fig. 110 Nottingham Splashed ware					
794	NSP	-	Previously published in Adams Gilmour 1988; Fig.51:21	F72	DA; CJ; NZ; YK; ZJ; ATK
795	NSP			H83	594
796	NSP	-	post firing perforation	Z86	143
797	NSP			M82	8
798	NSP			F72	ATK
799	NSP	-	Previously published in Adams Gilmour 1988; Fig.51:1	F72	AIE; CJ; DA; SZ; A BA; AIZ; AKF; AL V; ANE; ATK
800	NSP	-	Previously published in Adams Gilmour 1988; Fig.51:18	F72	XG
801	NSP			WP71	II AJ
802	NSP			LIN73A	51
803	NSP			LIN73DI	54
804	NSP			DT74II	AAC
805	NSP			DT74II	AAC
Fig. 111 Nottingham Splashed ware					
806	NSP			H83	569; 622; 676
807	NSP			F72	WP
808	NSP	-	Fabric impression under glaze; previously published in Adams Gilmour 1988; Fig.51:20	F72	RC; NZ; OH
809	NSP			H83	747
810	NSP	-	Previously published in Adams Gilmour 1988; Fig.52:16	F72	AFD
811	NSP	-	Previously published in Adams Gilmour 1988; Fig.52:17	F72	XG
812	NSP			DT74II	AAC
813	NSP	-	Previously published in Adams Gilmour 1988; Fig.52:11	F72	YE
814	NSP			DT74I	HX
815	NSP			CWG86	152
816	NSP			WNW88	+
817	NSP			P70	AV
818	NSP			DT74II	QF
819	NSP			LIN73C	36
820	NSP	-	Previously published in Adams Gilmour 1988; Fig.51:16	F72	AGL
821	NSP	-	Previously published in Adams Gilmour 1988; Fig.52:6	F72	DA
822	NSP			DT74II	+
Fig. 112 Nottingham Splashed ware					
823	NSP			F72	AEE
824	NSP	-	Previously published in Adams Gilmour 1988; Fig.52:2	F72	ALP; WG; ALN; A LQ
825	NSP			F72	APG
826	NSP			Z86	69
827	NSP	-	Previously published in Adams Gilmour 1988; Fig.52:14	F72	ALQ
828	NSP	-	Previously published in Adams Gilmour 1988; Fig.52:13	F72	AIZ
829	NSP			LIN73DI	75
830	NSP			MCH84	156
831	NSP			LIN73DI	58
832	NSP			F72	YE
833	NSP			DT74II	UD
834	NSP	-	Previously published in Adams Gilmour 1988; Fig.52:12	F72	AIZ
835	NSP	-	Previously published in Adams Gilmour 1988; Fig.52:7	F72	ANZ
836	NSP			H83	557
837	NSP	-	Previously published in Adams Gilmour 1988; Fig.50:17	F72	ZT; YX
838	NSP			BE73	I:BF
839	NSP			DT74I	AED
840	NSP			WP71	I AT
841	NSP			F72	AGR
842	NSP	-	Previously published in Adams Gilmour 1988; Fig.50:28	F72	ABQ
843	NSP	-	Previously published in Adams Gilmour 1988; Fig.51:23	F72	XF
Fig . 113 Scarborough-Type ware					
844	SCAR			DT78	BD
845	SCAR	-	Copper coloured strips; previously published in Adams 1977; Fig.15:118	BE73	I:EZ; I:LG; I:JM; I: PW; I:JT

Corpus No	Cname	Fabric	Comments	Sitecode	Context
846	SCAR	–	Previously published in Adams 1977; Fig.3:99	BE73	I:CY; I:EK; I:OO
847	SCAR			DT78	BA
Fig. 114 Unglazed Greensand-tempered fabrics					
848	UNGS	–	Previously published in Adams Gilmour 1988; Fig.56:26	F72	AKF
849	UNGS			BE73	I:BU
Fig. 115 Gritty Ware					
850	YG	–	Previously published in Adams Gilmour 1988; Fig.55:12	F72	ABP
851	YG			F72	ALN; AS; WL; AG M
Fig. 116 York-type Splashed Ware					
852	YORKSPL	–	Previously published in Adams Gilmour 1988; Fig.55:6	F72	AFK; VV; ZT
853	YORKSPL	–	Previously published in Adams Gilmour 1988; Fig.55:5	F72	ATK; XG
Fig. 117 Paffrath-type Ware					
854	BLGR			MCH84	156
855	BLGR			MCH84	156
856	BLGR			WB80	3005
857	BLGR			LIN73DI	1
858	BLGR			F72	WM; WI
Fig. 118 Brunssum-type Flasks					
859	BRUNS			H83	543; 599; 747; 594
860	BRUNS	–	Previously published in Coppack 1987; Fig.149:636	GM74	853; 854; 848
861	BRUNS			Z86	103; +
Fig. 119 North French Wares					
862	NFREM	A	Previously published in Miles et al 1989; Fig.33:54	LIN73BI	111:LIN73BII:4
863	NFREM	A	Previously published in Young in Jones 1999; Fig.105:68	WP71	II IAA
864	NFREM	A	Previously published in Young in Jones 1999; Fig.103:20	WP71	II AK
865	NFREM	A	Previously published in Jennings & Jones in Jones 1999; Fig.53:8	P70	+
866	NFREM	D	Previously published in Young in Jones 1999; Fig.103:24	WP71	II AX
Fig. 120 12th to early 13th century Lincoln Glazed Ware Fabric A					
867	LSWA			F72	WG
868	LSWA	–	Previously published in Young in Jones 1999; Fig.103:23	WP71	I AP; II AJ
869	LSWA			LIN73A	51
870	LSWA			BE73	VI:+
871	LSWA			MCH84	181; 140; 145
872	LSWA			MCH84	181
873	LSWA	–	Previously published in Young in Jones 1999; Fig.103:34	WP71	II BD
874	LSWA	–	Previously published in Young in Jones 1999; Fig.103:31	WP71	II BD
875	LSWA	–	Previously published in Young in Jones 1999; Fig.105:59	WP71	II AA
876	LSWA			BE73	I:BB; I:BD
877	LSWA			LT72	DA; CF; CJ
878	LSWA			MCH84	140
Fig. 121 12th to early 13th century Lincoln Glazed Ware Fabric A					
879	LSWA			F72	AFV; YZ; WP; XU
880	LSWA			LIN73C	+
881	LSWA			WP71	I DG; II AA
882	LSWA			F72:F69	AGP:BAG17
883	LSWA			CWG86	152; 184
884	LSWA	–	Previously published in Adams 1977; Fig.14:111	BE73	I:CY; I:FR
885	LSWA			CWG86	152; 184; 204
886	LSWA			LIN73DI	50
887	LSWA			MCH84	181
888	LSWA	–	Previously published in Young in Jones 1999; Fig.105:64	WP71	II AB
889	LSWA			LIN73C	36
Fig. 122 13th to 14th century Lincoln Glazed Ware Fabric A					
890	LSWA			F72	AZ
891	LSWA			LT72	BY; BX; BZ
892	LSWA			DT74II	BA
893	LSWA			SH74	KU
894	LSWA	–	Previously published in Coppack in Chapman et al 1975; Fig.17:123	LBP72	II1

Corpus No	Cname	Fabric	Comments	Sitecode	Context
895	LSWA			H83	543
896	LSWA			MCH84	28; 41; 42
897	LSWA			ZE90	1005
898	LSWA			WP71	II AA
899	LSWA	-	Previously published in Young in Jones 1999; Fig.104:49	WP71	I AV
900	LSWA			DT74II	BD
901	LSWA			F72	AIX
902	LSWA			MCH84	140
903	LSWA			BE73	I:AC
Fig. 123 13th to 14th century Lincoln Glazed Ware Fabric A					
904	LSWA			H83	543
905	LSWA			LIN73CI	76
906	LSWA	-	Previously published in Young in Stocker 1991; Fig.55:6	SMG82	39; 40
907	LSWA	-	Previously published in Young in Jones 1999; Fig.104:44	WP71	I AW; I AV; I AH; I AD
908	LSWA			M82	208
909	LSWA			CWG86	909
910	LSWA			F72	AIK
911	LSWA			F72	AZ
912	LSWA			Z86	26
913	LSWA			DT74II	BD
914	LSWA			CWG86	909
915	LSWA			MCH84	310; 317; +
916	LSWA			F72	EQ
917	LSWA			F72	AZ
918	LSWA			MCH84	140
919	LSWA			MCH84	24
920	LSWA	-	Previously published in Young in Jones 1999; Fig.105:61	WP71	II AA; II AJ; +
Fig. 124 14th to 15th century Lincoln Glazed Ware Fabric A					
921	LSWA			ON185	101
922	LSWA			MCH84	42; 48
923	LSWA			BE73	I:AO
924	LSWA			DT74I	GA
925	LSWA			DT74II	BT
926	LSWA			DT74II	XF
927	LSWA			P70	+
928	LSWA	-	Previously published in Jennings & Young in Gilmour & Stocker 1986; Fig.29:11	SM76	LT
929	LSWA			MH77	+
930	LSWA	-	Previously published in Jennings & Young in Gilmour & Stocker 1986; Fig.29:8	SM76	CN
Fig. 125 13th to 14th century Glazed Lincoln Ware					
931	LSW2	-	Previously published in Young in Jones 1999; Fig.103:27; stacking scar on side	WP71	II BD; I CR; I DB; II AA
932	LSW2	-	Previously published in Young in Jones 1999; Fig.103:26	WP71	II AZ; II BD; I CF; I CZ; I AR; II BU; I DW
933	LSW2	-	Previously published in Young in Jones 1999; Fig.103:33	WP71	II BD; I CF; I CZ; II AZ; I AR
934	LSW2	-	Previously published in Young in Jones 1999; Fig.103:32	WP71	II BD; II AZ
935	LSW2	-	Previously published in Young in Jones 1999; Fig.104:48	WP71	I AV; I AO; I AJ; I AB
936	LSW2			H83	543
937	LSW2	-	Previously published in Young in Jones 1999; Fig.104:38	WP71	I AW
938	LSW2			LIN73EI	57
939	LSW2	-	Previously published in Adams 1977; Fig.12:88	BE73	I:JK; I:EG
940	LSW2			WP71	I AR; I AB; I AW
941	LSW2			Z86	66
942	LSW2			FB88	216
943	LSW2			LIN73A	51
Fig. 126 13th to 14th century Glazed Lincoln Ware					
944	LSW2			F72	LF
945	LSW2			CW87	180; 192; 222

Corpus No	Cname	Fabric	Comments	Sitecode	Context
946	LSW2			H83	543; 563
947	LSW2			WNW88	+
948	LSW2			SB85	XI1
949	LSW2	-	Previously published in Young in Jones 1999; Fig.104:50	WP71	I AV; I AS; I AA
950	LSW2			CWG86	909
951	LSW2			MCH84	310
Fig. 127 13th to 14th century Glazed Lincoln Ware					
952	LSW2			F72	LF
953	LSW2	-	applied white clay strips	LIN73EI	57 76
954	LSW2			F72	AZ
955	LSW2			F72	CF
956	LSW2			DT74II	XX
957	LSW2			F72	LF
Fig. 128 13th to 14th century Glazed Lincoln Ware					
958	LSW2			F72	AZ
959	LSW2			LIN73A	28; 35; 49; 51
960	LSW2			SB85	XI1
961	LSW2			MCH84	140; 145; 146; 159; 181
962	LSW2			CWG86	909
Fig. 129 13th to 14th century Glazed Lincoln Ware					
963	LSW2			F72	AZ
964	LSW2	-	Previously published in Adams 1977; Fig.13:101	BE73	I:PM; I:PO
965	LSW2			BE73	I:PM; I:PO
966	LSW2			Z86	+
967	LSW2			F72	AZ
968	LSW2	-	Previously published in Young in Stocker 1991; Fig.56:17	SMG82	40
969	LSW2			LIN73EI	57
Fig. 130 13th to 14th century Glazed Lincoln Ware					
970	LSW2			LIN73C	76
971	LSW2			MCH84	27; 28; 42
972	LSW2	-	Previously published in Young in Stocker 1991; Fig.56:15	SMG82	34; 39
973	LSW2			Z86	123; 233
974	LSW2			MCH84	310
975	LSW2			MCH84	181
976	LSW2			CAS91	181
977	LSW2	-	Previously published in Young in Jones 1999; Fig.104:53	WP71	I AV
978	LSW2	-	Previously published in Young in Jones 1999; Fig.104:41	WP71	I AW
979	LSW2			MCH84	138
980	LSW2			MCH84	42
Fig. 131 13th to 14th century Glazed Lincoln Ware					
981	LSW2	-		NO66	
982	LSW2			F72	AT; KA
983	LSW2			F72	+
984	LSW2			00	00
985	LSW2			SH74	TM
986	LSW2			MCH84	140
987	LSW2			Brant Broughton	chance find by Mr Gordon
988	LSW2	-	Previously published in Young in Jones 1999; Fig.104:40	WP71	I VAR; I AB; I AW; II AS
989	LSW2			H83	543
990	LSW2	-		BGS96	222
991	LSW2			F72	JI
992	LSW2			F72	IF
993	LSW2			00	00
994	LSW2	-	Previously published in Young in Jones 1999; Fig.105:65	WP71	I VAR
995	LSW2			F72	LX
Fig. 132 13th to 14th century Glazed Lincoln Ware					
996	LSW2			DT74II	XY
997	LSW2			SH74	LV
998	LSW2			DT74II	EU

Corpus No	Cname	Fabric	Comments	Sitecode	Context
999	LSW2			F72	ZD
1000	LSW2			SW82	432
1001	LSW2			DT74I	SZ
1002	LSW2			Z86	66
1003	LSW2			WF89	617
1004	LSW2			CWG86	444
1005	LSW2			Z86	+
1006	LSW2			Z86	105
1007	LSW2	-	Interior deposit	M82	208
1008	LSW2			Z86	+
1009	LSW2			Z86	+
1010	LSW2	-	Previously published in Young in Jones 1999; Fig.104:47	WP71	I AV
1011	LSW2			LIN73C	78
Fig. 133 13th to 14th century Glazed Lincoln Ware					
1012	LSW2	-	Previously published in Young in Jones 1999; Fig.104:46	WP71	I AW; I AR;
1013	LSW2			LIN73A	51
1014	LSW2			LIN73A	51
1015	LSW2	-	Previously published in Young in Jones 1999; Fig.104:39	WP71	I AW; I AV; I AS; I AR; I AA; I CG
1016	LSW2			MCH84	329
1017	LSW2			SW82	52
1018	LSW2			SP72	AGZ
1019	LSW2	-	Previously published in Young in Jones 1999; Fig.104:42	WP71	I AW
1020	LSW2	-	Previously published in Adams 1977; Fig.14:110	BE73	I:PM
1021	LSW2			SF76	
1022	LSW2			SF76	
1023	LSW2			SPM83	+
1024	LSW2			FLAX69	LAYER 1
1025a	LSW2			LIN73EI	50 76
1025b	LSW2			LIN73EI	50 76
1026	LSW2			LIN73A	14
1027	LSW2	-	Previously published in Adams 1977; Fig.18:169	BE73	I:EO
1028	LSW2	-	Previously published in Jennings & Jones in Jones 1999; Fig.53:7	P70	+
1029	LSW2			SH74	BE
1030	LSW2			DT74II	NQ; EF
Fig. 134 13th to 14th century Glazed Lincoln Ware					
1031	LSW2			Z86	2
1032	LSW2			Z86	2
1033	LSW2			BE73	I:CK
1034	LSW2			LC84	15
1035	LSW2			SW82	54
1036	LSW2			LIN73A	51
1037	LSW2			F72	IF
1038	LSW2			F72	LL
1039	LSW2			SF76	
1040	LSW2			SF76	
1041	LSW2			DT74II	QF
1042	LSW2			MCH84	145
1043	LSW2			F72	ZB
Fig. 135 13th to 14th century Glazed Lincoln Ware					
1044	LSW2/3			WN87	+
1045	LSW2/3			Z86	+
1046	LSW2/3			Z86	+
1047	LSW2/3			MCH84	140
1048	LSW2/3			MCH84	28; 42
1049	LSW2/3			LIN73DI	49
1050	LSW2/3			SMG82	39
1051	LSW2/3			ZE87	723
1052	LSW2/3			Z86	108
1053	LSW2/3			ZE87	307
1054	LSW2/3:			MCH84	42
1055	LSW2/3			F72	KA
1056	LSW2/3			Z86	+

Corpus No	Cname	Fabric	Comments	Sitecode	Context
Fig. 136 Tile fabric					
1057	TILE			Z86	69
1058	TILE			DT74II	UD
1059	TILE			H83	543
1060	TILE			BE73	I:BD; I:BU; I:BZ; I:AC
1061	TILE			BE73	I:BU
1062	TILE			DT74II	UD
1063	TILE			F72	ALV
1064	TILE			LT72	BX
1065	TILE			EG63-6	EG9
1066	TILE			WP71	II AA
1067	TILE			F72	GJ
1068	TILE			Z86	+; 23
1069	TILE			BE73	I:AP
1070	TILE			H83	640
Fig. 137 Potterhanworth-type Ware					
1071	POTT			SM76	YW
1072	POTT			H83	543
1073	POTT			MCH84	27; 32
1074	POTT	-	Previously published in Young in Jones 1999; Fig.104:54	WP71	I AV
1075	POTT			F72	DX
1076	POTT	-	Previously published in Young in Jones 1999; Fig.104:51	WP71	I AV
1077	POTT			LIN73C	41
1078	POTT			LIN73EI	57; 58; 76
Fig. 138 Potterhanworth-type Ware					
1079	POTT			ZE87	678
1080	POTT			DT78	AAT
1081	POTT			DT74II	VR; GC; ON
1082	POTT	-	Previously published in Young in Stocker 1991; Fig.56:18	SMG82	41
1083	POTT			F72	DX
1084	POTT			F72	ZE
1085	POTT	-	post firing perforation	MCH84	41; 46
1086	POTT	-	madder?	MCH84	329
1087	POTT			LT72	AS; AV
1088	POTT			F72	WF
1089	POTT			F72	OO; OU
Fig. 139 Potterhanworth-type Ware					
1090	POTT			Z86	148
1091	POTT			Z86	119
1092	POTT	-	post firing perforation	ZE87	711; 723
1093	POTT			DT74II	BC
Fig. 140 Potterhanworth-type Ware					
1094	POTT			DT74II	JX
1095	POTT			H83	8; 14; 76
1096	POTT	-	Previously published in Healey 1988; Fig 4:4	BE73	I:LF
1097	POTT			ON343	+
1098	POTT			DT74I	+
Fig. 141 Potterhanworth-type Ware					
1099	POTT			F72	AT
1100	POTT			F72	AIX
1101	POTT			SW82	432
1102	POTT			M82	203
1103	POTT			ZE87	677
1104	POTT			DT74II	NB
1105	POTT			ZE87	620
Fig. 142 Potterhanworth-type Ware					
1106	POTT			LIN73EI	66
1107a	POTT			BE73	I:BY
1107b	POTT			DT78	+
1108	POTT			H83	529
1109	POTT			BR85	5
1110	POTT			Z86	8

Corpus No	Cname	Fabric	Comments	Sitecode	Context
1111	POTT			ZE87	753
1112	POTT			F72	AIQ
1113	POTT			DT78	AAM
1114	POTT			H83	540
1115	POTT			BE73	I:BD
1116	POTT			DT74II	QF
1117	POTT			WP71	I AW
1118	POTT	-	Previously published in Adams 1977; Fig.15:114	BE73	I:HZ
1119	POTT			HG72	+
Fig. 143 Non Local Medieval Fabrics					
1120	MEDX	-	Previously published in Jennings & Jones in Jones 1999; Fig.53:10	P70	UZ
1121	MEDX	-	Previously published in Young in Jones 1999; Fig.105:72	WP71	I AA
1122	MEDX			DT74II	BF
1123	MEDX	-	Previously published in Young in Jones 1999; Fig.105:60	WP71	II AA
1124	MEDX			DT74II	IJ; MQ
1125	MEDX			F72	AR
Fig. 144 Brandsby-type Ware					
1126	BRANS	-	Previously published in Adams 1977; Fig.21:198	BE73	I:JP; I:JT
1127	BRANS	-	Previously published in Young in Jones 1999; Fig.102:18	WP71	II AZ
Fig. 145 Nottingham glazed ware					
1128	NOTG			DT74II	ZK
1129	NOTG		Previously published in Young in Stocker 1991; Fig.55:11	SMG82	34; 39; 40
1130	NOTG		Previously published in Adams 1977; Fig.14:107	BE73	I:PO; I:CJ
1131	NOTG			WP71	II AD
1132	NOTG			F72	LF
1133	NOTG			DT74II	QF
1134	NOTG			SP72	AAM
1135	NOTG			Z86	2
1136	NOTG			DT74II	XX
Fig. 146 Toynton Medieval Ware					
1137	TOY			DT74II	ZK; XX
Fig. 147 Unspecified Medieval Imports					
1138	MIMP	-	Previously published in Young in Jones 1999; Fig.105:63	WP71	I AA
1139	MIMP	-	possibly oval	H83	+
Fig. 148 Low Countries Highly Decorated Ware					
1140	AARD			SH74	BV
Fig. 149 Archaic Maiolica					
1141	ARCH			DT74II	BA
1142	ARCH			F72	CK
1143	ARCH			MW79	+
1144	ARCH			SW82	12
Fig. 150 Islamic Glazed					
1145	ISLG			FLAX69	8
Fig. 151 Magrebi Ware					
1146	MAGR	-	Previously published in Young in Jones 1999; Fig.105:69	WP71	I VAW
Fig. 152 Rouen-type Ware					
1147	ROUEN	-	Previously published in Adams 1977; Fig.15:117	BE73	I:PZ
1148	ROUEN			DT74I	SV
Fig. 153 Saintonge Ware with a mottled green glaze					
1149	SAIM	-	Previously published in Young in Stocker 1991; Fig.55:5	SMG82	39; 34
Fig. 154 Saintonge Polychrome ware					
1150	SAIP	-	Previously published in Young in Stocker 1991; Fig.55:8	SMG82	34
Fig. 155 Siegburg-type Ware					
1151	SIEG	-	Previously published in Young in Jones 1999; Fig.105:70	WP71	I DG
Fig. 156 14th to 15th century Lincoln Glazed Ware					
1152	LSW3			ZE87	711; 723
1153	LSW3			HS90	059

Corpus No	Cname	Fabric	Comments	Sitecode	Context
1154	LSW3			DT74II	QF; QG; QY; FQ; XE
1155	LSW3			DT74II	BA
1156	LSW3			DM72	BD
1157	LSW3			DT74II	NG
1158	LSW3			LT72	CA; BQ; BW
1159	LSW3			DT74II	XO
Fig. 157 14th to 15th century Lincoln Glazed Ware					
1160	LSW3	–	Previously published in Young in Stocker 1991; Fig.56:16	SMG82	34; 39; 40
1161	LSW3			DT74II	QY; QF; QG; TB
1162	LSW3	–	Previously published in Young in Stocker 1991; Fig.55:2	SMG82	40
1163	LSW3			ZE87	711; 723
1164	LSW3			WB80	3011
1165	LSW3			ZE87	711; 723
Fig. 158 14th to 15th century Lincoln Glazed Ware					
1166	LSW3	–	Previously published in Coppack in Chapman et al 1975; Fig.9:79	LBP72	GARDEROBE
1167	LSW3			DT74II	QF; QG; QY; FQ
1168	LSW3			ZE87	711; 723
1169	LSW3			DT74II	QF; QG; QY; FQ
Fig. 159 14th to 15th century Lincoln Glazed Ware					
1170	LSW3	–	Previously published in Young in Stocker 1991; Fig.56:14	SMG82	34; 39
1171	LSW3			DT74II	BB
1172	LSW3	–	Previously published in Young in Stocker 1991; Fig.55:13	SMG82	34; 39
1173	LSW3	–	Previously published in Young in Stocker 1991; Fig.55:12	SMG82	34
1174	LSW3			Z86	119; 143
1175	LSW3			DT74II	XO
Fig. 160 14th to 15th century Lincoln Glazed Ware					
1176	LSW3			ZE87	711; 723
1177	LSW3			ZE87	677
1178	LSW3			ZE87	314
1179	LSW3	–	Previously published in Jennings & Jones in Jones 1999; Fig.53:11	P70	WF
1180	LSW3			H83	558
1181	LSW3			DT74II	XL; XM; XH; TW
1182	LSW3			DT74II	FB
1183	LSW3			ZE87	723
1184	LSW3			ZE87	314
1185	LSW3			Z86	143
1186	LSW3			F72	GE
1187	LSW3			DT74II	FZ
1188	LSW3			DT74II	UI
1189	LSW3			DT74II	BD
1190	LSW3			ZE87	711
Fig. 161 14th to 15th century Lincoln Glazed Ware					
1191	LSW3			DT74II	QZ
1192	LSW3	–	waster	DT74II	DF
1193	LSW3			DT74II	QF
1194	LSW3	–	waster	DT74II	XE; ZJ
Fig. 162 14th to 15th century Lincoln Glazed Ware					
1195	LSW3			DT74II	BF
1196	LSW3			DT74II	JO
1197	LSW3			Z86	2
1198	LSW3			SP72	JY; KH
1199	LSW3			CAS91	+
1200	LSW3			H83	135
1201	LSW3			H83	+
1202	LSW3			BOSTON BAR DITCH	
Fig. 163 Late Lincoln Glazed Ware					
1203	LLSW			MCH84	312
1204	LLSW			DT74II	JO
1205	LLSW			ZE87	17

Corpus No	Cname	Fabric	Comments	Sitecode	Context
1206	LLSW			ZE87	305
1207	LLSW			LIN73A	24
1208	LLSW			LIN73EI	74
1209	LLSW			ZE87	305
1210	LLSW			ZE87	691
1211	LLSW			ZE87	305
1212	LLSW			ZE87	620
Fig. 164 Late Lincoln Glazed Ware					
1213	LLSW	-	Rand Church	RC82	96; 63
1214	LLSW			MH77	AG
1215	LLSW			Z86	72
1216	LLSW			SW82	238
1217	LLSW			ZE87	673
1218	LLSW			ZE87	735
Fig. 165 Late Lincoln Glazed Ware					
1219	LLSW			ZE87	697
1220	LLSW			ZE87	305
1221	LLSW			ZE87	701
1222	LLSW			ZE87	301
1223	LLSW			MWS83	10; 6; 5; 2
1224	LLSW			ZE87	305
Fig. 166 Late Lincoln Glazed Ware					
1225	LLSW			ZE87	301
1226	LLSW			ZE87	301
1227	LLSW			ZE87	301
1228	LLSW			SW82	54
1229	LLSW			ZE87	305
Fig. 167 Late Lincoln Glazed Ware					
1230	LLSW			ZE87	719
Fig. 168 Late Lincoln Glazed Ware					
1231	LLSW			ZE87	694
1232	LLSW			ZE87	735; 753
Fig. 169 Late Lincoln Glazed Ware					
1233	LLSW			ZE87	673
Fig. 170 Late Lincoln Glazed Ware					
1234	LLSW			ZE87	24; 14; 20
Fig. 171 Late Lincoln Glazed Ware					
1235	LLSW			MWS83	10; 12
1236	LLSW			MWS83	+
1237	LLSW			DT74II	QF
1238	LLSW			ZE87	719
1239	LLSW	-	Previously published in Jennings & Jones in Jones 1999; Fig.53:9	P70	+
1240	LLSW			ZE87	735
1241	LLSW			ZE87	624
Fig. 172 Late Lincoln Glazed Ware					
1242	LLSW			ZE87	301
1243	LLSW			ZE87	17
1244	LLSW			Z86	105
1245	LLSW			ZE87	305
1246	LLSW			ZE87	17
1247	LLSW			Z86	2
1248	LLSW			MWS83	13
1249	LLSW			ZE87	305
1250	LLSW			ZE87	305
1251	LLSW			ZE87	305
1252	LLSW			ZE87	18
1253	LLSW			ZE87	17
1254	LLSW			ZE87	17
1255	LLSW	-	after McCarthy and Brooks 1988 Fig.240	ZE87	753
1256	LLSW			LIN73EI	69

Corpus No	Cname	Fabric	Comments	Sitecode	Context
1257	LLSW			ZE87	301
1258	LLSW			MWS83	5; 6
1259	LLSW			LIN73EI	90
1260	LLSW			ZE87	301
Fig. 173 Late Lincoln Glazed Ware					
1261	LLSW			Z86	66
1262	LLSW			ZE87	301
1263	LLSW			F72	GP
1264	LLSW			ZE87	753
1265	LLSW			ZE87	301; 645
1266	LLSW			DT74II	BD
1267	LLSW			DT74II	QF; QY
1268	LLSW			ZE87	301
1269	LLSW			ZE87	305
1270	LLSW			ZE90	1005
1271	LLSW			ZE87	305
1272	LLSW			ZE87	301
1273	LLSW			DT78	ADC; +
1274	LLSW			LT72	BL; BG
1275	LLSW			Z86	121
Fig. 174 Late Lincoln Glazed Ware					
1276	LLSW			F72	NO
1277	LLSW			DT74II	XF
1278	LLSW			ZE87	328; 314
1279	LLSW			ZE87	308
1280	LLSW			HS90	054
1281	LLSW			SW82	44
1282	LLSW			ZE87	734
1283	LLSW			MWS83	8; 12; 101
1284	LLSW			Z86	11
1285	LLSW			ZE87	301
1286	LLSW			H83	14; 76; 19
1287	LLSW			ZE87	305
Fig. 175 Late Lincoln Glazed Ware					
1288	LLSW			ZE87	305
1289	LLSW			DT74II	NE
1290	LLSW			H83	38
1291	LLSW			Z86	105; 121
1292	LLSW			LIN73EI	83
1293	LLSW			ZE87	301
1294	LLSW	-	Previously published in Jennings & Jones in Jones 1999; Fig.53:20	P70	BW
1295	LLSW			Z86	20
1296	LLSW			ON265	+
1297	LLSW	-	Previously published in Jennings & Jones in Jones 1999; Fig.53:17	P70	BW; +
1298	LLSW			ZE87	+
1299	LLSW			Z86	81
1300	LLSW			Z86	23
1301	LLSW			LIN73EI	90; 74
1302	LLSW			ZE87	301; 719
Fig. 176 Late Lincoln Glazed Ware					
1303	LLSW			Z86	121; 105
1304	LLSW			ZE87	305
1305	LLSW			ZE87	753
1306	LLSW			ZE87	301
1307	LLSW			ZE87	301
1308	LLSW			Z86	+
1309	LLSW			ZE87	301
Fig. 177 Late Lincoln Glazed Ware					
1310	LLSW			ZE87	719
1311	LLSW			F72	FB
1312	LLSW			LIN73C	+

Corpus No	Cname	Fabric	Comments	Sitecode	Context
1313	LLSW			ZE87	753
1314	LLSW			Z86	+
1315	LLSW	-	inscribed letter	SB85	+
1316	LLSW	-	Previously published in Jennings & Jones in Jones 1999; Fig.53:19	P70	BW
1317	LLSW			HS90	069
1318	LLSW	-	wear marks	LIN73EI	46
1319	LLSW			SH74	BL
1320	LLSW	-		Z86	+
1321	LLSW			ZE87	301
1322	LLSW			ZE87	719
Fig. 178 Late Lincoln Glazed Ware					
1323	LLSW			ZE87	301; 645; 646; 673
1324	LLSW			CWG86	831
1325	LLSW			ZE87	+
1326	LLSW			DT74II	QF
1327	LLSW			ZE87	697
1328	LLSW			ZE90	+
1329	LLSW			DT74I	ML
1330	LLSW			ZE87	624
1331	LLSW			ZE87	735
Fig. 179 Late Lincoln Glazed Ware					
1332	LLSW			ZE87	747; 753
1333	LLSW			ZE87	661
1334	LLSW			ZE87	301
1335	LLSW			ZE87	301
1336	LLSW			ZE87	620
1337	LLSW			ZE87	305
1338	LLSW			ZE87	645
1339	LLSW			ZE87	301
1340	LLSW			ZE87	301
1341	LLSW			ZE87	301
Fig. 180 15th Century Lincoln Glazed Ware					
1342	LSW4	Fabric A		Z86	23
1343	LSW4	Fabric A		Z86	121
1344	LSW4	Fabric A		F72	FH
1345	LSW4	Fabric A		BE73	I:BY
1346	LSW4	Fabric A		SW82	242
1347	LSW4	Fabric A		HG72	FH
1348	LSW4	Fabric A		HG72	FH
1349	LSW4	Fabric A	post firing keyhole perforation	ZE87	20; 14; 1; 24
1350	LSW4	Fabric A		H83	49
1351	LSW4	Fabric A		DT74I	PP
1352	LSW4	Fabric A		DT74II	EV
Fig. 181 15th Century Lincoln Glazed Ware					
1353	LSW4	Fabric B		GL91	131
1354	LSW4	Fabric B		DT74II	EY
1355	LSW4	Fabric B		Z86	121
1356	LSW4	Fabric B		DT74II	EY
1357	LSW4	Fabric C		HG72	FH
1358	LSW4	Fabric C		HG72	FH
1359	LSW4	Fabric C		HG72	FH
1360	LSW4	Fabric C		HS90	057
1361	LSW4	Fabric C		Z86	69
1362	LSW4	Fabric C		H83	95
1363	LSW4	Fabric C		DT74I	HX
1364	LSW4	Fabric C		DM72	AI
1365	LSW4	Fabric C		CWG86	100
1366	LSW4	Fabric C		H83	2003
1367	LSW4	Fabric C		H83	38
Fig. 182 Late Medieval Finewares					
1368	LMF	St Mark's		ZE87	301

Corpus No	Cname	Fabric	Comments	Sitecode	Context
1369	LMF	St Mark's		ZE87	753; 672
1370	LMF	St Mark's		ZE87	301; 645
1371	LMF	St Mark's		ZE87	624
1372	LMF	St Mark's		ZE87	301
1373	LMF	St Mark's		Z86	108; 105; 121
1374	LMF	St Mark's		Z86	108
1375	LMF	St Mark's		SW82	12; 180
1376	LMF	St Mark's		DT74II	EU
1377	LMF	St Mark's		H83	2009
1378	LMF	St Mark's		ZE87	301; 620; 624; +
1379	LMF	St Mark's		SP72	CSE
1380	LMF	St Mark's		SW82	131
Fig. 183 Late Medieval Finewares					
1381	LMF	St Mark's		DT74II	+, BH; BT; KG
1382	LMF	St Mark's	LNCCN Acc No 34-70	NO66	FF
1383	LMF	St Mark's		ZE90	1005
1384	LMF	St Mark's		F72	AG
1385	LMF	St Mark's		ZE87	301; 624; +
Fig. 184 Late Medieval Finewares					
1386	TUDOR GREEN TYPE			DT74II	AH; BT; DS; DV; E Y; JS; JY
1387	TUDOR GREEN TYPE			WP71	II AA
1388	TUDOR GREEN TYPE			DT78	ACJ
1389	MIDLANDS- TYPE		Previously published in Young in Stocker 1991; Fig.56:22	SMG82	2001
Fig. 185 Late Medieval Local Fabrics Fabric B					
1390	LMLOC	Fabric B	Previously published in Young in Stocker 1991; Fig.56:20	SMG82	227
1391	LMLOC	Fabric B		SH74	DP; DJ; GX
1392	LMLOC	Fabric B		SH74	FY
Fig. 186 Non Local Late Medieval Fabrics					
1393	LMX	-	Previously published in Jennings & Jones in Jones 1999; Fig.54:26	P70	AC
1394	LMX			BE73	BC
Fig. 187 East Anglian Late Medieval and Transitional Ware					
1395	EALMT	-	Previously published in Young in Jones 1999; Fig.105:71	WP71	II IAE
Fig. 188 Humberware					
1396	HUM			HG72	FH
1397	HUM			SW82	229
1398	HUM			DT74II	RW
Fig. 189 Midlands Purple-type Ware					
1399	MP	-	Previously published in Coppack in Chapman et al 1975; Fig.9:76	LBP72	LP140; GARDER OBE
1400	MP			DT74II	EU; CI
1401	MP			F72	CY
1402	MP	-	cut-outs above handles	H83	531; 543
1403	MP			DT74I	ABZ
1404	MP			DT78	ACJ
Fig. 190 Late Medieval Toynton Ware					
1405	TOYII			SW82	9
1406	TOYII			H83	531
1407	TOYII			SW82	9; 130
191Low Countries Red Earthenwares					
1408	DUTR			SW82	60; 229
1409	DUTR	-	Previously published in Jennings & Jones in Jones 1999; Fig.53:21	P70	AT

Corpus No	Cname	Fabric	Comments	Sitecode	Context
1410	DUTR			SW82	229
1411	DUTR			DT74II	BT
1412	DUTR			DT74II	EY
1413	DUTR			LIN73EI	83
<i>Fig. 192 Langerwehe-type Stoneware</i>					
1414	LANG			LT72	CN
1415	LANG	-	Previously published in Young in Stocker 1991; Fig.56:21	SMG82	2001
<i>Fig. 193 Mature Valencian Lusterware</i>					
1416	MVAL	-	Previously published in Young in Stocker 1991; Fig.56:19	SMG82	227

VII Appendix 1

Pottery Codes used in this report, with horizon and date parameters

Ware code	description	earliest horizon	latest horizon	earliest date	latest date
AARD	LOW COUNTRIES HIGHLY DECORATED WARE	MH5	MH7	1250	1400
AMPH	EAST MEDITERRANEAN-TYPE AMPHORA	R	PMH7	400	1700
ANDA	ANDALUSIAN LUSTREWARE	MH5	MH9	1250	1450
ANDE	ANDENNE-TYPE WARE	ASH11	MH3	1000	1200
ARCH	ARCHAIC MAIOLICA	MH6	MH8?	1270	1350
BALT	BALTIC-TYPE FABRIC	ASH7?	ASH14?	950	1200
BEAG	GREEN GLAZE BEAUVAIS-TYPE WARE	MH10	PMH3	1500	1600
BERTH	BROWN EARTHENWARES	PMH2	PMH10	1530	1800
BEVO	BEVERLEY WARE	MH1	MH7	1100	1350
BL	BLACKWARE	PMH3	EMH	1530	1900
BLBURN	BLACK BURNISHED WARES	ASH3	ASH4?	700	900
BLGR	PAFFRATH-TYPE OR BLUE-GREY WARE	ASH12	MH3?	1050	1200
BLSURF	BLACK SURFACED WARES	ASH3	ASH4?	700	900
BOU	BOURNE-TYPE WARE;FABRIC D	MH10	PMH4	1450	1650
BOUA	BOURNE-TYPE WARE;FABRICS A-C	MH3	MH7	1170	1350
BRANS	BRANDSBY-TYPE WARE	MH5	MH8	1250	1400
BRBURN	BROWN BURNISHED WARES	ASH3	ASH4?	700	900
BRILL	BRILL WARES	MH5	MH7	1250	1500
BRUNS	BRUNNSUM-TYPE FLASKS	MH2?	MH3?	1150	1200
BS	BROWN STONEWARE	PMH7	EMH	1680	1900
CEP	CHINESE EXPORT PORCELAIN	PMH6	PMH10	1580	1900
CHARN	CHARNWOOD-TYPE FABRICS	ASH1	ASH2	400	700
CIST	CISTERCIAN-TYPE WARES	MH10?	PMH5	1450	1650
CITG	CENTRAL ITALIAN TIN-GLAZED WARE	MH9	PMH2	1480	1550
CMW	WHITE COALMEASURE FABRICS	MH7	PMH3	1350	1620
CRMWARE	CREAMWARE	PMH9	EMH	1740	1880
CROW	CROWLAND ABBEY-TYPE BOWLS	ASH12	ASH14	1020	1150
DERB	DERBY-TYPE WARE	ASH10?	ASH13?	940	1080
DONC	DONCASTER HALLGATE-TYPE WARE	MH3	MH4	1170	1250
DST	DEVELOPED STAMFORD WARE	MH1	MH4	1150	1220
DUTR	LOW COUNTRIES RED EARTHENWARES	MH8	PMH5	1350	1650
EALMT	EAST-ANGLIAN LMED/ TRANSITIONAL WARE	MH9	PMH3	1450	1550
ECHAF	CHAFF-TEMPERED FABRICS	ASH1	ASH2	400	750
EGSW	EARLY GERMAN STONEWARES	MH5	MH6	1250	1300
ELFS	EARLY LINCOLNSHIRE FINE-SHELLED WARE	ASH6	ASH7	820	980
ELSW	EARLY LINCOLN GLAZED WARE	ASH7	ASH8	870	920
EMHM	EARLY MEDIEVAL HANDMADE FABRICS	MH1?	MH3?	1120	1200
EMLOC	LOCAL EARLY MEDIEVAL FABRICS	MH1	MH4	1120	1220
EMX	NON-LOCAL EARLY MEDIEVAL FABRICS	MH1	MH4	1100	1220
ESAX	UNDIAGNOSTIC ANGLO-SAXON FABRICS	ASH1	ASH2	400	700
ESAXLOC	LOCAL ANGLO-SAXON FABRICS	ASH1	ASH2	400	700
ESAXX	NON-LOCAL ANGLO-SAXON FABRICS	ASH1	ASH2	400	700
ESG	EARLY GLAZED WARE;YORK TYPE 1	ASH8	ASH12	870	1050
ESGS	ANGLO-SAXON GREENSAND FABRICS	ASH1	ASH2	400	700
EST	EARLY STAMFORD WARE	ASH7	ASH11	870	1010
FINSP	FINE SPLASHED WARE	MH2?	MH4?	1150	1220

Ware code	description	earliest horizon	latest horizon	earliest date	latest date
FREC	FRECHEN/COLOGNE STONEWARE	PMH2	PMH8	1550	1700
FREN	UNSPECIFIED FRENCH WARES	MH3	PMH5	1170	1650
GERMS	GERMAN SLIPWARES	PMH3	PMH8	1580	1700
GERMW	GERMAN WHITE WARES	PMH3	PMH7	1550	1700
GRBURN	GREY BURNISHED WARES	ASH3	ASH4?	700	900
GRE	GLAZED RED EARTHENWARES	PMH3	PMH9	1550	1780
HUM	HUMBERWARE	MH7	PMH2	1320	1550
HUMB	HUMBER BASIN FABRICS	MH1	MH10	1120	1500
HUY	HUY-TYPE WARE	ASH6	ASH12	830	1130
IPS	IPSWICH-TYPE WARE	ASH2?	ASH6	750	870
ISLG	ISLAMIC GLAZED	ASH11	MH8	1000	1350
KING	KINGSTON-TYPE WARE	MH5	MH6	1230	1400
KOLN	COLOGNE STONEWARE	PMH1	PMH2	1500	1580
LANG	LANGERWEHE-TYPE STONEWARE	MH7	PMH1	1350	1500
LARA	LANGERWEHE/RAEREN-TYPE STONEWARE	MH8	PMH1	1450	1500
LEMS	LOCAL EARLY MEDIEVAL SHELLY WARE	MH1	MH4	1120	1220
LEST	LEICESTER-TYPE WARE	ASH7?	ASH9?	870	1010
LFS	LINCOLN FINE-SHELLED WARE	ASH11	MH3?	970	1200
LG	LINCOLN GRITTY WARE	ASH7	ASH7	870	880
LHUM	LATE HUMBERWARE	PMH2	EMH	1550	1800
LIGU	LIGURIAN BERRETINO TIN-GLAZED WARE	PMH2	PMH6	1520	1700
LIM	OOLITIC LIMESTONE-TEMPERED FABRICS	ASH2	ASH9	700	950
LKT	LINCOLN KILN-TYPE SHELLY WARE	ASH7	ASH11	870	1000
LLSW	LATE GLAZED LINCOLN WARE	MH8	MH10	1380	1500
LMED	LATE MEDIEVAL	MH7	MH10	1350	1500
LMF	LATE MEDIEVAL FINEWARES	MH9	PMH1	1410	1530
LMIMP	LATE MEDIEVAL IMPORTED FABRICS	MH7	MH10	1350	1500
LMLOC	LATE MEDIEVAL LOCAL FABRICS	MH8	PMH1	1370	1520
LMPM	LMED OR PMED	MH7	PMH10	1350	1800
LMX	NON-LOCAL LATE MEDIEVAL FABRICS	MH7	MH10	1350	1500
LOCC	SPARSELY GLAZED WARE	MH1	MH3?	1120	1200
LPM	EARLY MODERN OR MODERN	EMH	EMH	1780	1900
LSCRUC	LATE SAXON CRUCIBLE FABRICS	ASH7	ASH12	870	1100
LSH	LINCOLN LATE SAXON SHELLY WARE	ASH7	ASH12?	870	1120
LSIMP	LATE SAXON MISC IMPORTED FABRICS	ASH7	ASH11	870	1010
LSLOC	LOCAL LATE SAXON FABRICS	ASH7	ASH13	870	1080
LSLS	LINCOLN LATE SAXON SANDY WARE	ASH7	ASH8	870	920
LSMED	LSAX OR MED	ASH7	MH10	870	1500
LSPLS	LINCOLN LATE SAXON PALE-BODIED SANDY WARE	ASH7	ASH8	870	920
LSW1	LINCOLN GLAZED WARE; 12TH TO 13TH	MH1	MH4	1120	1220
LSW1/2	LINCOLN GLAZED WARE; 12TH TO 13TH	MH1	MH6	1120	1275
LSW2	LINCOLN GLAZED WARE; 13TH TO 14TH	MH4	MH6	1210	1320
LSW2/3	LINCOLN GLAZED WARE; 13TH TO 15TH	MH4	MH9	1210	1470
LSW3	LINCOLN GLAZED WARE; 14TH TO 15TH	MH6	MH9?	1280	1470
LSW4	LINCOLN GLAZED WARE; 15TH TO 16TH	MH10	PMH1	1470	1530
LSWA	LINCOLN GLAZED WARE; FABRIC A	MH1	MH10	1120	1500
LSX	NON-LOCAL LATE SAXON FABRICS	ASH7	ASH13	870	1080
MAGR	MAGREBI WARE	MH5	MH7	1270	1350
MARTI	MARTINCAMP WARE; TYPE I	MH10	PMH2	1480	1550
MARTII	MARTINCAMP WARE; TYPE II	PMH1	PMH3	1500	1600
MARTIII	MARTINCAMP WARE; TYPE III	PMH3	PMH7	1600	1650
MAX	NORTHERN MAXEY-TYPE WARE	ASH2	ASH6?	670	870
MAXQ	SOUTH LINGS MAXEY-TYPE WARE	ASH2	ASH5?	670	800
MAY	MAYEN-TYPE WARES	ASH3	ASH6?	650	900
MCRUC	MEDIEVAL CRUCIBLES	MH1	MH10	1100	1500
MEDLOC	MEDIEVAL LOCAL FABRICS	MH4	MH10	1200	1500
MEDPM	MED OR PMED	MH4	PMH10	1200	1800
MEDX	NON-LOCAL MEDIEVAL FABRICS	MH4	MH10	1200	1500
MIMP	UNSPECIFIED MEDIEVAL IMPORTS	MH4	MH10	1200	1500
MP	MIDLAND PURPLE-TYPE WARE	MH8?	PMH3?	1350	1650
MSAXLOC	LOCAL MID-SAXON FABRICS	ASH2	ASH6	650	870
MSAXX	NON-LOCAL MID-SAXON FABRICS	ASH2	ASH6	650	870
MVAL	MATURE VALENCIAN LUSTREWARE	MH7	PMH3	1430	1500
MY	MIDLAND YELLOW-TYPE WARE	PMH2	PMH8	1530	1700
NDST	NOTTINGHAM DEVELOPED STAMFORD TYPE WARE	MH3	MH4	1170	1220
NEWS	NEWARK-TYPE WARE	ASH11	ASH12	970	1040
NFM	NORTH FRENCH MONOCHROME	MH4	MH5	1170	1300
NFREM	NORTH FRENCH WARES	MH3?	MH5	1170	1250

Ware code	description	earliest horizon	latest horizon	earliest date	latest date
NHSLIP	NORTH HOLLAND SLIPWARES	PMH3	PMH7	1570	1750
NITALS	NORTH ITALIAN SGRAFFITO WARE	PMH3	PMH4	1550	1700
NLST	NORTH LINCOLNSHIRE SHELLY WARE	MH1	MH8	1120	1400
NOTG	NOTTINGHAM GLAZED WARE	MH4?	MH7	1210	1350
NOTTS	NOTTINGHAM-TYPE WARE	ASH9?	ASH12?	920	1020
NSP	NOTTINGHAM SPLASHED WARE	MH1	MH4?	1120	1220
ORP	OXIDISED RED-PAINTED WARE	ASH4?	ASH6?	700	1000
PBIC	LIGHT-BODIED BICHROME FABRICS	PMH2?	PMH3?	1530	1630
PING	PINGSDORF-TYPE WARE	ASH7	MH3	1000	1200
PMF	POST-MED FINE WARES	PMH1	PMH7	1500	1700
PMLOC	POST-MED LOCAL FABRICS	PMH2	PMH9	1530	1780
PORTF	PORTUGESE TIN-GLAZED WARES	PMH3	PMH5	1600	1700
POTT	POTTERHANWORTH-TYPE WARE	MH4?	MH9?	1210	1480
RAER	RAEREN STONEWARE	MH10	PMH2	1480	1550
RESAX	ROMAN OR EARLY ANGLO-SAXON	R	ASH2	60	650
RGRE	REDUCED GLAZED RED EARTHENWARES	PMH3	PMH9	1650	1780
RLG	ROMAN OR LG	R	ASH7	60	880
RLSAX	ROMAN OR LATE SAXON	R	ASH11	60	1000
RMED	ROMAN OR MEDIEVAL	R	MH10	60	1500
RMSAX	ROMAN OR MIDDLE SAXON	R	ASH6	60	870
ROUEN	ROUEN-TYPE WARES	MH3	MH5	1170	1350
RSN	ROMAN OR SAXO-NORMAN	R	ASH14	60	1100
SAIG	SAINTONGE ALL OVER GREEN-GLAZED WARE	MH5	MH6	1280	1350
SAIM	SAINTONGE WARE WITH A MOTTLED GREEN GLAZE	MH5	MH7	1250	1650
SAIP	SAINTONGE POLYCHROME WARE	MH5	MH6	1280	1350
SAIPM	POST MEDIEVAL SAINTONGE	PMH1	PMH4	1500	1650
SAIU	UNGLAZED SAINTONGE	MH10	PMH4	1480	1650
SCAR	SCARBOROUGH-TYPE WARE	MH3	MH7	1200	1350
SEVIL	SEVILLE-TYPE	MH10	MH5	1450	1650
SIEB	IRON-WASHED SIEGBURG STONEWARE	MH9	PMH1	1450	1550
SIEG	SIEGBURG-TYPE STONEWARE	MH6	PMH1	1300	1500
SLIP	SLIPWARE (GENERAL)	PMH4	EMH	1630	1900
SLSNO	SOUTH LINCOLNSHIRE SAXO-NORMAN OOLITIC LIMESTONE-TEMPERED FABRICS	ASH12	MH3	1020	1170
SNEOT	ST.NEOTS-TYPE WARE	ASH11	MH3?	970	1100
SNIMP	SAXO-NORMAN IMPORTED FABRICS	ASH7	MH3	870	1150
SNLOC	LOCAL SAXO-NORMAN FABRICS	ASH7	MH3	870	1150
SNLS	LINCOLN SAXO-NORMAN SANDY WARE	ASH11	ASH13	970	1080
SNTG	SOUTH NETHERLANDS TIN-GLAZED WARES	MH10	PMH1	1480	1570
SNX	NON-LOCAL SAXO-NORMAN FABRICS	ASH7	MH3	870	1150
SPARC	SPARRY CALCITE-TEMPERED FABRICS	ASH1	ASH6?	400	870
SPTG	SPANISH TIN GLAZE	MH5	PMH2	1250	1550
SST	SANDSTONE-TEMPERED FABRICS	ASH1	ASH6	400	870
ST	STAMFORD WARE	ASH7	MH3	870	1200
STANLY	STANION/LYVEDEN-TYPE WARE	MH5	MH7	1250	1350
STCRUC	STAMFORD WARE-TYPE CRUCIBLES	ASH7	MH3	870	1150
STSL	STAFFORDSHIRE SLIPWARE	PMH5	PMH8	1650	1780
TB	TOYNTON OR BOLINGBROKE-TYPE WARE	MH10?	PMH8	1450	1750
TGE	TIN-GLAZED EARTHENWARES	PMH4	PMH10	1570	1800
TGEM	MAIOLICA (ANGLO-NETHERLANDS)	PMH3	PMH4	1570	1650
THETT	THETFORD-TYPE FABRICC	ASH7	MH2	870	1150
TILE	TILE FABRIC	MH3	MH10	1150	1500
TORK	TORKSEY WARE	ASH7	ASH13	870	1080
TORKT	TORKSEY-TYPE WARE	ASH7	ASH13	870	1080
TOY	TOYNTON MEDIEVAL WARE	MH5	MH6	1280	1450
TOYII	LATE MEDIEVAL TOYNTON WARE	MH10?	PMH1	1450	1540
UNGS	UNGLAZED GREENSAND-TEMPERED FABRICS	ASH11	MH7	970	1350
WERRA	WERRA/WANFRIED WARE	PMH3	PMH4	1580	1650
WESER	WESER WARE	PMH3	PMH4	1580	1630
WEST	WESTERWALD STONEWARE	PMH4	EMH	1590	1800
WINC	WINCHESTER-TYPE WARE	ASH10	ASH14	970	1100
WS	WHITE SALT-GLAZED WARES	PMH8	PMH9	1720	1780
YG	GRITTY WARE (YORKSHIRE-TYPE)	ASH13	MH3	1050	1200
YORK	YORK GLAZED WARE	MH3	MH5?	1180	1280
YORKSPL	YORK-TYPE SPLASHED WARES	ASH14?	MH4?	1080	1200
YW	YORK WARE	ASH6	ASH9	850	950

VIII Appendix 2

Ceramic Horizons and their dating ranges

HORIZONS	DATING	PERIOD	EARLIEST DATE	LATEST DATE
R	1ST-4TH	ROMAN	60	400
ASH1	5TH-?E8TH	EARLY ANGLO-SAXON (c.450+)	450	680
ASH2	?L7TH-?E8TH	MIDDLE SAXON (c.650+)	680	720
ASH3	?E8TH-?M8TH	MIDDLE SAXON (c.650+)	720	750
ASH4	?M8TH-?L8TH	MIDDLE SAXON (c.650+)	750	800
ASH5	?E9TH-?M9TH	MIDDLE SAXON (c.650+)	800	840
ASH6	?M9TH-?L9TH	MIDDLE SAXON (c.650+)	840	870
ASH7	?M/L9TH-L9TH	LATE SAXON (c.850+)	870	880
ASH8	L9TH-E10TH	LATE SAXON (c.850+)	880	920
ASH9	E/M10TH-M10TH	LATE SAXON (c.850+)	920	940
ASH10	M10TH-L10TH	LATE SAXON (c.850+)	940	970
ASH11	L10TH	LATE SAXON (c.850+)	970	1010
ASH12	E11TH-?E/M11TH	SAXO-NORMAN (c.1000+)	1010	1020
ASH13	?E/M11TH-M/L11TH	SAXO-NORMAN (c.1000+)	1020	1070
ASH14	L11TH-E12TH	SAXO-NORMAN (c.1000+)	1070	1120
MH1	?E/M12TH-M12TH	EARLY MEDIEVAL (c.1120+)	1120	1140
MH2	M12TH-M/L12TH	EARLY MEDIEVAL (c.1120+)	1140	1170
MH3	M/L12TH-E13TH	EARLY MEDIEVAL (c.1120+)	1170	1210
MH4	E13TH-E/M13TH	EARLY MEDIEVAL (c.1120+)	1210	1230
MH5	E/M13TH-?L13TH	HIGH MEDIEVAL (c.1220+)	1230	1270
MH6	?L13TH-?M14TH	HIGH MEDIEVAL (c.1220+)	1270	1320
MH7	?M14TH-?L14TH	LATE MEDIEVAL (c.1350+)	1320	1380
MH8	?L14TH-?E15TH	LATE MEDIEVAL (c.1350+)	1380	1420
MH9	?E15TH-M15TH	LATE MEDIEVAL (c.1350+)	1420	1450
MH10	M15TH-L15TH	LATE MEDIEVAL (c.1350+)	1450	1500
PMH1	E16TH-M16TH	EARLY POST-MEDIEVAL (c.1500+)	1500	1530
PMH2	M16TH-M/L16TH	EARLY POST-MEDIEVAL (c.1500+)	1530	1560
PMH3	M/L16TH-E17TH	POST MEDIEVAL (c.1560+)	1560	1620
PMH4	E17TH-M17TH	POST MEDIEVAL (c.1560+)	1620	1650
PMH5	M17TH-M/L17TH	POST MEDIEVAL (c.1560+)	1650	1670
PMH6	M/L17TH-L17TH	POST MEDIEVAL (c.1560+)	1670	1690
PMH7	L17TH-E18TH	POST MEDIEVAL (c.1560+)	1690	1720
PMH8	E18TH-M18TH	LATE POST-MEDIEVAL (c.1720+)	1720	1760
PMH9	M18TH-L18TH	LATE POST-MEDIEVAL (c.1720+)	1760	1780
PMH10	L18TH-E19TH	LATE POST-MEDIEVAL (c.1720+)	1780	1820
EMH	L18TH-20TH	EARLY MODERN (c.1780+)	1780	1900

IX Appendix 3

Index to sites shown on Fig 2 (sites in Lincoln) and Fig 3 (sites outside Lincoln)

Fig No	No	Sitecode	SiteName	Fig No	No	Sitecode	SiteName
Fig 2	1	LH84	Lawn Hospital 1984	Fig 2	45	LIN73A	Silver Street Trench A
Fig 2	2	LA85	Lawn Hospital 1985	Fig 2	46	LIN73C	Silver Street Trench C
Fig 2	3	L86	The Lawn 1986-7	Fig 2	47	GLB94	Greyfriars/Library, Broadgate 1994
Fig 2	4	CY89	Cuthbert's Yard	Fig 2	48	GL91	Greyfriars/Library
Fig 2	5	CWG86	Castle West Gate 1986-89	Fig 2	49	BE73 (I to VI)	Broadgate East 1973 Areas I to VI
Fig 2	6	CAS91	Lincoln Castle	Fig 2	50	LIN73F	Saltergate 1973 Trench F
Fig 2	7	Lincoln	Lincoln Castle Observatory Tower (Reynolds 1975)	Fig 2	51	LIN73E	Saltergate 1973 Trenches EI and EII
Fig 2	8	CL85	Chapel Lane 1985	Fig 2	52	LIN73D	Saltergate 1973 Trenches DI to DIV
Fig 2	9	WB80	West Bight 1980	Fig 2	53	WF89	Waterside Foreshore (Saltergate frontage)
Fig 2	10	MW79	Mint Wall 1979	Fig 2	54	BN89	Brayford North
Fig 2	11	MWS83	Mint Wall Stables 1983	Fig 2	55	LT72	Lucy Tower Street 1972
Fig 2	12	SP72	St Paul-in-the-Bail 1972	Fig 2	56	WO89	Woolworth's basement
Fig 2	13	SP84	St Paul-in-the-Bail well 1984	Fig 2	57	WNW88	Waterside north west
Fig 2	14	ON119	Corner of Bailgate and Eastgate 1884	Fig 2	58	WN87	Waterside North 1987 - trial dig
Fig 2	15	EB70	East Bight 1970 (Jones 1980, 13-19)	Fig 2	59	DM72	Dickinson's Mill 1972
Fig 2	16	EBS70	East Bight Society dig 1970 to 1983	Fig 2	60	SB85	St Benedict's 1985
Fig 2	17	EB53	East Bight 1953	Fig 2	61	EME92	East Midland Electricity showroom, 191 High Street
Fig 2	18	CP56	Cottesford Place 1956-58	Fig 2	62	ON265	19, Cornhill (Alliance & Leicester)
Fig 2	19	ON185	12 Eastgate	Fig 2	63	HG72	Holmes Grainwarehouse 1972
Fig 2	20	EG63-6	Eastgate 1963-6	Fig 2	65	BWE82	Brayford Wharf East 1982
Fig 2	21	LG89	Langworthgate 1989	Fig 2	66	HS90	170 High Street
Fig 2	22	CAT86	Lincoln Cathedral 1986	Fig 2	67	SM76	St Mark's Church 1976
Fig 2	23	LC84	Lincoln Cathedral 1984	Fig 2	68	BR85	British Rail St.Mark's [trial trench] 1985
Fig 2	24	LBP72	Lincoln Bishop's Palace 1972	Fig 2	69	ZEA95	St Marks Station 1995
Fig 2	25	MH77	Motherby Hill [Walnut House] 1977	Fig 2	70	Z86	St Mark's Station 1986
Fig 2	26	SPM83	Spring Hill/Michaelgate 1983-4	Fig 2	71	ZEB95	St Marks Station 1995
Fig 2	27	MCH84	Michaelgate, Chestnut House 1984	Fig 2	72	ZE87	St Mark's Station East 1987-90
Fig 2	28	WP71	West Parade	Fig 2	73	ZE90	St Mark's Station East 1987-90
Fig 2	29	H83	Hungate 1983-5-6	Fig 2	74	M82	Monson Street 1982
Fig 2	30	P70	The Park 1970-2	Fig 2	75	SMG82	St Mary's Guildhall 1982
Fig 2	31	SH74	Steep Hill 1974	Fig 2	76	ON362	Gaunt Street 1991
Fig 2	32	DT78	Dane's Terrace 1974-78 (dt78)	Fig 3	1		Scarborough
Fig 2	33	DT74I	Dane's Terrace 1974-78 (dt74i)	Fig 3	2		Brandsby
Fig 2	34	DT74II	Dane's Terrace 1974-78 (dt74ii)	Fig 3	3		York
Fig 2	35	GP81	Grantham Place 1981	Fig 3	4		Holme-on-Spalding-Moor
Fig 2	36	F72	Flaxengate 1972-79	Fig 3	5		Beverley
Fig 2	37	FLAX69	Flaxengate 1969	Fig 3	6		West Cowick
Fig 2	38	FB88	Flaxengate Booster Station	Fig 3	7		Flixborough
Fig 2	39	FLAX45-8	Flaxengate 1945-8	Fig 3	8		Doncaster
Fig 2	40	SW82	Swan Street 1982-3	Fig 3	9		Torksey
Fig 2	41	TCA94	North Lincolnshire Technical College, Cathedral St	Fig 3	10	ST83	Stow Church
Fig 2	42	TC93	North Lincolnshire Technical College, Cathedral St	Fig 3	11	ON343	Saxilby Road/Lincoln Bypass
Fig 2	43	SES97	Sessions House 1997	Fig 3	12	BGB95	Bishop Grosseteste College, Library Extension 1995
Fig 2	44	LIN73B	Silver Street Trenches BI and BII	Fig 3	12	ON218	Bishop Grosseteste 1976

Fig 3	13	WLM92	Welton to Lincoln water main 1992	Fig 3	29		Derby
Fig 3	14	CW87	Cherry Willingham	Fig 3	30		Leicester
Fig 3	15	SF76	Fiskerton, Short Ferry	Fig 3	31		Bourne
Fig 3	16	RC82	Rand Church	Fig 3	32		Boston
Fig 3	17	NO66	North Ormsby	Fig 3	32	BHF93	Boston Hall Farm1993
Fig 3	18	GM74	Goltho Manor	Fig 3	33		Stamford
Fig 3	19		Horncastle	Fig 3	35		Lyveden/Stanion
Fig 3	20		Toynton All Saints	Fig 3	36		Grimston
Fig 3	21		Old Bolingbroke	Fig 3	37		Thetford
Fig 3	22	Boston Bar	Boston, Bar Ditch	Fig 3	38		St. Neots
			Ditch	Fig 3	39		Ipswich
Fig 3	23	BGS96	Boston, Grammar School	Fig 3	40		Brill/Boarstall
Fig 3	24		Potterhanworth	Fig 3	41		Winchester area
Fig 3	25		Lincoln			MGC00	Gibraltar Steps
Fig 3	26	Brant	Brant Broughton, stray find				Art College, Lindum Rd
		Broughton	(SK915539)				Rawmarsh
Fig 3	27		Newark			Trollope	Lincoln, Unprovenanced
Fig 3	28		Nottingham			Collection	

X Appendix 4

Closely-dated ceramic assemblages used in the statistical analyses in this volume

In this appendix we list those assemblages of Anglo-Saxon, medieval and post-medieval pottery which appear to have been deposited over a short period of time, no longer than a single ceramic horizon. Together with their LUB and CG references. This will allow the reader to consult the stratigraphic reports for the sites concerned. Only those sites in the Wigford suburb and Upper City could be included here since the Lower City site volume was still in the editorial process at the time of preparation.

As noted in the text, some ceramic horizons are not represented by stratified assemblages within the city, especially those of the early and middle Anglo-Saxon periods. For horizons ASH7 and ASH8 all of the stratigraphic information comes from sites in the Lower City. This is also true for MH1, PMH4, PMH6, and PMH8. MH9, dating to the early to mid 15th century, is not represented at all by large stratified assemblages anywhere in the city.

ASH9 (c. 920–c.940)

Site code	LUB	CG
sb85	12	36
sb85	12	110
sb85	12	35
sb85	11	28
sb85	10	19
sb85	12	32
sb85	12	114

ASH10 (c.940–c.970)

Site code	LUB	CG
dm72	1	3
dm72	1	4
dm72	2	5

ASH11 (c. 970–c.1010)

Site code	LUB	CG
sb85	16	45
hg72	30	127
hg72	30	136
hg72	32	128
sb85	13	43

ASH12 (c.1010–c.1020)

Site code	LUB	CG
sb85	17	117
hg72	33	199

ASH13 (c.1020–c.1070)

Site code	LUB	CG
sp72	52	486
sp72	52	500
sp72	88	1186
sb85	21	54
sb85	21	56
sb85	18	55

ASH14 (c.1070–c.1120)

Site code	LUB	CG
l86	31	87
la85	29	14
lh84	31	87

MH2 (c.1140–c.1170)

Site code	LUB	CG
lt72	4	9

MH3 (c.1170–c.1210)

Site code	LUB	CG
lt72	3	5
lt72	4	6

MH4 (c.1210–c.1230)

Site code	LUB	CG
lc84	26	206
cat86	12	33
cat86	12	2
cat86	12	1
sp72	93	1002
lt72	6	15

MH5 (c.1230–c.1270)

Site code	LUB	CG
sb85	22	83
z86	40	174
lc84	1	101
cat86	18	22

MH6 (c.1270–c.1320)

Site code	LUB	CG
Smg82	37	57
Smg82	37	132
lt72	6	16
w73	14	25
w73	13	33

MH7 (c.1320–c.1380)

Site code	LUB	CG
cl85	17	66

MH8 (c.1380–c.1420)

Site code	LUB	CG
sm76	69	649
ze87	19	178

MH10 (c.1450–c.1500)

Site code	LUB	CG
dm72	11	32
Mws83	5	4
Mws83	5	15
z86	44	270
z86	44	280
z86	45	275
z86	47	325
z86	47	327
z86	50	218
z86	54	226
ze87	17	31
ze87	17	74
ze87	27	195
ze87	29	215
ze87	30	238
ze87	31	245
ze87	31	248

PMH1 (c.1500–c.1530)

Site code	LUB	CG
hg72	44	170

PMH2 (c.1530–c.1560)

Site code	LUB	CG
wc87	16	35
wc87	16	43
mws83	6	7

PMH3 (c.1560–c.1620)

Site code	LUB	CG
mws83	6	18

PMH5 (c.1650–c.1670)

Site code	LUB	CG
dm72	15	19

PMH7 (c.1690–c.1720)

Site code	LUB	CG
sp72	84	882

PMH9 (c.1760–c.1780)

Site code	LUB	CG
sp72	118	1158
sp72	115	1131

PMH10 (c.1780–c.1820)

Site code	LUB	CG
sp72	111	1084
sp72	114	1123

XI Appendix 5

Summary of post-Roman pottery from sites in the Upper City and Wigford

Jane Young

Summary of post-Roman pottery from sites in the Upper City

The post-Roman pottery recovered from the sites discussed in this volume ranges in date from Anglo-Saxon to modern. It is difficult to make generalizations about the pottery site by site, as the character and chronological representation of each site are different. Fig 11.1 shows the estimated percentages of pottery from each site by period.

Early Anglo-Saxon or Mid-Saxon pottery was found on eight of the sites under consideration in this volume (see Fig 195) and has also been recovered from six other Upper City sites (eb70, eb79, eb80 – local society sites; cwg86, lg89 and cy89). The highest concentration of material came from the three Lawn Hospital sites (lh84, la85 and l86) which produced six Anglo-Saxon and 64 Mid-Saxon sherds.

Late Saxon pottery was present on all but two of the sites (mw79 and mws83), although it accounted for more than 2% of the total pottery recovered only on the sp72 (517 sherds) and the cl85 (24 sherds) sites. St Paul-in-the-Bail was the only site in the

Upper City to produce stratified Late Saxon groups; these date to the late 10th century; the earliest Late Saxon pottery found on the site dates to between the late 9th and early/mid 10th centuries. Vessels were mainly plain jars and bowls in shell-tempered fabrics. The ratio of the two main fabrics (LSH and LKT) is very different from that in other parts of the city; less than 40 sherds of LSH were recovered, compared to 995 sherds from the Wigford sites. The discrepancy between the earlier and later types here suggests that the intensity of occupation increased in the late 10th century, rather than, as at Wigford, in the early 10th.

Pottery from the Saxo-Norman period was found on every site except mws83, although on most sites (except sp72, cl85, mw79 and wb80), reoccupation did not commence until the late 11th century at the earliest, as indicated by the absence of the main ware types found in the early part of this period (reduced greywares TORK and SNLS). By the mid to late 11th century a shell-tempered ware (LFS) and both glazed and unglazed Stamford ware (ST) had superseded the greywares and these are found on

	wc87	cathedral	lawn	w73	wb76/wb80	mw79	mws83	sp72	cl85	eb80
Early/Mid-Saxon	0	0	5	*	1	*	*	*	0	0
Late Saxon	1	1	*	*	1	0	0	6	11	1.5
Saxo-Norman	2	2.5	21	23	11	26	*	10	63	10
Early-Medieval	5	7	9	9	28	11	*	2	11	5
Medieval	33	20	17	57	29	38	8	9	13	48
Late Medieval	12	3	1	2	12	6	31	4	0	1.5
Post-Medieval	43	45	10	6	9	11	44	58	0	3
Modern	2	19	54	0	7	6	14	10	0	29
Total imports	5	7	1	*	1	*	3	2	0	*

* denotes presence of less than 0.5%

Fig 195 Table showing recovered post-Roman pottery by period as percentages by site

every site. Forms are more diverse than those in the Late Saxon period, with pitchers becoming as common as bowls by the end of the period.

Pottery of the Early Medieval period (late 12th to early 13th century) is poorly represented on all but two of the Upper City sites (sp72 and wb80). Vessels are mainly jugs in splashed-glaze wares, with shell-tempered cooking pots and bowls forming only a minor part of any assemblage by the end of the period.

Pottery of the High Medieval period is the most common type found only on five sites (wc87, w73, wb80, mw79 and eb80). The medieval pottery was almost entirely manufactured within the city or locally. A small number of regional imports from Beverley, Nottingham and Scarborough occur, mainly on the sp72 site. Only four continental imported sherds of this period were found in the Upper City. Jugs are the main form found, many of them highly decorated with applied and incised decoration. Other common forms include bowls, cooking pots, jars, pipkins, curfews and dripping dishes.

The amount of Late Medieval pottery found on each site is variable (see Steane 2006 Table 14.12). Pottery of this period was most common on the mws83 site where it formed 31% of the pottery recovered. Regional imports comprised mainly Humberwares (HUM) and Midlands-purple types (MP), although they were never very common. A total of 36 Late Medieval to Early Post-Medieval imported continental sherds occur, mostly German stoneware drinking jugs. Jugs are still the most common form found, but other forms such as bowls, cisterns and jars became more important.

Post-Medieval pottery was found on every site in the Upper City except cl85, and forms the main type found on three individual sites (wc87, mws83 and sp72) as well as on the cathedral sites taken as a group. Little of the pottery of this period is locally produced, most of the material coming from other

areas of Lincolnshire or from the Midlands. Continental imports of this period were found on several sites, but were only common on the sp72 site. Jugs ceased to be the most common form found; instead cups, jars, bowls and dishes formed the bulk of Post-Medieval groups. An unusually large number of chamberpots were found on the sp72 site in late 18th-century deposits.

Summary of post-Roman pottery from sites in Wigford

The pottery recovered from the sites discussed in this volume ranges in date from Anglo-Saxon to modern. It is difficult to make generalizations about the pottery site by site, as the character and chronological representation of each site is different. Fig. 196 shows the estimated percentages of pottery from each site by period.

Anglo-Saxon and mid-Saxon pottery was limited to three vessels from three different sites (smg82, m82 and lt72). None of the vessels was securely stratified in deposits that might be interpreted as being contemporary with the pottery, and it is probable that in each case the material was brought on to the site with rubbish from elsewhere.

Late Saxon pottery was present on every site, the two largest assemblages coming from sb85 (1226 sherds) and hg72 (1290 sherds). Sherds belonging to the period between the late 9th and the early/mid 10th century were found on seven sites, although the only sherd to indicate a definite late 9th-century date (a sherd of LG) came from the hg72 site. It seems probable from the pottery evidence that intensive occupation of Wigford had begun by the early/mid 10th century. It is only on the sb85 site, however, that associated groups of this date are found. The Late Saxon pottery is generally similar in character to that

	smg82	m82	cs73	sm76	z86	hg72	dm72	bwe82	sb85	lt72	ws82
Anglo-Saxon	0	0	0	0	0	0	0	0	0	*	0
Mid-Saxon	*	*	0	0	0	0	0	0	0	0	0
Late Saxon	29	11	23	8	15	60	31	42	67	1	16
Saxo-Norman	23	45	16	8	19	32	26	43	9	7	11
Early-Medieval	3	5	0	1	5	1.5	1	4	1.5	41	7
Medieval	29	37	20	23	47	1.5	14	7	14	18	40
Late-Medieval	2	1	10	3	11	1.5	4	2	*	5	2
Post-Medieval	2.5	2	0	34	1	3	22	1	0.5	27	9
Modern	11	0	30	22	0.5	0	0	*	7	0.5	13
Total imports	0.5	*	0	1	2	0.5	1.5	*	*	1	*

* denotes some presence but less than 0.5%

Fig. 196 Table showing recovered post-Roman pottery by period as percentages by site.

found on the Flaxengate site (Adams-Gilmour 1988), with most vessels being plain jars and bowls in shell-tempered fabrics. The ratio of the two main fabrics (LSH and LKT) is extremely variable from site to site and probably reflects chronological differences, as evidence from the Flaxengate site (*ibid*) suggests that LSH is more common in early/mid- to mid-10th century deposits.

Pottery from the Saxo-Norman period was also found on every site, although there is a suggestion that less activity took place on some sites (most notably on hg72 and sb85). The main ware types found in the early part of this period are reduced greywares (TORK and SNLS), superseded in the mid to late 11th century by a shell-tempered ware (LFS) and both glazed and unglazed Stamford ware (ST). Forms become more diverse, with pitchers as common as bowls by the end of the period.

Pottery of the early medieval period is poorly represented on all Wigford sites with the exception of lt72 (on the north bank of the River Witham). It is difficult to understand why so little material of this date has been found (c 591 sherds of the main ware types). Perhaps there was a decrease in population in the area for a while after the Norman conquest, deposits may have been truncated, or rubbish deposits may have lain outside the sites excavated. Vessels are mainly jugs in splashed-glaze wares, with shell-tempered cooking pots and bowls forming a minor part of any assemblage by the end of the period.

Pottery of the High-medieval period is the most common type found on only three sites (smg82, z86 and ws82). The medieval pottery was almost entirely manufactured within the city or locally. A small number of regional imports from York, Beverley,

Nottingham, Scarborough, and the Lyveden kilns occur, mainly on the z86 and the lt72 sites. Only 11 continental imported sherds of this period were found in Wigford, with seven of them coming from the z86 site. Jugs are the most common occurring form, many of them highly decorated with applied and incised decoration. Several of these jugs are of shapes or have decorative techniques unique to the Wigford area, indicating perhaps local production. Other common forms include bowls, cooking pots, jars, pipkins, curfews and dripping dishes.

Late medieval pottery is not a common find on any of the Wigford sites except the ze87 kiln site. Waste material from the ze87 and z86 sites indicates at least three phases of pottery production in the area, extending from the 14th to the 16th centuries. Regional imports mainly comprised Humberwares (HUM) and Midland-purple types (MP), although they are never very common. Only a small number of imported continental sherds occur, the most notable being the Valencian Lustreware bowl from the smg82 site (Vince 1991). Jugs are still the most common form found, but the evidence from the ze87 kiln site shows a wide range of forms available, ranging from moneyboxes to candlesticks.

Post-medieval pottery was found on every site in the Wigford except bwe82, although it accounted for more than a very minor element on only three sites (sm76, dm72 and lt72). Little of the pottery of this period is locally produced, most of the material deriving from other areas of Lincolnshire, or from the Midlands. Continental imports were scarce, with most from the (waterfront) dm72 and lt72 sites. Jugs were by this date no longer the most common form found; instead cups, jars, bowls and dishes constituted the bulk of post-medieval groups.

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XIII Colour Plates



Plate 1a MAX, right, Fabric A; left Fabric B.

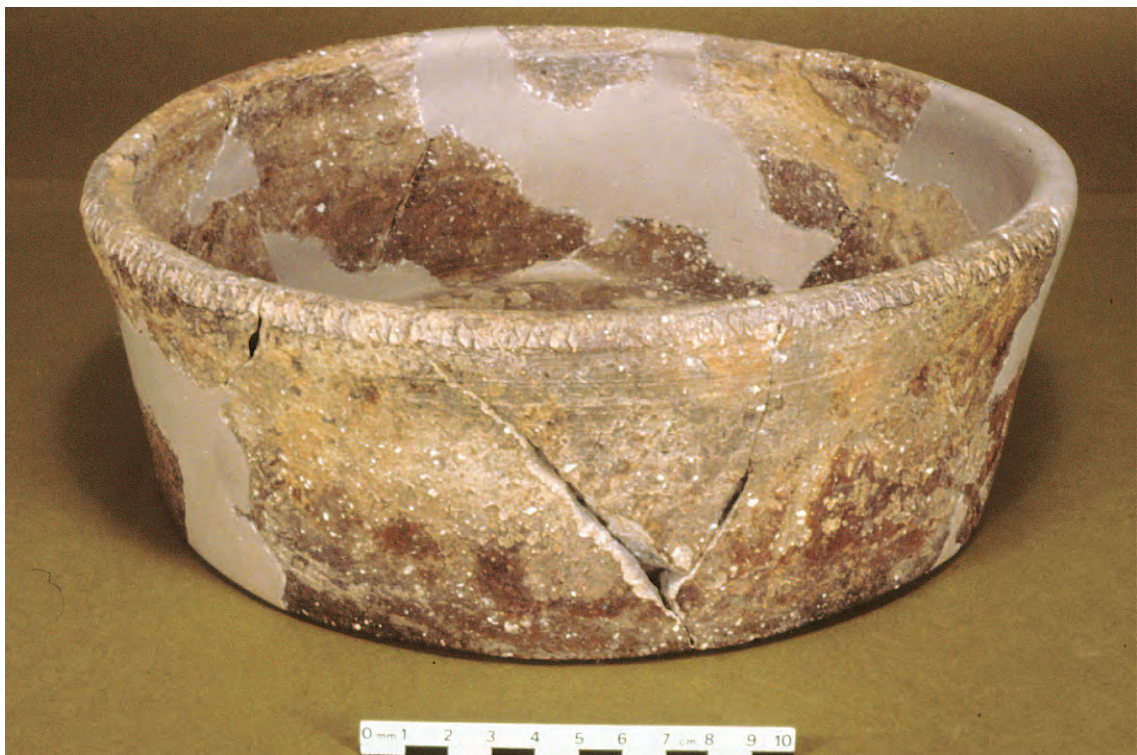


Plate 1b LKT, Shallow bowl.



Plate 1c LKT, Early large-sized jar.



Plate 1d LKT, Late medium-sized jar.



Plate 2a SNLS, Large decorated pitcher.



Plate 2b LSW1, Jug.



Plate 2c NSP, Early globular jug.

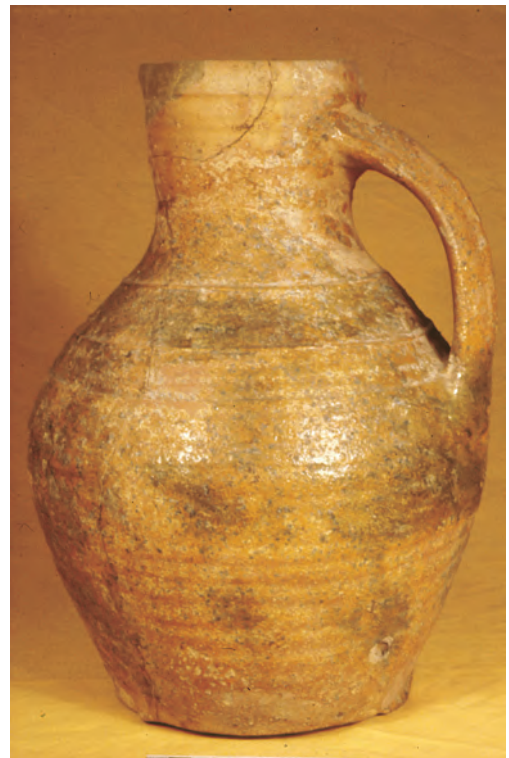


Plate 2d LSWA, Early rounded jug with three feet.

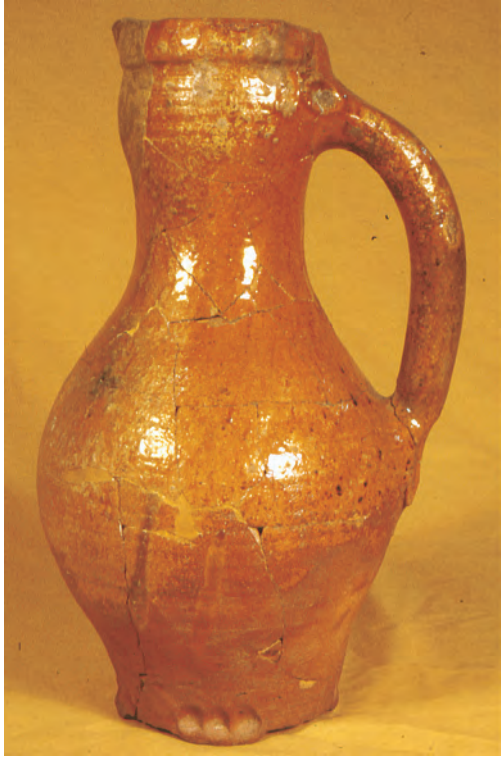


Plate 3a LSW2, Early baluster jug.

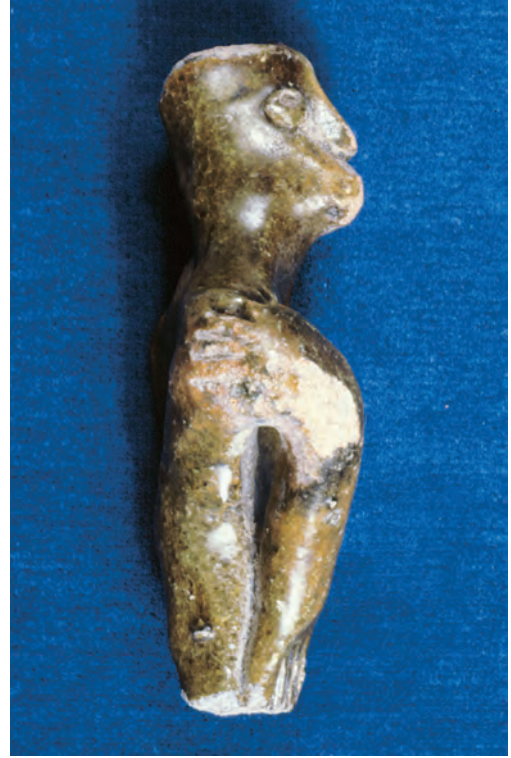


Plate 3b LSW2, Detail of applied figure from knight jug.



Plate 3c LSW3, Highly decorated rounded type 3 jug.



Plate 3d LLSW, Small squat type 2 jug.



Plate 4a LLSW, Tall highly-decorated jug.



Plate 4b LLSW, Tall highly-decorated jug with applied white clay decoration.



Plate 4c LLSW, Detail of male face spout from tall highly-decorated jug.



Plate 4d LLSW, Squat jug with applied male and female face masks.



Plate 5a LLSW, Detail of male face masks.



Plate 5b LLSW, Flat lid.



Plate 5c LMF, St. Marks type Fabric; puzzle mug.



Plate 5d LSW4, Squat jug.



Plate 6a PING, White fabric, decorated sherds.



Plate 6b ISLG, Sherd from decorated bowl.



Plate 6c ARCH, Top left, faceted albarelo; top right, decorated jug sherd; bottom right, decorated jug sherd. SNTG: bottom left, albarelo or jug base.



Plate 6d ARCH, Albarello or jug.



Plate 7 10th-century assemblage, from left to right, back row: LKT shallow bowl; LKT pedestal lamp; LKT medium-sized jar; LKT large-sized jar. Front row: LKT small-sized jar.



Plate 8, 11th-century assemblage, from left to to right, back row: SNLS large pitcher; early LFS jar; wide LFS bowl. Front row: shallow LFS bowl; ST bowl; ST globular lamp.



Plate 9 12th-century assemblage, from left to right, back row: early ST jug; LSW1 jug; LEMS cooking pot. Front row: DST jug; ST globular vessel; LSWA jug; ST bottle.



Plate 10 Late 13th- to mid 14th-century assemblage, from left to right, back row: oxidized LSW2 early baluster jug; reduced LSW2 early baluster jug; LSW3 biconical jug. Centre row: LSW3 small pear-shaped jug; LSW3 large pear-shaped jug; LSW3 conical jug. Front row: LSW2 biconical jug; LSW2 dripping pan; POTT small cooking pot; LSW2 biconical jug; LSW2 rounded type three jug.



Plate 11 15th-century assemblage, from left to right, back row: LLSW pipkin; LLSW large glazed jar; LLSW squat jug; LLSW small squat jug; LLSW tall highly-decorated jugs. Centre row: LLSW bottle; LSW3 rounded type 6? jug. Front row: MVAL bowl; LLSW lid; LLSW long handled jar; LLSW footed.



Plate 12 Late 15th-century to mid 16th-century assemblage, from left to right, back row: MP cistern; two LSW4 jugs; HUM jug; LSW4 conical jug. Centre row: TOYII cistern; CIST cup; CIST posset pot; LSW4 jar. Front row: small MP cistern; HUM drinking jug; RAER drinking jug; TB urinal.



Plate 13.1, ELFS



*Plate 13.2, ELSW, Fabric A,
sawn edge*



Plate 13.3, ELSW, Fabric B



Plate 13.4, ELSW, Fabric C

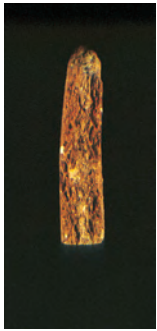


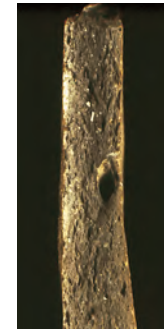
Plate 13.5, EMHM, Fabric A



*Plate 13.6, EMHM,
Fabric B, L1311*



Plate 13.7, EMHM, Fabric T



*Plate 13.8, EMLOC,
Fabric A*



*Plate 13.9, EMLOC,
Fabric C, L1343*

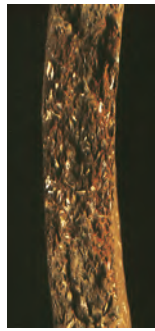


Plate 13.10 LEMS

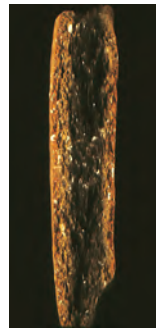


Plate 13.11 LFS



Plate 13.12 LG, oxidized



Plate 13.13 LG, reduced

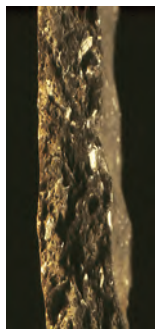


Plate 13.14 LKT, L1555



Plate 13.15 LLSW, L1879

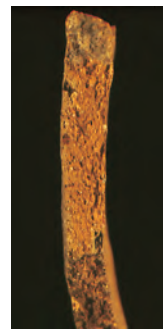


Plate 13.16 LLSW



Plate 14.17 LMF, St Marks type, L1907, sawn edge

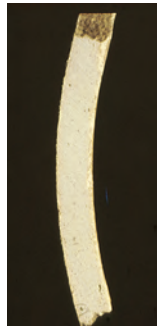


Plate 14.18 LMF, Tudor Green-type, L1910, sawn edge



Plate 14.19 LMLOC, Fabric A

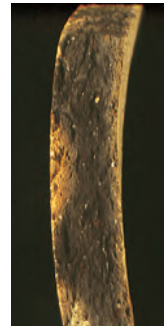


Plate 14.20 LOCC, L1792

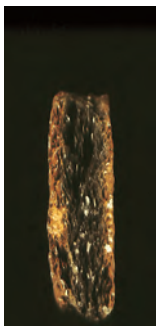


Plate 14.21 LSH, Fabric A



Plate 14.22 LSH, Fabric B

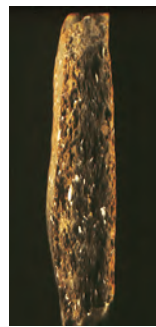


Plate 14.23 LSH, Fabric C



Plate 14.24 LSH, Fabric E, sawn edge



Plate 14.25 LSLOC, Fabric A



Plate 14.26 LSLOC, Fabric B



Plate 14.27 LSLOC, Fabric D

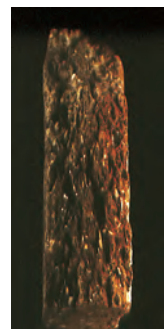


Plate 14.28 LSLOC, Fabric M



Plate 14.29 LSLS, Fabric A

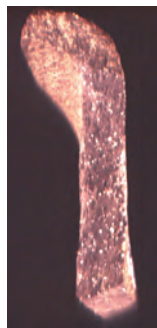


Plate 14.30 LSLS, Fabric B



Plate 14.31 LSLS, Fabric D, L1525

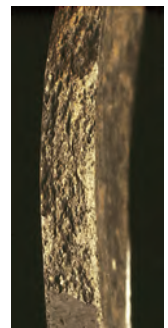
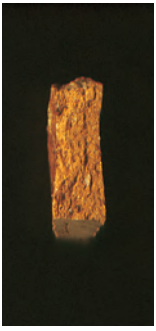
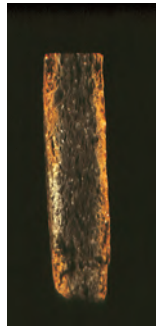


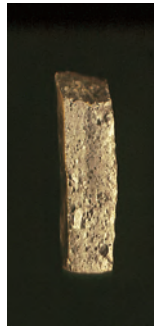
Plate 14.32 LSPLS, L1527



*Plate 15.33 LSW1,
L1805*



*Plate 15.34 LSW1,
L1808*



*Plate 15.35 LSW2,
L1840*



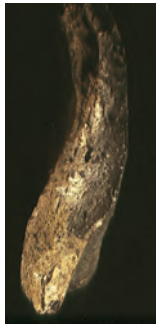
*Plate 15.36 LSW2,
L1837*



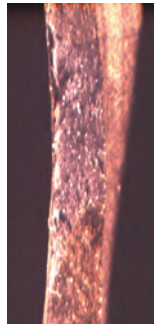
*Plate 15.37 LSW3,
L1844*



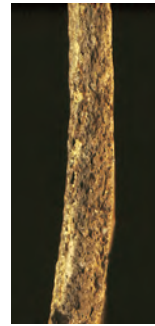
*Plate 15.38 LSW3,
L1842*



*Plate 15.39 LSW4,
L1901*



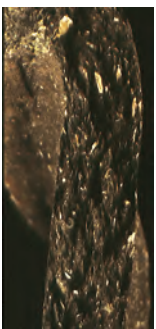
*Plate 15.40 LSW4,
L1898*



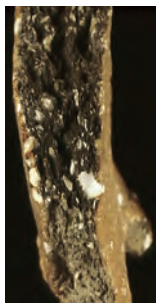
*Plate 15.41 LSWA,
L1834*



*Plate 15.42 MAX,
Fabric A*



*Plate 15.43 MAX,
Fabric B*



*Plate 15.44 MAX,
Fabric C*



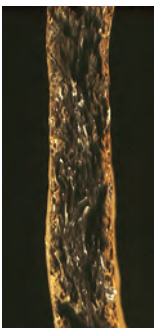
*Plate 15.45 MEDLOC,
Fabric A*



Plate 15.46 NOTG



Plate 15.47 NSP



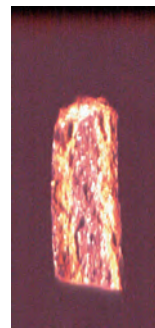
*Plate 15.48 POTT,
L1847*



*Plate 16.49 SNLS,
L1766*



*Plate 16.50 SNLS,
L1767*



*Plate 16.51 TORK,
L1751*

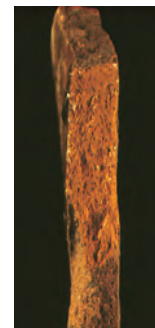


Plate 16.52 TOY