

**LINCOLN ARCHAEOLOGICAL STUDIES No. 3**

# **The Archaeology of The Upper City and Adjacent Suburbs**



**Kate Steane**

**with Margaret J. Darling, Michael J. Jones,  
Jenny Mann, Alan Vince and Jane Young**

**Oxbow Books**

LINCOLN ARCHAEOLOGICAL STUDIES No. 3  
GENERAL EDITORS: MICHAEL J. JONES AND ALAN VINCE

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*Radio carbon dates were provided by the Harwell Low Level Measurements Laboratory through the good offices of English Heritage's Ancient Monuments Laboratory.*

*Illustrations by Paul Miles, Helen Palmer-Brown, Zoe Rawlings and David Watt*

## Preface and Acknowledgements

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The Upper City at Lincoln was the first area of the town to be defined by fortifications – first for the timber Roman legionary fortress and later, in stone, for the succeeding *colonia*. For over 300 years, the principal administrative buildings for their successive establishments lay within this circuit. The centre of power also had a religious dimension, the Christian cathedral replacing the pagan state temple from possibly as early as the 4th century. The see was based here intermittently during the Anglo-Saxon period, and continuously from 1072, representing the centre of the diocese. In the form of the castle and cathedral, the town is still dominated physically by the twin symbols of English medieval authority. The surrounding streets always contained the greatest concentration of prestigious buildings in the city, but the area was not without its setbacks: battles in 1141 and 1216/7 and again during the Civil War caused considerable physical damage.

Given such a history, it is not surprising that the Upper City still preserves many ancient features. Remains of Roman and medieval date have been noted by antiquarians for several centuries, and monuments such as the Bailgate Roman colonnade carefully recorded. Today, much of that heritage, above and below ground, is protected by legislation, and current policies should help to conserve the historic fabric, while deterring investigation of buried deposits and thereby preserving them for future generations. But there have been substantial discoveries over the past century or so, and particularly since the 1940s. That is when a formal programme of scientific investigation began, in the quest to identify the precise location of the Roman legionary fortress known to lie hereabouts, particularly from finds made in 1910 on the site of the Westgate Water Tower (Webster 1949). A series of judiciously placed trenches over the following decade confirmed that the fortress lay directly beneath the *colonia* (Webster, *loc cit*; Thompson 1956, Petch 1960, Thompson and Whitwell 1973, Whitwell 1980). Work in the interior was already constrained by historic properties, and the only excavations on any scale were those carried out in 1956–8 by Petch on the Roman public baths and adjacent street and shops at Cottesford Place (unpublished). At East Bight, remains of a water tank (*castellum aquae*) were

explored as part of a wider study of the aqueduct (Jones M J 1980, 17–9; Wood 1981).

It is notable that, as elsewhere, interest was formerly confined to the Roman period. This changed from the early 1970s with the establishment of a professional archaeological field unit. The excavations at Westgate School (w73) and at St Paul-in-the-Bail (1972–9; sp72) concerned themselves with the full sequence of archaeological deposits up to the modern period. The form of presentation in this volume, dealing with sites investigated in the period 1972–87, gives due prominence to the complete stratigraphic sequence, organised into context groups (cgs) and Land Use Blocks (LUBs), as also set out in the report dealing with the Wigford suburb (Steane *et al* 2001) see Appendix 1 and the Introduction, below, regarding the systems adopted).

The sites reported on here included large-scale excavations which yielded some stunning finds, none more so than those at St Paul-in-the-Bail. This contained remains of the Roman legionary headquarters building, followed by the civic forum, and a series of church buildings dating back possibly to the end of the Roman period. The results of the less substantial investigations have helped us understand better the larger sites and certainly contribute to the study of the area as a whole in terms of topography and function, among other aspects.

The data recovered have provided important new knowledge on the Roman military occupation, inside and outside the walls, and not only regarding the public buildings, but also the amenities, layout, and residences, as well as on trade, commerce, and industry of the Roman city. Traders' houses have been found outside the walls to the west, east and (more recently) north. There are slight but definite traces of activity belonging to the Early and Middle Saxon periods (c.AD450–850), suggesting that this was primarily a political and/or ecclesiastical base until it became more urbanised again from the later 10th century – clearly later than the intensive reoccupation of part of the Lower City and the Wigford suburb. Some of the churches were already in existence, including the predecessor of the minster, when the castle and cathedral were founded in 1068 and 1072 respectively (see now Stocker and Vince 1997, regarding the first phases of these establishments).



Although there has been limited exploration of the castle site (and the results of the excavations of 1986–92 on the site of its west gate have yet to be fully analysed), and only small-scale work on buried deposits adjacent to the cathedral (section 2, below), other recent projects have studied the documentary evidence for the houses of the Close (Jones *et al* 1984–96), the Bishop’s Palace (Brann forthcoming), and sections of the Close Wall (unpublished).

The medieval and later remains which are described and analysed include the church of St Paul-in-the-Bail, which by this date was merely another parish church, and part of the graveyard of St Bartholomew, lying in the grounds of the Lawn Hospital, to the west of the castle. While much of the rest of the Upper City was occupied by the monuments and residences noted above, it is clear that certain areas were not so densely occupied: the Westgate School site was being used for stone quarrying in the 13th–14th centuries, and malt-drying kilns were found here and elsewhere in the later medieval period. Notable sequences from the post-medieval period included that from the site of St Bartholomew, succeeded by the House of Industry, subsequently relocated slightly to the Union Workhouse (the nearby Lawn Asylum was built c 1820); and a nearby lime-kiln, a feature common in fringe areas of the city when the town was growing again. The well at St Paul-in-the-Bail was not finally filled until the 18th century, and contained an illuminating collection of artefacts, particularly of 17th-century date; this assemblage was of such size and importance that it is being published separately in this series (Mann (ed.) forthcoming).

The fact that the same well had served the Roman City, and may actually have been dug by the Ninth Legion in the 1st century AD, brings us full circle. The present volume may cover only a fraction of the city’s archaeological wealth, but I hope that it is clear from the reports set out below that the Upper City has both yielded discoveries of great significance and complexity, and that many more secrets still lie buried awaiting discovery. For those who wish to study them further, the full data on the sites are being made available for further analysis via the City and County Museum in Lincoln.

## Acknowledgements

Those who took part in the excavations are too numerous to mention here. Individual site directors and supervisors are thanked in the introductory sections of the appropriate site report.

The current integrated project was developed with the advice of Dr Michael Parker-Pearson, then an Inspector of Ancient Monuments with English

Heritage, and Tim Williams of English Heritage’s Archaeology Division. Their colleague, the then Chief Archaeologist Dr G J Wainwright, sanctioned substantial funding. Christopher Scull of the Archaeology Division, and Malcolm Cooper and Andrew Brown, Inspectors of Ancient Monuments, have also provided much support subsequently. Alan Vince, who co-ordinated the necessary assessment documents, was in daily charge of the project from its inception until he left to take up a post the University of York in October 1995. Kate Steane has borne much of the burden of preparing the site narratives, along the lines recommended by the academic reader, Steve Roskams of the University of York; he has also devoted much time then and since to ensuring that the presentation of information followed a logical and standard format. J E Mann and M J Jones have read the whole revised text, the first-named particularly with regard to the integration of finds data, the second both as a copy-editor and to ensure that the academic statements were clear. They have been ably supported in achieving a final version by John Herridge.

Various specialists have been involved closely, some over a period of several years. They are listed on p. *iv*, but the contributions of Margaret Darling and Barbara Precious (Roman pottery), Jane Cowgill and Jenny Mann (non-ceramic finds), and Jane Young (post-Roman pottery) have been fundamental. Other experts have also prepared accounts of artefacts (see also Bibliography). They include Petra Adams and Julian Henderson (medieval and later vessel glass); Marion Archibald (medieval and later coins and tokens); Mark Blackburn (Anglo-Saxon coins); Anthea Boylston and Charlotte Roberts (human remains); Keith Dobney, Debbie Jaques, Brian Irving, Annie Milles and Sally Scott (animal and fish bones); Hilary Cool, Jenny Price and Sally Cottam (Roman glass); John Davies (Roman coins); Rowena Gale and Carole Morris (wood); Joanna Bird (samian pottery); Brenda Dickinson (samian stamps) and Katherine Hartley (*mortaria* stamps); Lucy Bown and Judy O’Neill also contributed to the work on the post-Roman pottery; David King (medieval decorated window glass); Don Mackreth (Roman brooches); Lisa Moffett (environmental samples – plants, fish scale); David Moore (hones – petrology); Quita Mould (leather objects); David Peacock and David Williams (amphorae and marble petrology); James Rackham (animal bones); Fiona Roe (stone objects); Penelope Walton Rogers (textiles; report withdrawn from the published text at the author’s request). Gerry McDonnell also gave advice on slags, Julian Litten on coffin furniture. Radiocarbon dates were provided by the Harwell Low Level Measurements Laboratory through the good offices of English Heritage’s Ancient Monuments Laboratory.

M J Jones  
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# Summaries

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## The Upper City

This volume contains reports on sites excavated in the upper walled city at Lincoln and adjacent suburbs to east and west between 1972 and 1987. It forms a companion volume to those on Wigford and the Brayford Pool (*LAS 2*) and the Lower Walled City (*LAS 4*; not yet published). The form of presentation is an integrated one, with data on artefactual and environmental finds incorporated into the presentation of the stratigraphic sequence, which itself is organised according to Land Use Blocks (LUBs) and Context Groups (cgs). An introductory chapter sets the scene, describes the state of knowledge before the excavations took place, explains the context of the present post-excavation project and the procedures adopted, and the format of the various elements of the site reports. (Further information on the structure of the archive is provided in an appendix.) Each site is described in turn, and the various threads are brought together in a general discussion. A full bibliography is presented, including archive reports as well as publications.

The excavations revealed a considerable amount about several periods of the city's history. Remains were found of the western and northern defences of the legionary fortress and some of their internal buildings, as well as extra-mural occupation. Notable among the discoveries was the *principia*, or legionary headquarters, whose site was subsequently converted into a civic precinct, which in its second major phase included the *colonia* forum and basilica. Roman houses were also found, both inside and outside the walls, and indications of stone quarrying.

The forum was also the location for a sequence of churches and subsequently a burial ground, possibly from as early as the late Roman period. These early ecclesiastical discoveries are potentially of great academic significance, but difficult to date precisely. Some occupation of the upper city in (and following) the Early Saxon periods is implied, while the area outside the west gate has produced more pottery of the Mid-Saxon period (*c.*650–*c.*850) than any other in the city. Although there was renewed

activity from the 10th century, full urbanisation of the upper city may not have happened until the late 11th, when it ceased to be a political/ecclesiastical enclave.

There were already several churches before the Cathedral was begun in 1072, and the sequence of that at St Paul-in-the-Bail is set out in detail. Various small-scale investigations have added details to our knowledge of the Cathedral's structure and sequence. Several of the excavations included areas to the rear of the various properties, and contained evidence for activities such as malting, quarrying and bell casting – this thought to be adjacent to the church of St. Bartholomew. Structural and artefactual evidence for the post-medieval period, including the impressive assemblage from the well at St Paul-in-the-Bail (to be published in a separate monograph), give a flavour of the local life-style in the 16th–18th centuries.

Other volumes in the same series apart from the site reports and post-medieval finds include *corpora* of Roman pottery, Saxon and medieval pottery, and Roman glass, and a synthesis and assessment.

## La ville haute

Dans cet ouvrage sont publiés les résultats de fouilles exécutées dans la ville haute enclose de Lincoln et dans ses faubourgs adjacents, à l'est et à l'ouest, entre 1972 et 1987. Ce volume complète les publications précédentes consacrées d'une part aux sites de Wigford et de l'étang de Brayford (*LAS 2*), d'autre part à la ville basse (*LAS 4*). La publication intègre les données sur le mobilier et l'environnement à la présentation de la séquence stratigraphique, elle-même organisée selon deux niveaux en « Land-Use Blocks » (LUBs) et en « Context Groups » (cgs), soit des usages caractérisés du sol regroupant des contextes associés.

Un chapitre introductif présente l'espace étudié, l'état des connaissances avant le début des fouilles



et explique le cadre du programme de publication actuel ainsi que la procédure adoptée et l'organisation des différents éléments des rapports de fouille, des informations complémentaires sur la structure des archives étant fournies en annexe. Chaque site est ensuite traité séparément puis l'ensemble des données fait l'objet d'une discussion générale. La bibliographie inclut aussi bien les rapports de fouille que les publications.

Les fouilles ont livré une très grande quantité d'informations sur plusieurs périodes de l'histoire de la ville. Des éléments défensifs du fort de la légion ont été observés sur les côtés ouest et nord ainsi que des bâtiments internes et des traces d'occupation *extra muros*. À souligner la découverte du quartier général (*principia*) de la légion, transformé ultérieurement en un enclos comprenant, dans son deuxième état principal, le *forum* et la basilique de la colonie. Des maisons romaines furent également mises au jour, à la fois *intra* et *extra muros*, ainsi que des zones d'extraction de la pierre.

Le *forum* vit aussi la construction d'une série d'églises et le développement d'un cimetière, peut-être dès la fin de l'époque romaine. Ces découvertes de nature religieuse et funéraire sont d'une extrême importance pour la recherche scientifique mais demeurent difficiles à dater précisément. Elles impliquent une certaine forme d'occupation de la ville

haute au début de l'époque saxonne et plus tard, alors que la zone située à l'extérieur de la porte occidentale a livré plus de céramique de l'époque saxonne moyenne (vers 650 – vers 850) qu'aucune autre partie de la ville. Malgré le renouveau de l'activité à partir du 10<sup>e</sup> siècle, l'urbanisation à part entière de la ville haute a pu n'intervenir qu'à partir de la fin du 11<sup>e</sup> siècle, quand cet espace cessa d'être une enclave à fonction politique et ecclésiastique. Plusieurs églises existaient avant le début de la construction de la cathédrale en 1072 et l'évolution de Saint-Paul est ici analysée en détail. Diverses fouilles de taille réduite ont complété nos connaissances sur la structure de la cathédrale et ses transformations. Certains sondages ont inclus la partie arrière de parcelles et ont livré des indices d'activités telles que le maltage, l'extraction de pierre ou la fabrication de cloches, ceci probablement à côté de l'église Saint-Barthélémy. Les structures et le mobilier de l'époque moderne, en particulier celui qui provient du puits fouillé sur le site de Saint-Paul (à paraître dans une monographie distincte), laissent percevoir le mode de vie local entre le 16<sup>e</sup> et le 18<sup>e</sup> siècle.

Outre la publication des sites et celle du mobilier post-médiéval, les autres volumes de la collection incluent les corpus de céramique romaine, saxonne et médiévale, celui du verre romain ainsi qu'une synthèse.

# 1. Introduction

*Alan Vince and Kate Steane*

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## **The geography and history of the Upper City (Figs 1.1 and 1.2)**

The so-called Upper City of Lincoln which is the subject of this volume is situated on the crest of the Lincoln Edge on the north side of the Witham Gap. The natural bedrock is Jurassic Lincolnshire Limestone, overlaid by a loose rubbly subsoil or brash which itself is in places covered by wind-blown sand. This sand occasionally fills solution hollows in the brash which can be extremely difficult to distinguish from man-made features.

As a background to the reports on excavations carried out between 1972 and 1987, we present here a summary of the knowledge of the history and archaeology of the Upper City before the excavations. The Upper City had always been considered the most likely location for the foundation of the Roman legionary fortress – on the top of the hill, with views to the south, east and west over the valley (Richmond 1946). By c.AD 78 the tribal lands of the Corieltavi were considered to be sufficiently pacified and Legio II *Adiutrix*, which had replaced Legio IX *Hispana* in c.71, was transferred to Chester. It is likely that a caretaker garrison retained occupation of the fortress until the foundation of the *colonia*. Substantial remains of the *colonia* defences are discernible in the urban townscape today, including the Roman north gate (Newport Arch) and exposed stretches of the northern wall. The Upper City was most probably the location of administration during the *colonia* period, although the column bases discovered along Bailgate were not considered by Richmond (1946) to represent the forum, while the Mint Wall, a massive fragment of Roman civic building which is still standing to a considerable height, was a conundrum.

Hill (1948, 15) suggested, in keeping with the view of that time, that the archaeological evidence

might indicate that much of the Roman upper *colonia* had been destroyed by fire, and he describes the loss of the orthogonal layout of the Roman roads system in the Upper City as a reflection of this destruction; Bailgate follows a sinuous course and Eastgate has drifted southwards at its western end.

Bede wrote that Paulinus made a missionary visit to Lincoln in AD 628/629 and that ‘In this city he built a stone church of remarkable workmanship’ (Colgrave and Mynors 1969, 193). This would suggest that there was some early 7th-century Anglo-Saxon occupation in the city, if only royal and/or ecclesiastical in nature.

The place names East and West Bight are derived from the Old English *byht*, a bend, which suits their curving course (Hill 1948, 34; Cameron 1985, 63–4). Probably on the site of the present cathedral was the *old minster* of St Mary of Lincoln; the word *minster* being derived from the Anglo-Saxon *monasterium*, and often used of a church, not monastic in the usual sense, but which served a group or college of clergy sharing a communal life. This church enjoyed thraves (a form of tithe) and so would probably have been the “head” church in the district (the district here being Lindsey, Lincolnshire); it would not have been established as the mother church in this area before the recovery of the Five Boroughs by Edward the Elder and his sister about 918 (Hill 1948, 68–72). However, a bishop of Lindsey in 953, Leofwine, is known to have held the see of Dorchester in 958 (Hill 1948, 73–4).

St Paul-in-the-Bail was a church by the early medieval period, but with a tradition of being founded much earlier (Hill 1948, 103). In some part of the north-west quarter of the Upper City was also the parish of St Clement; little is known of the graveyard and still less of the church (Hill 1948, 105). On the north side of Eastgate stood the endowed late Saxon church of All Saints (Hill 1948,



Fig 1.1 Map showing location of Lincoln with inset – detail of Lincoln and its environs.

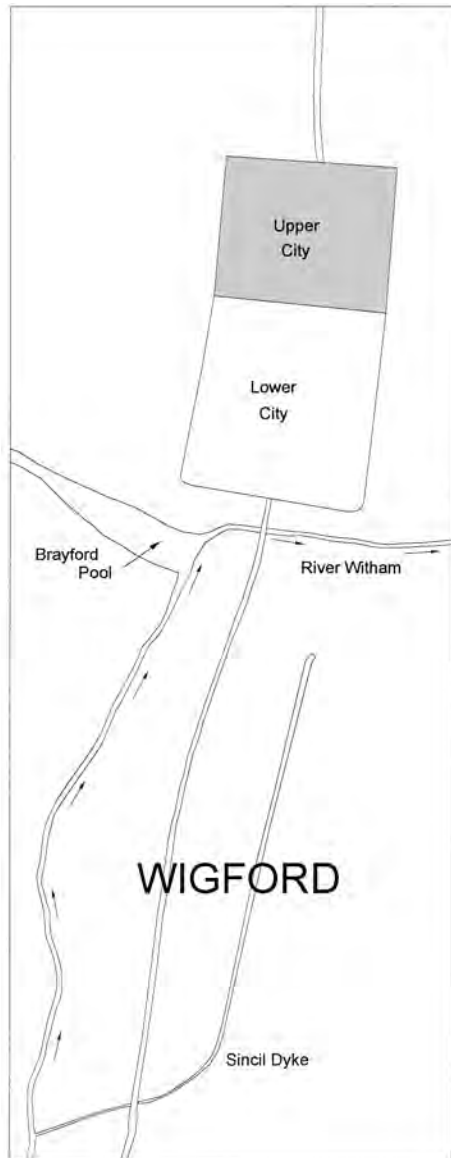


Fig 1.2 Location of the Upper City.

115). Some churches were of later origins: the first reference to the church of St Bartholomew, to the west of the Upper City, was in the late 12th century (Hill 1948, 145).

Some Late Saxon occupation of the Upper City was suggested by the 166 messuages (out of a total of 970 inhabited messuages in the city of Lincoln) thought to have been destroyed on account of the castle (Hill 1948, 53). Work on the Synthesis, as part of this project, has enabled a radical new reinterpretation to be proposed of the development of the Upper City during the early Norman period (Stocker and Vince 1997), which is further referred to in the Discussion.

Henry I granted to Bishop Bloet licence to make

way of egress in the wall of the king's castle of Lincoln for the convenience of the bishop's house, provided that the wall was not weakened (Hill 1948, 127); in due course an area to the south-east of the Upper City was enclosed for the construction of successive bishops' palaces (Brann forthcoming). In the mid 12th century Lincoln also played a key part in the Civil War, with the Battle of Lincoln at which Stephen was captured (Hill 1948, 177–80).

In 1185 the Norman cathedral was split from top to bottom, the calamity being attributed to an earthquake (Hill 1948, 109). A new cathedral was constructed, begun under the auspices of Bishop (St.) Hugh of Avalon in 1192; the eastern end of this cathedral broke through the line of the existing Roman/Norman defences. The nave of the cathedral, begun by Bishop Hugh, was completed by 1250 (Hill 1948, 111), again incorporating the early Norman construction as its west front. Between 1256 and 1280 the Angel Choir was constructed, replacing St Hugh's Choir (lc84, area A).

In 1285 the King gave the Dean and Chapter licence to enclose the north, east and south-east of the precinct of the Minster with a wall (Hill 1948, 121). During this period the Vicars' Court was constructed, and building may not have commenced on the wall until the early 14th century; licence to crenellate the wall and build turrets was granted at this time. The Close wall was complete by 1327. The principal gate to the Close was the double gate of Exchequergate, to the west of the cathedral; other gates were Pottergate Arch, a gate to the north of Minster Yard (Priorygate) and two gates on Eastgate. By this date, the castle was no longer defensible.

The Civil War of the 17th century left the Upper City damaged but the importance of the castle and cathedral, as administrative and religious centres respectively, continued as before.

### Excavations (Fig 1.3)

The sites published here were excavated between 1972 and 1987. They are normally referred to in the text by their codes. Most of the cathedral excavations (ch83, dg83, lc84 areas A and C) were undertaken as part of cathedral maintenance work. Redevelopment was, however, the major reason for the archaeological investigations (ce75, cl85, mw79, mws83, w73, wb76, wb80 and wc87). Other sites were dug for assessment purposes (eg, ny87). There were also research excavations including two small areas outside the cathedral (cat86 and lc84 area B), the excavations between East Bight and Church Lane (eb80), the Lawn excavations (lh84, la85, l86) and principally the excavation of St Paul-in-the-Bail



Fig 1.3 Location of sites.

church (sp72) (although it was initially expected that this site would be developed). Every excavation varied in the extent and depth of stratigraphy uncovered, and each had a different period emphasis.

A number of individuals, sometimes more than one per site (ch83, dg83, la85, mw79, mws83, sp72 and w73) have directed the excavations including Colin Brown (la85), Kevin Camidge (eb80, sp84, l86, wc87 and ny87), Christina Colyer (sp72, w73), John Clipson (wb80), Brian Gilmour (sp72, wb76, mw79 and mws83), Christopher Guy (cat86), Andrew Harrison (ch83), Michael Jones (sp72, w73 and mw79), John Peaker (sp72), Peter Rollin (lh84) Andrew Snell (cl85 and la85), David Stocker (dg83 and lc84), Michael Trueman (ch83 and dg83), Richard Whinney (sp72 and ce75), Catherine Wilson (sp72), Ken Wood (sp72) and Douglas Young (mws83). These site directors worked on behalf of either the local Archaeological Society (Lincoln Archaeological Research Committee to 1974; Society for Lincolnshire History and Archaeology from 1974) or for the Lincoln Archaeological Trust or its successor bodies, Trust for Lincolnshire Archaeology (City of Lincoln Office) and the City of Lincoln Archaeology Unit.

Funding for excavations between 1972 and 1987 nearly always came from more than one source. The Department of the Environment or later, English Heritage, contributed towards the funding of many of the sites (sp72, w73, mw79, eb80, wb80, mws83,

cl85 and wc87). The Lincoln County Borough Council, later the Lincoln City Council, contributed towards many excavations (sp72, w73, wb76, mw79, sp84, la85, l86); with the County Council for certain sites (sp84, cl85, la85, l86, ny87). The Manpower Services Commission provided excavation teams for several sites (sp72, cl85, la85, l86, cat86, ny87 and wc87). Independent developers, Simons Ltd, funded excavations at ce75 and contributed towards eb80, and S & M Developments partly funded wc87. Lloyds Bank donated money towards the cost of excavating St Paul-in-the-Bail. The Dean and Chapter contributed to the investigations within and around the cathedral including ch83, dg83, lc84 areas A, B and C, as well as cat86. Friends of Lincoln Archaeological Research and Excavation (FLARE) contributed to cat86. There was a donation from the Society of Antiquaries Research Fund towards the excavation of eb80. Lincolnshire's county society, the Society for Lincolnshire History and Archaeology, partly funded lh84.

Previous publications for most of the sites included interim papers in the annual report of the Lincoln Archaeological Trust (1972–84) or the Trust for Lincolnshire Archaeology (1985–8). Interim reports about excavations at St Paul-in-the-Bail (sp72) were also published in regional and national archaeological publications (Gilmour and Jones 1980; Gilmour 1979b; Jones and Gilmour 1980). Michael Jones has described w73 and ce75 together with other

pre-1980 excavations concerned with the Defences of the Upper City (Jones, M J 1980) and has discussed possible contexts for the early churches at sp72 (Jones, M J 1994). David Stocker has published his ideas about the development of the eastern end of the cathedral (Stocker 1985a) and also St Hugh's shrine (Stocker 1987). An account of the possible early features and 1st-century pottery from The Lawn excavations has been published in an article (Darling and Jones 1988, 46–50). The post-medieval material from the fill of the well at St Paul-in-the-Bail, mainly excavated in 1984, is to be published separately (Mann (ed), forthcoming).

### Archiving and post excavation analysis

In 1988 English Heritage commissioned the City of Lincoln Archaeology Unit to undertake the Lincoln Archaeological Archive Project over a three-year period to computerise the existing records for sites excavated in the above period; this project was managed by Alan Vince. The records were listed in detail, suitable for permanent curation, while their computerisation is also intended to facilitate future research and decision-making (see Appendix 1 for details).

In 1991, the potential of the sites (1972–1987) was assessed and a research design for the analysis and publication of their excavations was presented to English Heritage (Vince (ed) 1991); among the publications proposed was the present volume. A first draft of the report text was submitted to English Heritage in 1996. English Heritage subsequently commissioned alterations and a more systematic and formalised structure, on the recommendation of S. P. Roskams of the University of York, the academic adviser. Kate Steane coordinated the major reordering of the stratigraphic data in line with these recommendations. Michael J Jones, the Unit Director, had meanwhile replaced Alan Vince as project manager in 1996, and undertook both academic and copy-editing of this report in 1999.

### The stratigraphic framework: rationale

Each site narrative is an attempt to present an interpretation of what took place through time, backed by an integrated analysis of the evidence. The primary framework is stratigraphic; within this framework the pottery and other finds have specific context-related contributions with regard to dating, site formation processes, and functions.

The stratigraphic framework has been built up using the context records made on site to form a

matrix. The contexts, set into the matrix, have been arranged into context groups (cgs); each cg represents a discrete event in the narrative of the site. The cgs have been further grouped into *Land Use Blocks* (LUBs); each LUB represents an area of land having a particular function for a specific length of time. The move from contexts to cgs, and to LUBs indicates a hierarchical shift, from recorded fact interpretation, from detail, to a more general understanding of what was happening on the site. Here the cgs are the lowest element of the interpretative hierarchy presented in the text.

The LUBs are presented chronologically by period and each site has a LUB diagram, so that the whole sequence of LUBs can be viewed at a glance. Because it is near to the top of the interpretation hierarchy, the LUB depends on the stability of the context group structure and this in turn depends on the strength of the dating evidence.

Within the text each Period (see below) has a LUB summary, so that it is possible to move through the text from period to period in order to gain an outline summary of each site sequence.

### Structure of this publication

The organisation of the volume originated from the initial authorship of the first drafts of the site narratives written as part of the Archive Project. The cathedral sites are presented first, followed by the other sites narrated in the alphabetical order of their codes.

Each site narrative is made up of three parts: an introduction, an interpretation of the sequence of events from the excavated evidence, and finally a discussion of various aspects of the discoveries.

#### *Site introductions*

Each introduction includes information about when, where, why and how the excavation was undertaken together with who supervised the work and which organisations funded it. Previous published work on the site is listed here.

For each site, the outline post-excavation stratigraphic hierarchy is set out; this includes the number of contexts from each site, the number of context groups (cgs), the number of unstratified contexts, and the number of Land Use Blocks (LUBs). For each site there is an introduction to the material evidence uncovered during excavation. Numbers of combined stratified and unstratified Roman and post-Roman pottery, registered finds, building material fragments, animal bone fragments and burials are mentioned; these are grouped into a table here to give an idea of the quantities involved (Fig

site	Rpot	post Rpot	regist finds	bm frags	animal bfrags	burials	period	date range
ch83	none	15	11	38	none	none	Iron Age	>mid 1st century AD
dg83	53	130	28	49	270	none	Early Roman	mid 1st – early 2nd century
lc84	160	207	191	206	118	2	Mid Roman	early 2nd – mid 3rd century
cat86	458	596	427	1266	1639	none	Late Roman	mid 3rd – late 4th century
ny87	114	10	60	125	120	none	Very Late Roman	late 4th – very late 4th century
ce75	14	none	2	6	none	none	Ultimate Roman	late 4th – late 9th century
cl85	749	221	104	1417	490	none	Early Anglo-Saxon	5th – late 7th century
eb80	3658	198	610	202	1034	1	Mid Saxon	late 7th – late 9th century
l86	6592	1591	745	1889	3623	55	Late Saxon (Anglo-Scandinavian)	late 9th – late 10th century
mw79	55	129	12	93	60	none	Saxo-Norman	early 11th – early/mid 12th century
mws83	11	362	16	77	126	none	Early Medieval	early/mid 12th – early/mid 13th century
sp72	6791	8320	5762	6591	9632	775	High Medieval	early/mid 13th – mid 14th century
w73	986	481	71	104	293	none	Late Medieval	mid 14th – end 15th century
wb76	99	18	16	56	30	none	Post-Medieval	beginning 16th – early 18th century
wb80	2310	520	127	1011	122	none	Modern	mid 18th – 20th century
wc87	2037	230	164	455	927	none		

Fig 1.4 Finds recovered from the Upper City sites: numbers of Roman and post-Roman pottery sherds, registered finds, building material fragments, animal bone fragments, and human burials.

Fig 1.5 Period terms used in this volume

1.4). The presence or absence of organic material is noted. All those who have contributed in any way to the narratives are acknowledged either by name or by reference to their reports.

#### Sequence of events

Each excavation report is structured using the period categories below (Fig 1.5). This framework was based on our ability to recognise and date phases of activity on a regular basis: major historical events generally did not leave recognisable stratigraphic traces on a site. The list could perhaps be criticised on the grounds that it does not draw a distinction between the legionary period and the early *colonia* – it was partly based on the general periods of Roman occupation at London – but the change in occupation is not as easily recognised from the artefactual evidence at Lincoln as might be assumed.

The term ‘Ultimate Roman’ has been used to describe features which seal or cut through late Roman deposits and are earlier than Late Saxon features but contain no artefacts which indicate that they are of that date.

Each site has been interpreted as a sequence of LUBs (see above for explanation); each LUB within a site has a LUB number (from either 0 or 1 onwards). For each site a two-dimensional LUB diagram has been prepared, illustrating the changing land use. Such diagrams have been used to great effect in both London and Norwich (Davies, B 1992; Shepherd 1993). In this volume LUBs were not normally created unless there was positive excavation evidence; the exception was when a LUB was needed

to clarify the LUB sequence (eg LUB 17, sp72).

Each LUB is described in the text and illustrated with plans, sections and photographs by context group (cg). The cg is the lowest stratigraphic unit used in the narratives and each site has its own cg sequence (cg1 to whatever); context codes (letters or numbers) are not mentioned in the text except as part of a registered find reference (eg a late Saxon whale-bone casket-mount (1017) <B1> cg15, LUB 11 wb80; here the bracketed code (1017) is the context). Although it makes for a rather inelegant prose style, every cg number used in the interpretation of each site is mentioned in the site text; the exception is sp72 where context groups which represent inhumations, charnel pits, or graveyard deposits in or later than LUB 32 are only mentioned specifically when this enhances an understanding of the narrative (this means that 630 of the 1,425 grouped contexts from sp72 are not discussed in the text, although they are listed as part of the concordance Fig 9.93). In sp72 there are six context groups which are subdivided with alphabetic sub-codes (eg cg50 is subdivided into cg50a and cg50b) to aid comparison between the interpretation presented here and the previous report (Jones and Gilmour 1980). For each site there is a concordance of context group numbers linked with associated LUB numbers; this can be used for quick reference from the context group number to the LUB (eg when moving from sections to text).

The interpretation and dating of the LUBs arise from a dynamic dialectic between an understanding of the stratigraphic sequence and site formation processes, together with an analysis of the pottery and other finds. Pottery, in particular, sometimes provides evidence for site formation processes and



where appropriate this information is included in the text. Site formation is described and discussed by cg within the LUB framework. To enable the reader to understand the sequence clearly, when a cg is first described, whatever was earlier in the sequence is also mentioned, whether this was the limit of excavation or previous cgs. Whenever a cg is mentioned outside its LUB, then its associated LUB number is attached; in order to work back from plans and sections where cgs are numbered without their LUB numbers, then it is possible to look up this information in the appropriate table. Residual material is rarely mentioned in the text unless there are conclusions to be drawn from it. Where there is a possibility that deposits were contaminated, the presence of intrusive material is noted.

Roman pottery evidence is presented where it dates the Roman sequence; numbers of sherds from the relevant cg are quoted together with the justification for the dating. Detailed information on Roman pottery was provided by Margaret Darling and Barbara Precious before the reader stage of the post-excavation process. As part of the process following the reader's advice, edited and selected data has since been transferred from the earlier drafts. Kate Steane, as co-ordinator of the site narratives, has undertaken this task and is responsible for the version presented in the present volume. Further detail is available in the Roman pottery archive, while a Roman pottery corpus will also be published shortly (Darling & Precious forthcoming). The Roman pottery codes used in the text are listed and explained in Appendix 2.

Post-Roman pottery dating evidence is presented in the text by Jane Young; key dating groups are mentioned together with sherd counts where appropriate. It is necessary to refer to the Saxon and medieval corpus (Young and Vince 2006) for information on the dated ceramic horizons, and to find out what is in each assemblage, readers should refer back to the archive. In some cases, post-Roman fabric codes are referred to in the text; these are explained in Appendix 3. In some cases, the dating of post-Roman stratigraphy relies on the tile.

Registered finds (and building materials) are rarely presented as key dating evidence and only selectively used for interpretative purposes, the criteria used resting on the relationship between artefact and deposit as outlined by Roskams (1992, 27–8). Finds contemporary with and functionally connected to their cg (Roskams Type A) are always discussed in the text; those that are broadly contemporary with but not functionally related to their cg (Roskams Type B) are noted only where they are deemed relevant to the site narrative or to the site discussion. Finds that are intrusive or residual but

locally derived (Roskams Type C), and those that are residual and imported on to the site (Roskams Type D), are occasionally discussed where it is considered appropriate. The same criteria are used for bulk finds, including building materials.

Remains of buildings found on each site have been given a structure number during post-excavation analysis for ease of reference in the texts. Although some attempt was initially made for these to be numbered sequentially through the site, subsequent work has often meant that structure numbers do not reflect the site chronology and must be considered as random labelling (eg Structure 4, eb80 is not the fourth structure mentioned on the site). The numbering of buildings inevitably rouses debate concerning its definition, and whether mere traces of possible structural activity count. Substantial alterations of buildings probably within existing walls have been given the same structure number, but a different phase (eg Structure 5.2, LUB 17 eb80). Different rooms in the same building have been given alphabetic codes (eg Structure 2F, LUB 17 sp72). Finally there are building phases by room (eg Structure 2A.5, LUB 9 sp72).

The site-by-site computer archive for stratigraphy, pottery and other finds is the foundation on which the narratives have been built. Together with this archive are numerous specialist reports (the 'research archive'), whose conclusions have contributed to a deeper understanding of the sites. Information about animal bone is included where it adds to an understanding of the site narrative. Animal bone assemblages have been examined by cg, but numbers of bone for each cg have not been given, merely broad descriptions: very small (under 30), small (30–100), moderate (100–200) or large (over 200). In turn both the archive and specialist reports link with the stratigraphic site records and the rest of the recorded material evidence; at this level, it is the context which is the key that unites the site elements. The archive holds a concordance between context and grouped context numbers for each site.

Each site narrative has therefore been produced by assessing the available information in terms of how appropriate it is in adding to an understanding of the site sequence and site formation processes, and using that information in a selective way. The full archive from which this material has been drawn is to be made available via the Lincoln City and County Museum for future research.

### *The figures illustrating the site narratives*

The illustrations for each site are listed by site in the same sequence; location plan/s first, followed by LUB diagram/s, phase plans, section/s, photographs, finds drawings (where appropriate) and

diagrams. The figure numbers appropriate to a LUB are mentioned at each LUB heading, and sometimes also again in the text. All plans and sections were drawn with CAD and all are annotated with cg numbers.

Each site has a site location plan (scale 1:1,250) and on most of these sections have been located (with or without an inset), while others have a more detailed additional plan to show individual site trenches or areas together with section locations (mw79, mws83, sp72, w73 and wb80). Every site has a LUB diagram, and a sequence of phase plans which include one or more LUBs; the phase plan figure numbers are noted on the LUB diagrams, as well as in the text. The phase plans mostly provide outline information only and usually much more detail is available in the archive.

For a detailed understanding of the plans it is necessary to refer to Fig 1.6 for a list of encoded line conventions and hatch patterns; walls are indicated in most cases with a hatch pattern, but occasionally stones have been picked out when the line of the wall was unclear (eg, Fig 2.21). Most of the phase plans illustrate specific features (walls, pits, ditches, etc), rather than layers (dumps, surfaces, etc); this partly stems from the lack of on-site single context planning, but was also an attempt to disentangle the complexity of the sequences by illustrating events which scored or had some strong impact on the land. Where possible, features are

projected; occasionally intrusive features are represented with the appropriate delineation, where this enhances the understanding of the sequence. Often features will appear on more than one plan; this generally, but not always, indicates continuity of function, rather than uncertainty regarding phasing. The plans illustrate what is being discussed in the text.

For most sites, one or more sections have been illustrated to give some idea of the depth and complexity of the deposits. Only one of the cathedral sites (lc84 Area B) has a published section; few sections were drawn. To the east of the city, wc87 has no published section. The reliability of the sections is generally excellent, but in some cases there are layers which are not shown on the sections when theoretically they should be – it is possible that the excavator made a decision not to include them as being too slight to be significant, or perhaps amalgamated layers during the drawing process.

The location of the published sections is indicated on the site or trench location plans. LUBs are not shown on the section drawings; they remain annotated only by context group. Stones in walls are identified, but for clarity of sequence no other type of layer or feature has been depicted or annotated in the published sections. A datum is marked on the sections, where recorded (there was no recorded datum for w73).

All of the site reports are also illustrated with

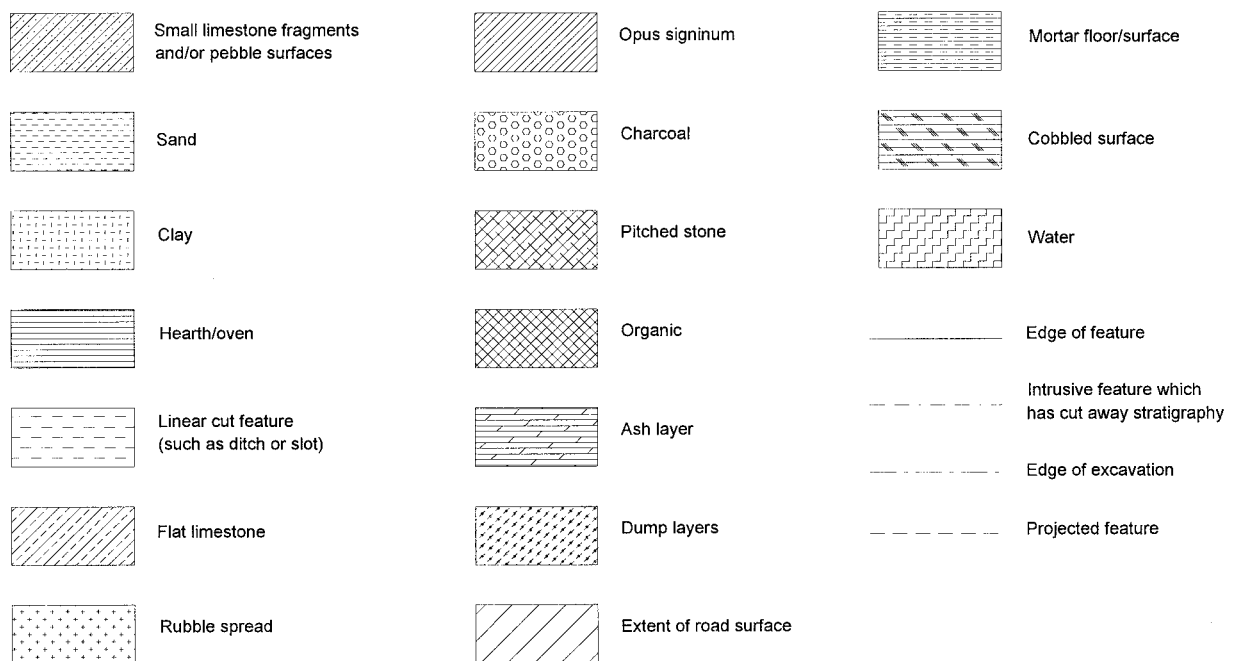


Fig 1.6 Key to lines and hatch patterns used on plans.

photographs. Other diagrams, such as radiocarbon date lists and finds drawings, are included where appropriate.

### *Site discussions*

The format of the site discussions varies from site to site depending on the characteristics of each site. For some sites, the structure of the discussion is constrained by the limited stratigraphic sequence (such as ce75), and for others the discussion is necessarily extensive due either to the depth and complexity or just the extent of the deposits and interesting nature of the finds (such as eb80, the Lawn sites, wb80 and particularly sp72).

One of the sites (sp72) has been partially published in regional and national interim form (Gilmour and Jones 1980; Gilmour 1979b; Jones and Gilmour 1980; Jones 1994); alternative interpretations have been suggested by the analysis undertaken for this project and these are explained at the beginning of the discussion for this site.

The dominant framework for the discussions is chronological, and site-specific elements are highlighted (the cathedral sites, cl85, eb80, the Lawn sites, mws83, sp72, wb86, wb80 and wc87). The changing topography introduces the discussion for some sites (cl85, eb80, the Lawn sites and mw79). Roman buildings are discussed in varying detail (cathedral sites, cl85, eb80, the Lawn sites, mws83, sp72, w73, wb76, wb80 and wc87), as are the post-Roman buildings (cathedral sites, the Lawn sites, mws83, sp72, wb80 and wc87).

Pottery is not discussed separately, but only within the site narratives with discussions referring, for example, to function; a discussion of the whole assemblage from the Upper City, however, is included in the General Discussion (pp. 267–87). Some of the discussion on Roman pottery is based on information gleaned from plotdate analysis. This is a recent technique for examining Roman pottery, developed by Margaret Darling with Barbara Precious (see Darling 1999, 56–7, Table 5) to examine the dated content of groups of pottery. This works from the archive measure of sherd count and filters the pottery in the individual group, LUB or groups of LUBs, through a file which assigns dates based on the fabric and vessel type. The resulting raw values are then spread across the period, and plotted either as raw sherd count values or, more usually for comparisons between groups of disparate sizes, as percentages (using a program kindly adapted by Paul Tyers). When combined with analyses of the pottery for fabrics and functions, this is a useful tool for assessing groups and their relationships. Presentation of such detail in the present volume is confined to the General Dis-

cussion (below). Details for each site are available in the archive (although these were prepared before some re-phasing took place).

Similarly, the post-Roman pottery is discussed generally for the whole of the Upper City.

Registered finds, although not having a prominent role in the site narratives, are often referred to in the discussions, and in some cases have whole sections dedicated to one or a group of finds (cl85, eb80, sp72, wb80 and wc87). The animal bone from a site is only discussed where clear conclusions could be drawn, and then under function rather than as an assemblage.

There is only minimal citing of stratigraphic parallels in the narrative discussions; there has not been an opportunity to search the literature deeply for similar material. Any parallels are drawn from within the volume.

By comparing the LUB diagrams across the sites in the Upper City, it is possible to get an overall impression about what was happening in the area, through time. The overall discussion of the Upper City can be found at the end of this volume.

### *Bibliography*

A consolidated bibliography is presented using a Harvard-based reference system. The large number of unpublished CLAU archive reports is referred to in the texts by author and date, in the manner of published reports, so that specific archive reports may be consulted on demand. In the bibliography, the unpublished nature of these reports is made clear. The format and abbreviations used are those recommended by the Council for British Archaeology.

### **The archive**

The paper, digital, and artefactual archive is to be made available for further research.

The primary site excavation archive (both paper and artefactual) is all accessible by context. In order to compare the archive with the text published here, it is necessary to turn the context data into cg information. This is achieved by using the context-to-cg concordance files which are part of the computerised, or digital, archive (termed *phasing* files). The digital archive contains such types of documentation relating to the various post-excavation processes on which this report is based. Included with each excavation archive are the external specialist reports (part of the Research Archive). A more detailed explanation of the archive can be found in Appendix 1.



## 2. Excavations in and around Lincoln Cathedral between 1983 and 1987 (ch83, dg83, lc84, cat86 and ny87)

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### Introduction to the sites

The circumstances of the various excavations (Fig 2.1) are described in turn below. The results were fragmented, but added a modest amount to our understanding of several phases of the site's history from the Roman period. They represent only minor details, however, when set against the scale and complexity of this enormous, complex, and impressive building: the best recent introduction to it is that of Antram and Stocker 1989.

Two small trenches (ch83) were dug between 22 and 25 March 1983 at the bases of two of the flying buttresses of the Chapter House, in order for engineers to investigate the state of the buttress foundations and to insert gauges to measure movement of the structure (Fig 2.1). The trenches were excavated by staff of the Lincoln Archaeological Trust (LAT), under the supervision of Mike Trueman and Andrew Harrison; the excavation was funded by the Dean and Chapter.

At the end of March/early April 1983, a long continuous trench 0.75m wide by 0.75m deep was excavated north of the cathedral nave in the area known as the Dean's Green (dg83) in order to insert a lightning conductor connecting strip between the north-west tower and the central tower (Fig 2.1). The work was carried out archaeologically by Manpower Services Commission personnel under the direction of David Stocker and Mike Trueman for the Lincoln Archaeological Trust (LAT). These excavations were also funded by the Dean and Chapter. An interim report appeared in the Annual Report of the LAT (Jones *et al*, 1983).

Three areas (A, B and C) where observation or excavation took place in 1984 were all given the same site code, lc84; A to the north-east of the chancel, B to the south-east of the cathedral and C

the west nave of the cathedral (Fig 2.1). Area A consisted of a 2m deep trench, approx 6 x 5m (Fig 2.1) dug on the north side of the Angel Choir, so that engineers could investigate the state of the foundations. The excavation (Fig 2.31) was carried out for Lincoln Archaeological Trust under the direction of David Stocker and with funding from the Dean and Chapter. After the discovery of a grave by volunteers from the Cathedral Camps working party, another excavation, Area B, was mounted to the south-east of the south-east transept of Lincoln Cathedral in August of 1984 and January 1985, with the enthusiastic cooperation of and financial assistance from the Dean and Chapter. The excavation was carried out for Lincoln Archaeological Trust under the direction of David Stocker (Fig 2.32). Area C involved the lifting of paving slabs within the north and south aisles of the nave, in order to insert cables for a public address system. No further excavation took place, except for the careful brushing away of the bedding sand to reveal the uppermost surface of the rubble below (Fig 2.33). Features revealed were photographed and planned. The work was supervised for the Trust for Lincolnshire Archaeology (TLA) by David Stocker, and funded by the Dean and Chapter. Interim reports were published on Area B (Stocker 1985a and 1985b).

The area between the Angel Choir and the north-east transept was excavated in 1986 (cat86; Figs 2.1 and 2.34). Excavations were carried out in July to October 1986 in order to expose the foundations of a chapel, the approximate layout of whose wall remains were discernible under grass, before excavation. This project coincided with the celebrations marking the 800th anniversary of the enthronement of Hugh as Bishop of Lincoln. It was funded jointly by the Dean and Chapter of Lincoln Cathedral and

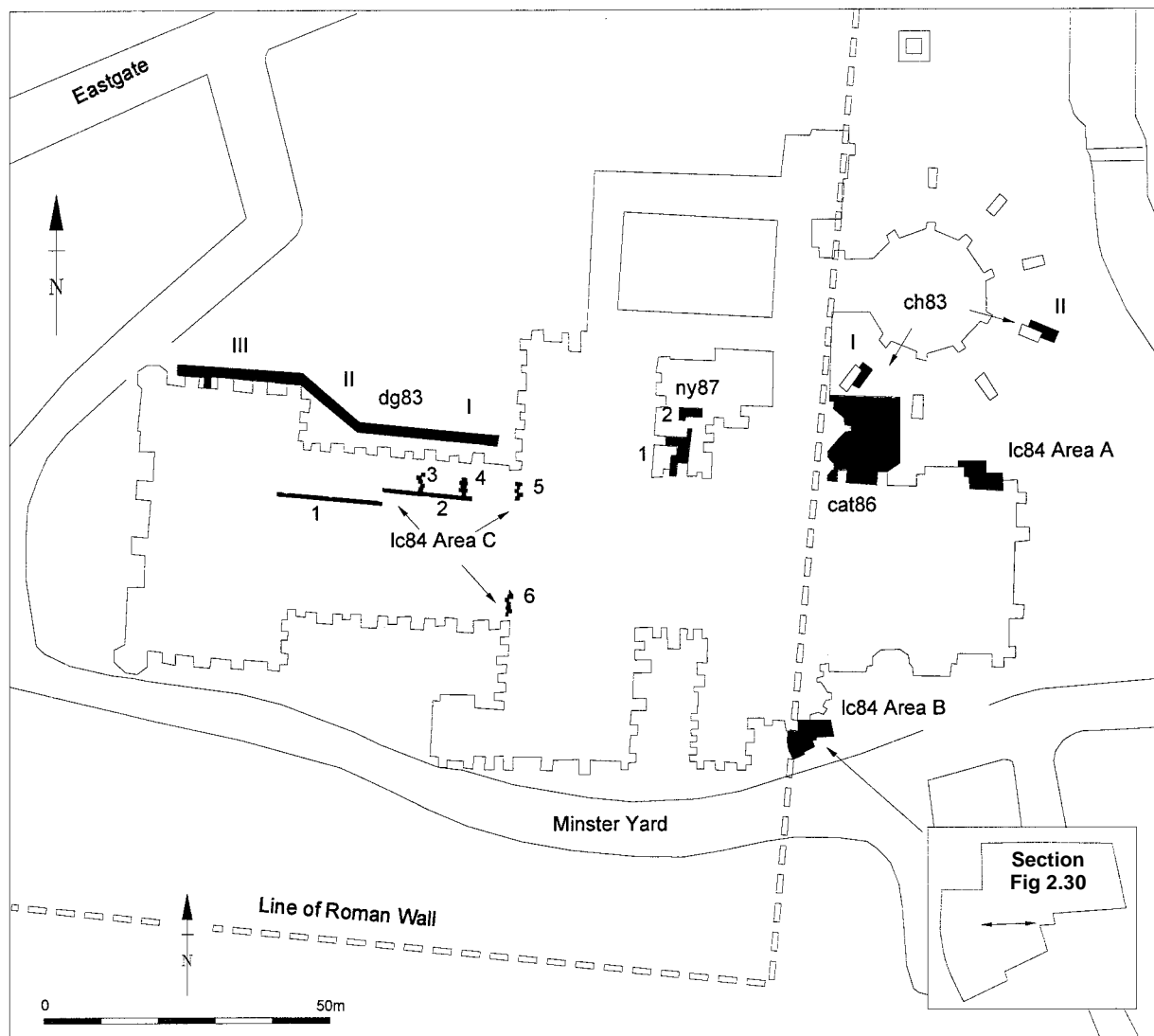


Fig. 2.1 Site location plan showing dg83, ch83, lc84 Areas A, B and C, cat86 and ny87.

the Friends of Lincoln Archaeological Research and Excavation (FLARE), and was carried out by staff of the Trust for Lincolnshire Archaeology (TLA) and individuals supplied by the Manpower Services Commission, under the direction of Christopher Guy. Interim reports appeared in the Annual Reports of TLA (Guy 1986; Guy 1987), David Stocker has discussed the evidence for the changing location of the shrine of St Hugh (Stocker 1987).

Excavations in the Nettle Yard, between the north transepts of the cathedral, took place during a period of two weeks in 1987 (Fig 2.1), designed to assess the archaeological impact of building works which were being contemplated at the time. The aim was to expose the uppermost levels of archaeology. The work was carried out by Manpower Services personnel provided by FLARE Projects, under the supervision of Kevin Camidge of the Trust for Lincolnshire Archaeology, during a lull between larger excavations. No cost was incurred by the

cathedral as the costs of this team were carried by the County Council. Initial post-excavation analysis was carried out by Kevin Camidge and an interim report appeared in the Annual Report of the Trust for Lincolnshire Archaeology (Camidge 1987b).

### Introduction to the finds

Only 15 sherds of post-Roman pottery were recovered from ch83, and no Roman pottery. Only 11 registered finds were recovered from the site; they were mainly of glass (post-medieval vessel: Adams and Henderson 1995) with a little iron and copper alloy, together with a single jet object and part of an architectural fragment. No organic material was recovered. A few fragments (38 fragments) of building material were recorded, mostly medieval/post-medieval ceramic tile; no animal or human bone was recovered from ch83.

Some sherds (130 sherds) of post-Roman pottery were recovered from dg83, and a few sherds of Roman pottery (53 sherds); 28 registered finds were recovered from dg83, mostly of iron, lead and glass, with only single occurrences of bone (Rackham 1994) or ceramic objects. The material is largely structural, comprising nails, lead roof fittings and comes, together with window glass; datable finds are largely 18th- or 19th-century and later. These represent a sample of the material originally recovered, much of which was discarded once an archive record had been made. No organic material was found. A few fragments (49 fragments) of building material were recorded from this site, mostly medieval/post-medieval ceramic tile (stone building material: Roe 1995). Fragments of animal bone (270 fragments) did occur, but they did not merit further study; there was no human bone.

Sherds of Roman pottery (160 sherds) and post-Roman pottery (207 sherds) were recovered from the three areas of lc84, together with 191 registered finds; more than one third of these (35%) are small architectural fragments, and there are substantial proportions of ironwork (23%) and glass (17.3%; Roman: Price and Cottam 1995f; medieval decorated window: King 1995c). There are only small quantities of copper alloy (including one Roman coin: Davies, J A 1992) and lead, a single ceramic object, a stone object (Roe 1995) and fragments of leather (Mould 1993) and textile (Walton Rogers 1993) were among the finds from one of the burials. The leather was completely desiccated on excavation, while all copper alloy and ironwork was heavily corroded. The only other finds are a few pieces of clay tobacco pipe, and fragments of modern window and bottle glass from the uppermost levels in Area A; these were discarded following examination and archive recording. 206 fragments of building material were recorded from the site, 96 from Area A and 110 from Area B, mostly medieval/post-medieval ceramic tile (stone building material: Roe 1995). Several fragments (118 fragments) of animal bone were found, but did not merit further study. The remains of two inhumations were removed during excavation (Henderson 1984; Boylston and Roberts 1994).

Roman (458 sherds) and post-Roman pottery (596 sherds) was fairly abundant at cat86, together with 427 registered finds; the largest proportion of these is represented by architectural fragments (36.5% of the total) and glass (27.6%; Roman: Price and Cottam 1995f; medieval decorated window: King 1995d; post-medieval vessel: Adams and Henderson 1995), both outweighing the quantity of ironwork (22.7%). The iron objects consist almost entirely of nails and unidentifiable fragments, and were generally heavily corroded. A noticeable proportion of lead (8.2%), largely roofing waste and window comes, was also

recovered, but there are few objects in other materials such as bone (Rackham 1994), stone (Roe 1995) copper alloy (Roman coin: Davies, J A 1992; Roman brooch: Mackreth 1993). A single piece of leather (Mould 1993) was recovered from a post-medieval dump; this was completely desiccated on excavation. A further massive quantity of building debris, composed largely of post-medieval and later window glass (more than 3,000 fragments) and lead (roofing) waste, found in the topsoil and modern dumps, was recorded on excavation but only a small sample retained. A large number of building material fragments came from cat86 (1,266 fragments), mostly medieval/post-medieval ceramic tiles, but also several Roman tiles in addition (stone building material: Roe 1995). A number of animal bone fragments (1,639) were recovered but, as most appeared to be derived from mixed sources, a total of only five contexts was assessed (Dobney *et al* 1994a); the assemblage is of little interpretative value. No human bone was retained for study.

Roman sherds were recovered from ny87 (114 sherds) and a very few post-Roman sherds (10 sherds). Only 60 registered finds were found at ny87, and 31 of these are architectural fragments, all from the fill of a single, partially-excavated pit. Most of the remaining finds are glass (Roman: Price and Cottam 1995a; medieval decorated window: King 1995f) and metalwork: iron, lead and copper alloy, including one Roman coin (Davies, J A 1992). There is a single ceramic object; the only other items are a few pieces of slag and fragments of clay tobacco pipe. No organic material was found. Building material fragments were recovered from ny87 (125 fragments), made up mostly of Roman and medieval/post-medieval ceramic tiles (stone building material: Roe 1995). Fragments of animal bone (125 fragments) occurred, but did not merit further study, and no human bone was found.

## Site presentation

The cathedral excavations are analysed in a roughly east-west sequence (Fig 2.1):

sitecode	location	LUBs
i) lc84 Area A	On the north-east side of the Choir	1-5
ii) ch83	Outside the cathedral Chapter House	6-8
iii) cat86	Between the Angel Choir and the north-east transept	9-24
iv) lc84 Area B	On the south-east side of the cathedral	25-30
v) ny87	Nettle Yard	31-38
vi) lc84 Area C	In the nave of the cathedral	39-41
vii) dg83	On the north-west side of the cathedral in Dean's Green	42-49

A trench *c* 0.6m wide, *c* 5m long and *c* 2m deep (lc84 Area A) explored the foundations of the Angel



Choir and the Fleming Chapel, a later addition to the north of the Choir. In lc84 Area A 39 contexts were recorded on site; one was unstratified and the rest were interpreted during post-excitation as 16 context groups (cg101–117 with cg111 unused). These were grouped into five land use blocks, ranging between the high medieval and modern periods (LUBs 1–5: Figs 2.2 and 2.51).

The Chapter House buttress foundations (ch83) were also investigated. There were two trenches (I and II) in ch83 and 21 contexts were recorded; these were interpreted as 18 context groups (cg601–618), grouped into 3 land use blocks, high medieval, post medieval and modern (LUBs 6–8; Figs 2.3 and 2.51). In Trench I were all or part of LUBs 6, 7 and 8 and in Trench II only LUBs 6 and 8.

Between the Angel Choir and the north-east transept, another trench (cat86) investigated the foundations of an earlier chapel, also uncovering the line of the Roman city wall. During excavation of cat86, 108 contexts were recorded; during post-excitation analysis these were reduced to 37 context groups (cg1–cg38 but excluding cg28), which were grouped into 16 land use blocks (LUBs 9–24; Figs 2.4 and 2.51). The earliest (LUB 9) dated from the Roman period; there was also stratigraphy from the early medieval period (LUBs 10 and 11), the high to late medieval period (LUBs 12–15), the post medieval period (LUBs 16–23) and modern period (LUB 24).

To the south of the cathedral (lc84 Area B), the line of the Roman city wall was revealed and its relationship with St Hugh’s south-east transept was demonstrated. In lc84 Area B there were 46 contexts which were reduced to 29 context groups (cg201–230, but cg225 was not used) and these were grouped into 6 land use blocks (LUBs 25–30; Figs 2.5 and 2.51). There was evidence of activity from the Roman period (LUB 25), early medieval period

(LUB 26), between the early medieval and post medieval periods (LUBs 27–9) and the modern period (LUB 30).

The Nettle Yard consists of an external area surrounded on all sides by cathedral buildings to the north of the Angel Choir and to the south of the cloister, between the north transepts. Two small areas were excavated here (ny87) (Areas I and II). During excavation, 25 contexts were recorded; these were reduced to 17 context groups during post-excitation (cg501–517) and interpreted as 8 land use blocks (LUBs 31–38; Figs 2.6 and 2.51). In Area I were Roman LUBs 31, 32, and 33, early medieval LUBs 34 and 35, and modern LUBs 37 and 38. In Area II LUBs 31 and 33 were of Roman or Early Medieval date, early medieval LUB 35, post medieval LUB 36 and modern LUB 38.

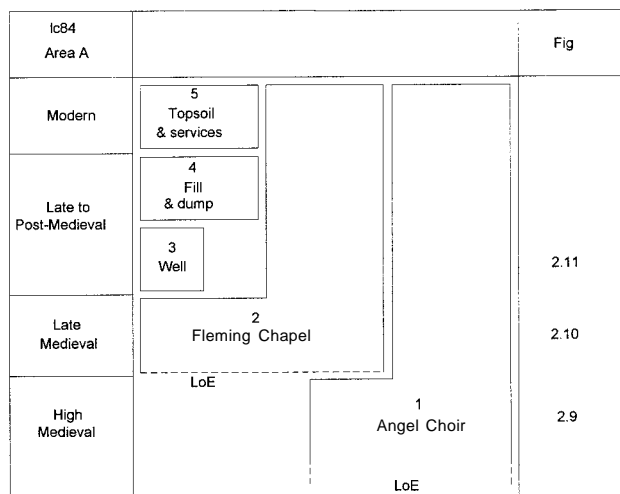


Fig 2.2 LUB diagram for lc84 area A

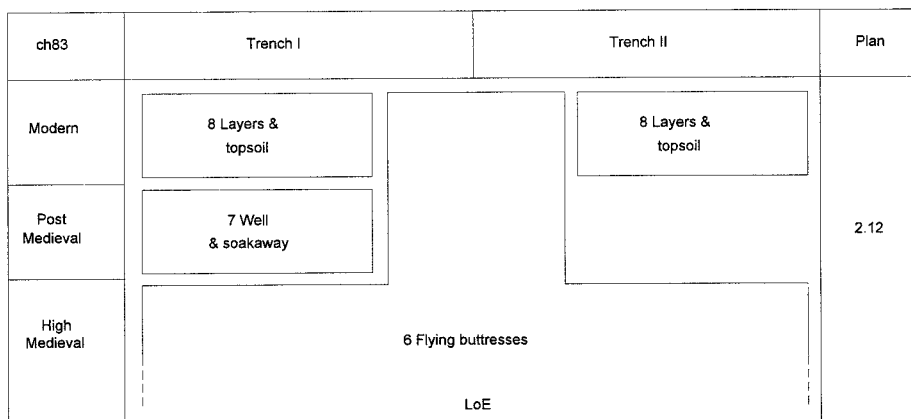


Fig 2.3 LUB diagram for ch83

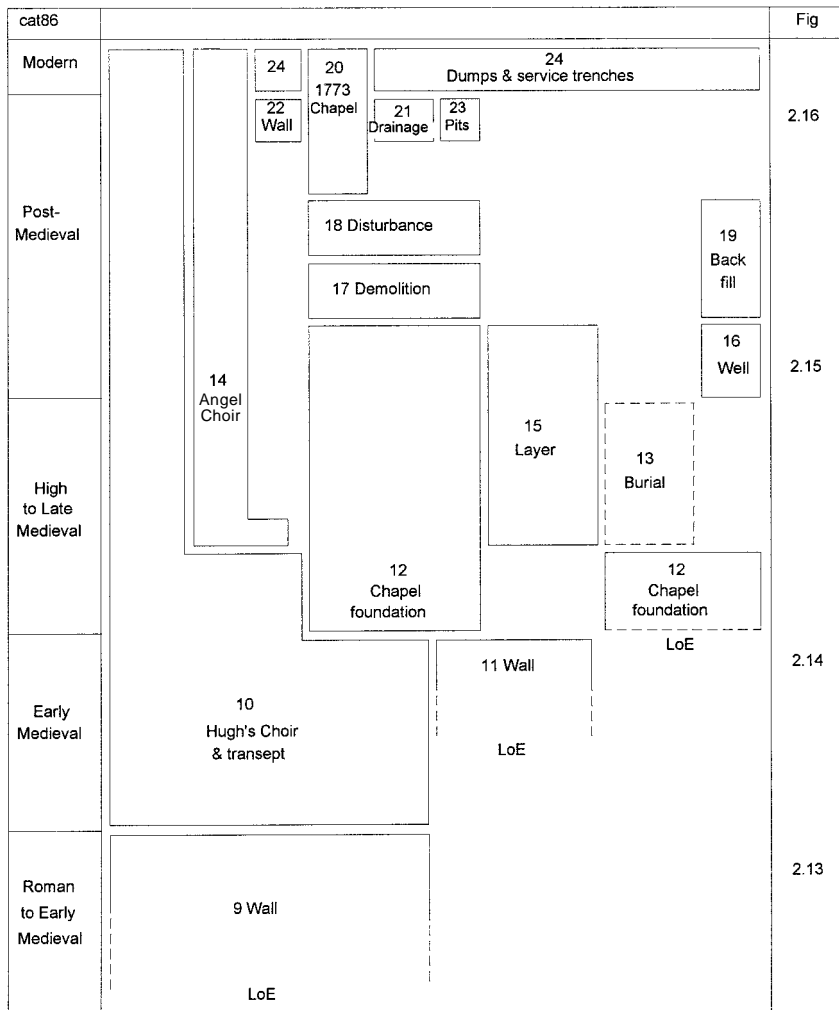


Fig 2.4 LUB diagram for cat86

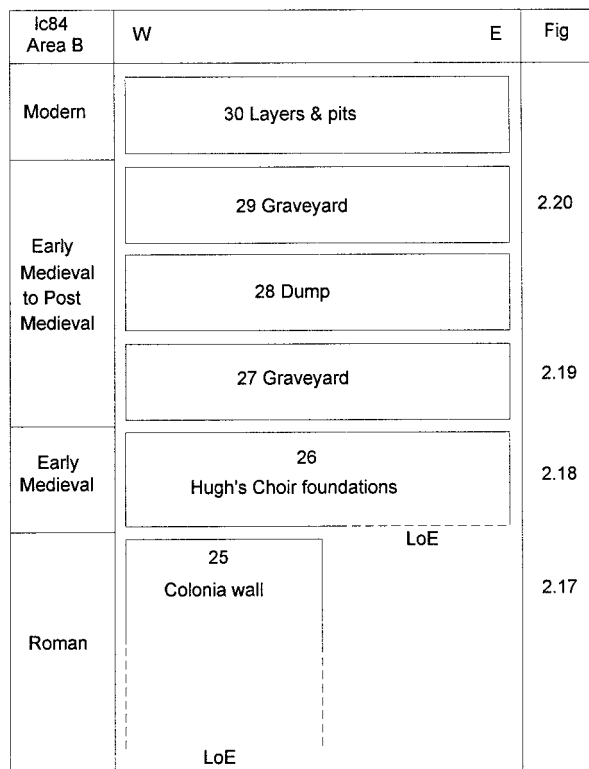


Fig 2.5 LUB diagram for lc84 area B

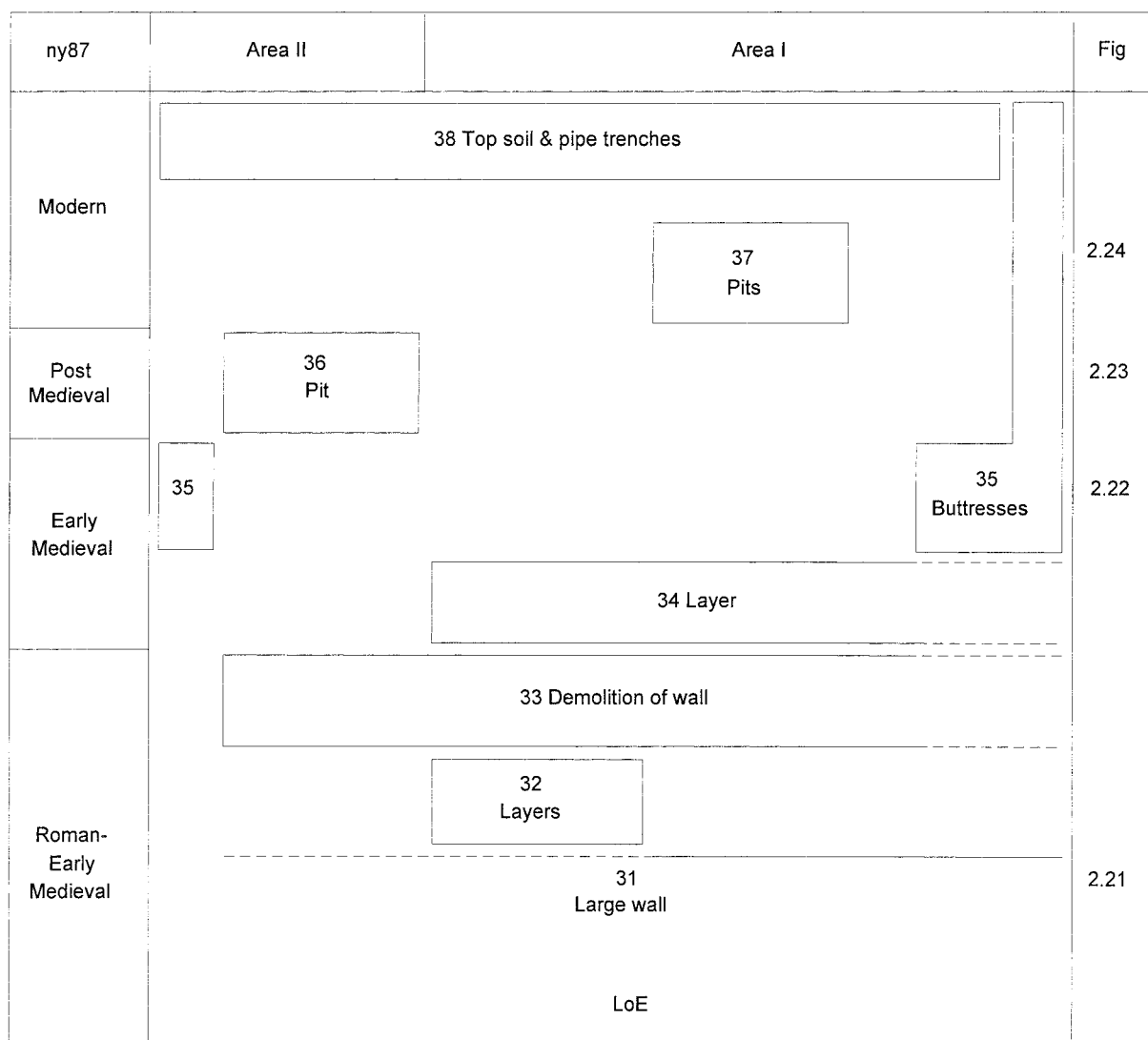


Fig 2.6 LUB diagram for ny87

Within the area of the nave (lc84 Area C) the paving slabs were shifted to one side in 6 locations (Trenches 1–6). During post-excavation work the 22 contexts were identified in plan. These were reduced to 11 grouped contexts (cg301–311) and interpreted as 3 land use blocks (LUBs 39–41; Figs 2.7 and 2.51). Norman LUB 39 was only identified in Trench 4; early medieval LUB 40 was observed in Areas 1, 3, 5 and 6; medieval to post medieval LUB 41 was seen in Areas 1, 3, 5 and 6.

On the Dean's Green (dg83) to the north of the cathedral nave three lengths of narrow dog-legged trench were excavated (Trenches I, II, and III from east to west). Of the 47 contexts in dg83, 3 were unstratified and the rest were grouped as 17 context groups (cg401–417); these were interpreted into 8 land use blocks (LUBs 42–49; Figs 2.8 and 2.51). In Trench I were late post medieval LUBs 45 and 47,

and part of modern LUB 49; in Trench II were part of late post medieval LUBs 44 and 46, and modern LUBs 48 and 49. In Trench III were early to high medieval LUBs 42 and 43 and part of late post medieval LUBs 44 and 46, and part of modern LUB 49. In Trench III some deposits were dug as a spit cg406 (no finds) but these same deposits were also dug in a stratified manner as well – as layers cg404 (LUB 45) and cg405 (LUB 47).

Post-excavation stratigraphic analysis was undertaken by Paul Miles and Kate Steane. Margaret J Darling analysed the Roman pottery and Jane Young the post-Roman pottery. Jen Mann worked on the registered finds and, with Rick Kemp, the building materials. Pam Graves and Jeremy Ashbee examined the architectural fragments. Paul Miles and Zoe Rawlings digitized the plans.

lc84 Area C	1	2	3	4	5	6	Fig
Medieval to Post Medieval	41 Makeup & graves		41 Makeup			41 Makeup & graves	2.26
Early Medieval	40 Nave Pier foundations				40 Nave Pier foundations		
Saxo-Norman			39 Norman Cathedral				2.25

Fig 2.7 LUB diagram for lc84 area C

**(I) Excavations on the north-east side of the Angel Choir, lc84 Area A (Fig 2.31)**

*High Medieval (lc84 Area A)*

The foundations LUB 1 of the Angel Choir were uncovered; the date of the pottery (mid to late 13th century) from the construction was consistent with that documented historically.

*LUB 1 Angel Choir (Figs 2.9 and 2.35)*

At the limit of excavation was the foundation cg101 of the Angel Choir, which was revealed to a depth of about 2m. The foundations consisted of large facing blocks of limestone set in brown-yellow mortar, and offset; the walls themselves stepped in from the foundations. No construction trench cut was observed (it was probably not bottomed and lay outside the area of excavation), but the backfill of what must have been the trench consisted of sandy clay, with a moderate to high rubble and tile content. However, it may equally be possible that the choir was built from a lower ground level, and that these layers could represent makeup and ground levelling during or soon after construction. A re-used architectural fragment, dating to the late 12th century, had been originally part of St Hugh's Choir, demolished to make way for the Angel Choir.

The construction of the Angel Choir is dated between 1256–80 (Antram and Stocker 1989, 465). The pottery also gives that date. A small mixed assemblage of pottery from cg101 mainly comprising residual Roman sherds, included a group of mid- to late-13th century material made up almost entirely

dg83	W	Trench III	Trench II	Trench I	E	Fig
Modern	49 Dumps & service trenches					2.29
			48 Cut features			
Late Post Medieval		46 Layers	LoE		47 Charnel pit	2.28
		44 Rubble		45 Rubble	LoE	
Saxo-Norman to High Medieval		43 Foundations	LoE			2.27
	42	LoE				

Fig 2.8 LUB diagram for dg83

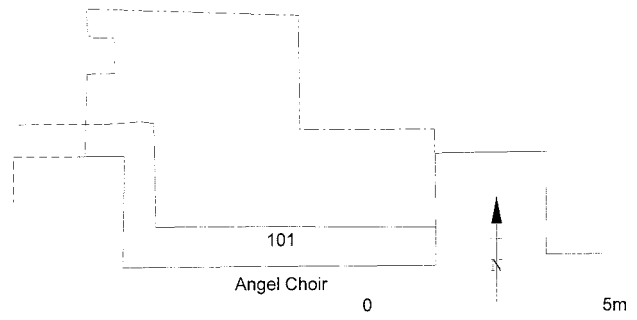


Fig 2.9 lc84 area A: foundations cg101 for Angel Choir: LUB 1

of LSW2 jugs and jar/pipkins (23 post-Roman sherds). Few vessels were represented by more than one sherd.

#### *Late Medieval (lc84 Area A)*

The foundations of the Fleming Chapel **LUB 2**, cut the Angel Choir **LUB 1**. The chapel postdates the death of Bishop Fleming (1431).

##### *LUB 2 Fleming Chapel (Fig 2.10 and 2.36)*

Cutting the foundations cg101 (**LUB 1**) of the Angel Choir were foundations cg103 of limestone blocks and slabs set in a very pale brown mortar which ran north-south. The construction trench fill, of sandy clay loam cg104 with large amounts of rubble and mortar, and occasional tile, sealed foundations cg103.

Sealing both foundations cg103 and abutting the Angel Choir were the lowest footings of a wall cg102 which was made up of small to medium limestone blocks also set in very pale brown mortar. Wall cg102 was the east wall of the Fleming Chapel. Cutting cg104 were postholes cg105 and cg106, possibly scaffold holes used during the construction of the Fleming Chapel.

Bishop Fleming died in 1431 (Antram and Stocker 1989, 473). There were no pottery or finds of this date, merely a little residual and intrusive material.

#### *Late Medieval to Post Medieval (lc84 Area A)*

Cutting the backfill of the foundation trench **LUB 2** was a well **LUB 3**. Stratigraphically this dated some time after the mid 15th century (the date of **LUB 2**). The well was backfilled **LUB 4**, on pottery dating, in the 16th or 17th century.

##### *LUB 3 Well (Fig 2.11)*

Cutting cg105 (**LUB 2**) was a stone-lined well cg107. Reused architectural fragments from the late 12th century through the medieval period were incorporated into its build. The well was not bottomed.

##### *LUB 4 Backfill of well and dump*

Well cg107 (**LUB 3**) was backfilled after abandonment; the top fill was greyish-brown sandy clay and loam cg112 with numerous small limestone fragments and some tile. Overlying it was dark clay-loam cg108 with numerous rubble and mortar fragments which spread over the trench, sealing cg106 (**LUB 2**).

From this **LUB** was a small group of pottery (24 post-Roman sherds) ranging from Roman to post medieval date; the latest sherds date to the late 16th or 17th century. Clay tobacco pipe fragments including a bowl dated c1650–80 were recovered from

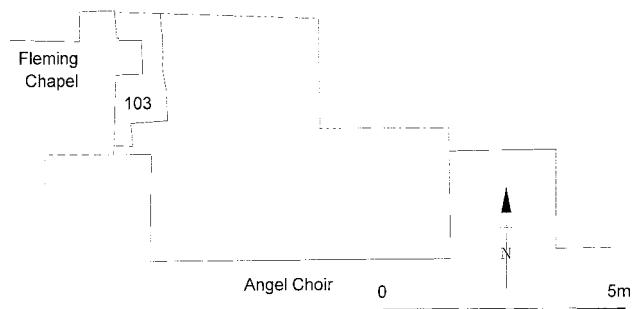


Fig 2.10 lc84 area A: foundations cg103 for Fleming Chapel: **LUB 2**

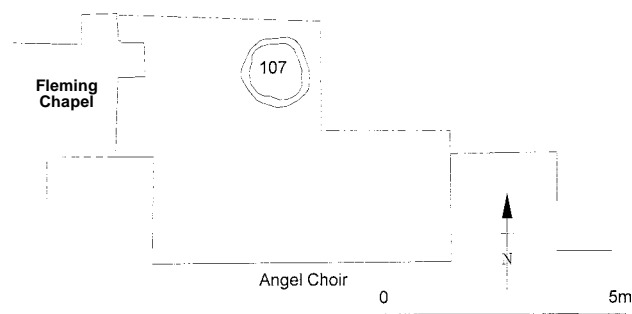


Fig 2.11 lc84 area A: well cg107: **LUB 3**

cg112. Cg108 and cg112 each contained a single lead musket shot, perhaps debris from the Civil War. The fill of the well cg112 contained structural debris including medieval architectural fragments, window glass and a single lead came. There was intrusive modern window glass from both cg112 and cg108.

#### *Modern (lc84 Area A)*

Sealing the area were layers of sandy clay loam cut by service trenches **LUB 5**.

##### *LUB 5 Topsoil and service trenches*

Sealing footings cg102 (**LUB 2**) was a sandy clay-loam layer cg109 with numerous rubble and mortar fragments. Cutting cg109 was a trench for a drain pipe cg113.

Cutting cg108 (**LUB 4**) was a brick sump cg110; both this and cg113 were sealed by dark greyish-brown sandy clay cg114. Cutting this layer was a trench cg115 for an air vent and waterpipe to the sump, a trench cg116 for compressed air pipes and a trench cg117 for the repair of a drain pipe.

This **LUB** contained a range of pottery up to the modern period (76 post-Roman sherds) which seems to include disturbed 17th and 18th century material. Other post medieval and modern finds were present,

including much structural debris: window glass, lead waste, and architectural fragments.

## (ii) Excavations outside Lincoln Cathedral Chapter House, ch83

### *High Medieval (ch83)*

Flying buttresses were added to the Chapter House **LUB 6**; the pottery and tile suggest a date towards the latter part of the 13th century (Antram and Stocker 1989, 480).

#### *LUB 6 The flying buttresses of the Chapter House (Figs 2.12 and 2.37)*

At the limit of excavations the limestone foundations cg601 of the flying buttresses were exposed in each trench, to a depth of 800mm. The exposed wall faces, now below ground level, were well-enough finished to have been intended to be above ground when first constructed. The general design of the buttress plinths, however, suggests that the ground surface today is the same as when the buttresses were first completed.

In Trench I sealing buttress foundation cg601 was limestone rubble in sand and clay cg604 sealed by a thin band of mortar and limestone rubble cg605; there were dark soil stains cg608 and cg609 over cg605, contemporary with a layer of rubble, mortar and clayey sand cg606. The latest fragment of tile

from layer cg605 dates to between the early-mid 13th and late 14th centuries. Within layer cg606 in Trench I was an architectural fragment, a large portion of dog-tooth ornament, commonly used in the cathedral from the late 12th century to 1280.

In Trench II sealing buttress foundation cg602 was clay, sand and mortar cg603, sealed by solid clay and limestone rubble cg607. Over cg607 was dense limestone rubble cg614 and limestone blocks with mortar cg612; there was a dark stain cg613 in cg607. A single tile from cg612 is dated early-mid 13th to late 14th century.

These layers probably represent the rammed backfill of buttress construction trenches. Although layers cg603, cg604 and cg607 contained sherds (3 post-Roman sherds) only generally datable to between the 13th and 15th centuries, the tile from cg605 and cg612 and the architectural fragment from cg606 indicate a date no earlier than the late 12th century.

### *Post Medieval (ch83)*

A well and a soakaway were inserted **LUB 7** in Trench I; the well was backfilled with 17th or 18th-century pottery.

#### *LUB 7 Well and soakaway (Figs 2.12 and 2.37)*

Cutting cg606 (LUB 6) in Trench I was a brick-lined well cg610. Also cutting cg606 (LUB 6) was a brick-lined, stone-capped feature cg611, possibly a soakaway.

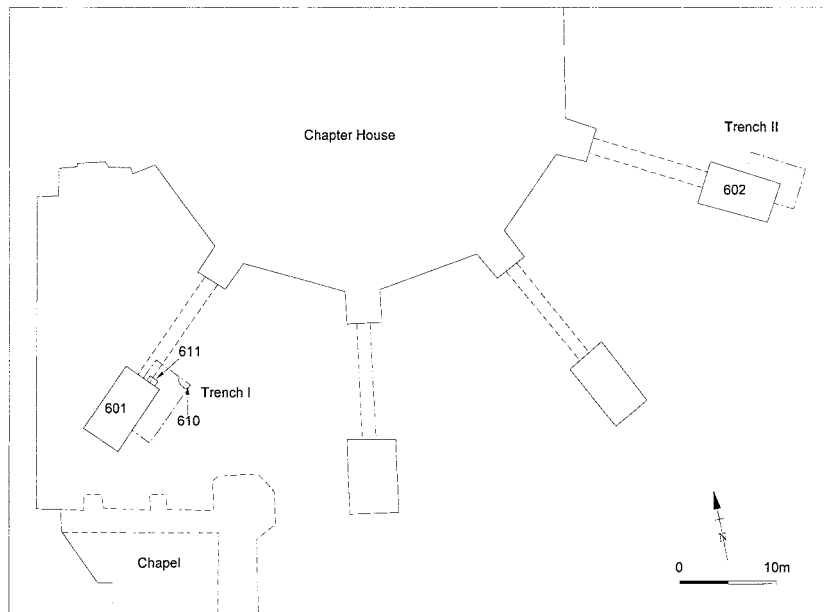


Fig 2.12 ch83: plan of trenches, showing buttresses cg601 around the Chapter House; well cg610 and soakaway cg611 to the north-east of trench I: LUBs 6 and 7

The well cg610 (LUB 7) was sealed by fill cg618 and contained four post medieval sherds dating to the 17th or 18th century together with a fragment of clay tobacco pipe which is no earlier than the 18th century.

#### *Modern (ch83)*

Deposits of rubble and topsoil **LUB 8** sealed the construction trenches.

#### *LUB 8 Layers and topsoil*

Probably sealing stains cg608 and cg609 (LUB 6) in Trench I were layers of limestone fragments, broken roof tiles, mortar and clayey sand cg616.

Sealing rubble cg612 and cg614 and cg607 (LUB 6) together with stain cg613 in Trench II was limestone rubble with clayey sand cg615.

Sealing cg615, cg616 and also well cg610 and soakaway cg611 were topsoil and turf cg617. The height of the modern ground surface was approximately 65m OD.

Eight medieval, post medieval and early modern sherds were recovered from cg615 and cg617. Fragments of modern (20th-century) bottle glass came from cg617.

### **(iii) Excavations between the choir and the north-east transept, cat86**

#### *Roman (cat86)*

The foundations of the east wall of the Upper *colonia* **LUB 9** were revealed at the limit of excavations.

#### *LUB 9 East wall of the Roman Upper Defences (Figs 2.13, 2.38 and 2.39)*

At the limit of excavation were the rough mortared limestone foundations cg4 of a large north-south wall at least 3m wide. Rough edges observed at the north and south ends of the foundations may indicate gangwork. But the north end looked very ragged, as if it had originally continued further north, and the south end appeared equally so.

The wall foundations cg4 were probably part of the Roman upper city wall, reused as part of the medieval fortifications.

#### *Early Medieval (cat86)*

Remains were uncovered of the Angel Choir and north-east transept of St Hugh's cathedral **LUB 10**. They were dated by documentary evidence to the late 12th-early 13th century. Abutting the north side of the choir was evidence for a north-south wall **LUB 11**; it can be dated to between the late

12th and mid 13th century through stratigraphic relationships.

#### *LUB 10 Bishop Hugh's Choir and Transept (Figs 2.14, 2.40 and 2.41)*

The city wall (LUB 9) had been levelled and the ditch to the east backfilled. The cathedral had been extended by Bishop Hugh over and beyond the wall (LUB 9) in the late 12th century (Antram and Stocker 1989, 449). At the limit of excavation, the foundations cg6 of one of the radiating chapels of St Hugh's Choir were exposed. To the south-west of the excavation was the foundation cg5 of one of the north-eastern apses of the 12th-century north-east transept. To the north of this, but since demolished, was a similar apse (Stocker 1987, 110-124).

#### *LUB 11 North-south wall (Figs 2.14, 2.40 and 2.41)*

Wall foundations cg12 abutted the north side of St Hugh's Choir (cg6, LUB 10). They were approximately 1 metre wide, consisting of partly-mortared facing stones up to 0.50m by 0.40m and a rubble core. The wall survived to its highest level to the

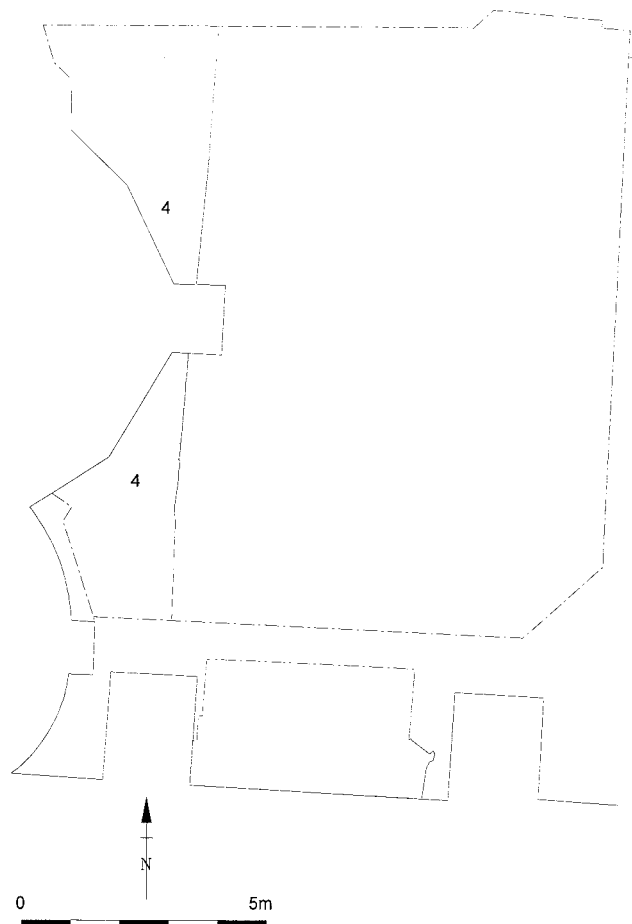


Fig 2.13 cat86: north-south wall cg4: LUB 9



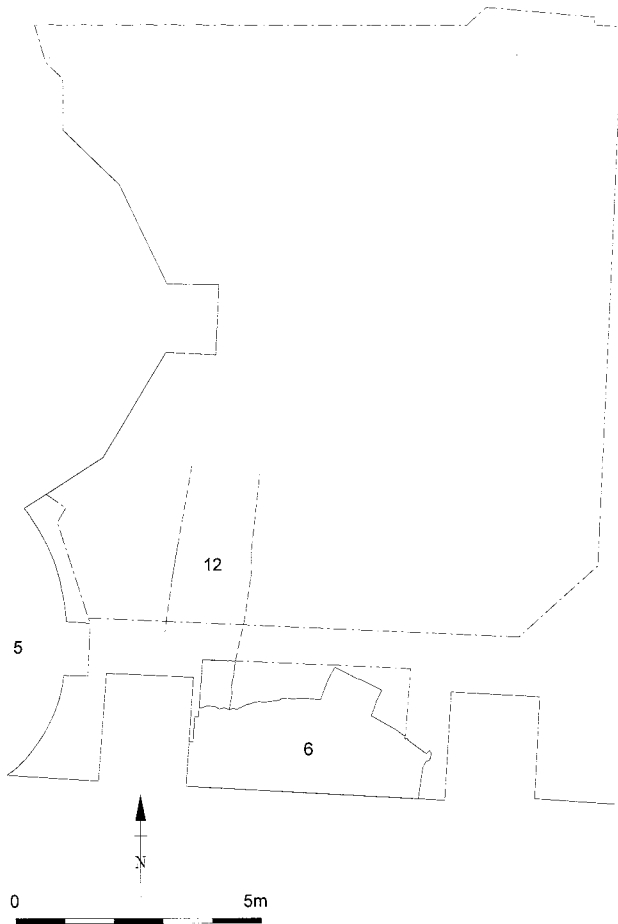


Fig 2.14 cat86: St Hugh's choir with chapel foundations cg6 and transept, and later wall cg12: LUBs 10 and 11

south of the baulk, against the foundation of St Hugh's Choir (LUB 10). The function of this wall is unclear.

#### *High Medieval to Late Medieval (cat86)*

A new chapel was constructed LUB 12. The pottery and architectural fragments both date this event to sometime after the early to early/mid 13th century. There was a burial outside the chapel LUB 13, which post-dated its construction and was probably medieval in date.

St Hugh's Choir (LUB 10) was demolished and the Angel Choir constructed LUB 14; documentary evidence indicates that this took place between the mid and late 13th century. Layers built up to the south of the chapel LUB 15 from this period; these were dated by the architectural fragments and pottery.

#### *LUB 12 Chapel construction*

(Figs 2.15, 2.38, 2.39, 2.41 and 2.42)

Wall cg12 (LUB 11) was levelled. At the limit of

excavation was a layer of brown silt with patches of mortar cg1; the layer sloped down from west to east. It was sealed by yellow mortar and sand layers with limestone fragments cg34, some of which had been worked. Sealing cg34 were layers cg35, which consisted of silt and sand with charcoal fragments, sealed by sandy clay and mortar, over which were layers of clay and sand and layers of limestone and sandy clay. Sealing layers cg35 was a layer of light yellow-brown clayey sand cg8. At the limit of excavation were layers cg3 which consisted of sand with limestone fragments, sealing sandy clay and further limestone fragments. Although a few typically early-medieval fabrics are present in cg1, cg34 and cg35, the majority of the vessels were LSW2 jugs and jars or pipkins. The glaze on most of these vessels is of a full suspension type coloured with the addition of copper to the glaze. This group (37 post-Roman sherds) is likely to date to between the early and early/mid 13th century. A copper alloy buckle plate (79) <345> from cg35 is ornamented with a simple linear design of punched dots; only the bar of the buckle itself remains and its precise form is therefore unknown, but the little that remains is consistent with a 13th-century date at the earliest.

The lower chapel foundations cut layers cg35 as well as wall foundations cg12 (LUB 11); two cuts were recorded cg2 and cg33. The lower foundations cg32 were constructed of stone blocks, bonded with mortar; they contained a relieving arch and were about 1.80m wide (Fig 2.42). Their alignment was at a slight angle away from the north-south line of the chapel. It seems likely that the lower foundation cg32 was simply a consolidation of the foundation in an area where subsidence was likely, over the fills of the city ditch. Its foundation cut cg33 appeared to be continuous with that of the east wall and buttress foundations cg7. The backfill of the construction trenches cg2 and cg33 was sandy clay and limestone. Both cg2 and cg33 contained a few sherds of pottery dating between the last quarter of the 12th century and the early 13th; a single jug sherd may post date the early 13th century.

Sealing both levelled foundations cg4 (LUB 9) and lower foundations cg32 to the west were chapel foundations cg7. These mortared and faced limestone foundations cg7 were approximately 1.5m wide, with hexagonal buttresses at the north-east and south-east corners, and smaller buttresses on the north and south walls.

Three reused decorative stones in the foundations cg7 of the chapel are limestone blocks bearing raised 'lattice' or 'diaper' pattern on one face. This device appears in several other instances in the cathedral, in the upper areas of the central arch of the west front and in the lower stage of the crossing tower (both inside and out). This device has been

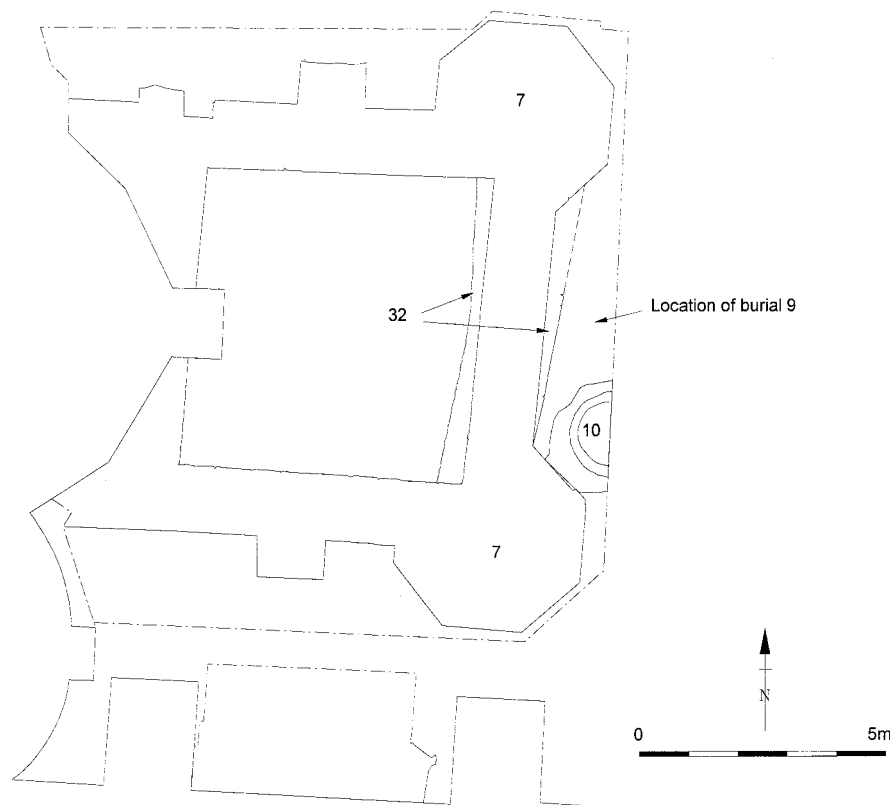


Fig 2.15 cat86: the chapel foundations cg32 and cg7 with well cg10 to east: LUBs 12 and 16

recognised as a distinctive signature of the mason known as the Third Master (Antram and Stocker 1989, 458): he is mentioned as in office in (or by) the year 1235 and his name is Alexander. A date range of 1230 to 1250 therefore seems likely. The function of the device was to decorate large areas of otherwise blank walling and, for this reason, it only appears in buildings of the very highest status. The pottery evidence does not conflict with the possibility that the chapel, in whose foundations the fragments were incorporated, was built between the early and early to mid 13th century – exactly the time at when the device was current: this allows no time for them to be used in another part of the building, recovered from demolition and re-used. It would therefore seem probable that they were off-cuts from the masons' workshop and were re-used as foundation material immediately after being rejected for their intended use.

#### LUB 13 Burial (located on Fig 2.15)

Cutting layer cg8 (LUB 12) was an inhumation cg9. Only the skull lay within the area of excavation, but the coffin outline was visible with nails *in situ*. A single sherd of 12th- or 13th-century date was present in cg9.

#### LUB 14 Demolition of St Hugh's Choir and the construction of the Angel Choir (Figs 2.40 and 2.41)

The east end of the cathedral was completely remodelled in the second half of the 13th century by the demolition of St Hugh's later 12th century Choir (cg6, LUB 10) and the construction of the Angel Choir cg36 between 1256 and 1280 (Antram and Stocker 1989, 465). St Hugh's north-east transept survived (cg5, LUB 10).

#### LUB 15 Layers

Sealing the levelled wall cg12 (LUB 11) were limestone fragments in sandy silt cg37. Sealing cg37 to the east and south of the chapel were limestone fragments in a clay silt layer cg38; this contained architectural fragments and some window glass and lead waste. Sealing layers cg38 were layers of brown sandy and silty clay cg13 with limestone fragments, mortar, tile, bone, and window glass and small architectural fragments. This was in turn sealed by silty sandy clay cg14 with limestone fragments, tile, architectural fragments, nails, some window glass and fragments of lead waste, including comes. Over it were layers cg15 of limestone rubble with occasional fragments of brick and again containing architectural fragments, window glass and lead

waste. To the north of the chapel, at the limit of excavation, there was a sequence of similar layers cg26.

Layers cg26 contained nine post-Roman sherds ranging in date from the late Saxon to the late medieval periods. Layers cg13 produced a single sherd of post-medieval pottery; the only sherd of note in this LUB came from a RAER panel jug depicting a scene from a peasant dance (cg15). Large assemblages of finds were recovered from cg13, cg14 and cg15. These were almost entirely composed of building debris (including Roman brick and tile), mainly small architectural fragments and window glass with some lead waste, probably from roofing, although at least two pieces are identifiable as lead came. The latest material dates to the 17th or 18th century.

These layers included architectural fragments dating from the late 12th and early 13th century, fragments from the demolition of St Hugh's Choir (LUB 14) and fragments from the construction of the the Angel Choir (LUB 14). It would seem that these layers accumulated from the time of the construction of the Angel Choir, right through to the 17th or 18th century and the demolition of the chapel.

#### *Post-medieval (cat86)*

The layers LUB 15 continued to build up, until LUB 17. A brick-lined well LUB 16 was built to the east of the chapel.

The chapel was demolished LUB 17, the interior was disturbed LUB 18 possibly by antiquarian excavations, and the well was backfilled LUB 19. Then a new chapel LUB 20 was built in the late 18th century; the date for this was recorded as 1773. There were attempts at drainage LUB 21, a wall built to the south LUB 22 and two pits LUB 23. The drainage produced late 17th- to mid-18th-century pottery; the wall and the pits were dated stratigraphically to a similar period.

#### *LUB 16 Well (Fig 2.15)*

Cutting layers cg8 (LUB 13) was a circular brick-lined well cg10, located immediately east of the demolished and levelled chapel (LUB 12). It was only excavated to a depth of 1.5m.

#### *LUB 17 Demolition of Chapel, and other alterations?*

The chapel was demolished and levelled down to its foundations cg7 (LUB 12) Sealing foundation cg7 (LUB 12) was clayey sand cg17.

In 1772 the chapel was demolished, apparently to avoid the expense of its upkeep (Stocker 1987, 113).

#### *LUB 18 Disturbance: antiquarian excavation?*

The layers excavated within the chapel have been

grouped as one, cg22. There were two recorded sequences in the lower levels. At the limit of excavation was clayey sand and limestone which was sealed by pebbles with limestone fragments in light sandy clay, over which was more sandy clay; this was sealed by limestone and sandstone fragments in clay. Also at the limit of excavation were limestone in sand silt and pebbles sealed by sandy clay; over this was clay with mortar and bone, followed by clay with limestone. Both sequences were sealed by clay with fragments of Roman painted plaster over which was sandy mortar and limestone filling hollows in the underlying layer.

The fragments of medieval pottery (69 post-Roman sherds) from cg22 were of early/mid to late 13th-century date. There was also a very large amount of residual Roman, together with late Saxon and Saxo-Norman material. It would seem from this evidence that these layers were a secondary deposit, post-dating the construction of the chapel. The mixed composition of the finds assemblage, which includes residual Roman material and a large proportion of structural debris (particularly architectural fragments), also suggests redeposited material, while the latest glass indicates an 18th century or later date.

James Essex supervised the demolition of the chapel and the reason for the disturbance of layers within the chapel may well have been due to antiquarian excavations undertaken by him during demolition. He took a keen interest in the development of the cathedral and wrote about his observations in *Archaeologia* (Essex 1777).

#### *LUB 19 Backfill of well*

The upper part of the well cg10 (LUB 16) had been demolished and the well backfilled with brown loam and yellow-brown sandy clay cg11 with limestone rubble, bricks, pebbles and mortar. Cg11 produced a small group of pottery (54 post-Roman sherds) with the contemporary material dating to the 18th century. The finds assemblage is of similarly mixed composition to that from cg22, perhaps suggesting that the disturbance LUB 18 and the backfill of the well were either contemporary or contained material from the same source.

#### *LUB 20 Chapel (Figs 2.16 and 2.38)*

At the bottom of the trench in the northern part of the site was a circular posthole cg27; it contained a sherd of pottery dating from the 18th century. The posthole, as layer cg26 (LUB 15), was sealed by a layer of trampled mortar and limestone fragments in dark loam cg29. Pottery from cg29 (7 post-Roman sherds) dated from the 17th to 18th centuries. Several architectural fragments and fragments of lead (?roofing) waste were also recovered from cg29.

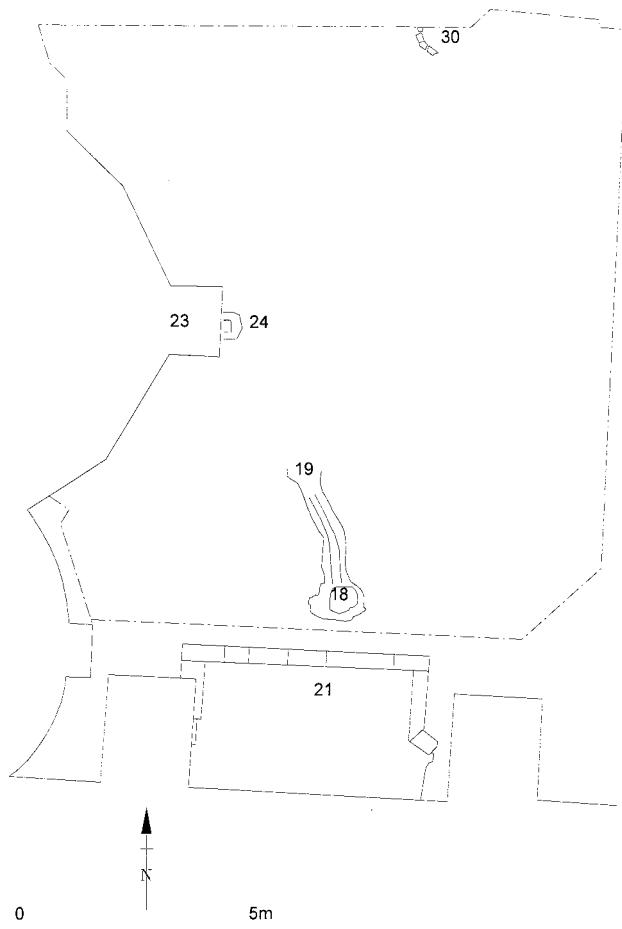


Fig 2.16 cat86: new chapel cg23 and drainage with wall cg21 to south: LUBs 20, 21 and 22

In 1773 the new chapel cg23 was built (Stocker 1987, 113). It was probably associated with trample cg29 and possible scaffold hole cg27. This new chapel was a small structure, its dimensions may have been governed by the presence of the solid foundations of the Roman wall (LUB 9). The central buttress of the new chapel protruded slightly beyond this, however, to be partly founded on chapel backfill rubble cg22 (LUB 18).

#### LUB 21 Drainage (Figs 2.16 and 2.43)

Cutting cg29 (LUB 20) was an arc of stones cg30 exposed at the edge of excavation north of the chapel. These may have been the remains of a small soakaway but it was not fully excavated, and its significance is unclear. Two of the stones are both pieces of sandstone paving with the setting of spikes or railings: the two fragments fit together to define a line of spikes with one at right angles (as a brace?). The stones do not appear to be weathered and may therefore come from an internal feature, such as a railing around a tomb or monument: this would suggest a post-medieval date.

The foot of a stone coffin cg24 (Fig 2.43), re-deposited in the 18th century or later, partly overlay the foundations of the 1773 chapel (LUB 20). This may well have come from a burial within the chapel, but the identity and date of the burial is not known. The stone coffin fragment seems to have been used as a gutter-base, leading into stone-lined drain cg19, which cut through the demolished south wall cg7 (LUB 12) of the chapel and fed into sump cg16 at the limit of excavation. The sump was a brick-lined circular feature which acted as a soakaway. Sump cg16 produced a few sherds of late 17th to mid 18th-century date and cg19 part of a wine bottle, probably of 18th-century date. Sealing both sump cg16 and layer cg17 (LUB 17) was sandy clay with fragments of limestone cg18.

#### LUB 22 Wall (Figs 2.16 and 2.41)

A roughly coursed limestone wall cg21 was built, partially sealing the exposed remains of the demolished chapel cg6 (LUB 10) of St Hugh's Choir.

#### LUB 23 Pits

One pit cg20 (unplanned) probed down to the Roman wall cg4 (LUB 9) and the other cg25 (unplanned) dug down within the area of the chapel (LUB 12).

#### Modern (cat86)

Sealing the whole excavation were layers and service trenches LUB 24.

#### LUB 24 Dumps and service trenches

Sealing cg15 (LUB 15), cg11 (LUB 19), cg18, cg19, cg24 and cg30 (LUB 21), cg21 (LUB 22), cg20 and cg25 (both LUB 23) were loam layers cg31 with limestone, glass, brick, mortar, bone, worked stone and clinker, sealed by grass and cut by service trenches. The positions of the wall foundations cg7 remained visible as grassy mounds up to the time of the excavation.

An interesting group of pottery (384 post-Roman sherds) was recovered from layers cg31. There was a large number of 17th- and 18th-century vessels present which probably represented disturbed dumped material from occupation in the area prior to the 1773 chapel demolition/construction (LUB 20). A large assemblage of registered finds was also recovered from layers cg31; this material consists predominantly of building debris, particularly architectural fragments and window glass, and includes material that almost certainly relates to the demolition of the chapel. A further massive quantity (in excess of 3,000 pieces) of window glass of post medieval and later date, and some lead roofing waste, was also found but only a sample kept. A few pieces of 16th- and 17th-century date,

including a copper alloy book clasp (2) <44> and several lead seals (1) <5, 6, 9> may also represent disturbed occupation material derived from the same source as the pottery noted above.

**(iv) Excavations to the south-east of the cathedral (south-west of the south-east transept), lc84 Area B (see also Stocker 1985a) (Fig. 2.32)**

*Roman (lc84 Area B)*

In the Roman period the east wall of the upper city was constructed, and later thickened LUB 25. The dating of this LUB is dependent on that established for the upper circuit as a whole (Jones, M J 1980).

*LUB 25 East wall of the upper Roman city and postern/tower (Figs 2.17, 2.30, 2.44 and 2.45)*

At the limit of excavation the lower courses of the east wall cg201 of the Upper Roman city were exposed. The excavation did not reach the bottom of the wall, but a height of 3.6m was revealed.

Two phases of Roman construction were identified, an early narrow wall cg201, with later thickening cg202; these were dated by comparing the sequence with other sites on the upper defensive circuit (Jones, M J 1980, 50–54); the early narrow wall cg201 (c1.5m wide), was dated to the early 2nd century. It had a west (internal) face of small well-squared stone in orderly courses. The mortar in the rubble core and west face was pinkish in colour. On the east face the well-dressed limestone was laid in more erratic courses and the colour of the mortar was more yellow. The lowest three

courses visible of the east face consisted of large blocks which terminated at a vertical joint cg228 to the north.

A thickening cg202 of the wall to the west (internal) probably dated to the late 3rd or 4th century, and was constructed of more roughly-laid limestone in pinkish mortar. Pottery from cg202 (14 sherds) was residual.

To the north of vertical joint cg228 was a masonry projection cg230; the upper three courses of wall cg201 were keyed in to the projecting masonry cg230 (Fig 2.45). The vertical joint cg228 at the north end of the lowest three courses continued up between wall cg201 and the projecting masonry cg230, except for the uppermost three courses. The projecting wall could represent the remains of a tower, of Roman or Norman date, perhaps located at a point where there had previously been a postern (Stocker 1985a, 17).

*Early Medieval (lc84 Area B)*

The choir of the cathedral LUB 26 was built over the truncated Roman wall. Although the date of building is recorded in the documentary evidence as being from 1192, the construction dating is corroborated by the presence of late 12th century architectural fragments and pottery.

*LUB 26 Construction of St Hugh's Choir foundations (Figs 2.18, 2.30, 2.44 and 2.45)*

In the late 12th century, the east end of the cathedral broke through the line of the Roman defences (LUB 25), and the truncated city wall was reused in its foundations.

To the east of the site at the limit of excavation were dumps; these deposits cg226 were invest-

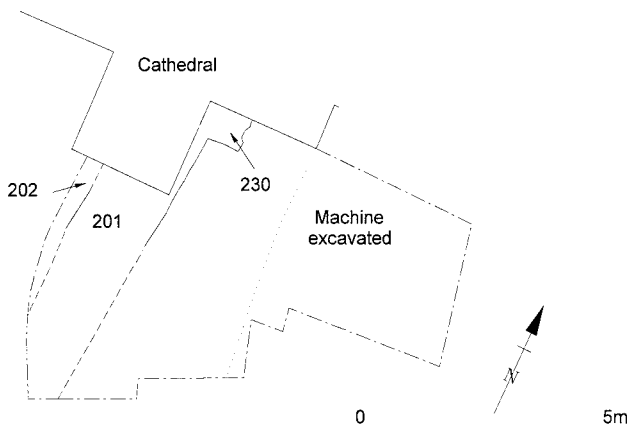


Fig 2.17 lc84 Area B: north-south wall cg201 with thickening cg202 and masonry projection cg230: LUB 25

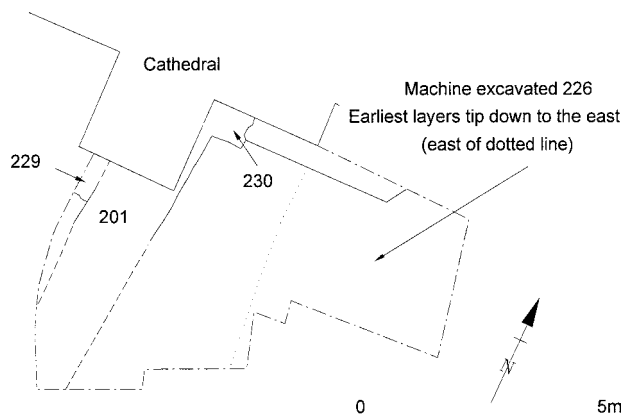


Fig 2.18 lc84 Area B: truncation of wall cg201 and reuse as foundations together with cg203 and cg229 for St Hugh's Choir: LUB 26

igated mechanically (Fig 2.29) and seen to fill the Roman ditch. Sealing the east side of the wall cg201 (LUB 25) was brown silt and sand with patches of mortar and limestone rubble cg204 and similar material over this cg205. There was a marked fall to the east on top of cg205.

Also sealing dump cg205 were further dumps cg206 and cg207. Although they both included occasional dumps of sandy loam and clay, the majority of these deposits consisted wholly or largely of limestone chippings.

Sealing the pinkish mortared limestone cg202 (LUB 25) were foundations of limestone rubble and mortar cg229, which continued westwards beyond the limit of excavation; here the limestone rubble was bonded with grey mortar; this material was interpreted at the time of excavation as consolidation in preparation for the construction of the south-east transept. There were also foundations cg203 to the south of the Roman wall which sealed dump cg206; these had been constructed from roughly squared, well mortared, coursed rubble.

Much of the dump cg206 consisted of crushed limestone of the sort categorised as 'quarry waste' but a proportion of the stone was worked, and included 14 small broken fragments of architectural details, many dating to the early 13th century, including a fragment of a Purbeck/Alwalton shaft. Alwalton marble (from the Nene Valley, west of Peterborough) was a stone used for many of the ornamental shafts in St Hugh's Choir and it seems likely that these dumps are composed of waste which had accumulated on the masons' lodge floor during its construction. Further confirmation of this was the discovery of a probable mason's chisel (77) <140> within one of these dumped layers. It is understood from the documentary evidence that Hugh began the re-building of the cathedral in 1192 and that work continued for more than a century (Hill 1948, 112). A small but contemporaneous group of late 12th to early 13th-century pottery came from cg206 and cg207.

#### *Early medieval to post-medieval (lc84 Area B)*

A graveyard LUB 27 sealed the construction dump of the choir, LUB 26. This was sealed by dumps LUB 28. Cutting these dumps was a later continuation of the graveyard LUB 29; related finds date between the 14th and the 17th centuries.

#### *LUB 27 Graveyard (Fig 2.19)*

Cutting dump cg206 (LUB 26) were two inhumations cg208 and cg209.

#### *LUB 28 Dumps (Fig 2.30)*

Inhumations cg208 and cg209 (LUB 27) were sealed

by dumps cg210; this consisted of sand and soil with a high rubble content and occasional grey clay inclusions, dumps divided by thin bands of soil.

A small but contemporaneous group of late 12th to early 13th-century pottery (17 post-Roman sherds) came from cg210 and included an unusually high proportion of LEMS cooking pots; this probably represented residual material from LUB 26.

#### *LUB 29 Graveyard (Figs 2.20 and 2.46)*

Sealing dump cg210 (LUB 28) were shallow sandy loam layers containing some rubblely mortar cg211 and cg215. Dump cg210 (LUB 28) was cut by inhumations cg212, cg213, cg214, cg216 and cg217. Layer cg211 was cut by inhumations cg218, cg219 and cg220. A single post-Roman sherd of 14th or 15th century date was recovered from cg211. The excavator reported that there were at least four more inhumations adjacent to the excavations, which were left undisturbed, and suggested that the cluster of graves was related to the establishment of the Shrine

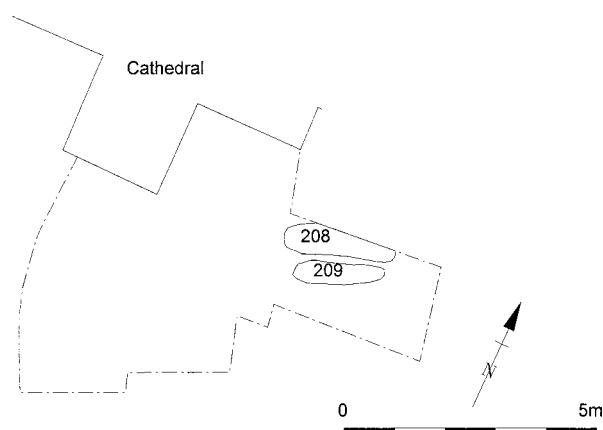


Fig 2.19 lc84 Area B: graveyard: LUB 27

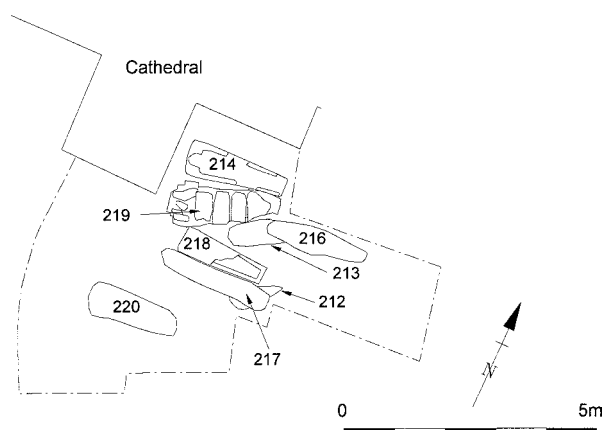


Fig 2.20 lc84 Area B: graveyard: LUB 29

of Bishop Grosseteste in the nearby transept chapel in 1253 (Stocker 1985a, 19).

Sequences of two intercutting graves were observed. Two of the burials (cg214, cg218) were in stone coffins, and a third was in a virtually intact cist cg219 (Fig 2.46). Fragments of a welted leather shoe upper found by the foot of the skeleton in cg219 show constructional details which suggest it to be of post-medieval, probably 17th-century date (Mould 1993). A small group of finds recovered from the head end of the cist, including pottery, window and bottle glass of 18th-century (or later) date, was probably intrusive; the stone above the head of the skeleton was broken, allowing soil to slip down into the cist. The skeletons were generally well preserved (Henderson 1984; Boylston and Roberts 1994). One was of a young woman.

#### Modern (1c84 Area B)

Sealing the graveyard LUB 29 were modern layers and pits LUB 30, associated with 18th/19th century pottery.

#### LUB 30 Layers and Pits (Fig 2.30)

Shallow dump layers of sandy clay loam and rubble cg223, limestone rubble cg224 and sandy clay loam, limestone rubble and mortar cg227 sealed inhumations (LUB 29) and the underlying stratigraphy. Pit cg221 cut dump cg227; and subrectangular pit cg222 cut dump cg223. Pottery sherds of 18th or 19th-century date were recovered from cg222, cg223 and cg227. The site was probably truncated in 1883–4 during the construction of a new road.

### (v) Excavations in the “Nettle Yard”, ny87

#### Roman or Early Medieval (ny87)

At the limit of excavation was wall LUB 31. It was abutted or cut through by layers LUB 32 containing pottery dating from the mid 3rd century and a mid to late 3rd century coin. Sealing both LUBs 31 and 32 was demolition material LUB 33 which was also associated with 3rd century Roman material, which could be residual.

#### LUB 31 Substantial wall (Figs 2.21 and 2.47)

At the limit of excavation in Area I were the foundations of a massive north–south limestone wall cg503. The wall was nearly 2m wide, with large facing stones and a rubble core bonded with yellow-brown very sandy mortar. There was no evidence for an eastern or western return. In Area II there were traces of a very rough limestone foundation cg504 bonded with yellowish brown sandy clay. This

would seem to be the robbed remains of the lowest layers of the wall foundation; it appears to have a western return in Area II: there were two courses of faced stones.

There was no dating evidence within the wall itself, but stratigraphically the wall could be late Roman, as it was abutted by layers LUB 32 containing pottery from the mid/late 3rd century, and was sealed by demolition layers LUB 33 which were also associated with Roman material. The wall was, however, assumed to be of medieval date on the basis of the level at which its remains were encountered, and the fact that it did not resemble Roman construction as found elsewhere in the city.

#### LUB 32 Layers

At the limit of excavation in Area I, abutting cg503 (LUB 31) were silty sand and sandy clay layers cg501 with small pebbles, limestone flecks, fragments of *opus signinum* and charcoal flecks. These were sealed by greyish-brown sandy clay cg502 with limestone chips, mortar flecks and oyster shell.

Pottery from cg501 (37 sherds) and cg502 (16 sherds) included sherds of GREY and NVCC and dated to the mid 3rd century. Cg502 produced an irregular radiate coin of c 270–284 (Davies, J A 1992) together with an intrusive sherd (LSW) of post-Roman date.

#### LUB 33 Demolition of wall

A layer of probable wall demolition material, sandy clay, limestone fragments and a few pieces of roofing slate cg506 overlay the levelled wall cg503 (LUB 32). Cutting into the wall cg503 (LUB 32) was a small pit cg509 (0.40m by 0.30m; 0.15m deep). This was

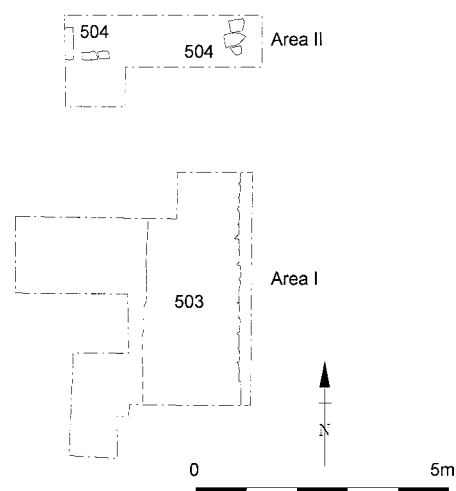


Fig 2.21 ny87: north–south wall cg503 and cg504: LUB 31



probably created during the demolition process. Yellowish-brown sandy clay with many small limestone fragments and orange mortar patches cg505, a similar layer to cg506, sealed wall fragment cg504 (LUB 32) in Area II. The few sherds of pottery from cg505 (2 sherds) and cg509 (3 sherds) were residual. There was a fragment of intrusive post medieval glass and post medieval/modern pantile from cg509.

### *Early medieval (ny87)*

Sealing the possible Roman demolition layer in Area I were layers **LUB 34**. Cutting these layers were late 12th-century cathedral buttresses **LUB 35**. The dating of the buttresses dates both LUBs 34 and 35.

#### *LUB 34 Layer*

Sealing pit cg509, and rubble cg506 (both LUB 33) were layers of brown sandy clay cg511 with some sand and limestone over which was brown sandy clay cg513 with much limestone, pieces of cleaner clay which sealed the whole of Area I.

Only three pottery sherds were present, of late 13th to early 14th century LSW2; these were probably intrusive sherds, as the LUB was cut by buttresses (LUB 35). There were also intrusive fragments of window glass and pantile, the latest of which were modern.

#### *LUB 35 Cathedral buttresses (Fig 2.22)*

A north-south trench cg512 in Area I, approximately a metre wide, cut through sandy layers cg513 (LUB 34). It was the foundation trench for a curving foundation cg507, of mortared limestone blocks. A somewhat similar, but not so curved, feature cg508 formed the western limit of excavation in the western arm of Area I.

Upon foundations cg507 and cg508 sit standing buttresses cg510 of St Hugh's late 12th-century cathedral.

It would seem that trench cg512 had been disturbed; it contained post medieval pottery and two pieces of modern window glass from cg512.

### *Post-medieval (ny87)*

A large pit **LUB 36** cut into LUB 33, through LUB 32 and below, beyond excavation in Area II. The pottery and clay tobacco pipes date this to the 17th or 18th century.

#### *LUB 36 Large pit (Fig 2.23)*

A large pit cg516 in Area II cut layer cg505 (LUB 33); it was not fully excavated. It is otherwise unphased, being sealed by modern topsoil. This pit was remarkable for being filled by limestone rubble and architectural fragments, almost to the exclusion of

soil. The architectural fragments dated between the late 12th century and the early 14th century; some of the later fragments appear to have come from a canopied tomb or piece of liturgical furniture of the 14th century (see discussion). There was also a small sculptural fragment, from a gowned figure, which is probably of 14th- or 15th-century date. Only four post-Roman sherds were found, of which the latest two date to the 17th or 18th centuries. The pit cg516 also contained medieval window glass, but the latest material included 17th/18th-century clay tobacco pipe fragments and intrusive modern glass.

### *Modern (ny87)*

Two small pits **LUB 37** cut into LUB 34 one of which was associated with 18th/19th century glass. These and pit LUB 36 were sealed by topsoil which was in turn cut by pipe trenches **LUB 38**.

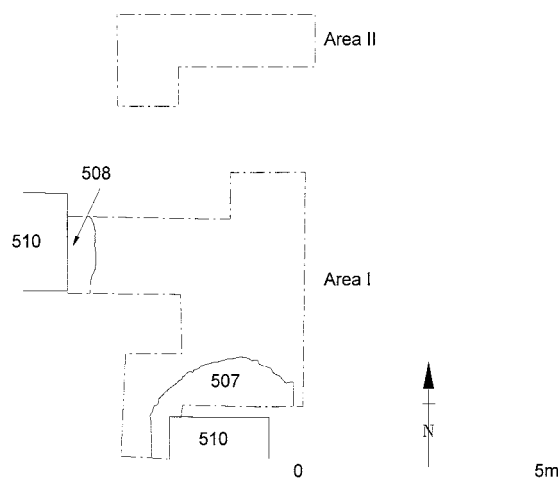


Fig 2.22 ny87: buttress foundations cg507 and cg508 with buttresses cg510: LUB 35

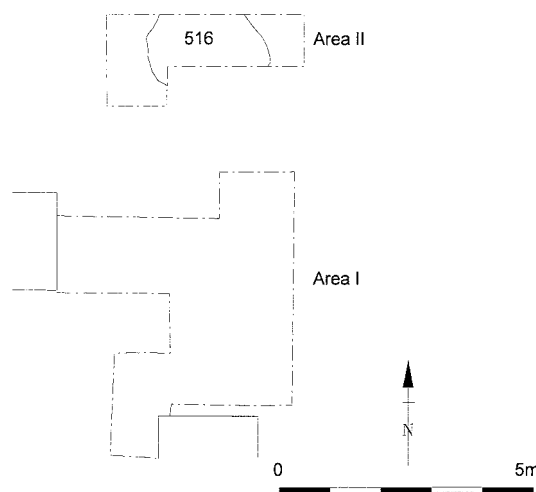


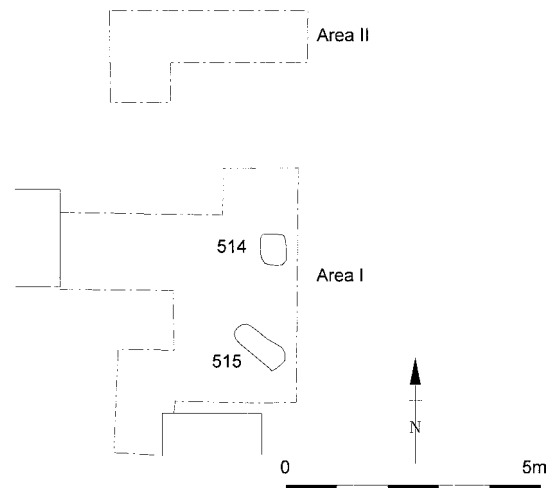
Fig 2.23 ny87: pit cg516: LUB 36

*LUB 37 Two small pits (Fig 2.24)*

Cutting layer cg513 (LUB 34) was small pit cg514 (0.60m by 0.30m and 0.25m deep) and cg515 which had steeply sloping edges and a flat bottom (0.90m by 0.43m and 0.10m deep), aligned south-east to north-west. Fragments of 18th/19th-century glass came from cg515.

*LUB 38 Topsoil and pipe trenches*

Sealing the pit cg516 (LUB 36) as well as pits cg514 and cg515 (LUB 37) was a layer of very dark greyish-brown sandy clay with much limestone chippings together with some ash and clinker cg517 (0.27m thick).

**(vi) Excavations in the nave, lc84 Area C***Saxo-Norman*

There were possible traces of the Norman cathedral LUB 39.

Fig 2.24 ny87: Pits cg514 and cg515: LUB 37

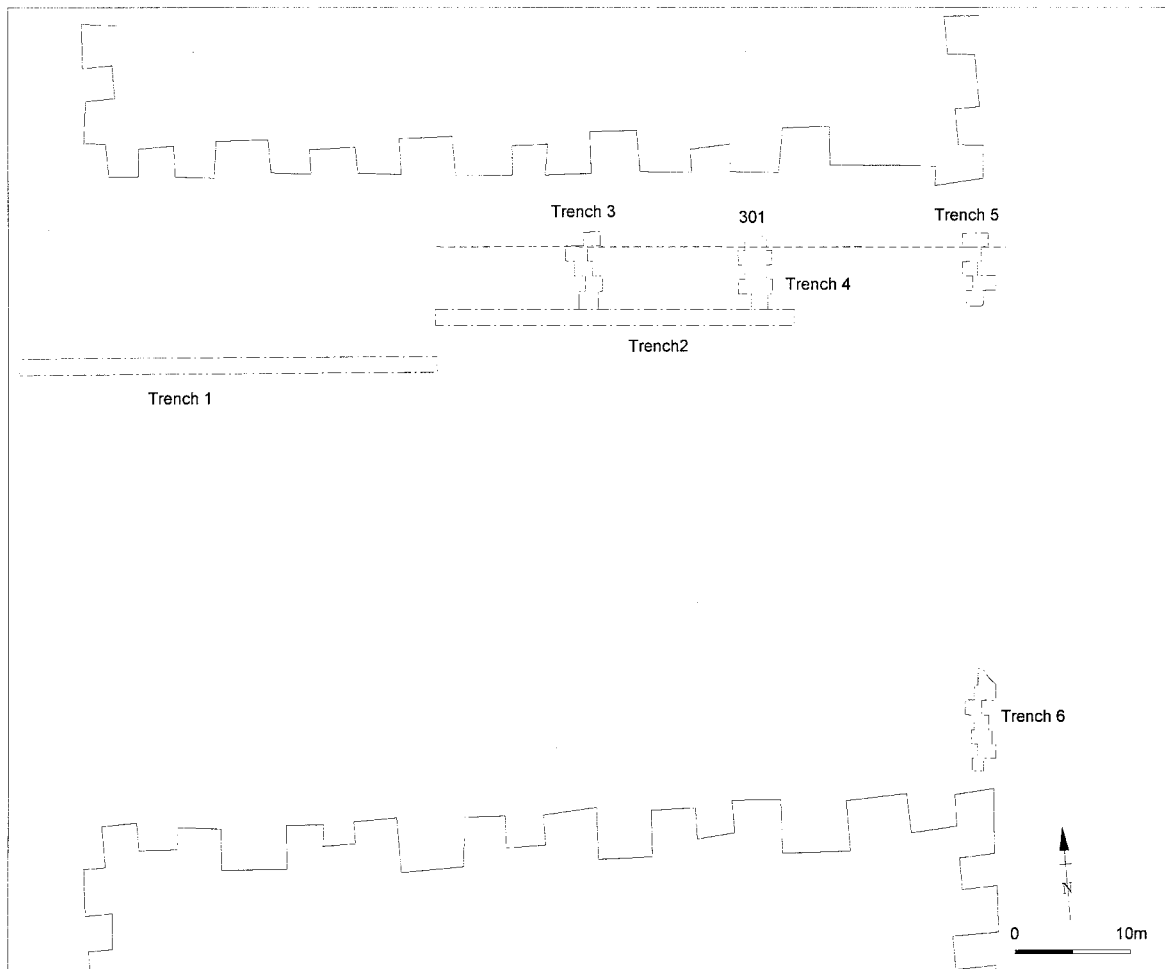


Fig 2.25 lc84 area C: plan of trenches 1-6; the line of the Norman cathedral is indicated: LUB 39

*LUB 39 Norman cathedral (Fig 2.25)*

The line of the north wall cg301 of the Norman cathedral appears to have been traced in Trench 4 as the edge of the cut of a robber trench; however, it was not obvious in either Trenches 3 or 5.

*Early Medieval (1c84 Area C)*

The foundations of the early medieval arcade and crossing piers were observed **LUB 40**.

*LUB 40 Nave pier foundations (Figs 2.26 and 2.33)*

The piers of the nave northern arcade were constructed of local limestone stone and Purbeck marble. The foundations of five of the piers cg308 in the north part of the nave were viewed during the uncovering of the paving slabs. The foundations included some re-used material, possibly from the Norman nave, including a Norman column base and the remains of a pillar. To the north-west of the 6th pier from the west, in Trench 4, were fragments of Purbeck marble cg302, probably waste material used as make-up under the flagstones.

The foundations of the crossing piers cg309 at the east end of the nave were observed in Trenches 5 and 6. The nave was probably completed by the mid 13th century (Antram and Stocker 1989, 465).

*Medieval to Post-Medieval (1c84 Area C)*

Graves and make-up under the flagstones **LUB 41** were noted.

*LUB 41 Makeup and graves under the flagstones*

In Trench 1 there were patches of mortar cg306. In Trenches 3 and 6 there were areas of mortar rubble cg304 and cg303. In Trenches 1, 5 and 6 there were possible traces of graves. In Trench 1 a possible grave cut was visible cg305; this appeared to be cut and sealed by a slab, possibly a tomb base cg311. In Trench 5 there was an outline of stones cg310, perhaps marking the edge of a grave. In Trench 6 there was a cut cg307, possibly the edge of a grave.

**(vii) Excavations on the north-west side of the cathedral, in Dean's Green, dg83***Saxo-Norman to High Medieval (dg83)*

There was evidence for foundations **LUB 42** in Trench III; no positive dating evidence was recovered. To the east of this, also in Trench III, was a different foundation **LUB 43**, possibly dating to the 13th century and the construction of the Morning Chapel.

*LUB 42 Foundations (Figs 2.27 and 2.48)*

At the limit of excavation in Trench III were limestone rubble foundations in the west part of Trench III. They extended for an unknown distance to the north and west of the trench, and consisted of irregular rubble cg403.

No positive dating evidence was recovered, but cg403 was sealed by the Morning Chapel to the south and the limit of cg403 aligns approximately on the east edge of the surviving 11th-century western block of the cathedral. Perhaps cg403 dated as early as the Norman period.

*LUB 43 Foundations (Figs 2.28 and 2.49)*

To the east of foundations cg403 (**LUB 42**) was an area of foundations which consisted of more evenly-sized, regularly-laid blocks cg417 whose northern edge lay within the area excavated. No positive dating evidence was recovered, but the foundations cg417 might relate to the Morning Chapel constructed around 1240. It would seem that the levelled cg403 (**LUB 42**) foundations were re-used for this purpose also.

*Late Post-Medieval (dg83)*

Sealing the foundations **LUBs 42** and **43** in Trench III, as well as the limit of excavation in Trench II was rubble **LUB 44**; it seems possible from the pottery throughout the later sequence, as well as that from the rubble, that this was deposited in the 18th century. Probably of a similar date was rubble **LUB 45** at the limit of excavations in Trench 1. Cutting rubble **LUB 44** was a charnel pit **LUB 46**. Over rubble **LUB 44** in Trenches II and III were layers **LUB 47**. Both **LUBs 46** and **47** contained 18th-century pottery.

*LUB 44 Rubble*

At the limit of excavation in Trench I was rubble, limestone with occasional brick and tile mixed with clay, silt and sand cg401.

*LUB 45 Rubble*

Rubble cg404, in Trench III, sealed the apparently robbed foundations cg403 (**LUB 42**), as well as the foundations cg417 (**LUB 43**) which extended from the Morning Chapel. There was a similar rubble layer cg402 in part of Trench II, at the limit of excavation.

It is difficult to date this **LUB**, as the small group of pottery (3 post-Roman sherds) includes both residual and possibly intrusive material. Sherds of Roman, medieval, post medieval and early modern material are present. Finds are largely structural, including nails and roofing lead, but include possibly intrusive modern (19th-century) vessel glass.

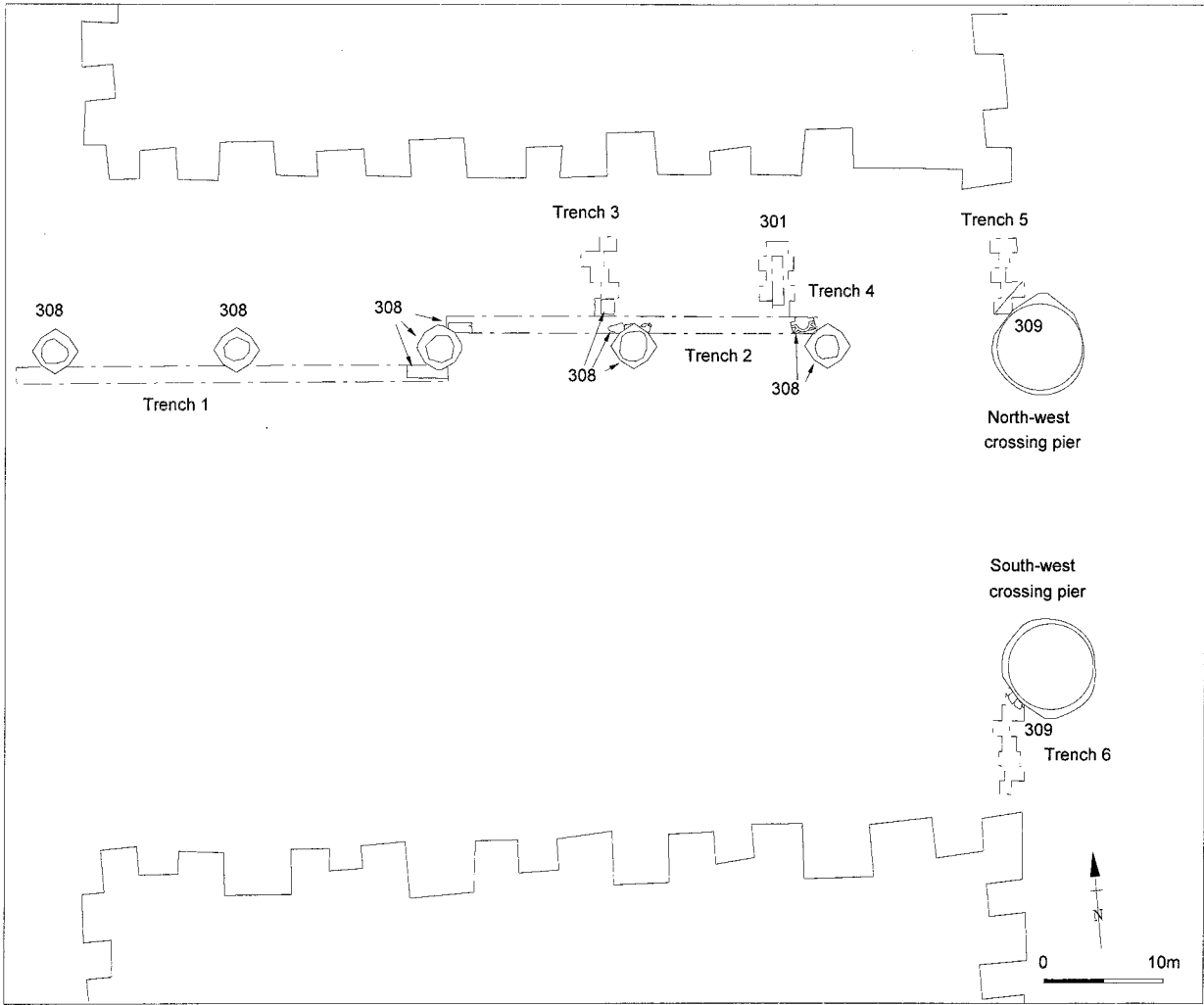


Fig 2.26 lc84 Area C: plan of trenches 1–6 and standing piers: LUB 40

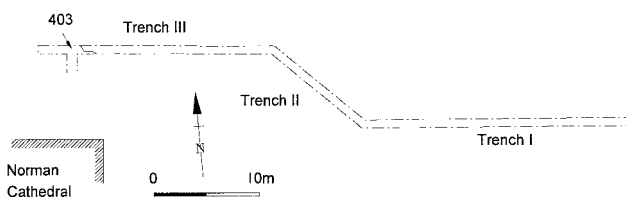


Fig 2.27 dg83: plan of trenches I–III, showing foundations cg403: LUB 42

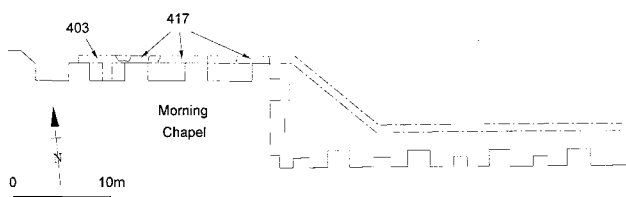


Fig 2.28 dg83: plan of trenches I–III, showing foundations cg417: LUB 43

*LUB 46 Charnel pit (Fig 2.29)*

Cutting the rubble cg401 (LUB 44) in Trench I was a large charnel pit cg407, packed with human bones. Only two vessels of 18th-century date occurred.

*LUB 47 Layers*

Overlying the rubble layers cg402 (LUB 44) in Trench II was soft dark yellowish clay loam cg409 sealed by a limestone rubble patch cg410 and a patch of decayed limestone fragments cg411. These layers

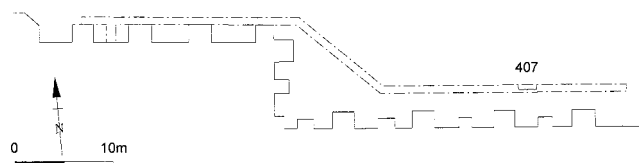


Fig 2.29 dg83: plan of trenches I–III, showing charnel pit cg407: LUB 46

produced a sherd of post-medieval pottery and residual sherds of Saxo-Norman and early medieval date; there was also 18th/19th-century glass.

Sealing cg404 (LUB 44), in Trench III was a rubble and earth layer cg405. Spit cg406 included layers cg404 (LUB 43) and cg405. This layer produced a very small pottery group (16 post-Roman sherds) dominated by 18th-century wares. The finds were largely structural (nails, lead comes and roofing waste) but also present were intrusive modern clay tobacco pipes, ironwork and glass.

### *Modern (dg83)*

Cutting LUBs 44 and 45 were various cut features LUB 48, sealed by a dump with service trenches cutting it LUB 49. Both LUBs 48 and 49 were associated with modern material. All these features appear to represent operations to repair or to provide services to the cathedral.

#### *LUB 48 Cut features*

Posthole cg408 cut cg402 (LUB 44) in Trench II; it was very neat and flat bottomed and a piece of lath, probably modern in date, was recovered from it. East-west trench cg414 (about 0.32m wide) in Trench II, had been cut into the limit of excavation; it contained part of a modern lightning conductor and perhaps was excavated for conductor renewal. Running parallel to cg414 and very similar was trench cg412 in Trench II, which cut rubble cg411 (LUB 45). Cutting north-south through the limit of excavation was an electric cable trench cg413 in Trench II.

#### *LUB 49 Dumps and service trenches*

In Trench II sealing trench cg412, trench cg414, cable trench cg413 and posthole cg408 (all LUB 48) and rubble cg410 (LUB 45), as well as rubble cg405 (LUB 47) in Trench III and charnel pit cg407 (LUB 46) in Trench I were clay loam dumps cg415. Seen to be cutting this were modern service trenches cg416. A range of pottery dating from the late medieval to the modern period was dominated by material of 18th-century date. There was a mid-19th-century clay tobacco pipe from cg415.

## Discussion

### *Roman fortifications*

The vertical joint cg228 (LUB 25; Fig 2.32) in lc84, Area B suggested to the excavators that there was at one stage an opening here; such a feature is unlikely to have been present in the original 2nd century wall (M J Jones pers comm), and the excavator suggested that this may have been the south jamb of a postern gate inserted through the wall in the later Roman

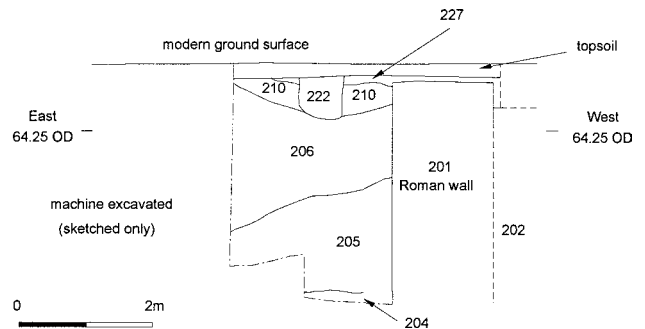


Fig 2.30 lc84 Area B: east-west section showing dumps LUB 26, against the Roman wall LUB 25

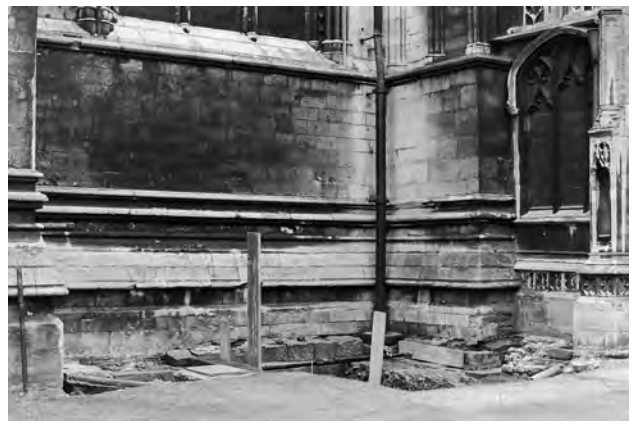


Fig 2.31 Looking south-west giving a general view of lc84 Area A



Fig 2.32 Looking north-west at the excavation of lc84 Area B



Fig 2.33 Trench 3 looking south-east, towards the 5th pier from the west: lc84 Area C



Fig 2.35 Looking south-east at the foundations cg101 of the retrochoir: lc84 Area A, LUB 1



Fig 2.34 Looking south giving a general view of cat86 under excavation



Fig 2.36 Looking west at the foundations cg103 of the Fleming Chapel: lc84 Area A, LUB 2

period (Stocker 1985a, 17). It was considered that all but the lowest three courses of the wall cg201 had been refaced at the time of the construction of the projecting structure cg230 (Stocker 1985a, 17). The joint cg228 no longer existed at the uppermost of the three courses where the projected masonry cg230 was bonded in the wall cg201. This projecting masonry was interpreted as an external tower (Stocker 1985a, 17); no such structure is known elsewhere on the Roman circuit, except at gateways,

so it had seemed possible that this was a gate (M J Jones pers comm) rather than a tower. Another interpretation given for this projecting masonry was that it formed part of the early Norman re-fortification of the city (Stocker, *loc. cit.*)

The north-south wall LUB 9, cat86, probably represented the east wall of the Upper *colonia* along the line of the wall (Figs 2.13, 2.38-9). Residual Roman pottery recovered in later layers (LUBs 12, 15 and 18) would have all been brought in as part

of dumps from elsewhere, and so cannot provide any independent dating for the wall. The projected line of the foundations (Jones, M J 1980, fig 1) lay along the edge of these excavations. The ditch to the east of the wall was not excavated. The wall foundations LUB 9 were damaged after truncation. The northern part appears to have been cut during the construction of the flying buttress of the Chapter House. The southern end may have been disturbed during insertion of a manhole just south of the buttress.

The pottery dating from the mid 3rd century, recovered from layers (LUB 32) which abutted the wall suggested a Roman context. If so, it might have formed part of a large civic or private structure within the upper *colonia*. The eastern defences lay less than 25m to the east. A Norman date is just as likely.

### *Norman Cathedral*

The western foundations cg403 (LUB 42) found at dg83 pre-dated the construction of the Morning Chapel, built c1240 and were possibly related to the original late 11th-century cathedral. Richard Gem (1986) suggests that the western foundations cg403 may relate to an 11th-century structure north of the surviving 11th-century block. This would have made the cathedral more credible as a military structure, as it would have enclosed the

large ground-level arch on the north side of that block, which would otherwise have been vulnerable to attack (see now Stocker and Vince 1997).

Traces of the Norman cathedral (LUB 39) were also found at lc84, Area C in the form of possible robber trenches of wall foundations, while the early (undated) wall at ny87 (LUB 31; Fig 2.47) may have belonged to an early transept, perhaps a chapel, or even an earlier chapter-house.



Fig 2.38 Looking west at the east face of the west wall cg4 of the Roman/Norman defences; sealing the truncated wall were the foundations cg7 of the chapel and over the levelled remains of these, the 1773 chapel cg23: cat86, LUBs 9, 12 and 20



Fig 2.37 Looking south-west at the base of the flying buttress cg601 of the Chapter House with well cg610 and soakaway cg611: ch83, LUBs 6 and 7



Fig 2.39 Looking south-east at the ragged north end of Roman wall cg4, sealed by the north-west corner of the chapel foundations cg7: cat 86, LUBs 9 and 12





Fig 2.40 Looking south at the foundations cg6 of one of the radiating chapels of St Hugh's Choir; the foundations are abutted by later wall cg21, which can be seen (right); the foundations cg36 of the Angel Choir were built over cg6: cat86, LUBs 10, 11, and 14



Fig 2.41 Looking down the walls of the Angel Choir cg36, facing north on the foundations cg6 of one of the radiating chapels of St Hugh's Choir; to the north-west the chapel is abutted by a north-south wall cg12; the chapel foundations are encased by wall cg21; the chapel foundations cg7 can be seen to the north: cat86, LUBs 10, 11, 12, 14 and 22



Fig 2.42 Looking south-east at the relieving arch in the foundations cg32; foundations cg7 were constructed above: cat86, LUB 12

### Early Medieval Cathedral

#### St Hugh's Choir

When St Hugh's Choir and apse were built, it involved the partial demolition of the city wall and filling of the ditch, but no record existed concerning this action until 1255 when the king responded to a petition for licence to lengthen the cathedral by removal of the wall (Hill 1948, 120).

David Stocker has interpreted the whole sequence of the construction of St Hugh's Choir (Stocker 1985a, 18–19). He considered that the sequence of development on the site during the Roman period must have raised the surface level inside the wall much more than outside (Jones, M J 1980, fig 9 & fig 11). This disparity in levels would have created problems in building an extension of any size to the Norman cathedral. The floor level would have been on higher ground to the west of the Roman wall and there would have been lower ground to the east, a drop of perhaps 2–3 metres. It is suggested by Stocker that the difference in level was resolved by constructing 'foundations' which were partly above the contemporary ground level and then raising the ground level outside the wall to match that inside, a process which buried the newly built foundations. He considered that the first operation was undertaken outside the wall, the filling in of the ditch with earth and rubble. A very large pit was dug, both through any 'archaeological' levels which had accumulated on the berm, and through the area of the back-filled ditch to receive a 'lower foundation' perhaps a giant masonry 'raft'. The foundation pit was probably back-filled soon after the raft had been built within it, leaving just the upper part visible as a masonry platform.

The walls were then built on top of the raft, at a level which at that time, would have been above



Fig 2.43 Vertical view (west at top) of the foot of a stone coffin reused for drainage cg24: cat86, LUB 21



ground level. These walls would, at some stage, have to be coordinated with foundations constructed in the usual way (probably in trenches) to the west of the city wall. The city wall itself would thus have been embedded in the new building providing a sleeper wall for the eastern arcade and, no doubt, giving the whole structure an added rigidity. Once the walls of the eastern end had reached a sufficient height, the ground level outside the former city wall was raised by the dumping of enormous quantities of material around the east end. These dumps would have buried the lowermost 2.5m of the new walls, converting them into conventional foundations and continued until the top of the city wall had been covered to a depth of approximately 1m.

Stocker's proposed sequence of events culminated in the construction of the eastern end of St Hugh's Choir. The excavations at lc84, Area B showed the truncated Roman wall being used as foundations for the cathedral, and dumps cg204, cg205 and cg226 (LUB 26) built up the ground over the Roman ditch. Fragments from the construction of St Hugh's Choir were recovered in dump cg206 (LUB 26), which sealed the earlier makeup dumps. Foundations cg203 (LUB 26) for the cathedral, perhaps the 'raft' mentioned above sealed cg206 (LUB 26).



Fig 2.44 Looking north-east at the west side of the east wall cg201 of the upper colonia, reused to underpin the foundations cg229 of St Hugh's Choir: lc84 Area B, LUBs 25 and 26

### *Nave*

Following the demolition of the Norman nave, fragments of its fabric were re-used in the early 13th-century pier foundations (LUB 40), lc84 Area C.

### *High Medieval cathedral*

#### *North-east transept chapel*

The elucidation of the history of this chapel was the main purpose behind the excavations at cat86. Documentary evidence states that that body of Bishop Hugh was originally buried by the altar of St John the Baptist. David Stocker considered the mostly likely location of this altar to be in the north-east apse of the north-east transept (Antram and Stocker 1989, 450). In 1280 the corpse was eventually transferred with great ceremony to the purposely-constructed Angel Choir (Antram and Stocker 1989, 465). The architectural details of the chapel (recorded in the Hollar engraving; Fig 2.50) suggest that it replaced the north-east chapel within 20 to 30 years of its construction, involving a major re-modelling of the north end of the relatively new transept (Stocker 1987, 110–124). It is likely that the removal of St Hugh's shrine to the Angel Choir would have been accompanied by alterations to the arrangements of the chapel. Stocker suggests that the dedication of the altar was changed at this time (Stocker 1987; see now also Alexander 1995). A partial refenestration would also have been appropriate.



Fig 2.45 Looking north-west at the east side of the east wall cg201 of the upper colonia, showing the joint cg228 and masonry projection cg230; on the right of the photograph are the foundations cg203 of St Hugh's Choir: lc84 Area B, LUBs 25 and 26



Fig 2.46 Looking west along intact cist burial cg219:  
lc84 Area B, LUB 29

For the erection of the chapel, the ground was built up with layers of mortar, sand and limestone cg1, cg34, cg35 and cg8 (LUB 12). These were cut by foundations cg32 to the east, and constructed on both these foundations and the truncated Roman wall were the upper foundations cg7 (LUB 12; Fig 2.34). The make-up and the trench foundation fills both contained pottery dating to the early to mid 13th century. The foundations cg7 contained re-used architectural off-cuts of a similar date (1230–1250).

The stratified demolition layers of the chapel (LUB 17) did not contain any architectural fragments: but fragments which may well have been derived from its demolition were recovered in the latest layers on the site cg31 (LUB 24). There was a group of stiff-leaf capital fragments belong to from the first half of the 13th century. A keeled roll (1)<59> is indicative of a date range from the late 12th (eg, the Norman House on Steep Hill) to the mid-13th century. A date in the 1230s or 1240s is proposed for (1)<61>, a moulding with freestanding fillet, quirk and roll similar to mouldings from the nave dado arches.

Similarly, the window glass from cg31 (LUB 24) also may well have originally come from the chapel



Fig 2.47 Almost vertical view looking west at the foundations of a massive wall cg503: ny87, LUB 31

as suggested by David King, who has contributed the following account (King 1995d):

“The majority of the painted window glass from cg31 (LUB 24) appears to have come from grisaille glazing with stiff-leaf foliage and cross-hatched backgrounds. Eight pieces of this group have both foliage and cross-hatching, two have just the foliage and five others have just the cross-hatching. Four other pieces have decoration consistent with their having been fillets or borders within such grisaille windows, although of course they could have come from other types of glazing.

The type of grisaille glazing represented by the fragments in this group was commonly seen in churches, monastic buildings, cathedrals and high status domestic buildings in England during the first half of the 13th century. The author of the 13th-century *Metrical Life of St Hugh* wrote of the glass in Lincoln Cathedral that: ‘The top row of windows shines forth, bent down with a covering of flowers, signalling the manifold beauty of the world; the lower ones set the names of the holy fathers’ (Morgan 1983, 35–6). This has been interpreted as suggesting that some at least of the clerestory windows were at that time glazed with grisaille windows containing foliage forms, and that these windows may have been in the transepts, as the poem immediately goes on to describe the twin rose windows in the north and south transepts. There are windows in the cathedral which now contain remains of 13th-century grisaille glazing, notably the five lancets below the north rose (nXXX–XXXIV), but none of this glass is *in situ*. The Lincoln grisaille glass seems to have been a monochrome version of the pattern windows using coloured glass which existed in the 12th century, based on regular geometric forms (*ibid*, fig.C, 12, 16, 17), or consisting of square or diamond-shaped quarries (*ibid*, fig. C, 1–9, 13–15). The fragments discussed here are probably from the former type of window.

This type of grisaille glazing with stiff-leaf ornament and cross-hatching is normally dated to the first half of the 13th century, which would be consistent with the pottery and the architectural fragments. If the glass does come from the chapel, the corollary is that it did not come from the clerestory, as described in the *Metrical Life of St Hugh*; although the lower layer of glazing in the transepts probably contained figured glass with saints (some of which may be among the surviving medallions reset in other windows of the cathedral), it is highly likely that, as at Chartres Cathedral, for exam-



Fig 2.48 Looking south at foundations cg403: dg83, LUB 42

ple, some windows were glazed with grisaille rather than full colour. Grisaille was occasionally used for practical reasons, to allow more light into certain parts of a building, although it could also be financially attractive because coloured glass was much more expensive.

Another possibility is the use of grisaille backgrounds for medallion windows, but there is no evidence for this at Lincoln, and indeed evidence to the contrary in the south rose, where sections of coloured backgrounds to medallion windows have been reset. In any case, this type of mixed window is not known in England before the latter part of the 13th century, for example, the chapel at Merton College, Oxford, c.1294 (Marks 1993, fig. 123). On the other hand, there is evidence to suggest that the chapel housing the tomb of St Hugh in the north-east transept may have been glazed with at least one medallion window. Amongst the *membra disiecta* consisting of stray medallions which have been dispersed in the windows of the cathedral is an ovoid quatrefoil, now inserted into the north rose, which shows the Carrying



Fig 2.49 Looking west along trench III at foundations  
cg417: dg83, LUB 43

of the Body of St Hugh into Lincoln (north rose, C 1). This panel is earlier than the Angel Choir in style, and has been associated with a window next to the altar of St Hugh in the north-east transept (Morgan 1983, 32). Much of the medieval glass surviving in the cathedral in the 18th century was reset in the period 1760–90, and this particular panel may have been placed in the north rose at that time, perhaps as a result of the demolition of the medieval north-east transept chapel from which it may have come in 1772.

Another possibility to consider, however, is that the St Hugh glass was reused in the Angel Choir, and then moved in the 18th century to the north rose, although there is no evidence for this. There are many cases of the reuse of medieval glass during the middle ages, the best known being the 12th-century panel of the Virgin and Child at Chartres Cathedral; this was saved from a fire which destroyed most of the 12th-century building, and reused in a 13th-century setting in a window in the south choir aisle known as *la belle verriere*. The suggestion that the St Hugh window at Lincoln may have been reused is made because it would have been relatively new when the body of St Hugh was moved to the completed Angel Choir in 1280, and would also have been highly regarded as a locally important monument.

The St Hugh window, if made originally for the north-east transept chapel, would certainly have been placed in the east window of the

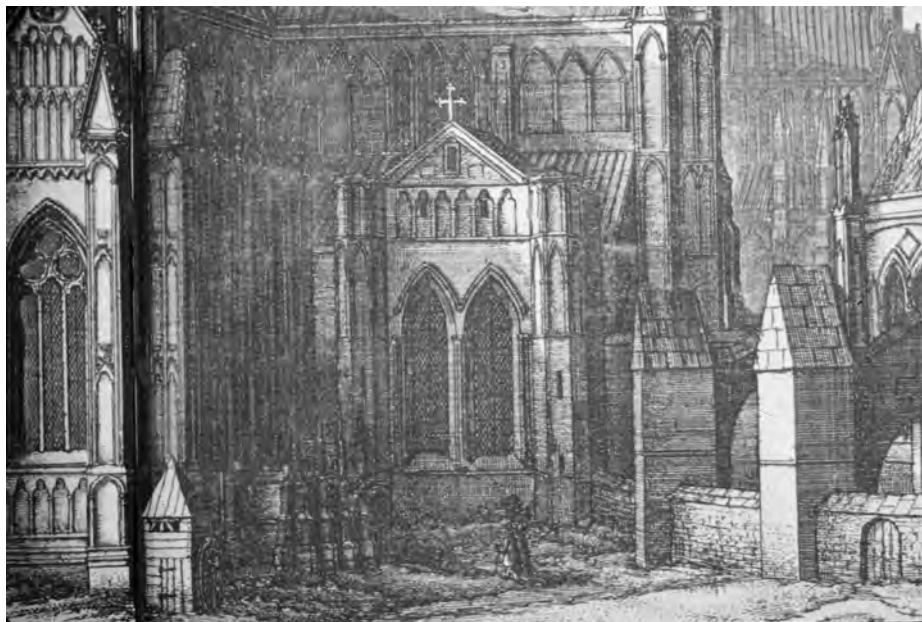


Fig 2.50 Hollar engraving of the north-east transept chapel of the cathedral in the 1670s

north transept, and the grisaille fragments discussed here would in that case have probably come from one or more side windows in the chapel, perhaps to give light in what would have been a rather dark part of the cathedral. In the case of a chapel built specifically to house the body of St Hugh, destined to be moved within a few decades to a grander setting in the new Angel Choir, the decision to glaze with the cheaper grisaille glass may have been influenced by the very fact that this was only a temporary resting place."

The site of the chapel has now been laid out for the public, with the positions of the walls marked.

#### *The Angel Choir*

St Hugh's Choir was replaced by the Angel Choir between 1256 and 1280. The foundations of the Angel Choir (LUB 1) in lc84 Area A were revealed; mid to late 13th-century pottery was found in the construction trench (Fig. 2.31).

Its construction involved the demolition of St Hugh's Choir (Fig 2.41); architectural fragments from the events were found not only in dump cg210 (LUB 28) lc84 Area B, but also in the later stratigraphy on the site. Sealing the first inhumations LUB 27 were layers of construction material LUB 28. It seems likely that this is the only trace of the Angel Choir's construction in lc84, Area B, except for architectural fragments from its construction, which were retrieved from the later stratigraphy.

Evidence for the demolition of St Hugh's Choir and the construction of the Angel Choir (LUB 14) in cat86 was found in later LUBs. Rubble cg13 (LUB 15) contained several fragments which were likely to date to the later 13th to 14th centuries. They included filleted ogee rolls, probably from window mullions similar to examples from the Angel Choir and Bishop's Eye. Plans of the cathedral made before the 1770s show a single large window on the south side of the chapel: this may have contained elaborate tracery in the Decorated style. The later 13th to 14th-century fragments also included a fragment of ornamental sculpture, which appears to be the seating of acanthus crocket and has affinities to the crockets of the Angel Choir Clerestorey. There was also a fragment of a moulding sequence similar in detail to the dado jambs of the Angel Choir, and likely to date to the mid-late 13th century. Later dumps cg14 and cg15 (both LUB 15) also contained architectural fragments dating from the later 13th or 14th centuries. Within cg15 (LUB 15) were several fragments of painted window glass, one of which (37) <185> prompts the following comment from David King (King 1995d):

This has a fruited stiff-leaf termination without

cross-hatching, datable to the period c1250–1290 or perhaps a little later, this being the date-range when stiff-leaf grisaille without cross-hatching is normally found. At the time, the stiff-leaf foliage, which had earlier been confined within the leading, often spread beyond it to form an overall pattern. In view of its context, this piece is possibly part of the glazing of the upper windows of the Angel Choir, where in the sculpture a mixture of stiff-leaf and naturalistic foliage is found. No substantial remains of this type of glazing have survived in the windows of the cathedral.

#### *Graveyard to the south of the cathedral*

The use of lc84 Area B as graveyard (LUB 27) dated to the period after the completion of St Hugh's Choir. There are documentary references to the establishment of a graveyard in this general area by the mid-13th century (Stocker 1985a).

#### *The Chapter House buttresses*

The Chapter House was begun before 1220; the date of its completion is not known (Antram and Stocker 1989, 480). The flying buttresses cg601 and cg602 however, may have been part of a later addition to the original design. The tops of the buttresses are not fully keyed into the main structure, but simply mortared on to the limestone wall, which had been roughened to provide a key (David Stocker, pers comm). The flying buttresses appear to have been added at some date from the latter part of the 13th century (LUB 6).

#### *Late Medieval cathedral*

The foundations of the Fleming Chapel were revealed in lc84 Area A (LUB 2; Fig 2.36). The date of this chapel relies on the date of Bishop Fleming's death in 1431 (Antram and Stocker 1989, 473).

#### *Civil War?*

A stone-lined well (LUB 3) in lc84, Area A, had a fill containing late 16th or 17th-century pottery, clay tobacco pipe fragments, including a bowl dated c1650–80, and a lead musket shot (LUB 4). The well in the graveyard of St Paul-in-the-Bail's church was also partially backfilled in the 17th century (sp72 LUB 109). It is possible that the wells were seen as sources of contagion during this period from the plague and so were backfilled with building debris. Another possibility is that these churchyard wells were backfilled sometime during the civil war period. The backfilling may have been the work of Lincoln people, blocking access to water from public wells, perhaps an attempt to make both the royalist and parliamentary soldiers unwelcome. Certainly Lincoln suffered from the plundering of both sides;



cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB
<i>cat86</i>	23/20	609/6	409/47	112/4	217/29	309/40
1/12	24/21	602/6	410/47	113/5	218/29	310/41
2/12	25/23	603/6	411/47	114/5	219/29	311/41
3/12	26/15	607/6	412/48	115/5	220/29	
4/9	27/20	612/6	413/48	116/5	221/29	<i>ny87</i>
5/10	28/-	613/6	414/48	117/5	222/29	501/32
6/10	29/20	614/6	415/49	201/25	223/29	502/32
7/12	30/21	610/7	416/49	202/25	224/29	503/32
8/12	31/24	618/7	417/43	203/26	225/-	504/32
9/13	32/12	611/7		204/26	226/26	505/33
10/16	33/12	615/8	<i>lc84</i>	205/26	227/29	506/33
11/19	34/12	616/8	101/1	206/26	228/25	507/35
12/11	35/12	617/8	102/2	207/26	229/26	508/35
13/15	36/14		103/2	208/27	230/25	509/33
14/15	37/15	<i>dg83</i>	104/2	209/27	301/39	510/35
15/15	38/15	401/44	105/2	210/28	302/40	511/34
16/21		402/45	106/2	211/29	303/41	512/35
17/17	<i>ch83</i>	403/42	107/3	212/29	304/41	513/34
18/21	601/6	404/45	108/4	213/29	305/41	514/37
19/21	604/6	405/47	109/5	214/29	306/41	515/37
20/23	605/6	406/47	110/5	215/29	307/41	516/36
21/22	606/6	407/46	111/-	216/29	308/40	517/38
22/18	608/6	408/48				

Fig 2.51 Concordance of cg numbers with LUB numbers for the cathedral sites

the churches and the cathedral were heavily damaged.

Pit cg516 (LUB 36) in *ny87*, although not fully excavated, produced many fragments of architectural stone. The period of deposition of these fragments might suggest that this activity was linked to the Puritan iconoclasm of the 17th century. It is likely that any medieval or popish fittings in the reredos of the High Altar would have been removed or damaged as a matter of priority at this time. Regardless of the original provenance of the fragments from LUB 36, this period would be an appropriate time for the destruction of any ornate architectural feature, whether it be a tomb, piece of liturgical furniture or shrine (Graves 1993, 49).

### 18th and 19th centuries

The chapel in the north-east transept was demolished (LUB 17) and a smaller replacement created in 1773 (LUB 20). The evidence suggests that the interior of the chapel was disturbed with 17th or 18th-century material (LUB 18) after its demolition (LUB 17). It would seem possible that antiquarian excavations undertaken by James Essex had investigated the area soon after demolition in 1772, and that these were backfilled before the chapel was re-built in 1773.

The well (LUB 16) at *cat86*, to the east of the chapel, would seem to have been backfilled (LUB 19) after the chapel was demolished. Then, after the new chapel was built (LUB 20), there was some concern over drainage (LUB 21), with a soakaway

and sump being provided; pits (LUB 23) may have been associated with these operations.

In Trench I, *dg83*, (LUB 44), and in Trench III (LUB 45) there were signs of repair works in the 18th century. The charnel pit (LUB 46) suggests 18th-century activity which intruded on the graveyard, necessitating the removal of bones for reburial. It is possible that all three events (LUBs 44, 45 and 46) may have been linked to a dispute over a fence. The deanery at that period was located to the north of the cathedral, abutting the north side of the cloister, while between the cathedral and the deanery lay the Dean's Green. In the late 19th century posts and rails were erected to the north of the minster to enclose the deanery and the Dean's Green. The precentor objected, concerned that the public might be prevented from using the east door of the cathedral. The next dean, Richard Cust, directed that palisades should be added to the fence; following this action the precentor directed the receiver not to pay for the work, and he himself apparently sawed down the palisades (Hill 1966, 45-6). The dispute continued until the death of Cust a few months later in 1782, and may have been represented by the archaeological evidence found.

### 20th century

Sealing the *cat86* excavations were dumps and service trenches (LUB 24). It was in these modern layers that remains of the demolished chapel were recovered.



### 3. Cecil Street 1975 (ce75)

#### Introduction

During February and March 1975, a small excavation was carried out at the rear of 17–27 Cecil Street (Fig 3.1). The purpose of the excavation was to investigate the Roman city wall, principally to determine its exact position and to assess its state of preservation in order to consolidate and landscape the area during the development for sheltered housing. The excavations were directed by Richard

Whinney on behalf of the Lincoln Archaeological Trust. Simons Ltd, the developers of the housing scheme, funded the excavation which was mostly carried out mechanically to excavate a 25m length of the north side of the wall. An interim report was published in 1975, followed in 1980 by a detailed description of the the principal results (Whinney 1975; Jones, M J 1980, 31–5).

A total of 17 contexts was recorded on site, and

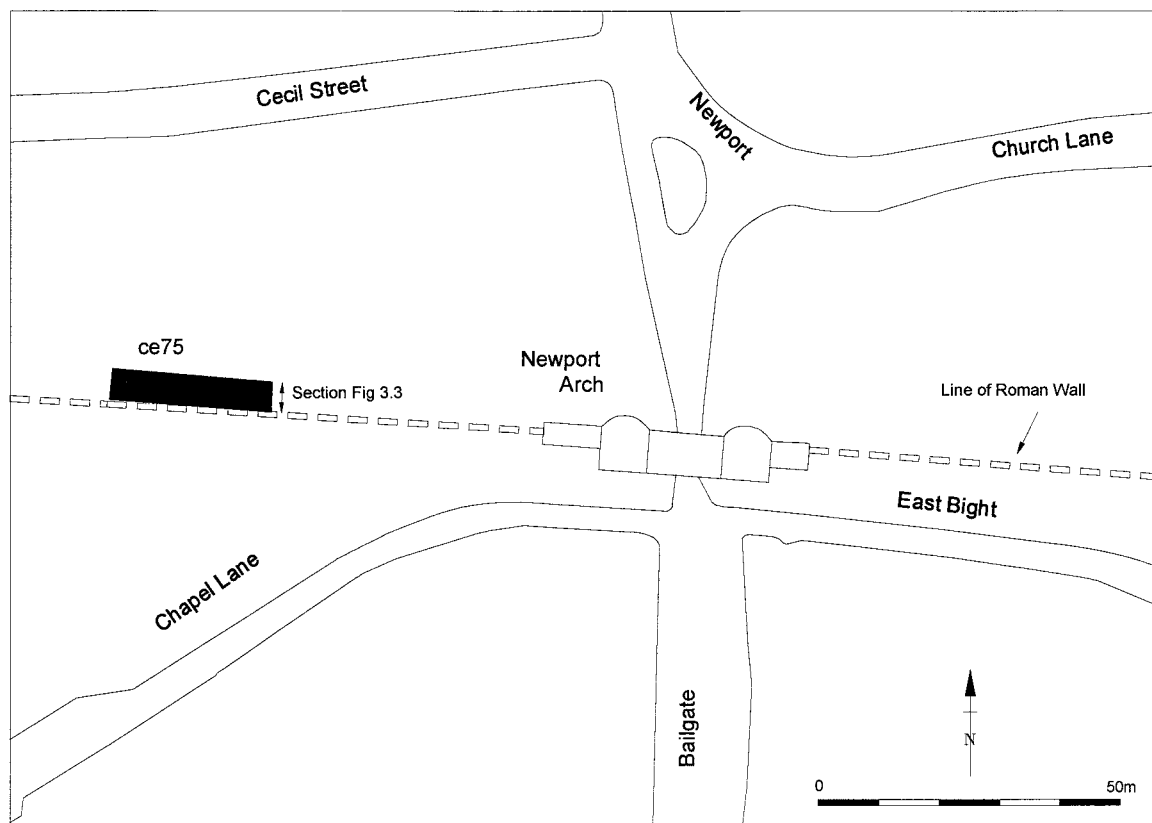


Fig 3.1 Site and section location plan for ce75



these have been interpreted into 11 grouped contexts (cg1–12, as cg8 remained unused); the grouped contexts are discussed below as six land use blocks (LUBs 0–5; Figs 3.2 and 3.4). The excavation was treated as a single area for the purposes of post-excavation analysis (Fig 3.2).

A few undiagnostic sherds (14 sherds) of Roman pottery were retrieved from fills cg3 (LUB 1) and cg4 (LUB 2); no post-Roman pottery was recovered. Only two (unstratified) registered finds were recovered, an iron nail and a coin, an irregular issue of Carausius (Mann and Reece 1983, 49). Six samples of mortar were taken from four locations along the wall and one was analysed (Fenton 1980, 45–6). No organic material or animal or human bone was recovered.

Post-excavation stratigraphic analysis was undertaken by Prince Chitwood and Kate Steane. Margaret J Darling examined the Roman pottery. Helen Palmer Brown and Zoe Rawlings digitized the section drawing.

## The Excavation

### *Natural*

Natural yellow clay with limestone **LUB 0** was found at the limit of excavation.

### *LUB 0 Natural (Fig 3.3)*

A stiff yellow clay containing large limestone fragments cg1 was undisturbed and free of cultural inclusions, and was accordingly interpreted as a geological deposit. It was found at 64.64m OD.

### *Early Roman*

The ditch **LUB 1** outside the legionary fortress rampart was replaced by the *colonia* defences, which included a ditch and wall **LUB 2**. There was no dating evidence.

### *LUB 1 Legionary ditch (Fig 3.3)*

Natural cg1 (LUB 0) was cut by a ditch cg2; its sides were smooth and sloping. Only the north part was excavated, the rest lying beyond the excavation and beneath the *colonia* wall. It contained a small amount of compacted silty sandy clay cg3, a natural accumulation of sediment within the ditch.

### *LUB 2 Colonia ditch and wall (Fig 3.3)*

The primary ditch fill cg3 (LUB 1) had been sealed with rammed and redeposited limestone brash cg4. The ditch infill cg4 also served as the foundations for the *colonia* wall cg6 which were set into the brash (no other discernible foundation trench was revealed).

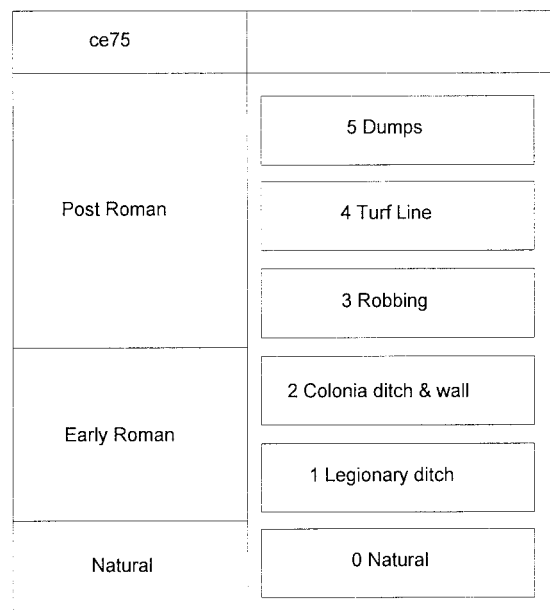


Fig 3.2 LUB diagram for ce75

The north side of wall cg6 had been revealed by excavation along c 23m of its length. It ran east–west and survived to a height of 4.25m, at a height of 67.794m OD. The lowest course of masonry was about 0.19m high; the limestone blocks of this lowest course were dressed, and varied in length from 0.70m to 0.13m. The upper courses of the wall were inset c 0.15m to the south of the lowest course at 64.794m OD. Up to five to six courses of the wall survived with their facing stones intact. While the limestone blocks were slightly smaller than the ones used in the lowest course, they were fairly consistent at about 0.14–0.15m in height. A further 17 courses survived in the form of wall core which was made up of varying shapes and sizes of stone. This included everything from small pitched chips and fragments of limestone to thin flat horizontally laid stones. It is difficult to tell if both the core and its associated facing blocks were built at the same time or one was built slightly ahead of the other. Both core stones and facing stones had been set into orange-yellow mortar. This mortar was used liberally to maintain levelling between courses of the facing stones; however, this was not necessarily the case with the core which was certainly more irregular. Some isolated and slightly irregular core courses had been formed in order to strengthen the wall core with the facing stones. Eight putlog holes, 0.14–0.18m square, were spaced at distances up to 1.83m apart along the wall where they could be discerned. Their height of 2.5m above the construction level confirms that they represent

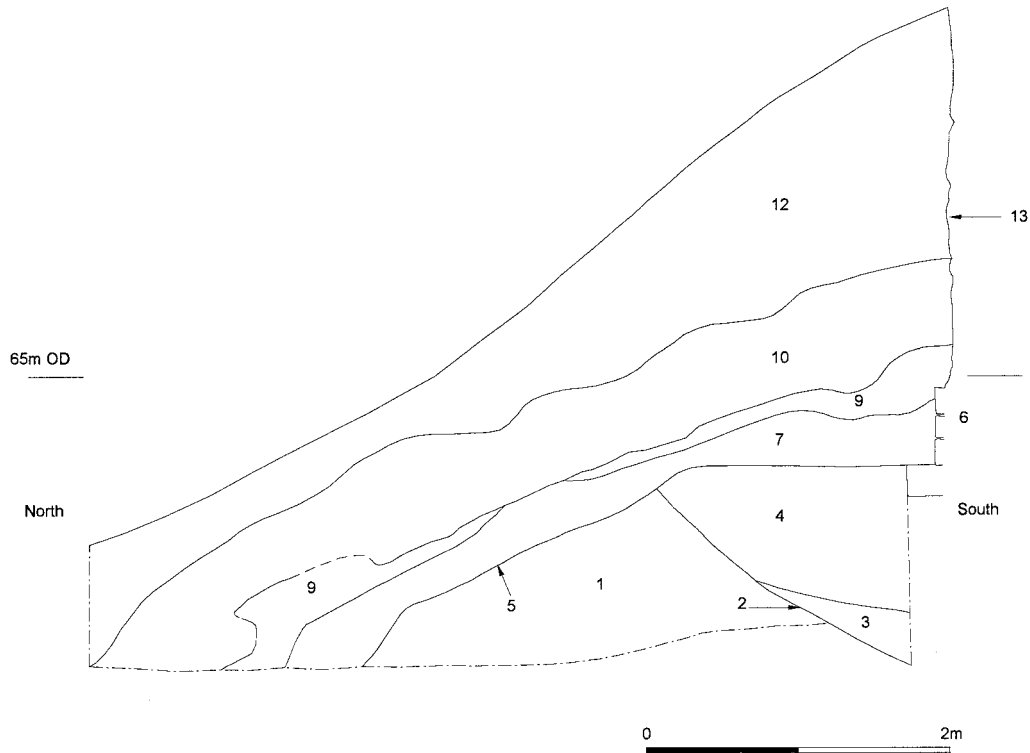


Fig 3.3 North-south section drawing for ce75

scaffolding. No evidence was recorded of putlogs to the east end of the wall under investigation. The putlogs were 0.5m deep, indicating that both the face and core of the wall must have been constructed at an even pace. Although no vertical coursing breaks suggesting gang work were found, the change in the provision of the putlogs may be a clue to changes in build.

About one metre to the north of the wall a new ditch cg5 was cut at roughly the same time as the wall was built. It could not be fully explored (see Fig 3.3).

**Post-Roman**

The wall LUB 2, was robbed LUB 3; there was no dating evidence, but it possibly took place in the late Roman period.

*LUB 3 Collapse and robbing of wall front*

Sealing the lowest course of the wall cg6 (LUB 2) and slipping down into the open ditch cg5 (LUB 2) were layers of loose rubble cg7. These are best interpreted as representing the gradual collapse of the wall fabric during the robbing of its facing stones and subsequently.

*LUB 4 Turf line(?) (Fig 3.3)*

A mixed layer of black to light grey brown gritty loam containing occasional limestone fragments cg9 sealed the earlier deposits. It suggests the possibility of a post-Roman turf horizon.

*LUB 5 Dumps (Fig 3.3)*

Over turf line cg9 was a thick dump of building debris cg10 followed by later dumps cg12; these indicate further robbing of the face cg11 and the top of the wall.

**Discussion**

These excavations offered an opportunity to scrutinise the relationship between the legionary ditch

cg/LUB	cg/LUB	cg/LUB	cg/LUB
1/0	4/2	7/3	10/5
2/1	5/2	8/-	12/5
3/1	6/2	9/4	11/5

Fig 3.4 Concordance of cg numbers with LUB numbers for ce75

(LUB 1) and the *colonia* defences (LUB 2). The *colonia* wall was shown to be based on the backfilled legionary ditch. Although there was no evidence from this site, it seems likely from work at the rear of the wall (Jones 1980, 36) that the wall was rebuilt or thickened in the late Roman period. The abandoned ditch subsequently grassed over LUB 4. Over the possible turf line LUB 4 were dumps LUB 5.

Details about the wall construction were recovered. The mortar analysis, together with stone-

types, tooling and coursing, contributed to an understanding of the construction of the city wall as a whole; the facing stones of this section of wall were of similar build to the north and east gates to the city and so no earlier in date than the early 3rd century (Fenton 1980, 46), confirming that it had been rebuilt or at least refaced.

Since the excavation, the remains of the wall core have been consolidated and displayed as part of the landscaping of the area.

## 4. Chapel Lane 1985 (cl85)

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### Introduction

Excavation work at Chapel Lane began at the end of July 1985 in advance of a scheme, put forward by Lincoln City Council's Housing Committee, to develop the site for sheltered housing (Fig 4.1). The site had been previously used as a depot of the City's building and engineering departments. A small team led by Andrew Snell on behalf of the Trust for Lincolnshire Archaeology carried out the excavations which were funded by the City and County Councils, and which also served as geo-technical tests for the structural engineer's purposes. Most of the labour was provided by the Manpower Services Commission. The land is scheduled as an Ancient Monument and consequently the Ancient Monuments Inspectorate was closely involved in the design and execution of the project. As a result of the work, English Heritage was able to advise the City on the foundation design for the new buildings to ensure preservation of the important remains.

Two trenches were excavated, their locations primarily designed to test the depth of surviving deposits, but also partially determined by the fact that certain areas of the yard were still in use. The trench sides were stepped-in to obviate the need for shoring. Trench 1 was largely machine excavated; the Roman material was excavated by hand (no plans were made, but a section was drawn). Some of the later stratigraphic sequence was removed mechanically and only recorded in section in Trench 2, before the site was stepped in; most of the Roman stratigraphy was hand excavated and planned. Interim reports were published (Jones 1985; Jones 1986a).

In all 250 contexts were identified on site; these have been interpreted into 87 grouped contexts (cg1–101, but cg28, cg30, cg41–5, cg48–9, cg51–3, cg67–8 were not used). These context groups were merged into 21 land use blocks (LUBs 0–20; Figs

4.2 and 4.22). The two trenches define the two areas used on the LUB diagram (Fig 4.2). In Trench 1 there are only a few LUBs; early and mid Roman LUBs 9 and 13; late Saxon to Saxo-Norman LUB 15 and modern LUB 21. In Trench 2 a greater archaeological sequence was recovered; natural LUB 0, Early Roman LUBs 1–5, Early–Mid Roman LUBs 6–11, and Late Roman to Ultimate Roman LUB 12; Late Saxon to Saxo-Norman LUB 14, Early to Late medieval LUBs 16–17 and Late medieval to Modern LUBs 18–20. There were more LUBs in Trench 2 than Trench 1, partly because Trench 1 was much smaller and partly because it was located some 25m to the south of Trench 2 and so reflects a different sequence.

A total of 749 sherds of Roman pottery was found, mainly 1st–early 2nd century from the Roman deposits, with some 3rd–4th century material in post-Roman contexts, perhaps brought on to the site. There were in addition 221 sherds of post-Roman pottery. Of the registered finds (104), much (58.7%) was ironwork, with a small proportion (11.5%) of copper alloy; the metalwork in general was heavily corroded. Only small quantities of other materials such as glass, bone (including horn) or stone were retrieved. Specialists examined Roman coins (Davies, J A 1992), Roman glass (Price and Cottam 1995b), bone and horn (Rackham 1994) and stone (Roe 1995; bone: Moore 1991). Notable among the latter are a fragment of a Purbeck Marble moulding (possibly part of a column) and two pieces of wall veneer of imported materials (Peacock and Williams 1992). No organic material was recovered. A large number of building material fragments were found (1,417 in all), the majority (89.4%) being plaster (stone building material: Roe 1995). A group (490 fragments) of animal bone was recovered from the excavation but excluded from further study on grounds of the small size of the site collection. There was no human bone.

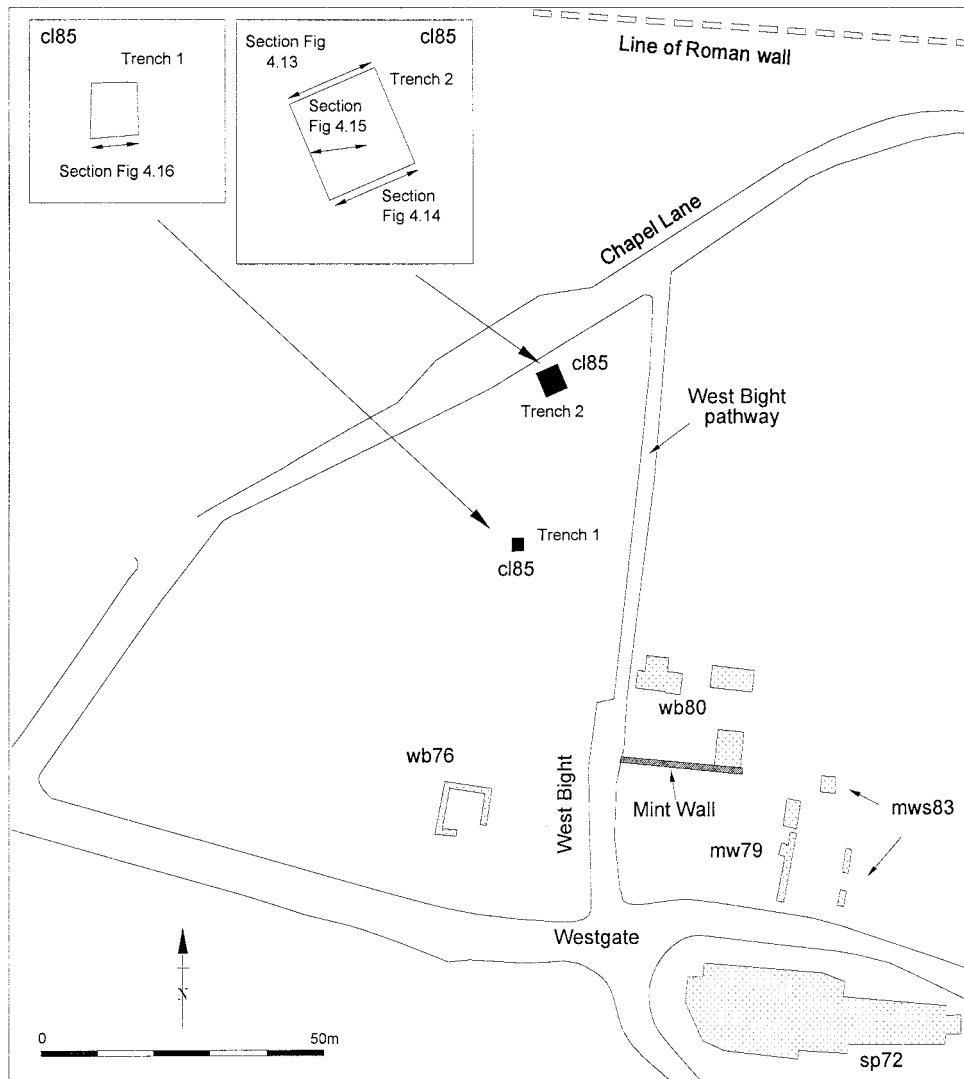


Fig 4.1 Site and section location plan for cl85

Post-excavation stratigraphic analysis was undertaken by Prince Chitwood and Kate Steane. Margaret J Darling worked on the Roman pottery and Jane Young on the post-Roman pottery. Jen Mann analysed the registered finds and, with Rick Kemp, the building materials. Jeremy Ashbee examined the two fragments of medieval architectural stone. Helen Palmer-Brown and Zoe Rawlings digitized the plans.

## The Excavation

### Natural

Both natural limestone brash and limestone bedrock LUB 0 was encountered at the limit of excavation.

### LUB 0

The natural subsoil on this site consisted of limestone brash or limestone bedrock, surviving to a height of c64.80m OD. No traces of a buried soil profile were noted.

### Early Roman

In Trench 2 there were traces of a timber structure having been erected on the site LUB 1, Structure 1. Structure 1 burnt down LUB 2, to be replaced by Structure 2 LUB 3; this in turn was demolished and sealed by a surface LUB 4. Both Structures 1 and 2 together with surface LUB 4 produced mid 1st-century pottery.

Subsequently the surface (LUB 4) in Trench 2, was cut by another timber structure LUB 5, Structure 3.

cl85	Trench 2	Trench 1	Fig
Late Medieval to Modern	20 Wall demolition	21 Concrete surface	
	19 Wall		
	18 Dumps & pits		
Early to Late Medieval	17 Dumps & Pits		4.12
	16 Dumps & Pits		4.11
Late Saxon to Saxo-Norman	14 Pits	15 Pits	4.10
Late Roman-Ultimate Roman	12 Dumps	13 Dumps	
Early Roman-Mid Roman	11 Str6	9 Str4	4.9
	8 Str5B	LoE	4.8
	10 Str5 C & D		
	7 Str5A	4.7	
	6 Str5		
Early Roman	5 Str3		4.6
	4 Surface		4.5
	3 Str2		
	2 Fire		4.4
	1 Str1		4.3
Natural	0 Natural		
	LoE		

Fig 4.2 LUB diagram for cl85

*LUB 1 Structure 1 (Figs 4.3 and 4.14)*

The bedrock (LUB 0) in Trench 2 was sealed by a sand and pebble surface with flecks of charcoal and burnt red sand cg1. A series of features intruded into this surface, including three postholes cg5 and associated stake-holes cg3, and possibly those of cg2 (which had been truncated by medieval pits and so might have belonged to Structure 2). Associated with these was an area of patchily burnt clay cg4, probably a hearth. These features suggest a timber posthole building, Structure 1.

Most of the features (all except cg2) are included in this LUB because they were sealed by sand cg6 (LUB 2). Pottery from cg1 (4 sherds) included a SAMSG plate of form 15/17, dated to the Flavian period. Pottery from cg5 (15 sherds), together with the other sherds from cg1, can all be dated to the mid 1st century, being of types current in the legionary period.

*LUB 2 Fire (Fig 4.4)*

Sealing Structure 1 (LUB 1) was a surface of sand and pebbles and burnt sand cg6. Over the surface cg6 (LUB 2) were patches of charcoal cg100, one of which had three nails in a row. The burnt sand and the charcoal cg6 (LUB 2) and cg100 suggest that Structure 1 burnt down. There was no dating evidence.

*LUB 3 Structure 2 (Fig 4.4)*

Sand cg6 was cut by stake-holes cg7 and a posthole with stake-holes cg8 which had been truncated by a medieval pit.

Pottery from cg6 (15 sherds) included 13 crushed OXSA body sherds from a single closed vessel, the other two being CR body sherds, giving little evidence for a date beyond the mid 1st century. A single body sherd from a C186 amphora was found in cg7.

*LUB 4 Surface (Figs 4.5 and 4.14)*

Sealing cg100 (LUB 2) together with stake-holes cg7 (LUB 3), was a surface of gravel and pebbles cg9 which was sealed by grey sand with gravel and charcoal cg10.

Only two sherds from an IAGR cooking pot came from cg9 gravel surface, dating from the mid 1st century. Two body sherds from cg10 of OX and OXSA have a similar date.

*LUB 5 Structure 3 (Figs 4.6 and 4.17)*

Layer cg10 (LUB 4) was cut by east-west timber slot cg11 and a series of postholes lay within the line of the slot, and may have been associated (Fig 4.17). To the north of this timber slot was a clay floor cg16 sealed by a sand floor cg17 (both unplanned).

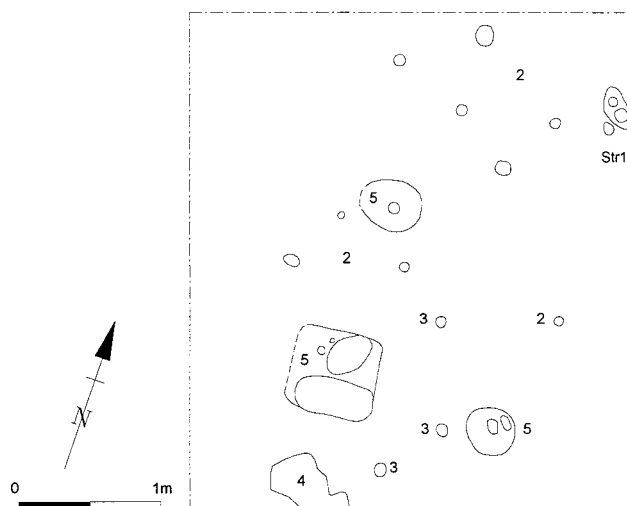


Fig 4.3 Postholes and stake-holes – Structure 1: LUB 1

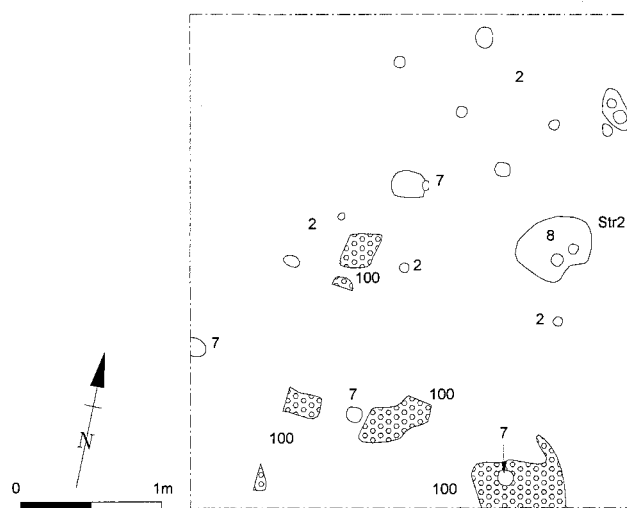


Fig 4.4 Postholes and stake-holes and charcoal patches – Structure 2: LUBs 2 and 3

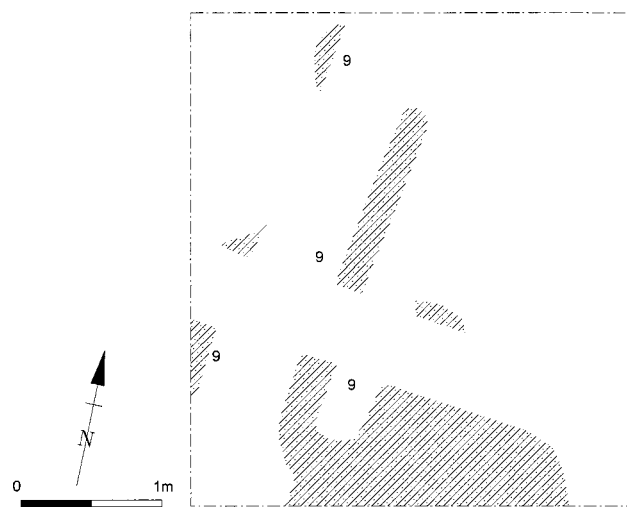


Fig 4.5 Surface: LUB 4

The slot cg11 and floors cg16 and cg17 suggest a timber framed building, Structure 3, with an internal area to the north. The postholes cg11 suggest that the timber frames were made earth-fast. Only a 3.25m length of the south side of this building was exposed, and the internal area to the north extended for at least 2.5m.

Pottery from cg11 (8 sherds) was confined to body sherds, except for a probable honey pot rim in OXSA; a tiny chip from a colour-coated beaker appears to be NVCC (ie, dating somewhere between the early 3rd and very late 4th century), and could be intrusive from the late Roman dumps (LUBS 12). The other sherds would indicate a mid to perhaps later 1st-century date.

### Early – Mid Roman

Structure 3 (LUB 5) was replaced by Structure 5 LUB 6, of stone foundations and possible timber superstructure. The pottery from LUBs 5 and 6 dated between the mid and late 1st century, but LUB 5 was stratigraphically earlier than LUB 6. Structure 5 (LUB 6) was made up of at least two rooms: to the east was room 5A LUB 7 and to the west was room 5B LUB 8; LUBs 7 and 8 contained pottery dating from the mid 1st to the later 1st century.

In Trench 1, there was evidence for a building or buildings LUB 9, Structure 4; the pottery associated with LUB 7 was all late 1st-century in date.

In Trench 2, room 5A (LUB 7) was later subdivided into two rooms, 5C to the south and 5D to the north LUB 10; late 1st-century pottery was associated with these rooms. Structure 5 was demolished and sealed by a dump on which Structure 6 LUB 11 was erected, with at least three rooms, 6A, 6B and 6C. The *terminus post quem* provided by pottery dating for these buildings was late 1st century.

#### LUB 6 Structure 5 construction (Figs 4.7 and 4.15)

In Trench 2 cutting across slot cg11 (LUB 5) was a narrow north–south limestone wall or wall foundation cg12 (0.30m wide); the foundation of pitched and laid limestone rubble was sealed by four courses of limestone blocks and slabs with a rubble core. The wall cg12 may have supported a timber superstructure; it contained pottery (2 sherds) of a mid or possibly later 1st-century date. The use of stone implies that it belonged to the *colonia* period.

#### LUB 7 Structure 5A (Figs 4.7, 4.14 and 4.18)

To the east of the wall cg12 (LUB 6), sealing cg11 (LUB 5) was a pitched and laid stone surface cg13 (Fig 4.18). Over the surface was a clay floor cg14. The floor cg14 was sealed by a greyish sandy silt

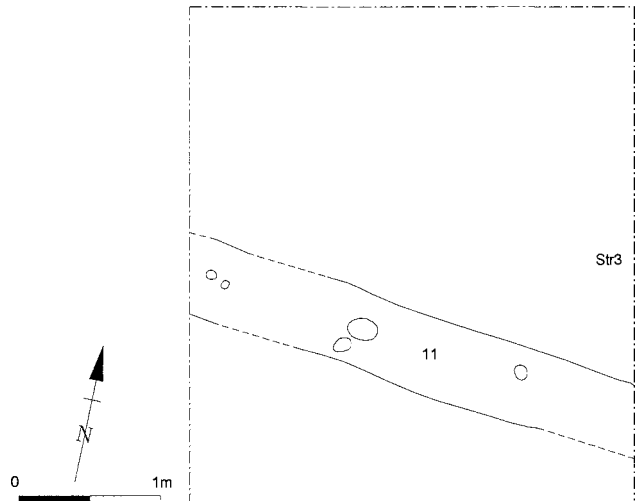


Fig 4.6 Slot and postholes – Structure 3: LUB 5

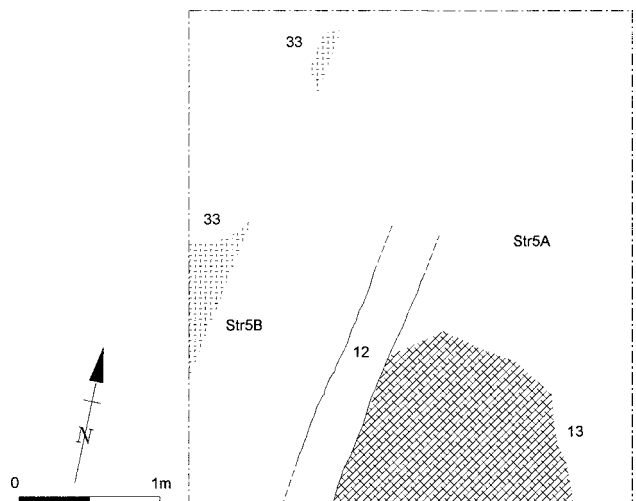


Fig 4.7 Wall of Structure 5, showing 5A and 5B: LUBs 6, 7 and 8

with abundant charcoal, some gravel, and burnt clay lumps cg19.

Pottery from cg13 (42 sherds) was, all except one fragment, from a single GREY jar with nodular rustication, which can be dated to the same mid to later 1st-century period. Pottery from cg14 (2 sherds) and cg19 (1 sherd) also dated to the mid to later 1st century.

#### LUB 8 Structure 5B (Figs 4.7, 4.8, 4.15 and 4.19)

Towards the west section, sealing cg11 (LUB 5), was a layer of clay with chalk and limestone cg33; it may be interpreted either as a rough surface, or possibly a make-up layer. Sealing the construction of wall cg12 (LUB 6) and layer cg33 was a clay floor cg34; over this was a mortar floor cg35 and



then a sand and gravel floor cg36. Several patches of wallplaster cg18 survived *in situ* on the west face of wall cg12 (LUB 6), with green paint over a white ground; a trace of red was also noted during excavation (Fig 4.19). Sealing the gravel floor cg36 was silt with charcoal and bits of burnt clay cg37.

Pottery from cg33 (3 sherds), cg34 (13 sherds), cg35 (2 sherds) and cg36 (1 sherd) were all body sherds from closed vessels, probably flagons, 12 being from a single PINK vessel; a mid 1st-century or later date applies.

#### LUB 9 Structure 4 (Fig 4.16)

In Trench 1 a pebble surface cg80 was found at the limit of excavation (perhaps equivalent to that of LUB 4); over it was a scatter of limestone slabs set in sand cg81, sealed by greyish-brown sand cg82. Over this in turn was a make-up layer cg83 of dark clay loam for a clay floor cg84. The clay floor was sealed by silt and charcoal cg85; then a sand floor cg86. These layers appear to have belonged to a building or buildings of the late 1st century or later, but little more could be said.

The presence of a fragment of Purbeck marble veneer suggests a *colonia* structure with faced columns, but it was probably reused from another building. In such a case, Structure 4 is not likely to predate the late 2nd century.

Pottery from cg84 (15 sherds), includes a SAMSG 29 dated to before AD85; the presence of linear rustication and a GREY necked bowl suggests a date probably later in the 1st century but there was nothing conclusively 2nd century. Pottery cg85 (118 sherds) includes approximately 23 SAMSG vessels, all, apart from one earlier vessel, dated to the Flavian period; the other vessels include fabrics and types known from the legionary period, while some of the GREY closed forms, all body sherds, may be slightly later in date. A later 1st-century date is indicated by pottery from cg85; no sherds could be positively dated later. Pottery from cg86 (30 sherds) contained a SAMSG vessel of Flavian date, which later 1st-century date suits the rest of the pottery, including a CR jar or beaker with probable ring-and-dot decoration.

#### LUB 10 Structure 5C and 5D (Figs 4.8, 4.14 and 4.20)

Butting up to the east side of wall cg12 (LUB 7) was an east–west limestone wall cg15; the wall remained to four courses of limestone blocks, bonded with mottled clay loam, with a rubble core incorporating pieces of brick; the south side of the wall cg15 was faced with brownish-yellow mortar. The wall suggests a later internal partition in Structure 5 dividing a room to the south (5C) from a room to the north (5D).

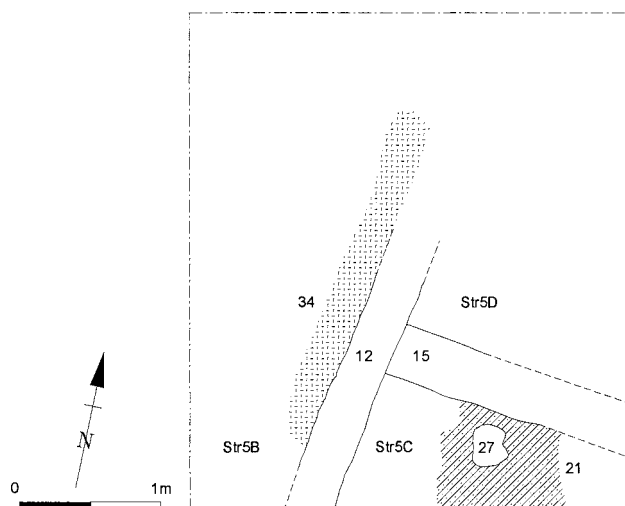


Fig 4.8 Walls of Structure 5, showing 5B, 5C and 5D: LUBs 8 and 10

To the south of and sealing the construction of wall cg15 was a patch of clay floor cg20 (room 5C). There was also a small area of sand and small limestone fragments cg21, sealing the earlier floor cg14 (LUB 7). It was sealed by hearth cg27, an area of burnt silt and a patch of burning on the wall (Fig 4.20). Silt and charcoal layer cg22 sealed floors cg20 and cg21. The hearth remained in use while layer cg22 was sealed by a sand floor cg23, over which was a layer of silt and charcoal with lumps of mottled clay cg24, clay floor cg25 and a further layer of silt, charcoal and lumps of mottled clay cg26.

Although room 5D was evident from the plan (Fig 4.8), any traces of flooring or other deposits had been removed by later features including wall cg32 (LUB 11), pit cg65 (LUB 14) and pit cg66 (LUB 17).

Pottery from cg15, cg25 and cg26 (6 sherds altogether) included a SAMSG form 18 dated to the Flavian to Trajanic period, a SAMSG form 37 dated to cAD75–100 and coarse pottery of a similar later 1st- to early 2nd-century date.

#### LUB 11 Structure 6 (Figs 4.9, 4.15 and 4.21)

Up against the plaster cg18 (LUB 8) was a thick make-up layer cg29 of sandy loam with pebbles and lumps of yellow mortar, over which was a construction layer cg31 of sand and pebble. Into this was set a north–south wall cg47 with traces of an east–west wall cg32 to the east of it. Wall cg32 also cut cg31. The wall cg47 survived as a foundation trench (0.60m wide) with pitched limestone set in sand, sealed by laid limestone rubble blocks set with clay loam and sand; wall cg32 was of similar but less substantial construction. The walls created at least three rooms: 6A to the south-east, 6B to the west and 6C to the north-east.

Pottery from cg31, cg32 and cg47 (11 sherds altogether) includes a SAMSG 27 dated to the Neronian to early Flavian period. None of the rest of the pottery can be dated more closely than mid to late 1st century.

### *Late Roman to Ultimate Roman*

The remains of Structure 6 (LUB 11) in Trench 2 were sealed by dumps **LUB 12** which contained material possibly brought on to the site from elsewhere in the city; while pottery from these dumps was mostly dated to the late 1st to early 2nd century, there were also sherds which dated to the 3rd and 4th centuries.

In Trench 1 the remains of Structure 4 (LUB 9) were sealed by dumps **LUB 13**; pottery from these dumps dated to the 2nd century, but were probably contemporary with LUB 12.

### *LUB 12 Dumps (Figs 4.14 and 4.15)*

To the south of wall cg32 (LUB 11) and to the east of wall cg47 were dumps cg50; these dumps sealed silt cg26 (LUB 10) and hearth cg27 (LUB 10). Dumps cg50 consisted, at the bottom, of a layer of mottled clay with sand and limestones (0.12m thick), over which and also sealing part of cg29 (LUB 11) was sandy loam and mottled clay with chalk lumps and yellow mortar; this was sealed by a layer of clay with loam and mortar; over it in turn were layers of clay loam and clay.

Further west, sealing cg37 (LUB 8) was cg38 consisting of mortar and other building debris (tile, a few stone tesserae, and small fragments of

Purbeck Marble) together with pebbles and other stone. Over it was a layer of clay and decayed mortar cg39 sealed by clay loam with gravel cg40.

Sealing cg40 to the west of wall cg47 (LUB 11) were dumps cg46, consisting of a layer of sand, pebble and mortar sealed by a layer of grey clay and decayed mortar; over these was more decayed mortar sealed by a layer of sandy clay loam and sand; these were sealed by a layer of greyish sandy clay loam and mortar which was sealed by a layer of sand with lumps of mortar. To the east, sealing dumps cg50 were dumps cg54; dumps cg54 consisted of a mixed layer of sand, clay, mortar and pebbles over which was mortar and limestones; above this was a compact layer of sand and gravel sealed by a layer of loam with building debris. The lowest level of dump cg54 contained a quantity of painted plaster (see Discussion).

Pottery from cg50 (14 sherds), included mid to later 1st-century sherds similar to those seen in earlier contexts, and a single NVCC body sherd from a barbotine decorated beaker which dated to the 3rd century. Pottery from cg54 (25 sherds), included late 1st- to early 2nd-century pottery together with a bodysherd of a NVCC folded beaker and an intrusive GREY bead-and-flange bowl rim fragment, dating to the 3rd to 4th century. A few post-Roman sherds (7 sherds) were recovered from this LUB, which suggests that these deposits were connected with Late Roman activity, perhaps disturbed at its surface, or with Late Saxon occupation (cf Trench 1, LUBs 13–14).

### *LUB 13 Dumps (Fig 4.16)*

In Trench 1, sealing cg86 (LUB 9) was a sequence of dumps: grey sandy clay loam cg87, was sealed by clay with limestone fragments and chalk cg88 over which was sandy clay loam cg89.

Pottery from cg87 (60 sherds) includes some earlier 1st-century sherds, but also bowls probably of the type B334, which is more common in 2nd-century contexts in Lincoln, although the broad type probably starts much earlier. The dump cg87 therefore has a ceramic date of the 2nd century. Pottery from cg88 (15 sherds) was less diagnostic, dating between the 1st and 2nd century. The general context, however, would favour a date from the Late Roman to the Late Saxon periods.

### *Late Saxon to Saxo-Norman*

Disturbing the early Roman stratigraphy in Trench 2 was pitting **LUB 14** and **LUB 15** in Trench 1. Late Saxon pottery and other finds were recovered from LUB 14 and Saxo-Norman pottery from LUB 15; late Roman pottery was brought on to the site during this period.

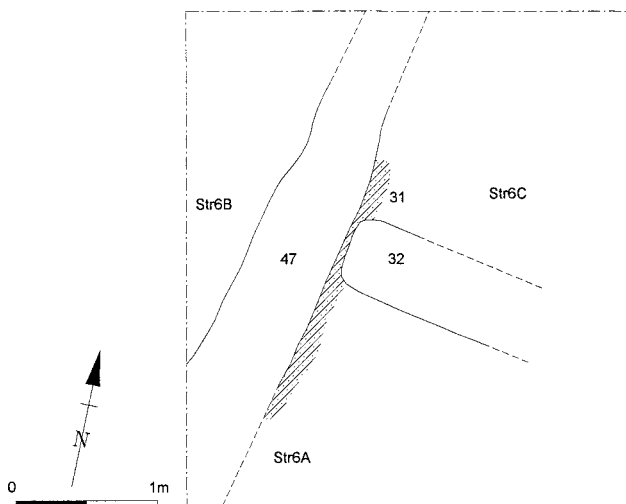


Fig 4.9 Walls of Structure 6, showing 6A, 6B and 6C: LUB 11

*LUB 14 Pits (Figs 4.10, 4.14 and 4.15)*

Cutting the dumps cg46 (LUB 12) in Trench 2, was a posthole cg55 (unplanned). Dump cg54 (LUB 12) was cut by pits cg61 and cg62 (unplanned); robber trench cg56 cut both the posthole cg55 and dumps cg54 (LUB 12). This robber trench was cut by pit cg57. Pit cg64 was cut by pit cg65.

Post-Roman pottery (76 sherds) from the features in this LUB is of 10th- and 11th-century date. The latest sherd has a splashed glaze (EMX) and is possibly of a type found at York from the mid/late 11th century (Mainman 1993).

The Roman pottery (168 Roman sherds from cg56, cg57, cg61 and cg65) gave a date between the 3rd and 4th centuries, with sherds from cg65 dating to the very late 4th century. This pottery may have been brought on to the site during the late Saxon period – it may also have intruded into LUB 12. An architectural fragment (see Discussion section) from cg56 was of later medieval date, and probably intrusive.

*LUB 15 Pits (Fig 4.16)*

In Trench 1 dump cg89 (LUB 12) was cut by pit cg90 and this pit was cut by pit cg91. Pit cg91 was cut by pits cg92 and cg93. Pit cg92 was cut by pit cg94; pit cg93 and possibly pit cg94 were cut by pit cg95.

Only four post-Roman sherds were recovered from pit fill cg93; these are in LFS fabric and date to the 11th or 12th century. In LUB 15 there were 21 Roman sherds; sherds from pit cg91 indicated a mid 3rd-century or later date and sherds from pit cg93 dated to the mid/late 4th century. It again seems likely that these late Roman sherds were brought on to the site in the late Saxon period.

*Early medieval to late medieval*

In Trench 2 subsequent dumps and pits **LUB 16** contained early medieval pottery; over this, dumps and pits **LUB 17** contained late medieval pottery.

*LUB 16 Dumps and pits (Fig 4.11)*

Pit cg57 (LUB 14) was sealed by dumps cg58 and cg59. Dump cg58 consisted of dark greyish sandy loam and dump cg59 consisted of sandy loam with limestone. Pit cg60 cut dump cg59. Pit cg60 produced a small group of pottery (57 post-Roman sherds) with the latest sherds dating to the mid/late 12th to 13th century.

*LUB 17 Dumps and pits (Figs 4.12, 4.13 and 4.14)*

Sealing pits cg60 (LUB 16), as well as cg61 and cg62 (both LUB 14) and robber trench cg56 (LUB 14), was a dump cg63, clay loam with building debris. This was cut by pits cg66 and cg78 (unplanned) and sealed by dump cg69, sandy loam

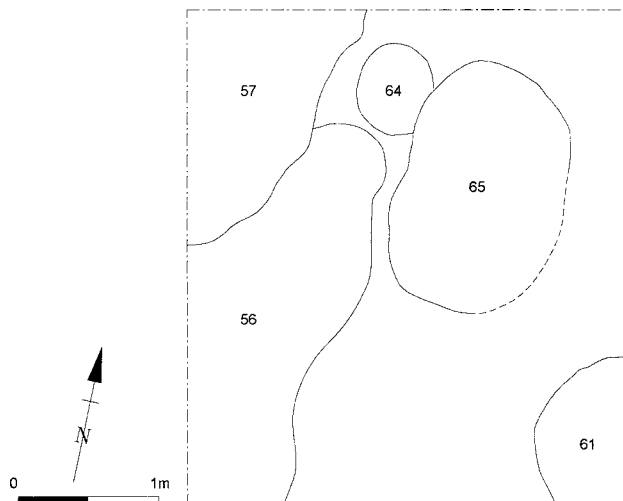


Fig 4.10 Pits: LUB 14

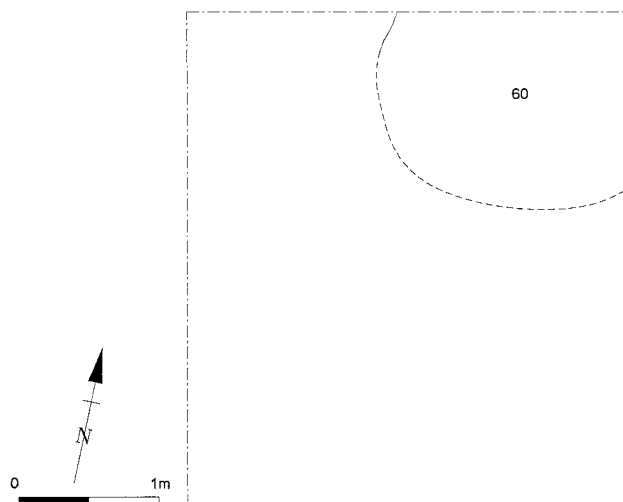


Fig 4.11 Pit: LUB 16

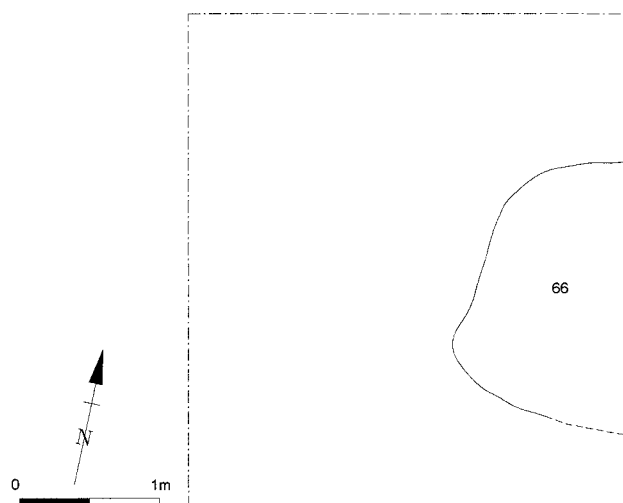


Fig 4.12 Pit: LUB 17

with building debris. Later pits cg70 and cg79 cut pit cg78. Pit cg66 contained a few sherds of 14th- or 15th-century pottery along with residual Late Saxon through to medieval material (42 post-Roman sherds).

**Late Medieval to Modern**

Dumps and pits **LUB 18**, in Trench 2, sealed the dumps and pits **LUB 17**; these were cut by a north-south wall **LUB 19**. The wall **LUB 19** was later demolished **LUB 20**. There was no dating evidence, but as **LUB 17** was late medieval in date, then **LUBs 18-20** were later.

In Trench 1 Saxo-Norman pits **LUB 15** were sealed by a concrete surface **LUB 21**, possibly of modern date.

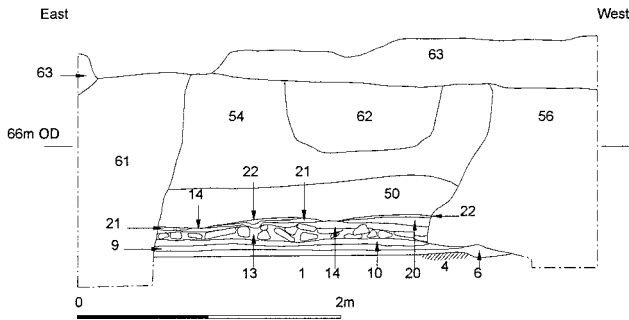


Fig 4.14 Section running east to west across the south end of Trench 2

**LUB 18 Dumps and pits (Fig 4.13)**

Sealing pits cg66, cg70 and cg79 (all **LUB 17**) was a dump cg71 of building debris. It was cut by pit cg74 (unplanned) which was cut by pit cg75 (unplanned). The dump cg71 was sealed by dump cg72 of sand and gravel and dump cg73 of building debris. There was no dating evidence.

**LUB 19 Wall (Fig 4.13)**

Sealing dump cg73 and pit cg75 (both **LUB 18**) was a mortar deposit cg101. Into this was set a north-south wall cg76 (unplanned); set in a foundation

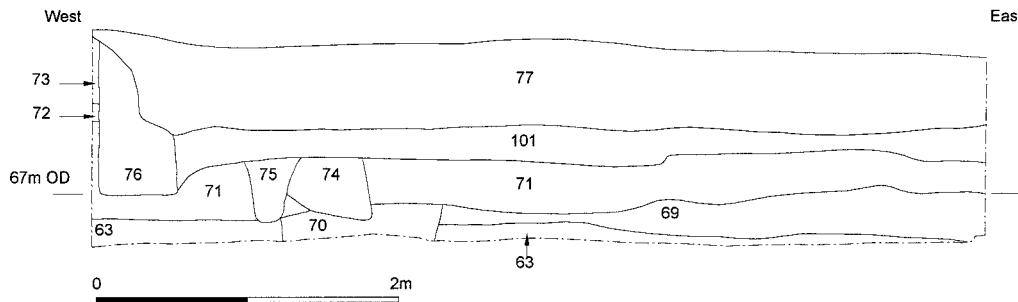


Fig 4.13 Section running from west to east across the north end of Trench 2

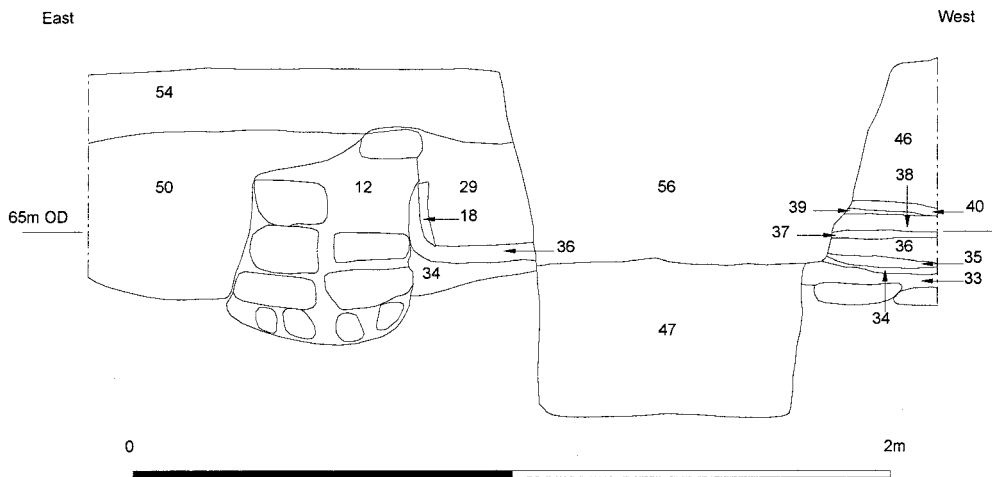


Fig 4.15 Section running east to west partly across the centre of Trench 2, cutting across cg12 (**LUB 6**) and cg47 (**LUB 11**)

trench were six courses of rough limestone blocks set with mortar. There was no dating evidence.

*LUB 20 Wall demolition (Fig 4.13)*

Wall cg76 was demolished and sealed by building debris cg77. There was no dating evidence.

*LUB 21 Concrete surface (Fig 4.16)*

Sealing pit cg95 (LUB 15) in Trench 1 was dump cg96 of building debris sealed by dump cg97 of dark grey silty loam with building debris. Over this was a rubble dump cg98, the make-up for concrete surface cg99. No finds were recovered and the dating depends on the nature of the surface.

## Discussion

### Topography

The early Roman sequence in the larger Trench 2 appears to be echoed to some extent in smaller Trench 1, suggesting that occupation was of a similar nature – as might be expected within the legionary fortress.

In Trench 2 the alignments of post and stake holes of Structures 1 and 2 (LUBs 1 and 3) follow the known alignment of the fortress structures; certainly the later structures in this trench,

Structures 3, 5 and 6 (LUBs 5, 7, 8, 10 and 11) were all aligned on the same grid, as later taken over by the *colonia*. These structures clearly did not relate



Fig 4.17 Looking west at east-west timber slot cg11: LUB 5

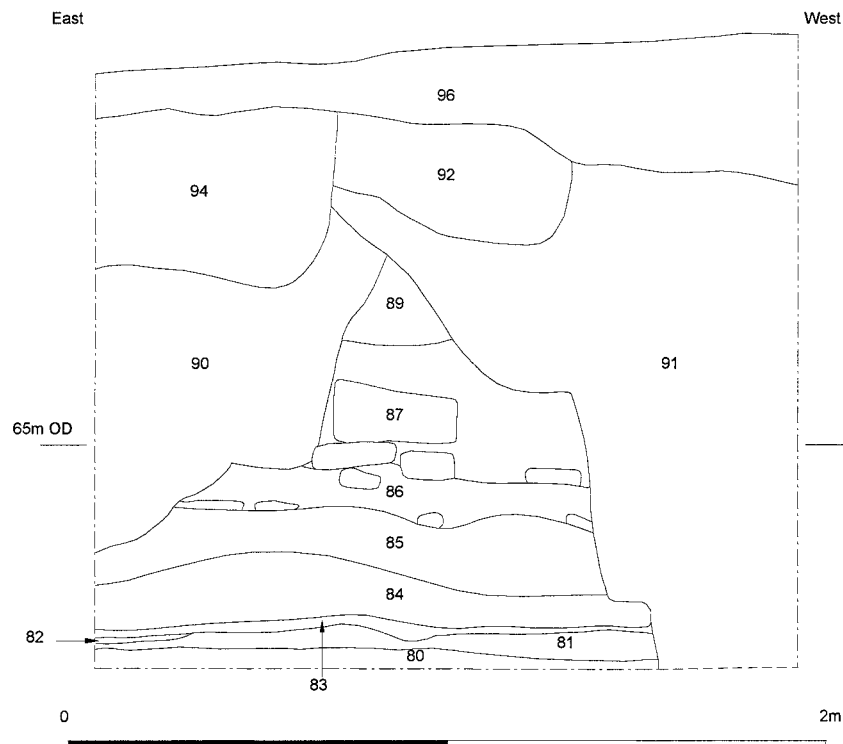


Fig 4.16 Section running east to west across the south end of Trench 1



Fig 4.18 Looking south at north-south wall cg12 with pitched/laid stones – surface cg13: LUB 7



Fig 4.19 Looking south-east at plaster fragments cg18 on wall cg12: LUB 8



Fig 4.20 Looking west at north-south wall cg12 abutted by east-west wall cg15 with hearth cg27 to left: LUB 10

to Chapel Lane (which was of post-Roman origin) but to a street pattern which has only survived in this area of the upper city as West Bight. It is possible that both buildings in Trenches 1 and 2 faced on to a precursor of West Bight, c20m to the east of Trench 1, and 15m to the east of Trench 2.

Sealing Structure 6 in Trench 2 were dumps (LUB 12) and sealing Structure 4 in Trench 1 were dumps (LUB 13). Both LUBs 12 and 13 contained material dating to the late Roman period, but could be later.

Although the earliest post-Roman pottery from the site dates to the Middle Saxon period, it was found in later deposits. From the late Saxon to Saxo-Norman periods there was evidence for pits in both Trenches 1 and 2 (LUBs 14 and 15), containing late Roman pottery which had been brought on to the site from nearby. The pitting from the late Saxon period may relate to nearby occupation, possibly along a street, perhaps West Bight or its Roman predecessor, to the east. From the early to late medieval period in Trench 2 there were dumps and pits (LUBs 16 and 17) which continued later (LUB 18). In Trench 1 there was no evidence of any early to late medieval activity. The open area of Trench 2 was eventually divided by a north-south wall (LUB 19), probably a property boundary; this wall was later robbed (LUB 20). Trench 1 (LUB 15) was sealed by a concrete surface (LUB 21).

#### *Roman structures*

The clearest sequence of buildings was found in Trench 2. Structures 1 and 2 were earth-fast timber buildings (LUBs 1 and 3), dating to the mid 1st century. It would appear that Structure 1 had burnt down (LUB 2), to be replaced by Structure 2. The layouts of the buildings were unclear but covered the whole of the area excavated (3.5m by 3m). They are most likely to represent legionary barracks.

At this point the area (Trench 2) was sealed by a gravel and pebble surface (LUB 4) dated to the mid 1st century or later.

Succeeding the surface in Trench 2 was a building, possibly of timber frame construction, with earth-fast elements (Structure 3; LUB 5; Fig 4.17). A clay floor was succeeded by a sand floor. The structure produced only mid to later 1st-century pottery, but possibly belongs to the early 2nd century.

The dating of the subsequent structures is uncertain: the pottery would suggest several rebuildings before the mid 2nd century, but on probability grounds one would be better placed in the late 2nd and 3rd centuries.

Structure 3 was dismantled to be replaced by Structure 5 (LUB 6), with stone-founded walls (only

0.30m wide – possibly of timber construction above). There were initially two rooms 5A and 5B (LUBs 7 and 8) dating between the mid and later 1st century (Fig 4.18); 5B was later divided into two, 5C and 5D between the late 1st and early 2nd century (LUB 10; Fig 4.20). There was clear evidence for painted wallplaster from this building, some of which had survived *in situ* (cg18, room 5B, LUB 8; Fig 4.19). These remains could represent the rooms of a courtyard house, or similar.

Structure 5 was demolished and replaced by Structure 6 (LUB 11), the stone-founded north–south wall of which (Fig 4.21) was shifted about 0.50m to the west (0.60m wide – it possibly supported some stone superstructure). Three rooms were revealed.

The buildings in Trench 2 appeared gradually to become more and more substantial in their construction from the mid 1st century through to the late 1st and 2nd centuries. The timber construction of the earliest buildings was usual for fortresses and the earliest structures in *coloniae* of this period.

In Trench 1, the restraints on depth meant that nothing earlier than Structure 4 (LUB 9) was excavated. The surfaces – pebbles, limestone slabs in sand, clay and sand – dated to the late 1st century or later, perhaps to the early 2nd.

Few artefacts, apart from small fragments of iron (mostly nails or hobnails) or occasionally copper alloy (tacks), were recovered from any of the structures, and domestic rubbish (eg vessel glass) and personal items (such as the normally ubiquitous bone pins) are noticeably absent. Although it may be due, at least in part, to the limited areas investigated, this relative absence of material is a feature common to the early timber (legionary) buildings investigated elsewhere in the upper city, as at Westgate (w73) and East Bight (eb80).

#### ***Building material imported on to the site***

Fragments of Purbeck marble and tesserae from dumps cg38 (LUB 12) clearly represent material derived from the demolition of or alterations to one or more nearby buildings. Dumps cg54 (LUB 12) contained a quantity (approximately 6.9 kg) of painted plaster which is quite unlike that from Structure 5. The pieces were mostly very small and colours were difficult to distinguish, suggesting that the plaster had been considerably disturbed, although a number of decorative schemes are recognisable: fragments of dado (red, black, white and ochre splashes on a pink ground, bordered by black), together with panelled schemes in various colours, and ‘marbled’ areas (mainly crude green splodges on a black ground). Several fragments show a curvilinear design (in white and maroon), with a couple probably representing foliage, while other



Fig 4.21 Looking south at the foundations of north–south limestone wall cg47: LUB 11

pieces just possibly represent part of some sort of figural scheme. The poor preservation and fragmentary nature of this plaster suggest that it constitutes redeposited material and, like the tesserae and Purbeck Marble (see below), could have been brought to this site from elsewhere.

Robber trench cg56 and pits cg57 and cg65 (all LUB 14) all contained much building debris, including a small quantity of painted plaster, virtually all very similar to that noted from dump cg54 (LUB 12), although a few fragments from the robber trench had clearly come from the remains of wall cg12 (LUB 8). Two notable finds are both fragments of wall veneer of imported material, one (35) <105> from pit cg65 of limestone (possibly from Boulogne), and the other, from robber trench cg56, of marble from Italy or the Pyrenees (Peacock and Williams 1992). These veneers are almost certainly from the earlier dumps of demolition debris (LUB 12) brought to this site.

Incorporated within the latest floor cg86 of Structure 4 (LUB 9) was a very small fragment of Purbeck Marble, just possibly part of a column. Neither the earlier levels within Structure 4 nor the buildings in Trench 2, c25m from this Trench,

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cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB
1/1	14/7	27/10	40/12	53/-	66/17	78/17	90/15
2/1	15/10	28/-	41/-	54/12	67/-	79/17	91/15
3/1	16/5	29/11	42/-	55/14	68/-	80/9	92/15
4/1	17/5	30/-	43/-	56/14	69/17	81/9	93/15
5/1	18/8	31/11	44/-	57/14	70/17	82/9	94/15
6/2	19/7	32/11	45/-	58/16	71/18	83/9	95/15
7/2	20/10	33/8	46/12	59/16	72/18	84/9	96/21
8/2	21/10	34/8	47/11	60/16	73/18	85/9	97/21
9/4	22/10	35/8	48/-	61/14	74/18	86/9	98/21
10/4	23/10	36/8	49/-	62/14	75/18	87/13	99/21
11/5	24/10	37/8	50/12	63/17	76/19	88/13	100/3
12/6	25/10	38/12	51/-	64/14	77/20	89/13	101/19
13/7	26/10	39/12	52/-	65/14			

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Fig 4.22 Concordance of cg numbers with LUB numbers for cl85

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provide any evidence for high-quality construction for which the use of Purbeck Marble would be appropriate. This fragment is therefore likely to have been brought on to the site as debris from the demolition of, or alterations to, a building of some importance elsewhere in the vicinity.

It would seem that after the demolition of Structure 6, the area was used for a dumping ground including building materials from a building or buildings of some substance in the Upper City (LUB 12). The demolished building may have been a building of great civic importance. One such building was that forming a large precinct sp72 Structure 10 (LUB 7), but there are other possible candidates. It is also possible that the dumps were brought to the site for a late Roman garden, or alternatively they may have been used in the late Saxon period to enable rubbish to be buried.

#### *Architectural fragment*

The only surviving architectural fragment (38) <102> was found embedded in the top of cg56, a late Saxon robber trench, but it is clearly of later medieval date. It is a large impost moulding for a door, with a square rebate and an internal splay. The profile of the moulding consists of a quirk, a roll, a chamfer, a hollow and a second chamfer. The fragment bears rough striated tooling on the upper and lower beds but is more finely tooled on the moulded surfaces with the claw. An origin in either an ecclesiastical or a high-status secular building is equally plausible. It is difficult to know therefore if it was derived from the nearby St Clement's or St Paul's church, or one of the residences in the Bailgate area. The moulding profile has certain affinities to Perpendicular forms: a date in the later 14th or 15th century is likely.





## 5. East Bight 1980 (eb80)

### Introduction

Excavations were carried out between October 1980 and May 1981, directed by Kevin Camidge for the Lincoln Archaeological Trust. Funding was provided by grants from the Department of the Environment and the Society of Antiquaries Research Fund, together with a donation from the local developers, the Simons Construction Group.

The site lay between East Bight and Church Lane in the grounds of the former County Police Headquarters, on the line of the Roman northern defences

(Fig 5.1). The position and extent of the excavations were largely dictated by the nature of the intended development of the site, which consisted of two large dwellings to be built on the East Bight frontage. Excavation of the Roman defences was limited to a one-metre wide trench between a row of poplar trees which were to be preserved, while the main area, to the south, was confined largely to the proposed line of service trenches.

One of the original objects of the excavations was to establish the nature and extent of any

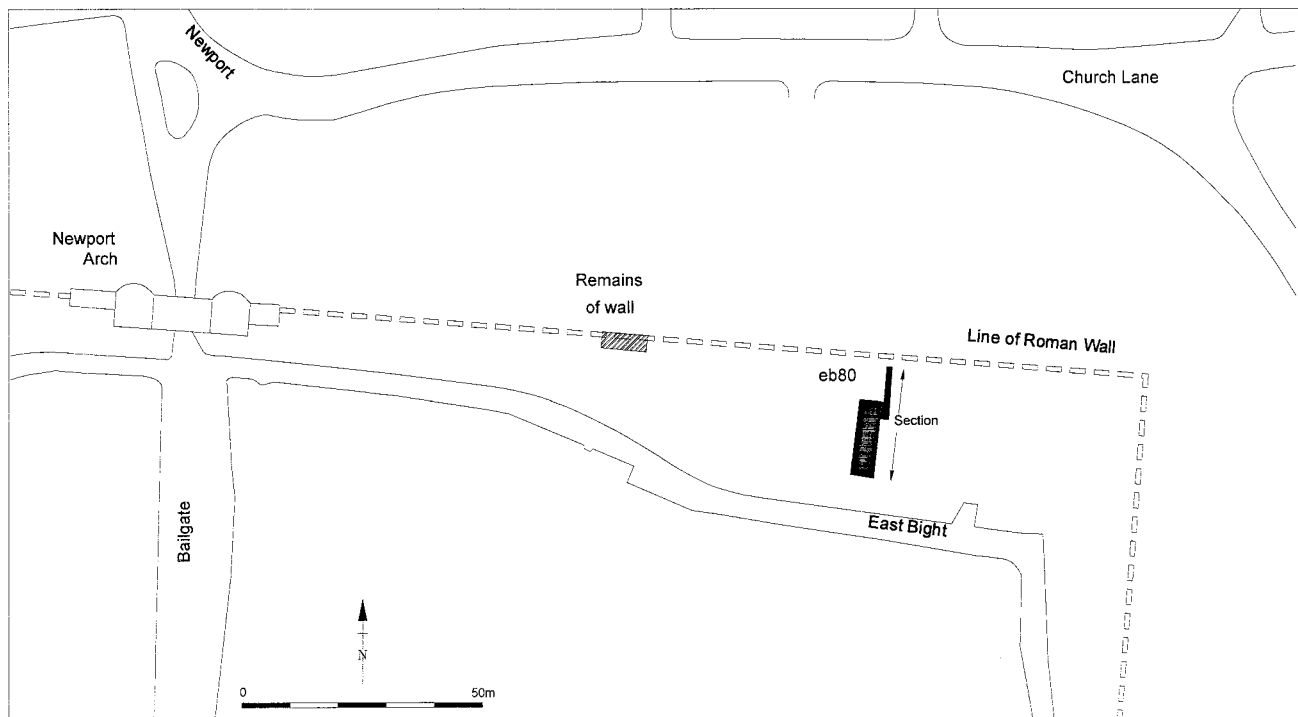


Fig 5.1 Location plan, showing section in eb80

surviving post-Roman re-use or refurbishment of the Roman defences, or occupation on the rampart. These were later developed to include investigation of the structures within the defences. The main area of excavation was taken down to natural subsoil, but the small trench across the defences had to be abandoned after the *colonia* defences were uncovered, for safety reasons. An interim report was published (Camidge 1981).

Of the 261 contexts recognised on the site, 5 were unstratified and the rest were grouped into 106 context groups (cg1–124, but cg14, cg20, cg29, cg37, cg39, cg80–85, cg87–88, cg95, cg102–4 and cg113 were not used). These context groups were interpreted as 34 LUBs (LUBs 0–33; Figs 5.2 and 5.20). The sequence of LUBs was divided between the north (LUBs 1–6) and south (LUBs 7–9) in the first part of the early Roman period. After LUB 10 from the early to mid Roman periods there were 3 sequences, one to the north (LUBs 11–12, 18; 20–23), one in the centre of the site (LUBs 13–14, 19 and 24) and one to the south (LUBs 15–17, 25–26). Subsequently from the late Roman period the sequence progressed more or less as one (LUBs 27–33).

A large amount of Roman (3,658 sherds) and some post-Roman (198 sherds) pottery, together with a relatively large number (610 finds) of registered finds were recovered, more than two-thirds (72.2%) of which consisted of heavily corroded metalwork. A large proportion (39.2%) of the whole finds assemblage was ironwork, although more than half of this was composed of nails. There was almost as much copper alloy (32%), an unusual feature of excavation assemblages for Lincoln; this effect is almost entirely due to the presence of waste (broken and fragmentary objects, some part-worked pieces and a tiny quantity of melt waste) associated with 1st-century military metalworking (see Discussion). Among the copper alloy were three Roman brooches (Mackreth 1993) and fourteen coins, while a single silver coin was also found (Davies 1987; Davies 1993); there were few finds of lead, tin or pewter. A substantial proportion (18.7%) of the remaining material was composed of glass (Price and Cottam 1995c), largely Roman vessel fragments, but including a little window glass, several beads and a counter. A small quantity of ceramic finds included fragments from several crucibles but there was only a very small quantity of slag (some pieces adhering to fired clay hearth-lining). Other materials such as bone (Rackham 1994) and stone (Roe 1995; hones: Moore 1991) occurred infrequently (representing 2.1% and 1.9% of the assemblage respectively). No organic material was recovered. Only a small group (202 fragments) of building material fragments was recorded from this site, a large proportion of which was of plaster or

of Roman tile (stone building material: Roe 1995). Animal bone was found in some quantity (1,035 fragments), but only two contexts could be well dated and as a result the assemblage as a whole is of little interpretative value (Scott 1987; Dobney *et al* 1994b). One Roman infant burial was recovered (Boylston 1998).

Post-excavation stratigraphic analysis was carried out by Paul Miles and Kate Steane. Margaret J Darling examined the Roman pottery and Jane Young the post-Roman pottery. Jen Mann analysed the registered finds and with Rick Kemp the building materials. Paul Miles and Zoe Rawlings digitized the plans.

## The Excavation

### Natural

Limestone brash **LUB 0** was located at the limit of the excavation.

#### *LUB 0 Natural (Fig 5.14)*

Natural limestone brash cg86 was located at the limit of excavation at about 64.50m OD. It was exposed in the whole area of the main excavation, but not along the narrow northern trench.

### Early Roman

Sealing the natural subsoil in the northern area of the site were sandy layers **LUB 1** which were cut by a large pit **LUB 2**. Contemporary with LUBs 1 and/or 2 was a line of stake-holes **LUB 3**, possibly the line of a fence separating the north of the site from the south. Sealing both the pit **LUB 2** and the stake-holes **LUB 3** was a dump, cut by pits **LUB 4**. The finds from both dump and pits (**LUB 4**) were indicative of metalworking. Cutting the dump and sealing two of the pits (**LUB 4**) was a timber building, Structure 4 **LUB 5** which was contemporary with dark sandy silt layers cut by a possible gully **LUB 6**. Pottery from LUBs 1, 4, 5 and 6 was all indicative of a mid 1st-century date, with sherds from LUBs 5 and 6 possibly later in the 1st century.

Cutting natural to the south of the site were the slots of timber Structure 1 **LUB 7**. Structure 1 was destroyed by fire and the site was levelled **LUB 8**. Succeeding Structure 1 was timber Structure 2 **LUB 9**. Mid 1st-century pottery was recovered from **LUB 8**; these structures probably represent successive phases of barracks.

Structure 2 (**LUB 9**) and Structure 4 (**LUB 5**) were dismantled and together with gully (**LUB 6**) were sealed by layers and cut by features **LUB 10**. The pottery from **LUB 10** dated to the legionary period

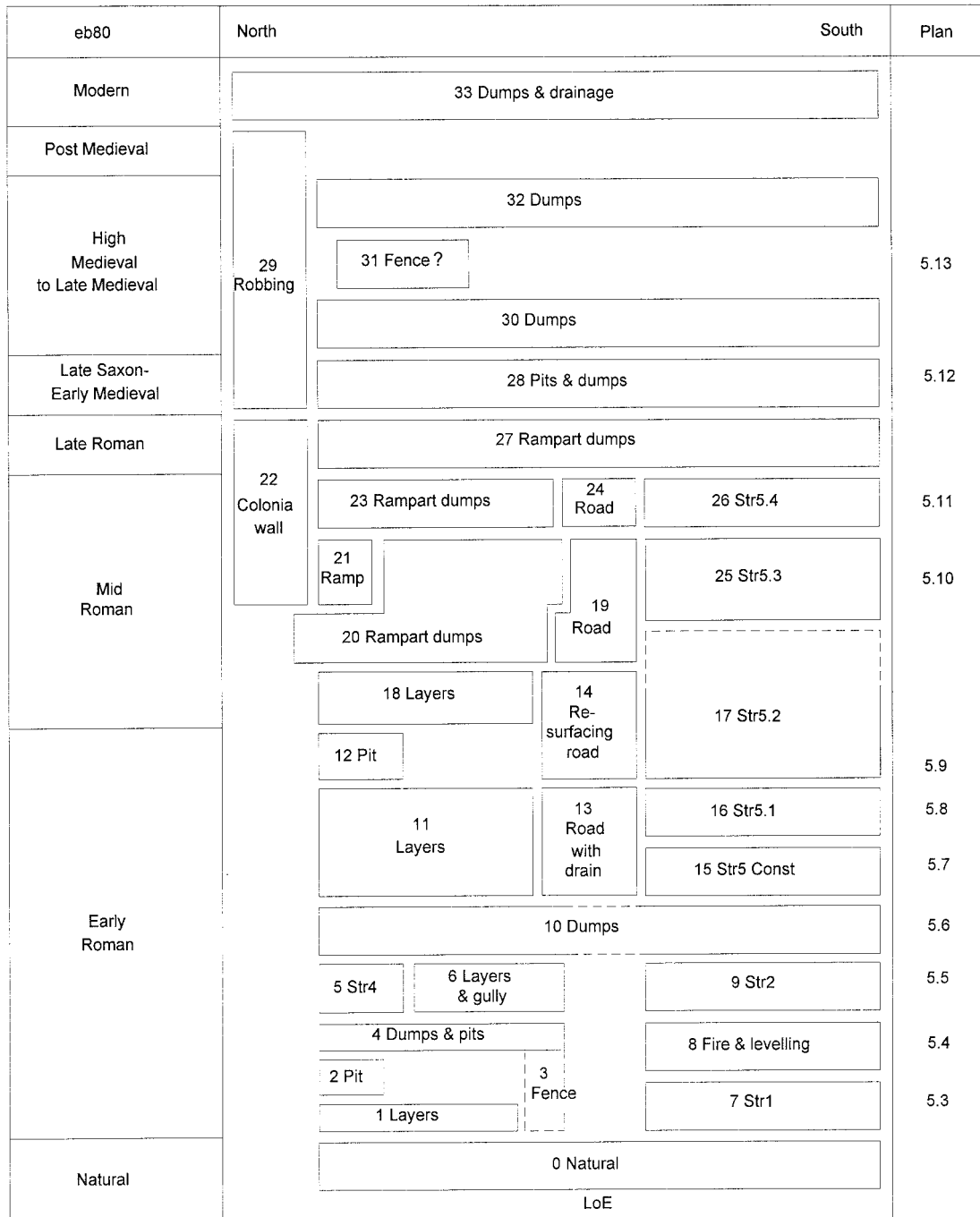


Fig 5.2 LUB diagram for eb80

with occasional sherds which might suggest that activity extended into the early 2nd century.

To the north of the site were dumps LUB 11 associated with pottery and glass which dated between the late 1st and early 2nd century. LUB 11 was cut by a large pit LUB 12, from which early 2nd-century pottery was recovered.

In the centre of the site, cutting LUB 10 and

running east-west was a road covering central drain LUB 13, probably constructed in the early 2nd century. It was later re-surfaced LUB 14.

In the south part of the site, sealing LUB 10, stone-founded Structure 5 LUB 15 was constructed; there was evidence for two phases of floors, internal divisions and features from the first main phase of its occupation LUB 16 and LUB 17. LUBs 15, 16

and 17 were associated with early 2nd-century pottery.

#### LUB 1 Layers (Fig 5.14)

Sealing natural cg86 (LUB 0) at the north end of the site was a layer cg1 (about 0.10m thick) of silty sand with pockets of charcoal. Also at the north end of the site, sealing the north part of layer cg1 were thin sandy silty layers cg4.

Pottery from cg1 (4 sherds) was consistent with a mid-1st-century date. Pottery from cg4 (26 sherds) included a chip of SAMSG which predated AD85; the other sherds are all consistent with a mid-1st-century date, including a CR handled cup and a flagon of the collared Hofheim type.

Although the legionary rampart lay beyond the northern edge of the main excavation area, the LUB and deposits might represent either spill or trample from the construction of the rear of the rampart.

#### LUB 2 Pit (Fig 5.3)

Cutting layer cg1 (LUB 1) in the north-west corner of the site was a pit cg3, about 1.8m in diameter. This very limited evidence may relate to the earliest period of military occupation, during the construction of the defences, but there was no dating evidence.

#### LUB 3 Fence (Fig 5.3)

Cutting natural cg86 (LUB 0) were three small postholes cg2 running east-west across the centre of the site. There was no dating evidence. The small size of the postholes and their irregular line, some 3m north of Structure 1, (LUB 7) suggest a fence-line, perhaps delimiting the area of the internal structures, the road line, or the construction zone for the defences, if only for a short period.

#### LUB 4 Dump and pits (Figs 5.4 and 5.14)

Sealing layer cg4 (LUB 1), pit cg3 (LUB 2), and postholes cg2 (LUB 3) was layer cg5, consisting of limestone rubble and sand (0.15m thick); this covered the northern 6m of the site. Among the few registered finds from cg5 were a fragmentary buckle bar and a piece of folded sheet, possibly part of the hinge from a cuirass buckle, both of copper alloy.

Cutting cg5 were pits cg7 (about 1m across; 0.50m deep), cg122 (about 0.90m across; 0.30m deep), cg123 (about 0.90m wide; 0.40m deep; unplanned), cg9 (about 1m wide; 0.50m deep) and shallow pit cg10 (about 1m wide; 0.25m deep). Cutting pit cg123 was a further shallow pit cg8 (about 1m wide; 0.12m deep). The pits contained sandy silt and some limestone rubble. Slight evidence for metalworking is suggested by a lump of ?smithing slag adhering to a piece of fired clay hearth-lining, from pit cg8.

The fabrics of the 16 pottery sherds from cg5 can all be dated to the mid 1st century, and include a CR small open vessel with an indeterminate name-stamp, IAGR cooking vessels, and a PINK lid of the type normally associated with Pompeian red platters. Pottery from pits cg122, cg123, cg8 and cg9 (80 sherds altogether) includes a single SAMSG sherd of a Ritterling 9 cup of pre-Flavian date; the coarse sherds include a CR collared flagon (as in LUB 3), copies of a Ritterling 12 bowl (complete profile, notably fresh sherds), at least two plates of

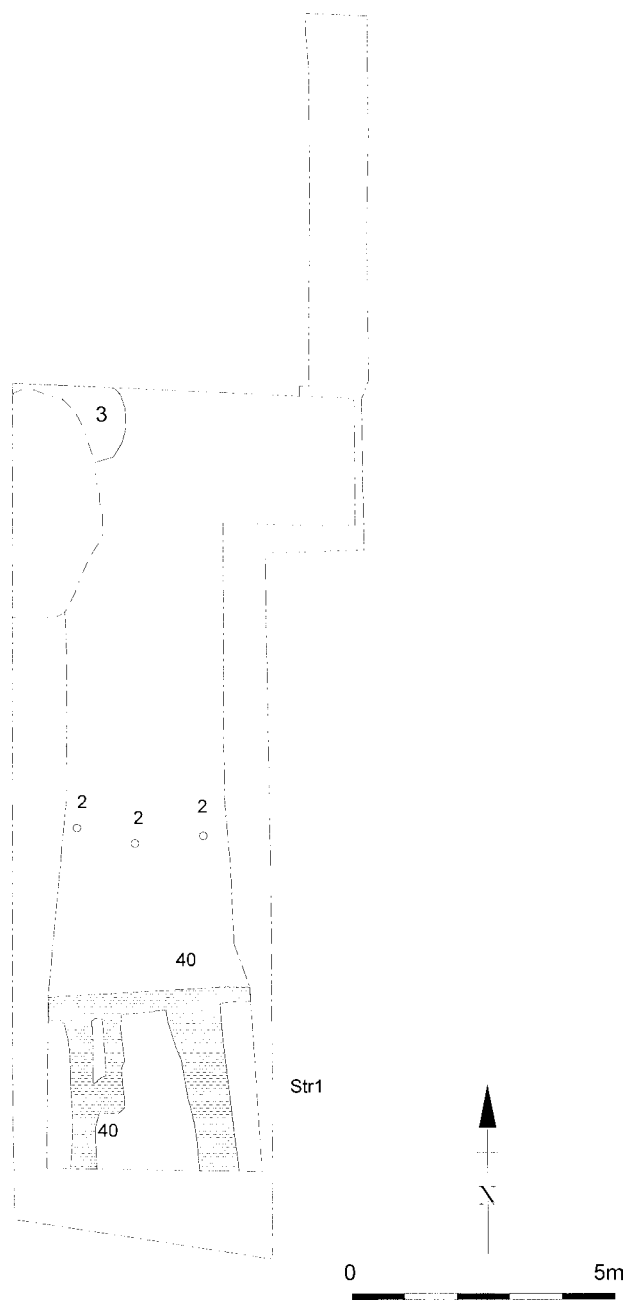


Fig 5.3 Pit cg3, fence, cg2 and Structure 1: LUBs 2, 3 and 7

samian form, one copying a 15/17, and fragments of a cup or small bowl and beaker, all in RDSL. Two unusual vessels from these pits are a PINK pedestalled cup or tazza, and a LEG beaker with vegetable barbotine decoration. The pottery from the pits is consistent with a mid 1st-century date.

*LUB 5 Structure 4 (Fig 5.5)*

Cutting dump cg5 (LUB 4) was the south-west corner of a right-angled beamslot cg116. Cutting cg116 were post- and stake-holes cg6. The posts

were quite evenly spaced, approx 0.80m apart. Fire-ash material and floors cg11 sealed pits cg9 and cg10 (LUB 4); these consisted of black ashy charcoal and silt, sealed by three layers of clayey sand with charcoal flecks. Cutting cg11 was a post-pit cg12 with the surviving ghost of a post-pipe. The post-pit cg12 was sealed by a thin layer of dark greyish-brown sandy silt cg15 with much ash (0.05m thick). This was cut by a shallow pit cg19 (0.25m deep; unplanned). Sealing layer cg15 was a layer of brownish-yellow silty sand cg90.

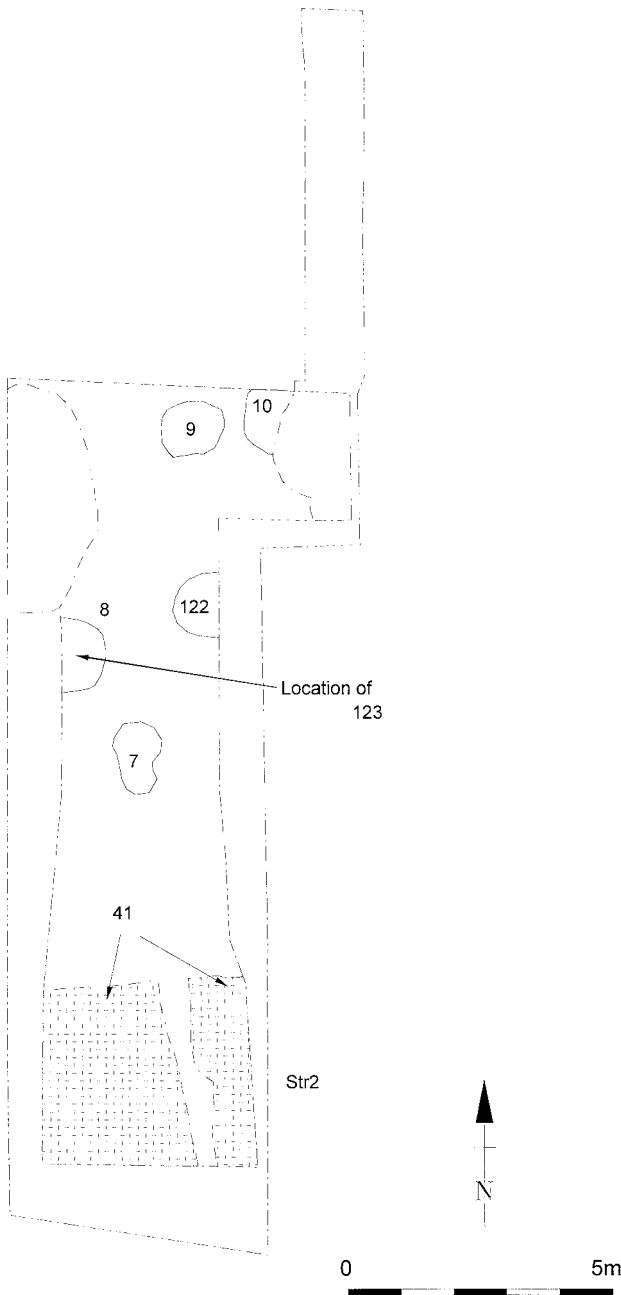


Fig 5.4 Pits and deposits cg41: LUBs 4 and 8

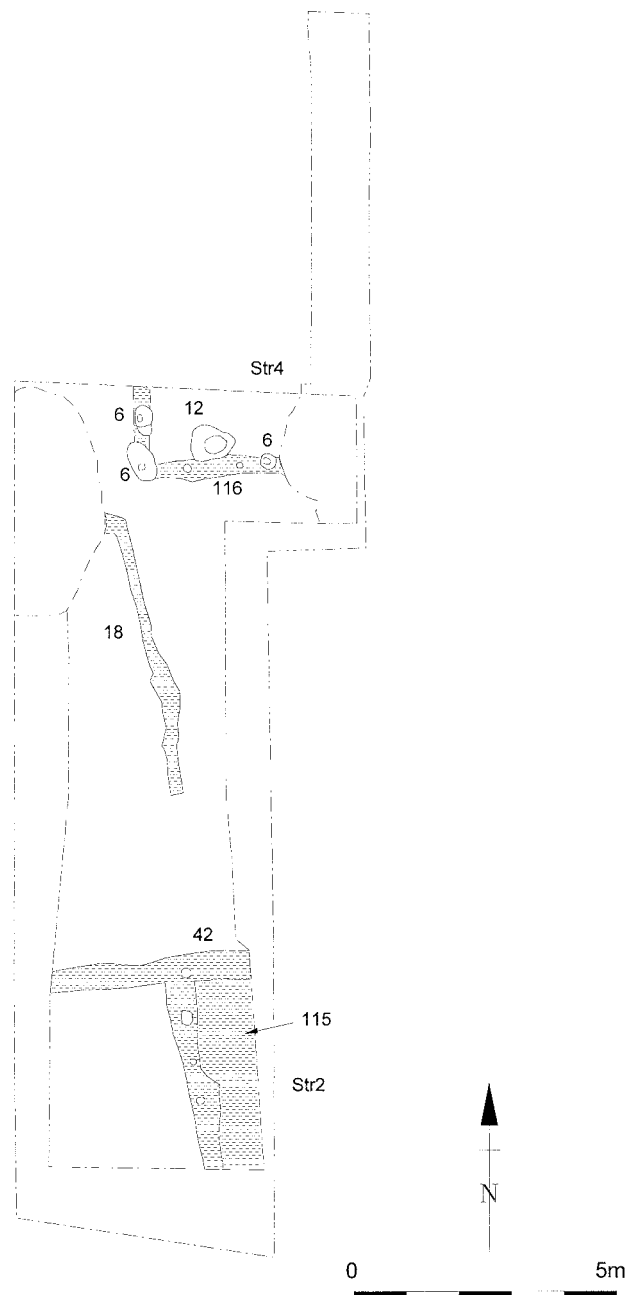


Fig 5.5 Structure 2, Structure 4 and gully: LUBs 5, 6 and 9

The pottery from post- and stake-holes cg6 (19 sherds) included two body sherds of SAMSG, dated to the Neronian-Flavian and Flavian periods; the other sherds included a rim fragment of a MORV mortarium, RDSL sherds from probably two plates of the samian 18 form, and can be dated to the mid or later 1st century. Pottery from layers cg11 (6 sherds) all belonged to a single CR campanulate handled bowl, a notable early continental type, also seen at the vexillation fortress at Longthorpe and the legionary fortress at Usk; a legionary period date seems clear. Pottery from post-pit cg12 (3 sherds) consisted of a body sherd from a LEG jar with high rustication, and two CR flagon type body sherds; these date to the mid 1st century or later. The pottery from cg15 (8 sherds) included a sherd of RDSL, supporting a mid 1st-century date.

#### *LUB 6 Layers and gully (Figs 5.5 and 5.14)*

Sealing pit cg7 (LUB 4) were layers cg13 which abutted Structure 4, and consisted of dark brown sandy silt with stone sealed by very dark grey charcoal with ash. Within layers cg13 were found part of the copper alloy piping from a helmet cheekpiece (190) <Ae150>, and a small, part-worked copper alloy bar (190) <Ae136>. Over layers cg13 also abutting Structure 4 were layers cg89 of dark sandy silt with limestone fragments. Sealing pits cg8 and cg122 (LUB 4) were similar layers cg17 of sandy clay with charcoal and limestone fragments. These layers may have been dumps (0.10–0.15m thick) to the south-west of Structure 4.

Cutting cg17 was the void of a possible gully cg18 (0.12m wide); the line of the gully was uneven, but appeared to slope from north to south; its fill was of dark grey silt. It possibly led to an east-west channel running to the north of Structures 1 and 2. Any trace of an east-west continuation would have been subsequently removed by the later central drain.

The pottery from this LUB came from cg17 (64 sherds) and cg89 (8 sherds) and included a bowl of Ritterling 12 type in RDSL, beakers and a rusticated jar in LEG fabric, a 1st-century flanged bowl in GRSA, and IAGR cooking vessels, all indicative of a mid or later 1st-century date; there were no sherds positively of later 1st-century date.

#### *LUB 7 Structure 1 (Fig 5.3, 5.14 and 5.15)*

Cutting natural cg86 (LUB 0) to the south of the site were the slots cg40 of Structure 1. These consisted of two parallel north-south slots (about 2m apart), the western of which was bifurcated, abutting an east-west slot to the north. The slots probably represent timber wall-trenches for horizontal beams, suggesting a timber building with two internal partitions. The bifurcation in the

western internal partition may have represented some form of internal fixture.

A plated (gilt?) copper alloy stud (238) <Ae163> was recovered from the fill of cg40; it is almost certainly military, and possibly from a harness-fitting. There was no pottery dating evidence from this LUB.

#### *LUB 8 Fire and levelling (Figs 5.4 and 5.14)*

Sealing slots cg40 (LUB 7) were layers cg41; these consisted of dark greyish-brown charcoal and ash (0.05m thick) sealed by clay with silty sand (0.10m thick) over which was silty clay (0.10m thick).

As these layers both sealed the timber beam slots cg40, the slots were no longer operating, and as the lowest layer was dark charcoal and ash it seems likely that Structure 1 had been at least damaged by fire, or its remains burned after demolition. The charcoal and ash were subsequently sealed by thick layers of silty sand and clay, possibly make-up for a new building to replace Structure 1.

Within the thick clay deposit of cg41 was found a rectangular, decorated copper alloy mount (229) <Ae162> from a military 'apron' or belt, and likely to be of pre-Flavian date (as Grew and Griffiths 1991, fig 8, 41). There were five sherds of pottery from layers cg41; four were of PINK fabric, two of them from an early flagon type of mid 1st-century date, but a sherd from a NVCC beaker in a later 3rd- to 4th-century fabric type, was intrusive.

#### *LUB 9 Structure 2 (Figs 5.5 and 5.14)*

East-west and north-south timber slots cg42 cut deposits cg41 (LUB 6); the north-south slot contained four postholes. To its east were sandy layers with mortar flecks cg115, which may have represented fragmentary floor levels associated with this structure. There was no pottery dating evidence.

Structure 2 represents a new timber structure replacing Structure 1, but with its north wall located about 0.50m to the north. However, it may have had a similar function, as it appears to have been a direct replacement of the earlier building.

#### *LUB 10 Dumps (Figs 5.6 and 5.14)*

In the south part of the site, sealing the postholes within the slots and the slots themselves cg42 (LUB 9), was sandy silt cg91 with clay; this shows that Structure 2 had been dismantled. Sealing both fill cg91 and layers cg115 (LUB 9) were layers of very dark grey ash and charcoal cg43 (0.10–0.20m thick). Over layers cg43 were dark pockets of ash cg92 (about 0.20m thick) containing a number of iron nails, some with burnt timber adhering and a few pieces of burnt daub.

At the north end of the site, Structure 4 was dismantled. Sealing cg90, beamslot cg116 and post-

holes cg6 (all LUB 5) was brown sandy silt cg16 (about 0.20m thick). Over the silt cg16 and sealing gully cg18 (LUB 6) were layers cg21: they consisted of dark grey charcoal and sandy silty ash, sealed by clay with ash and charcoal. Over this and sealing pit cg19 (LUB 5) were various layers cg93 of sand, charcoal, ash and silt. Sealing these was reddish-brown silty sand cg94 with clay, burnt daub, ash, charcoal and limestone chips. Cutting cg93 was small pit cg22 (0.50m deep), and cutting cg94 and pit cg22 was a large pit cg23 (not bottomed).

These levels almost certainly represent the dump-

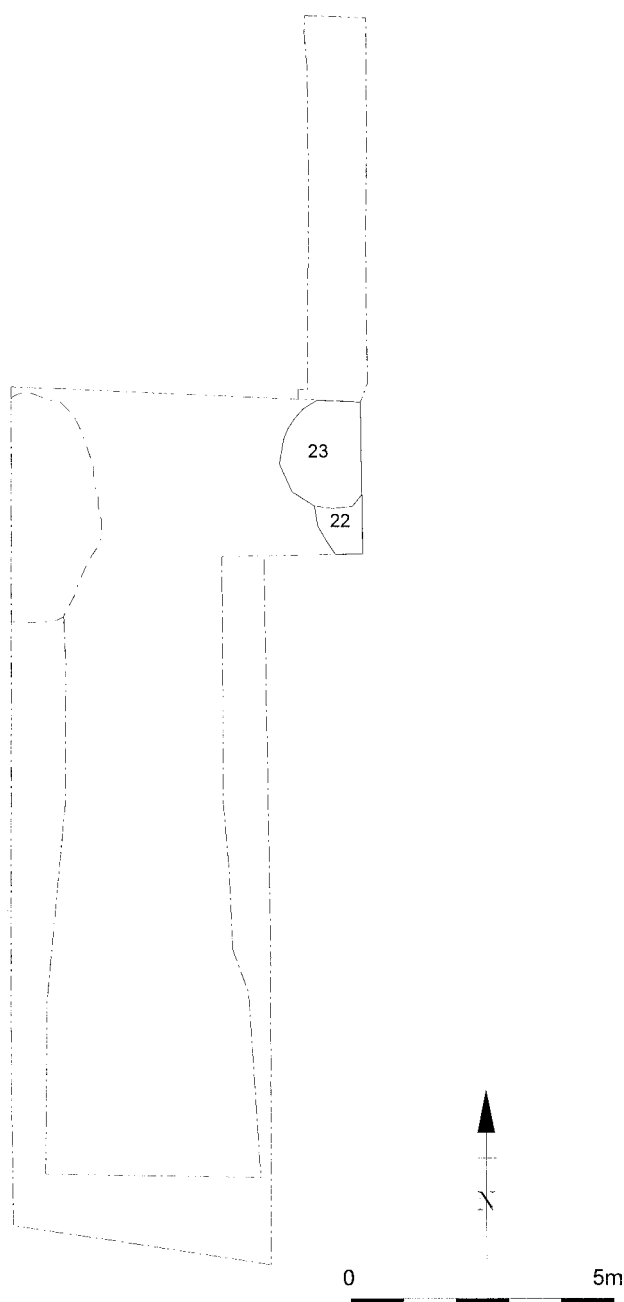


Fig 5.6 Pits associated with metalworking: LUB 10

ing of debris following the demolition of the legionary buildings. Much of the material is consistent with a mid to late 1st-century date; the debris included both military equipment and metalworking waste, most particularly from the uppermost levels of the dumps – cg92 over the area of Structure 2 to the south, and cg93 over the area to the north, where pit cg23 also contained a particularly large assemblage. Much of the pottery from cg43 and cg92 had been burnt, suggesting perhaps that rubbish burning was taking place over the site of Structure 2.

The pottery from cg16 (3 sherds), cg21 (9 sherds), cg23 (56 sherds), cg43, (3 sherds) cg91 (8 sherds), cg92 (66 sherds), cg93 (45 sherds) and cg94 (9 sherds) was mostly derived from earlier legionary period groups. There was a GREY body sherd with external burnishing which suggested a deposition date into the 2nd century; an unusual shell-tempered jar with rilling may also be of later date, and some of the CR flagon sherds could be of 2nd- rather than 1st-century date.

#### LUB 11 Layers

The pits cg22 and cg23 (LUB 10) were sealed by a series of fine layers cg24 containing lenses of charcoal, sand ash, limestone fragments, shell and mortar fragments (in total 0.35m in depth). These layers again largely comprised redeposited military material, including metal waste (see Discussion).

Although the pottery from cg24 (93 sherds) contained many residual legionary sherds (with links to cg23, LUB 10), there were two bowls of type B321, a bowl of type B333 (not bifurcated) and an unusual bowl with internal burnishing, suggesting an early 2nd-century or later date.

#### LUB 12 Pit (Fig 5.9)

A large pit cg25 over 5m in diameter cut layers cg24 (LUB 11). Only 1.5m of its depth could safely be excavated, but it is likely that the pit penetrated to the tabular limestone, some 1m to 1.5m deeper; it may have been dug as a stone quarry. The large assemblage of registered finds from the backfill of the pit cg25 is composed almost entirely of redeposited material including military fittings and metalworking waste (see Discussion). There were pottery sherd links to cg114 (LUB 18) and cg26 (LUB 20) and one across the site to cg63 (LUB 17), suggesting that the backfill of the pit was derived from the same source as the rest of the dumps.

Pottery from pit cg25 (276 sherds) had quantities of re-deposited legionary period rubbish, much of it made up of sherds from legionary cooking vessels (24% of the total). The latest possible date from the pottery would be early 2nd century, possibly post-Hadrianic, based on the types and decoration of the GREY vessels.



*LUB 13 East-west road with drain*  
(Figs 5.7, 5.8, 5.14, 5.16 and 5.17)

Cutting cg94 (LUB 10) was the construction trench of a substantial east-west drain cg34. The trench was 0.30m deep and cut into natural; it had an elliptical base. The sides were built of rough unbonded limestone, and the construction trench was backfilled with clay and silty sand. The drain was capped with large, flat, roughly-cut limestone slabs. Sealing the construction trench fill and the capstones was loose limestone rubble, and over this were pebbles and small limestone fragments bonded with compact sandy silt and clay.

Cutting the construction trench backfill of the drain cg34 was a shallow east-west slot about 1m wide with a fill of sandy clay with limestone chips cg35 forming a surface which abutted against the parallel wall cg60 (LUB 15); this may have represented a path along the north side of Structure 5 (LUB 15). Surface cg35 was partially sealed to the north by large flat limestone rubble cg117 laid in brown sandy clay with limestone fragments between them; surface cg117 was some 4m wide and represented the surface of the adjacent road. The limestone surface had become very worn.

Pottery from the drain construction cg34 (16 sherds) and make-up for the road cg35 (10 sherds) and surface cg117 (1 sherd) was mostly residual, apart from a BB1 cooking pot base which indicates a date no earlier than Hadrianic and a moulded foot for a GREY jar which was also of early 2nd-century date.

*LUB 14 Re-surfacing of road* (Figs 5.9 and 5.14)

Sealing road surface cg117 (LUB 13) were the make-up for and surface of another road cg107; the make-up consisted of a dump of sandy silt, and over it were large limestone slabs with traces of organic matter, perhaps horse dung, between them. Sealing the make-up dump of cg107 to the south were compacted limestone chips and sand cg124, which may have represented a path to the north of Structure 5.2 (LUB 17). The pottery (15 sherds) from cg117 includes a sherd of Flavian to Trajanic date SAMSG, and a rouletted GREY jar which could be of early 2nd-century date.

*LUB 15 Structure 5 construction*  
(Figs 5.7, 5.14 and 5.18)

Cutting layers cg92 (LUB 10) was a foundation trench cg45 for east-west wall cg60; its roughly dressed limestone blocks were bonded with yellowish-brown sandy clay. A second east-west stone wall cg44 lay some 4.2m south of the main wall, and was located at the southern limit of excavation; its construction levels were beyond the level of the (stepped) excavation. It is not possible

to say whether this was an internal or external wall. The room excavated would have measured 4.20m by at least 5m internally.

Sealing layers cg92 (LUB 10) was a floor of light yellowish-brown clay cg46 with traces of sandy silt and charcoal. Cutting the floor were three postholes and seven stake-holes cg47 and cg49 and, in the north-west corner, an infant burial cg48. The burial contained the well-preserved remains of a full-term infant (Boylston 1998).

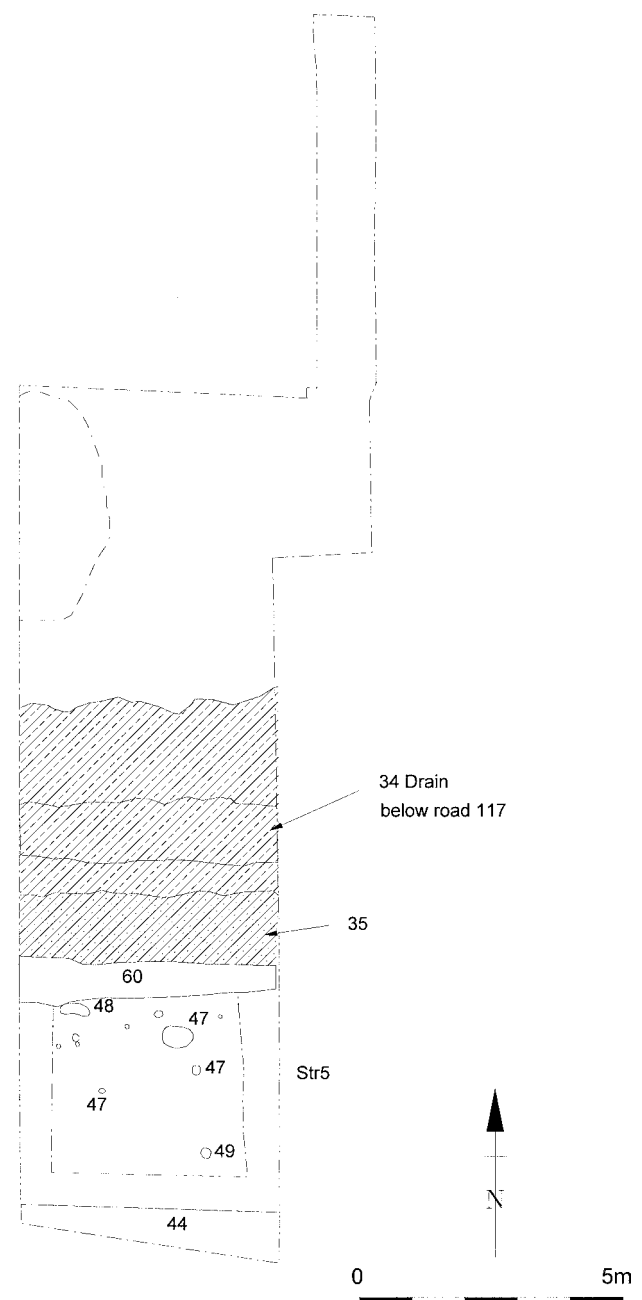


Fig 5.7 Construction of Structure 5 and road with drain: LUBs 13 and 15

Pottery from cg46 (9 sherds), cg47 (31 sherds), cg48 (1 sherd) and cg60 (6 sherds) was mostly residual 1st-century material; there was some disturbance of the underlying layers as indicated by a sherd link between cg46 and cg92 (LUB 10). A tiny fragment of an amphora from cg60 was in the Biv micaceous fabric, and is a notably early stratified example, presumed to be from the one-handled type. Another early occurrence of this type of amphora was a vessel found in an early 2nd-century well in London (Richardson 1986,103); an early 2nd-century date is indicated for the LUB.

*LUB 16 Structure 5.1 (Figs 5.8, 5.14 and 5.18)*

Sealing postholes cg47 and infant burial cg48 (LUB 15) were layers of dark brown sandy silt cg50 with patches of burning and ashy sand with charcoal. Layers cg50 were themselves cut by a shallow scoop cg54 (about 1m across and 0.10m deep) with a fill of sandy silt with limestone rubble and a small quantity of tile. Posthole cg49 (LUB 15) to the south was sealed by sandy silt with ash cg106 and cg53. Layer cg106 was cut by two postholes cg52 (unplanned).

Sealing postholes cg52 were layers cg51; they consisted of dark grey-brown sandy silt with much

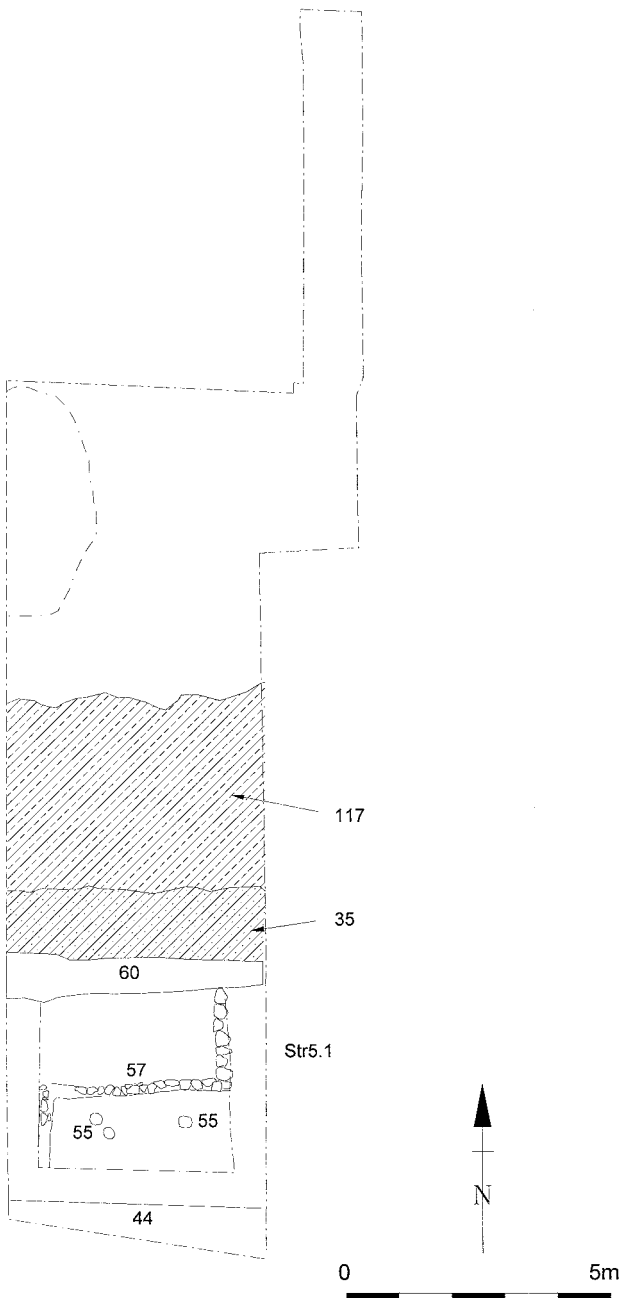


Fig 5.8 Structure 5.1 and road surface: LUBs 13 and 16

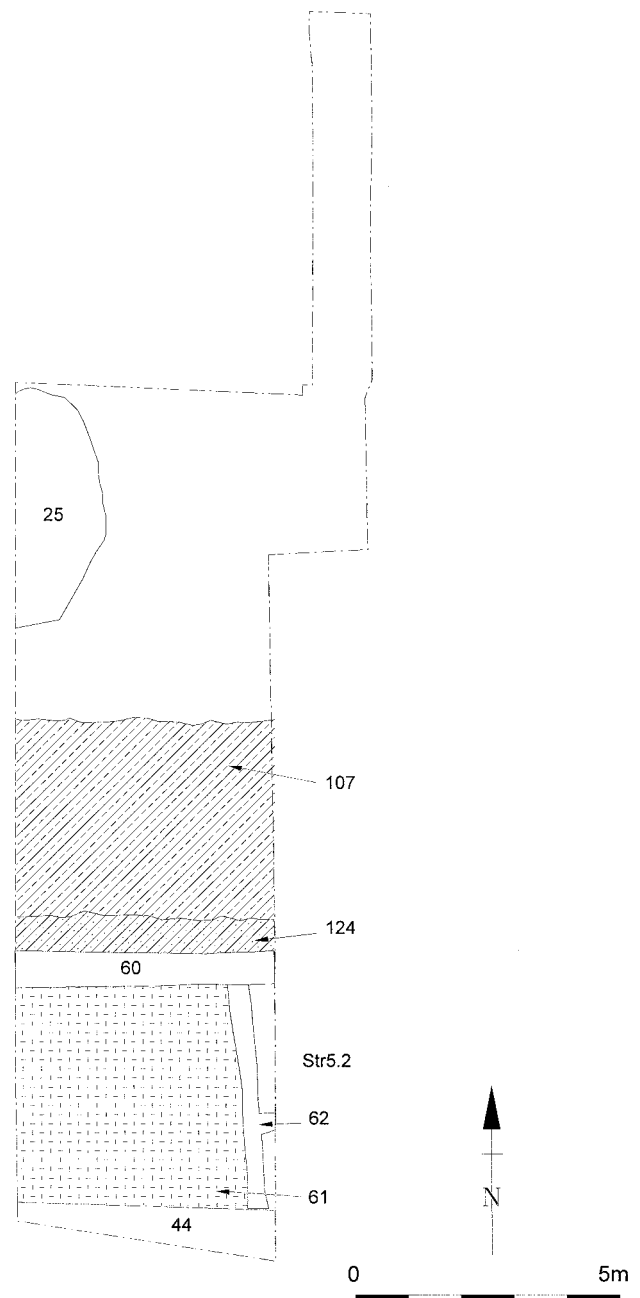


Fig 5.9 Structure 5.2 and road surface: LUBs 14 and 17

charcoal and ash, over which was a scatter of limestone sealed by sandy clay. Cutting cg51 were three postholes cg55 and north–south and east–west partition walls cg57, based on small stones presumably acting as sills for timber superstructures.

Pottery from cg50 (19 sherds), cg106 (8 sherds), cg54 (12 sherds), cg51 (11 sherds) was mostly residual; a rim of a SAMLM 18/31 of Trajanic date came from scoop cg54.

#### *LUB 17 Structure 5.2 (Figs 5.9 and 5.14)*

There was evidence to suggest that the timber from slot cg57 (LUB 16) was removed and the slot filled cg105. Sealing both postholes cg55 and fill cg105 (both LUB 16) was a dump of brown sandy clay cg56 with flecks of crushed limestone.

Cutting cg56 were small cobble-based partition walls cg62 running north–south at the east edge of excavation and east–west to the east and beyond the limit of excavation.

Sealing the area west of cg62 was pale brown clay cg61, and over it were layers cg63; these consisted of yellowish-brown sandy clay, over which in turn was light brownish clay with pebbles. The pottery from cg63 contained a few burnt sherds and there was a sherd link with the fill of pit cg25 (LUB 12) towards the north end of the site.

Sherds from cg56 (23 sherds), cg61 (2 sherds), cg62 (22 sherds), cg63 (90 sherds) included much residual pottery. A GREY bowl of the local B321 type, a body sherd from a possible copy of a samian form 37 bowl, and a lid-seated jar of type J105 in IAGR fabric from cg56 suggest an early 2nd-century date. From cg63, a local bowl type B321, GREY everted rim jars, and a body sherd probably from a bowl or dish of BB1 type suggest an early 2nd-century date or later.

#### *Mid Roman*

At the north end of the site, pit cg25 (LUB 12) was sealed by layers LUB 18; early to mid 2nd-century pottery sherds were recovered from these dumps. Make-up layers and road surface LUB 19 sealed the road LUB 14; the construction of the LUB 19 road was dated by the pottery to the mid to later 2nd century, and the latest pottery from its use dated to the mid 3rd century. Rampart construction layers LUB 20 sealed layers LUB 18 and extended over the edge of road LUB 19; pottery from this LUB dated between the mid and late 2nd century.

Sealing rampart dumps LUB 20 was a stone revetted ramp LUB 21, possibly serving as an aid for the construction of the *colonia* wall thickening LUB 22. Pottery was scarce from both these LUBs but suggested a late 2nd-century date or later.

Sealing ramp LUB 21 and partially sealing road surface LUB 19 were further rampart dumps LUB 23; these dumps were dated to the early 3rd century by the latest pottery sherds. The dump was contemporary with road surface LUB 24, which sealed road surface LUB 19.

At the south end of the site, Structure 5 (LUB 17) probably continued in use, before alterations LUB 25 were made; late 2nd-century pottery was recovered from LUB 25. Alterations were made to the interior of Structure 5 LUB 26.

#### *LUB 18 Layers (Fig 5.14)*

Sealing pit cg25 (LUB 12) were layers of sand, silt and rubble cg114 (0.40m thick in places). The layers cg114 included redeposited military fittings and metalworking waste. There were sherd links with the fills of the pit cg25 (LUB 12), suggesting that this material came from the same source as LUB 18, or that LUB 18 formed the upper fill.

Much of the pottery from cg114 (154 sherds) was composed of redeposited legionary period rubbish but it also included a BB1 flanged bowl with lattice decoration of early to mid 2nd-century date, and a near complete bowl of type B334; many of the jars are not closely datable beyond the late 1st to early 2nd century, but a complete rusticated jar was burnished inside the rim, a feature of 2nd-century rustic ware.

#### *LUB 19 Road (Figs 5.10, 5.14 and 5.19)*

Sealing cg107 (LUB 15) were possible road re-surfacing layers cg108, or perhaps layers deposited during use or even silting down from the rampart to the north; these consisted of three thin layers of pebbles with dark yellowish-brown sandy silt or clay (about 0.04m thick).

Sealing cg108 was another road surface cg109; there was a make-up dump of sandy silt with limestone rubble (0.45m thick), sealed by large flat limestone slabs with crushed limestone and pebbles in the interstices. The limestone slabs had become very worn.

Pottery from cg108 (5 sherds) was residual as were most of the sherds from cg109 (36 sherds), but one was a dales ware rim fragment, suggesting a mid 3rd-century or later date, perhaps indicating the latest use of the road surface.

#### *LUB 20 Rampart Dumps (Figs 5.9, 5.14 and 5.19)*

Sealing layers cg114 (LUB 18) and partially sealing the road cg108 (LUB 19) were further dumps of sand, silt and rubble cg26 (c1m in depth), again including redeposited military fittings and metalworking waste (see Discussion).

Pottery from cg26 (317 sherds) still included legionary-period rubbish (sherd links back to cg25,

LUB 12 and cg114, LUB 18), but the dating is more positively later than cg114 (LUB 18) due to the presence of at least eight BB1 vessels, most of early to mid 2nd-century date, but a cooking pot rim may date to the later 2nd century.

*LUB 21 Ramp at rear of rampart (Figs 5.10 and 5.19)*  
In the north-west corner of the site, sealing dump cg26 (LUB 20), were rough limestone blocks cg27,

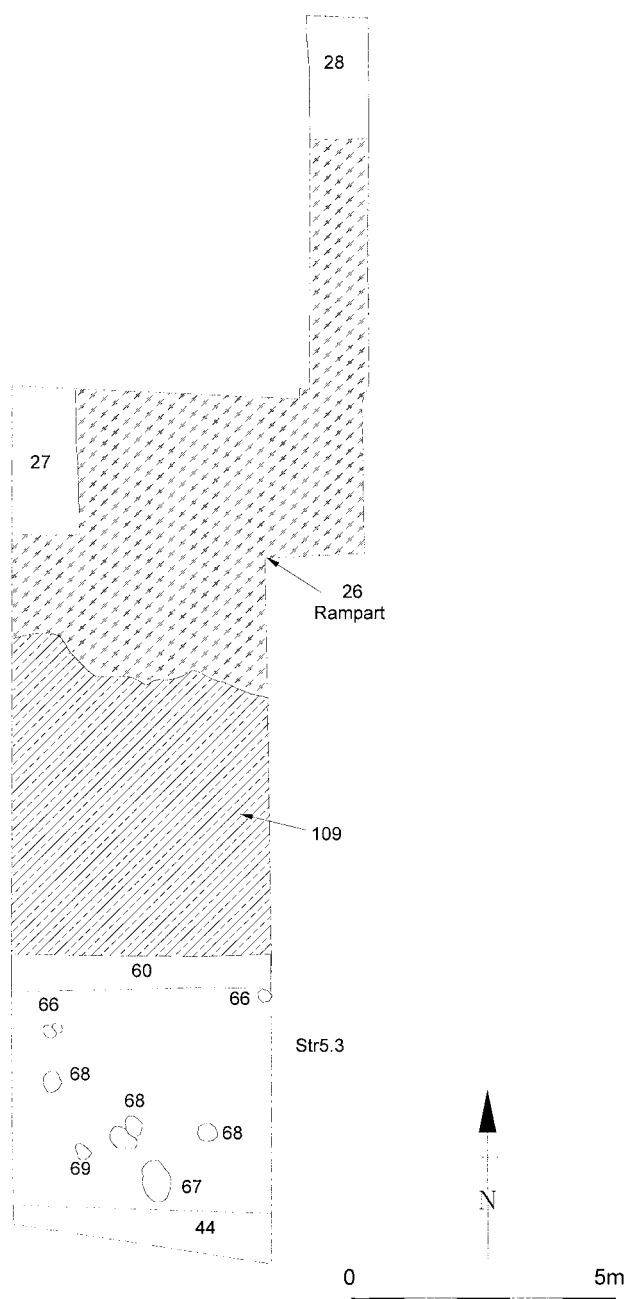


Fig 5.10 Structure 5.3, road surface, ramp, rampart and wall: LUBs 19, 20, 21, 22 and 25

roughly faced to the east, which formed an unmortared north-south wall at least 3.1m long, 1.45m wide, and 0.5m high which retained a dump of brown silty sand with limestone rubble.

This ramp seems highly likely to have been a constructional feature associated with the refurbishment of the defences. It may have been used for dragging up material for the heightening of the rampart, and/or the rebuilding/widening of the city wall, or a 'groyne' to prevent the rampart from slipping. The pottery from cg27 (29 sherds) was mainly residual or bodysherds, but these included sherds from two BB1 cooking pots, both of which had burnished line decoration on the rims, and one of which appears to be of mid to late 2nd-century date.

*LUB 22 Colonia wall (Figs 5.10, 5.11 and 5.14)*

Cutting dump cg26 (LUB 20), along the northern limit of the excavation was the construction cut for a substantial limestone wall cg28. The limestone blocks were bonded with hard reddish-yellow mortar; augering gave the width of the wall as 3.60m and the surviving height was 1.30m. The construction trench was backfilled with brown mortar and limestone rubble, sealed by sandy silt, over which was limestone rubble, sandy clay and mortar. The pottery (only 5 sherds altogether) from the construction trench cg28 included a GREY body sherd from a bowl with burnished decoration, suggesting a later 2nd-century date.

*LUB 23 Rampart dumps (Figs 5.11 and 5.14)*

Sealing the construction ramp cg27 (LUB 21) and partly sealing road surface cg109 (LUB 19) were various dumps of limestone rubble, mortar and sandy silt cg112 (0.85m thick to the north).

There were no sherd links between cg112 and other contexts; the average sherd weight excluding amphorae and mortaria was low (21.5g), down on the average for the rampart material of LUBs 18 and 20, suggesting not only that the material was brought on to the site from elsewhere, but also that it was a secondary dump of material. Of the 356 sherds from cg112, most fit a mid to later 2nd-century range, but the presence of NVCC, particularly the possible flagon, suggests the latest ceramic date would be in the (early) 3rd century.

*LUB 24 Road (Fig 5.11)*

Sealing cg109 (LUB 19) was another surface cg36; this was composed of a make-up layer of brown sandy silt with limestone chips cg36 (0.12m thick in places), sealed by flat limestone slabs with dark greyish-brown silt and sand in the interstices. The slabs were worn. Silt cg79 built up in the central drain cg34 (LUB 13) under the road.

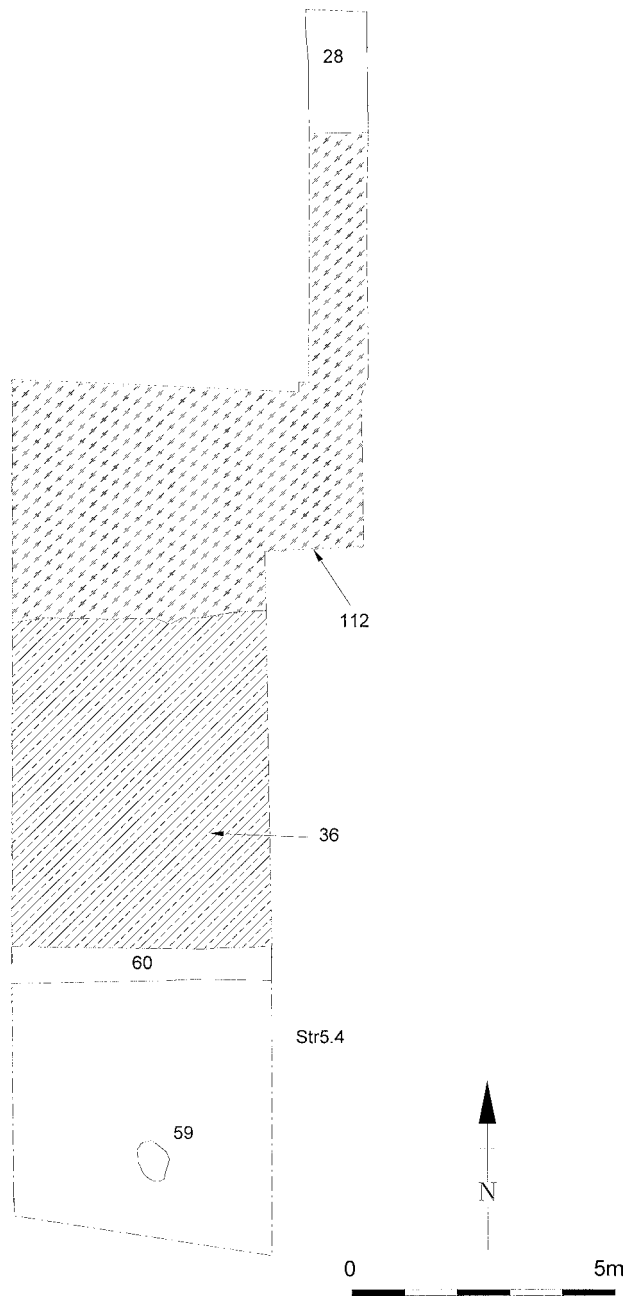


Fig 5.11 Structure 5.4, road surface, rampart and wall: LUBs 22, 23, 24 and 26

Pottery from cg36 (6 sherds) and cg79 (13 sherds) consisted entirely of residual sherds.

*LUB 25 Structure 5.3 (Figs 5.10, 5.14, 5.18 and 5.19)*  
The partitions in Structure 5.2, as represented by slots cg62 (LUB 17), were demolished and sealing layers cg63 (LUB 17) was a demolition spread of sandy silt and fragments of painted plaster cg64, including fragmented pottery sherds with mortar deposits. Over cg64 was a layer of sandy clay cg65

(0.08m thick), probably a floor. Cutting floor cg65 were eight postholes cg66, cg68, cg69 and a post-pad cg67.

Pottery from cg64 (27 sherds) included a possible fragment of a carinated bowl B334 and a GREY everted rim jar, suggesting an early 2nd-century date or later. However, pottery from the sandy clay floor cg65 (68 sherds) included rims of BB1 cooking pots with no wavy line decoration, consistent with a later 2nd-century date.

#### *LUB 26 Structure 5.4 (Fig 5.11)*

Sealing postholes cg66, cg68, cg69 and post-pad cg67 (all LUB 25) was sandy silt cg96. The wall cg44 (LUB 15) was robbed by trench cg58 (unplanned); the robbing of this wall and the continuity of the use of the building suggest that wall cg44 had never formed, or was no longer, an external wall.

Cutting the backfill of the robber trench cg58 was a shallow pit cg59 (0.90m by 0.55m and 0.15m deep); this was packed with pitched limestones. It could be interpreted as the base of a feature within Structure 5.4, possibly for a hearth or oven or other internal fitting.

Pottery from cg96 (24 sherds) included a NVCC sherd from a folded beaker, rim type unknown, and a small shell-tempered sherd, probably from a dales ware jar, which would indicate a date in the 3rd century, and probably the latter half. The latter sherd probably intruded from later material, since it appears that by the mid 3rd century the road had been dumped over, possibly limiting access to Structure 5.4. The pottery from cg58 (94 sherds) was all residual.

#### *Late Roman*

The road LUB 24 and Structure 5 (LUB 26) appear to have been abandoned, and sealing both the road surface and the remains of Structure 5 were rampart dumps LUB 27, much of which contained mainly mid-3rd century pottery with a few 4th-century sherds.

#### *LUB 27 Rampart dumps (Fig 5.14)*

Sealing the road cg36 (LUB 24) was a layer of greyish-brown sandy silt cg110 (0.15m thick). Sealing dump cg112 (LUB 23) and cg110 were rampart make-up layers cg30; these consisted of brown sandy silt with clay (0.18m thick), sealed by limestone rubble in brown silty sand (also 0.18m thick), over which was limestone rubble in dark sandy silt (0.20m thick). In the north-west corner of the dumps cg30 (LUB 25) was cg32, silty sand (0.14m thick) over which was a patch of mortar (about 1m by 2m in extent).

Partially sealing the truncated remains of wall cg60 (LUB 15) was limestone rubble cg33. Sealing

dump cg110 and road cg36 (LUB 24) was a layer of sand and pebbles cg111. In turn sealing cg30, cg33 and cg111 was a thick layer of sandy clay with silt cg97 (0.50m thick), and overlying cg97 was a dump of building debris cg38; this contained limestone rubble, tile, pieces of mortar and plaster (0.25m thick).

Sealing the fill of pit cg59 (LUB 27) and abutting the internal (south) face of the truncated but partially standing wall cg60 (LUB 15) were layers of dark greyish-brown sandy clay with silt cg70, with limestone chips (0.30m thick). The occurrence of a single tessera within cg70 suggests that this material may be derived from the demolition of a building of some status elsewhere in the vicinity. Dump cg70 was sealed by rubble dumps cg71; these consisted of layers of limestone rubble with brown silty clay (0.52m thick), over which was limestone rubble in dark silty sand (0.50m thick to the north and 0.15m thick to the south).

Pottery from cg110 (20 sherds) included a tiny chip of NVCC beaker, an OX bowl probably copying the samian form 38 and a dales ware jar, suggesting a mid 3rd-century date. Pottery from cg30 (108 sherds) included dales ware jars, a NVCC funnel-necked beaker in a later fabric, and a sherd from a possible NVCC bowl or dish; these too give a mid 3rd-century date. All the groups of pottery from cg32 (19 sherds), cg97 (172 sherds), cg70 (191 sherds) and cg71 (126 sherds) can be broadly dated to the mid 3rd century or later, on the basis of DWSH, a MHAD closed vessel and later NVCC beaker fabrics, including folded scale decorated funnel-necked types. The pottery from cg71 included two GREY sherds with a specific type of juddered decoration usually seen more often in 4th-century contexts in Lincoln, which may indicate that this group belonged to the early 4th century.

### Late Saxon–Early Medieval

Cutting dumps LUB 27 were pits and dumps of building debris LUB 28; they probably appeared during the early medieval period but only two sherds of pottery were recovered.

#### LUB 28 Pits and dumps (Fig 5.12)

Cutting cg71 (LUB 27) were pits cg72 (about 1m across and 0.36m deep) and cg74 (about 1m across and 0.70m deep). Pit cg72 was cut by pit cg73 (about 1m across and 0.55m deep). Pit cg74 was cut by robber trench cg75 which partially removed stone from the north wall cg60 (LUB 15) of Structure 6.

Cutting dump cg38 (LUB 27) were small round pits cg98 (about 0.50 across and 0.15m deep), cg99 (about 0.30m across and 0.15m deep) and cg100 (about 0.70m across and 0.40m deep). Pit cg100 was

cut by shallow pit cg101 (about 1m across and 0.20m deep).

All the pits were presumably associated with properties to the south, backing on to the city wall.

Single post-Roman sherds of LFS of 11th- or 12th-century date were recovered from pits cg73 and cg101. The Roman pottery sherds ranged from the 1st to the 4th centuries in date and were notably scrappy, with an average sherd weight of only 10g, suggesting much re-working.

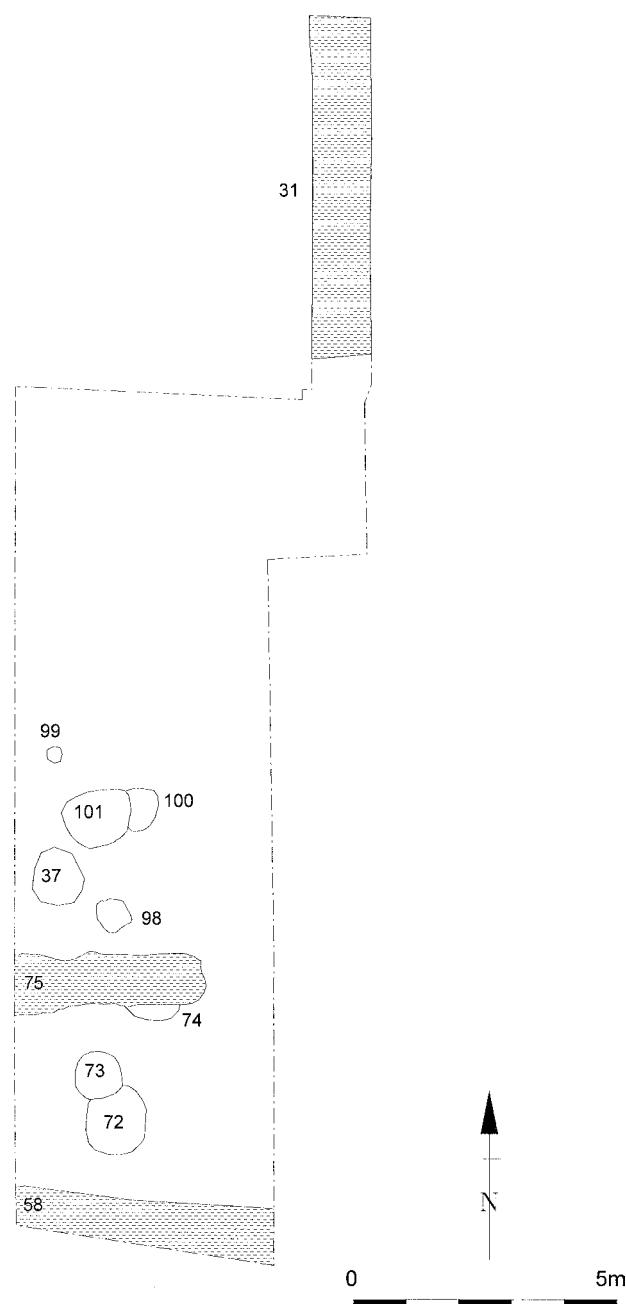


Fig 5.12 Robber trenches and pits: LUBs 28 and 29

### Early Medieval to Post-Medieval

The Roman *colonia* wall was robbed **LUB 29**, probably after the early medieval period, although there was no independent dating evidence. If it served the medieval city, robbing may not have taken place until after the post-medieval period.

#### *LUB 29 Colonia Wall Robbing (Figs 5.12 and 5.14)*

Cutting the *colonia* wall cg28 (LUB 22) was a robber trench cg31. Although this only contained Roman pottery it seems likely that it was a much later activity, possibly late medieval or post-medieval: elsewhere the city wall often survived into the 18th or 19th century.

### High Medieval to Late Medieval

Sealing LUBs 28–9 were dumps of rubble and sand **LUB 30**, levelling the rampart. Pottery from these layers dated to between the late 13th to the early 14th century. Into these dumps cut a possible boundary fence **LUB 31**, which was sealed by further dumps **LUB 32** containing material of a similar date to LUB 30 and later pottery dating to the late 14th to 15th centuries.

#### *LUB 30 Dumps (Fig 5.14)*

Sealing robber trenches cg75 (LUB 28) and cg31 (LUB 29), and also pits cg73, cg98, cg99 and cg101 (LUB 28) were layers of sandy silt cg76 with mortar and limestone rubble; these were deeper to the south (0.90m thick) and shallow to the north (0.10m thick). It would seem that these dumps largely levelled out the slope of the rampart to the north.

Although the layers cg76 contained a small assemblage of post-Roman pottery (73 sherds), ranging from residual material from the late Saxon to the medieval period, there was a significant group of late 13th- to early 14th-century sherds which probably date them. This pottery mostly consisted of Lincoln or locally made jugs and pipkins, some of which were decorated. The bulk of the residual Roman material in the dumps was significantly different from earlier pottery (it contained a concentration of late 3rd- and early 4th-century sherds), suggesting that it had been brought on to the site.

#### *LUB 31 Fence? (Figs 5.13 and 5.14)*

An east–west slot cg77 cut cg76 (LUB 30); it was 0.50m wide and 0.30m deep and was cut by three postholes. It may have represented a High Medieval boundary fence.

#### *LUB 32 Dumps (Fig 5.14)*

Sealing cg77 (LUB 31) were layers cg78; these consisted of brown silty sand with pebbles (0.20m

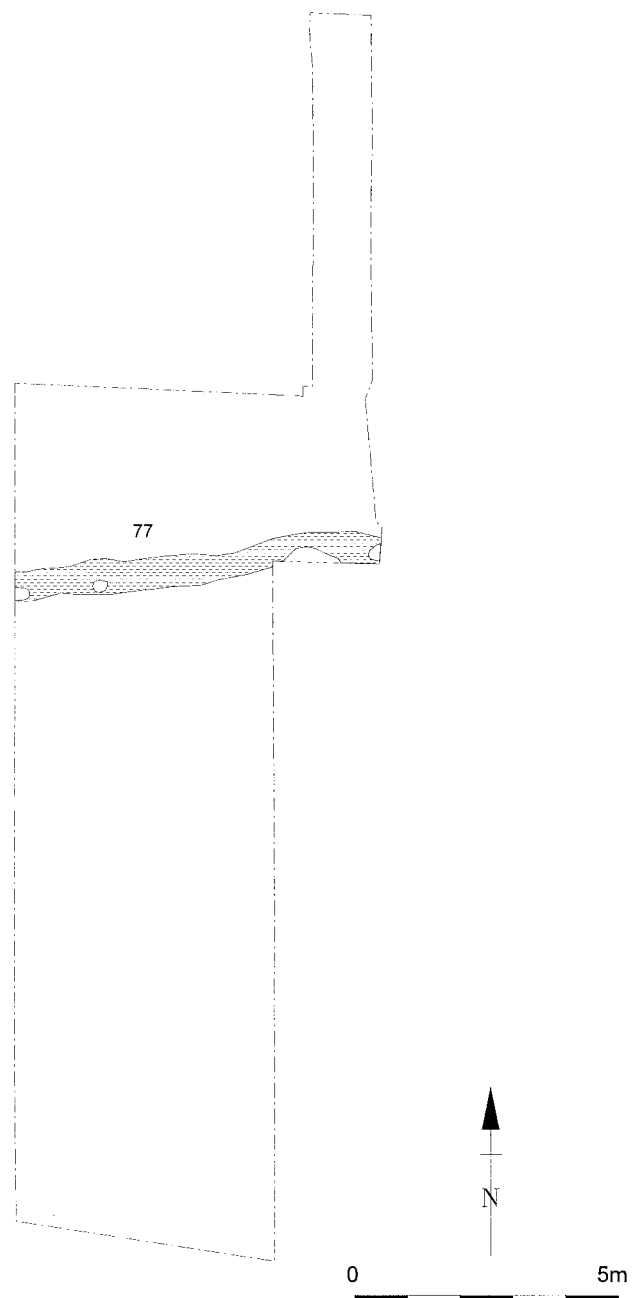


Fig 5.13 Fence (cg77)?: LUB 31

thick) in the south part of the site. Over it was silty sand (0.80m thick), sealed by sandy silt with small limestone pieces (0.25m thick to the south). Over cg78 was dump cg125 of sandy silt and loam (0.28m thick to the south). A small group (33 post-Roman sherds) of late 14th- to 15th-century pottery from cg78 included a sherd of SAIG (one of only four sherds found in the city); there were also two intrusive fragments of modern bottle glass.

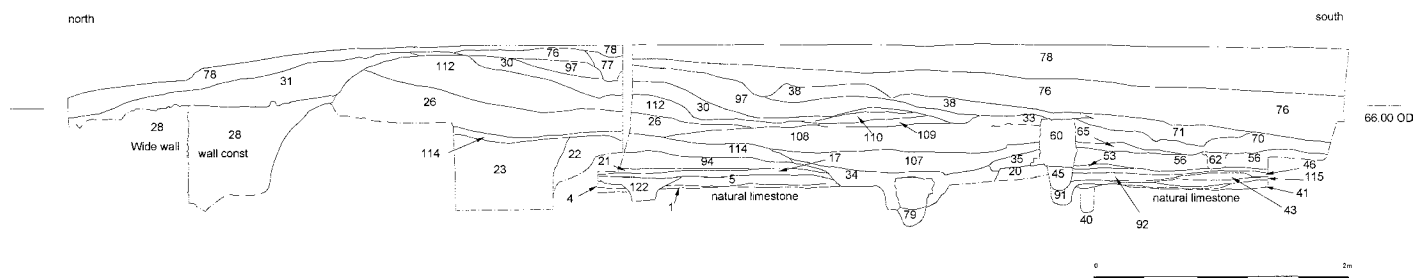


Fig 5.14 Composite north-south section to the east of the site

### Modern

The site was possibly levelled by truncation and dumps, and sumps were inserted LUB 33 to aid drainage for a lawn (used as a putting green) and garden.

#### LUB 33 Dumps and Drainage

To the north of the site sealing cg78 (LUB 32) was silt with limestone cg119 (0.20m thick), probably make-up for the putting green, sealed by garden soil cg121 (0.15m thick) and cut by a soakaway cg120. To the south of the site cg78 (LUB 32) was cut by a large soakaway cg118. Pottery from the 19th and 20th centuries was found in context groups of this LUB.

## Discussion

### Topography

In the Early Roman period this area was intensively occupied, with many changes (LUBs 1–17). There were three clear phases of activity in the Early Roman period: first, timber buildings, Structures 1 and 2 to the south, and Structure 4 to the north (LUBs 1–9) which were aligned with legionary defences to the north. Pottery from LUBs 1–9 shows an emphasis in the 1st century. The next phase of activity was rubbish disposal (LUBs 10–12); the ceramic content of these LUBs was largely derived from the earlier deposits, except for the higher incidence of later 1st-century pottery, despite early 2nd-century deposition. The last early Roman phase of activity was a road (LUBs 13–14), with a stone-founded building, Structure 5 (LUBs 15–17) fronting it to the south. The discovery of an *intervallum* road, the so-called *via sagularis*, was to be expected in this position behind a rampart (Jones, M J 1980, 48). Pottery from LUBs 13–14, together with that from LUBs 15–17, shows a similar dating profile to that of LUBs 7–10, although the percentages by date

are slightly lower for the 1st century; this shows that much of the pottery associated with the first stone building, drain, and road probably came from rubbish already on the site.

In the mid Roman period there was more rubbish dumping to the north of the site (LUB 18) and a road was built (LUB 19). The defences to the north were supplemented with extended rampart dumps (LUB 20) which were prone to slip over the road. While pottery from the layers of LUB 18 is almost identical to that from LUB 12, but with slightly higher values into the early 2nd century, the pottery from rampart LUB 20 is distinctly different – there was a sharp decline in residuality and a significant increase in the amount of 2nd-century pottery.

To the north of the road the *colonia* wall was later strengthened, possibly with the aid of a ramp (LUBs 21 and 22); further dumps built up the



Fig 5.15 Looking south at the slots of Structure 1: LUB 7



rampart (LUB 23) and spread further over the road, reducing its width (LUB 24). To the south of the road, the stone-founded building, Structure 5, went through various phases of use (LUBs 25 and 26). In the late Roman period the emphasis was even more strongly on defence, and rampart dumps (LUB 27) sealed the road and the remains of Structure 5. Pottery from the later rampart, LUBs 23 and 27, was of mixed date, with a small quantity of 3rd-century sherds, deriving mostly from LUB 27. There were only two stratified sherds from LUB 27 which could belong to the 4th century.

In the early Saxo-Norman period the site was used for pitting (LUB 28), possibly related to occupation on East Bight; the Roman wall was thoroughly robbed (LUB 29) at some date during or after this period. During the High Medieval period the rampart was levelled with dumps of material possibly from nearby (LUB 30) and a possible fence (LUB 31) was erected on an east-west alignment, about 8m south of the line of the Roman wall. The fence-line was in turn sealed by dumps (LUB 32) during the same period.

There was little sign of activity on the site between the High Medieval and Modern periods, when further dumping took place together with a possible effort to drain the site (LUB 33).

### *Roman rampart and wall*

Layers (LUB 1) are likely to represent spoil or trample from the construction phase of the first defences in the mid 1st century. Structure 4 (LUB 5) was constructed at the back of the rampart. The early 2nd-century establishment of an *intervallum* road (LUB 13) post-dated the legionary rampart construction by around 50 years, but probably succeeded a legionary predecessor totally removed by the works for LUB 13's foundation and drain (Figs 5.16–17).

Between the mid and late 2nd century, the rampart was built up to the south with dumps (LUB 20). From the late 2nd century, a stone-revetted ramp (LUB 21; Fig 5.19) was possibly used to aid the construction of the *colonia* wall or wall thickening (LUB 22). Sealing the ramp in the 3rd century were further dumps (LUB 23) containing redeposited material from the vicinity, but also including some domestic refuse and building debris.

In the late Roman period extensive rampart dumping (LUB 27) took place; again this represents a mix of redeposited material from the vicinity, as well as more domestic refuse and building debris. The dumps (LUB 27) mostly contained mid 3rd-century pottery but there were also a few sherds from the 4th century.

The interpretation of the development of the defences from these excavations agrees to a great



Fig 5.16 Looking east inside the drain cg34: LUB 13

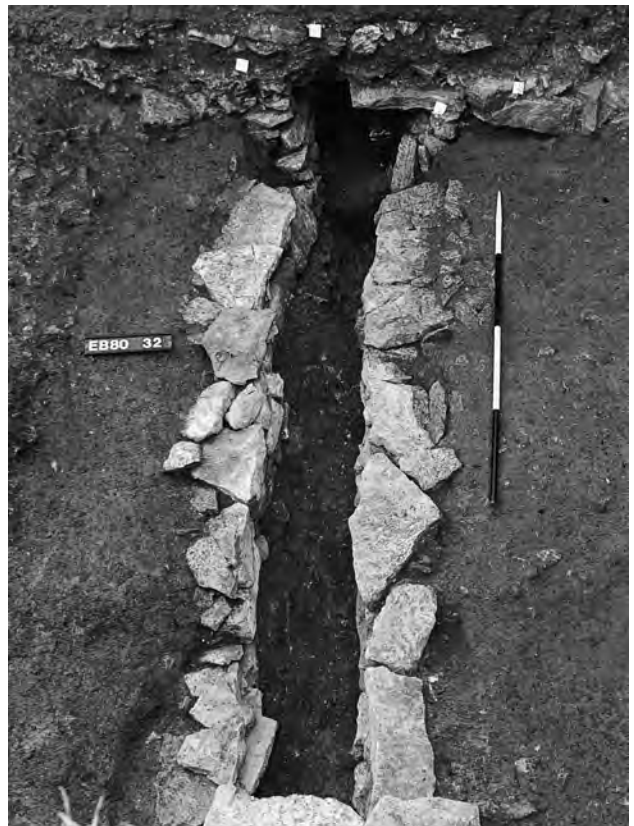


Fig 5.17 Near-vertical view looking east along drain cg34 without its capping stones, with some of overlying roads visible in the section: LUB 13

extent with a discussion of the upper Roman enclosure (Jones, M J 1980, 48–55) published just prior to the excavation of this site.

### *Legionary structures*

In the south part of the site, aligned with the legionary defences (which lay beyond the limit of the excavation to the north) was a timber structure (11.5m to the south of the defences); this building, Structure 1 (LUB 7; Fig 5.15) was constructed using beam-slots which cut natural (LUB 0).

Structure 1 appears to have been destroyed by fire (LUB 8) and replaced with another timber building, Structure 2 (LUB 9). This building was also constructed with beam-slots; the beam-slot along an internal division was cut by postholes. Possible sandy floor layers cg115 were recognised in the room to the east.

At the north end of the site was another building, Structure 4 (LUB 5), which was probably contemporary with Structure 2 (LUB 9) and of similar timber construction – beam-slots containing postholes. It too was aligned with the northern defences, but it was probably set into the back of the legionary rampart. The earliest floors seemed to be of clayey

sand which were strewn with fire ash, charcoal and silt cg11, possibly suggesting a workshop or catering function. A substantial post-pit cg12 cut cg11 close to the inner wall of the building; this may not have been structural, as it went out of use well before the end of the building's life and was sealed by sandy floors cg15 and cg90.

Structures 1 and 2 were constructed in more or less the same place; only 2m east–west of the buildings was excavated and 3.5m to 4m north–south. Structures 1, 2 and 4 were all aligned with the northern defences and all pre-dated the road (LUB 13), dating to between the mid and later 1st century; only an area 2.5m north–south and 1.5m north–south within Structure 4 was excavated – the south-west corner. It is possible that all these structures either represented barrack blocks (Structures 1 and 2), or associated workshops or cook-houses (Structure 4). Few artefacts apart from iron nails were recovered from any of the structures, while personal items and domestic rubbish were virtually absent. Although only limited areas of the buildings were investigated, the relative absence of material associated with the legionary buildings is a marked feature of the other Upper City sites at Westgate School (w73) and Chapel Lane (cl85).

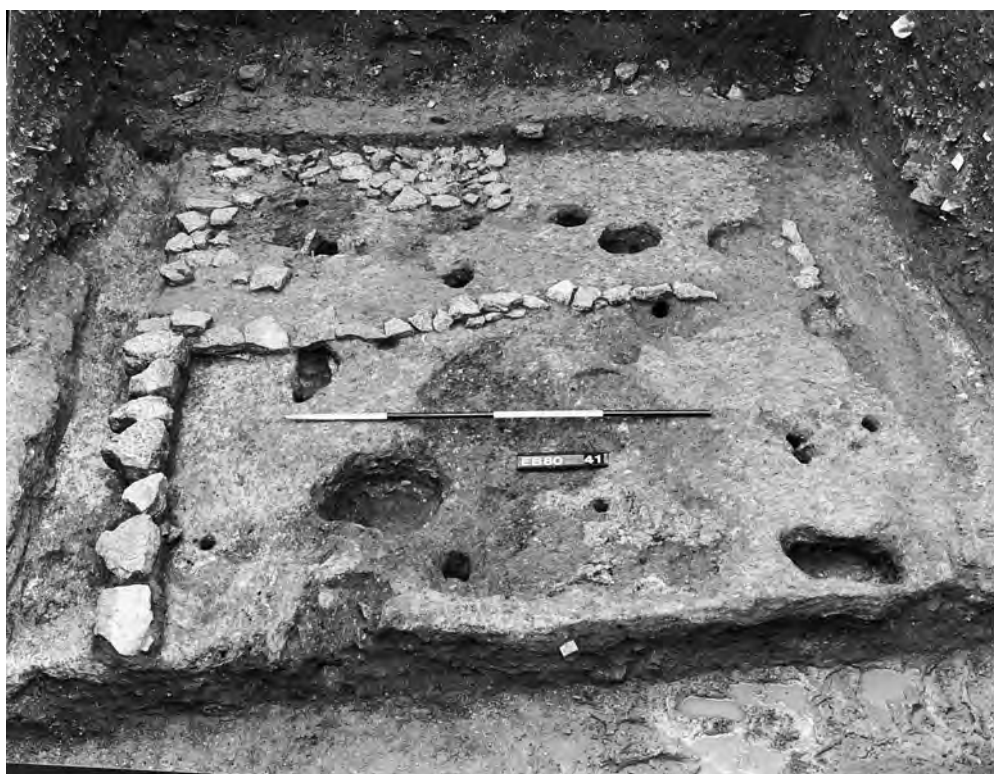


Fig 5.18 Looking south at cut features associated with the construction of Structure 5, the partition walls cg57 of Structure 5.1 and the stake/postholes of Structure 5.3: LUBs 15, 16 and 25

### Military equipment

The finds from this site represent the largest group of military finds to have been recovered in Lincoln, although very little was directly associated with the timber buildings, Structures 1 and 2. The majority of the material was recovered from the northern part of the main area of excavation, from within the dumps of redeposited demolition debris LUBs 10–11, the backfill of the large pit LUB 12, and the overlying layers LUB 18 and rampart dumps LUB 20. Some material was also redeposited within the sequence of road surfaces LUBs 13–14, and in the later building, Structure 5 (LUBs 15–17). The material comprised a range of infantry fittings from body armour, several weapon mounts, and cavalry equipment. Most of the material was damaged in some way or fragmentary, suggesting material that had been deliberately discarded or collected up as scrap for recycling.

Helmet fittings included part of the piping from a cheekpiece (190) <Ae150> and the crest-holder from an Imperial Gallic type of helmet (212) <Ae214>, bent from being ripped out of its seating too vigorously. Although no weapons were recovered, there was a tinned and gilt scabbard-mount (116) <Ae96> (as Brailsford 1962, fig 1, A6) which was almost certainly discarded because it had broken. One of the most remarkable finds was an iron dagger-sheath with inlaid ornament (212) <Fe207> of a type dated to the Augustan-Claudian period (Scott 1985, 154–5, type A). None of the suspension rings remains, and only one set of the rivets which would have secured them is still in place. A decorated belt mount (229) <Ae162>, probably of pre-Flavian date (as Grew and Griffiths 1991, fig 8, 41), came from cg41 (LUB 8).

Among the body armour were copper alloy fittings, including part of a broken cuirass hook (112) <Ae78> (cf Bishop and Coulston 1993, fig 52, 32), a fragment of lobated cuirass hinge (125) <Ae125> (as Bishop and Coulston 1993, fig 52, 7) which appears to have been cut, and a torn corner from a cuirass tie-loop (117) <Ae119> (*ibid*, fig 52, 35). Fragments of sheet copper alloy, and pieces of thin sheet iron sandwiched between two copper alloy plates, almost certainly represent fragments torn from *lorica segmentata*, while a torn fragment of sheet iron (117) <Fe192> has the remains of a buckle and hinge still in place.

Several pieces identified as cavalry fittings include a harness strap mount (108) <Ae70> (Bishop 1988, fig 56, 1d) and a tinned copper alloy harness pendant (107) <Ae65> of Tiberio-Claudian type (*ibid*, fig 45, 5e), its suspension loop torn off and two rough perforations representing a repair. Other pieces which are less certainly identified include a possible strap mount junction (168) <Ae146>, and



Fig 5.19 Looking north at the wall cg60, across the road cg109 towards the ramp cg27: LUBs 20, 21 and 25

the plated stud (238) <Ae163> from cg40, Structure 1 (LUB 7).

The miscellaneous items of military equipment included the copper alloy mouthpiece from a trumpet (118) <Ae165> (as Frere 1972, fig 40, 129) and the terminal of a patera handle (108) <Ae69> (as Bishop and Coulston 1993, fig 64, 2). Much of the associated pottery within the dumps represents vessels that are clearly identifiable as legionary period rubbish, and it is notable that roughly one quarter (24%) of the large assemblage found within the backfill of the large pit LUB 12 comes from vessels described as 'legionary cooking vessels'. Glassware from the dumps largely consisted of fragments of storage bottles, but tableware was also well represented with a number of mid to late 1st-century forms that include at least three examples of the common hemispherical 'Hofheim' cup (Price and Cottam 1995c).

### Metalworking waste

Much of the metalworking waste was concentrated in the same levels as the military equipment, ie, within the dumps of redeposited legionary demolition material. The material includes a quantity of waste copper alloy in the form of small blobs of melt

cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB
1/1	19/5	37/-	55/16	73/28	91/10	108/19
2/3	20/-	38/28	56/17	74/28	92/10	109/19
3/2	21/10	39/-	57/16	75/28	93/10	110/27
4/1	22/10	40/7	58/26	76/30	94/10	111/27
5/4	23/10	41/8	59/26	77/31	95/-	112/23
6/5	24/11	42/9	60/15	78/32	96/26	113/-
7/4	25/12	43/10	61/17	79/24	97/27	114/18
8/4	26/20	44/15	62/17	80/-	98/28	115/9
9/4	27/21	45/15	63/17	81/-	99/28	116/5
10/4	28/22	46/15	64/25	82/-	100/28	117/13
11/5	29/-	47/15	65/25	83/-	101/28	118/33
12/5	30/27	48/15	66/25	84/-	102/-	119/33
13/6	31/29	49/15	67/25	85/-	103/-	120/33
14/-	32/27	50/16	68/25	86/0	104/-	121/33
15/5	33/27	51/16	69/25	87/-	105/17	122/4
16/10	34/13	52/16	70/27	88/-	106/16	123/4
17/6	35/13	53/16	71/27	89/6	107/14	124/14
18/6	36/24	54/16	72/28	90/5		

Fig 5.20 Concordance of cg numbers with LUB numbers for eb80

waste and slag, some adhering to pieces of fired clay hearth-lining. Scraps of torn, crumpled and folded copper alloy sheet, some of them cut, suggest material collected up for recycling, and at least some of the military metalwork, as noted above, may also represent deliberately collected scrap. One notable find was a large corroded lump of iron which investigative cleaning revealed to be a number of small, neatly piled strips stacked one on top of another (118) <Fe202>; this may simply represent a bundle of scrap that had originally been neatly tied together, but could be a stack of material awaiting welding. A small quantity of slag, including smithing slag, was also recovered, but only a single crucible sherd and parts of two other vessels that may have been reused as crucibles were identified.

That this activity was concerned with the repair of military equipment is suggested by at least one item, a piece of roughly cut sheet (118) <Ae109> which is almost certainly the 'blank' for a *lorica* hinge. The precise location of the workshop from which the material originated remains unknown, although it may have been quite close by. Earlier excavations immediately inside the northern defences and just to the west of this site by J B Whitwell (see Jones, M J 1980, 6-9), produced similar evidence of metalworking, with crucible sherds and large quantities of copper alloy waste (and iron smithing?) slag; this may have originated from the same source. Excavations at Lion Walk, Colchester, have also produced

evidence of metalworking at a similarly early period (mid 1st century) just inside the line of the *via sagularis*, in the south-east corner of the fortress (Crummey 1984, 35-6).

#### *Early to mid Roman colonia structures associated with the road*

Contemporary with the construction of the road (LUB 13) a stone-founded building, Structure 5 (LUB 15), was built flush against its southern edge (Fig 5.18). The extent of the structure which lay within the area of excavation was some 4.20m by over 5m. The presence of an infant burial indicates a domestic presence. Several pieces of glass found in the fill of one of the postholes cg47 (LUB 15) suggest that there may have been at least one glazed window. The only evidence for internal decoration is provided by the plaster from cg64 (LUB 25), which almost certainly represents the demolition of the partition in Structure 5.2 (LUB 17). Only a sample (0.88kg) of this plaster was kept; it was mostly small fragments, some showing clear evidence of redecoration. Several different ornamental schemes are present; much of the plaster appears to be from plain or panelled schemes, while a few pieces may have come from marbled dados, and several bear foliage ornament. A few pieces of plaster from the robber trench cg58 of the north wall of Structure 5.4 (LUB 26) suggest that the walls may have been decorated with a panelled scheme of ornament.



## 6. The Lawn 1984–7 (lh84, la85, l86)

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### Introduction

Excavations were carried out in the grounds of the Lawn Hospital on several occasions during the years 1984–87 (site codes lh84, la85, l86). The excavations of 1984 and 1985 were undertaken for evaluation purposes, in the expectation that the grounds were going to be developed; it was known that St Bartholomew's church lay somewhere in the vicinity. The 1986/7 trench was specifically designed to cut across the line of some earthworks shown on Stukeley's map of 1722 (Fig 6.1), when some construction work was considered to be imminent following the purchase of the site by Lincoln City Council.

The 1984 excavations were partly funded by the Society for Lincolnshire History and Archaeology and supervised by Peter Rollin, an enthusiastic member. The 1985 and 1986 excavations were funded by both the City and County Councils, with staff provided by the Manpower Services Commission.

Initially, in 1984, the work was undertaken by Peter Rollin and the members of the Society for Lincolnshire History and Archaeology (SLHA) with advice from staff of the Lincoln Archaeological Trust. A series of 2m square boxes, each given a letter code, was dug; the boxes were later linked by further trenches and/or extended to examine features which had been partly revealed (code lh84). Contexts were numbered in a single sequence, regardless of which box they were in (e.g. C8, B9, D10, C11), although in a few instances the same number was used twice. Burials were given a box letter and numbered in a separate sequence preceded by the letter S; in all cases, the box letter code was preceded by the site code (LH) and year (1984).

In 1985, members of a Manpower Services Commission team, provided through the CEA and supervised by Andrew Snell of what was now the Lincoln office of the Trust for Lincolnshire

Archaeology (TLA), worked on the site (code la85). The previous trenches were cleaned up and work continued. Two long trenches, one aligned north–south, the other east–west, were opened up by machine. The contexts excavated by Andrew Snell for the TLA were numbered in a unique sequence for la85, beginning at 1 and with no trench identifier. Later in 1985 Colin Brown supervised, on behalf of the Trust for Lincolnshire Archaeology, the excavation of seven trial trenches to the north of the boundary wall of the site (also part of la85); each trial trench had its own unique sequence of contexts starting at 1.

In 1986, members of SLHA continued to excavate part of the site, opening up new trenches (code l86). Work on these trenches was completed in autumn 1986 by a Manpower Services Commission team under the direction of Kevin Camidge of the Lincoln office of the TLA. The new trenches used a unique context sequence commencing at 1, with the site code l86.

From late 1986 until early 1987, work was carried out in a new area, adjacent to Union Road, also directed by Kevin Camidge. Here a trench 30m long and 2m wide, aligned east–west, was excavated by hand. The eastern 4m of the trench was increased in width from 2m to 3m. The context record commenced at 200, with the site code l86.

The records of the 1984 SLHA excavation are sparse, with few dimensions; plans were sketched at scales of 1:20, 1:25 and 1:50. During post-excavation, in order to differentiate these contexts, all of them had '84-' as a prefix to the letter/number configuration. The 1985 context numbers were preceded by the site code '85-', and the contexts for those trenches excavated by Colin Brown (trenches each with their own numbering sequence) were preceded by '85-TT' together with the number of the trench, a dash and the context number. The 1986

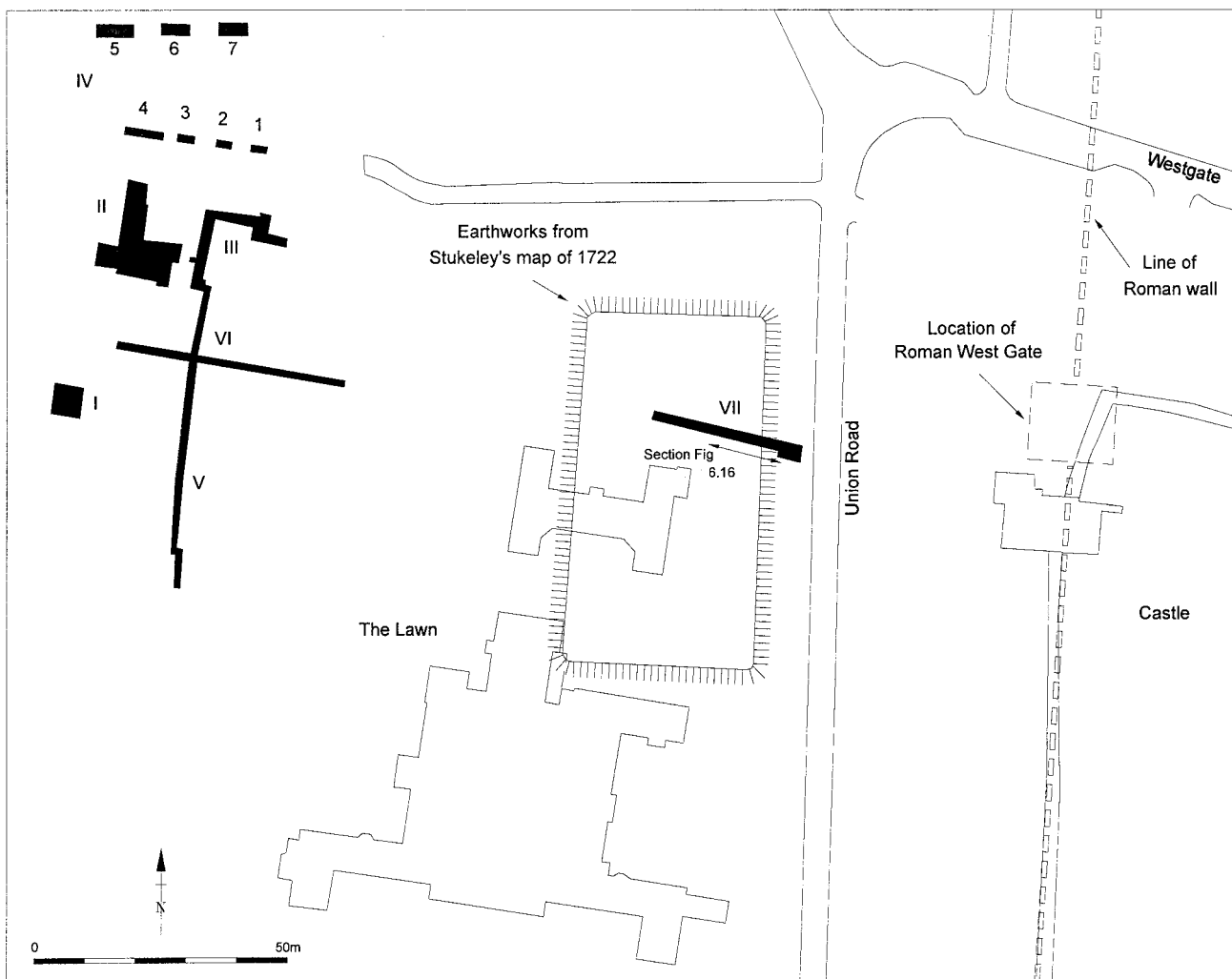


Fig 6.1 Site location plan for the Lawn excavations, also showing area numbers and location of section.

context numbers (another new sequence) were prefixed by '86-' as were the 1986/7 context numbers. The various contexts excavated in different years or by different groups have now been correlated and incorporated into one sequence, prefixed with the year code integral to the excavation code (eg 84-A16, 85-1009, 86-287).

Interim summaries of the excavations have been published (Jones 1986b; Camidge 1987c). A catalogue of sherds from nine Iron Age vessels from the site has also been published (Darling and Jones 1988, 45–50).

Of the 468 contexts recorded from the excavations, 18 were unstratified, and the rest have been grouped into 201 context groups (cg1–cg206; excluding cg73–6 and cg202 which were not used). The context groups have been interpreted as belonging to 56 land use blocks (LUBs 0–55; Figs 6.2 and 6.32). The site was divided into 7 areas (Areas I–VII) for ease of

interpretation (Figs 6.1). Area I included part of lh84 and la85; it contained natural (LUB 0), early Roman (LUBs 1 and 3), medieval (LUB 32), post-medieval (LUB 43) and modern (LUB 51) stratigraphy. Area II included part of lh84, la85 and l86; in Area II there was natural (LUB 0) and early Roman (LUBs 1, 2 and 6), medieval (LUBs 30–2 and 38), and modern (LUBs 46, 50–3 and 55) stratigraphy. Area III included lh84 and la85; it contained natural (LUB 0), Roman (LUBs 2, 8–9) medieval (LUB 32) and modern (LUBs 51 and 54–5) stratigraphy. Area IV included the seven trial trenches of la85; the trenches natural (LUB 0), Roman (LUB 7), medieval (LUB 35), post medieval (LUBs 40–2 and 44) and modern (LUBs 45, 49 and 55) stratigraphy. Area V was a north–south trench, part of la85; Area V contained natural (LUB 0), medieval (LUBs 28–9), and modern (LUBs 54–5) stratigraphy. Area VI was an east–west part of la85 and contained Roman (LUB 8), medieval (LUB 32)

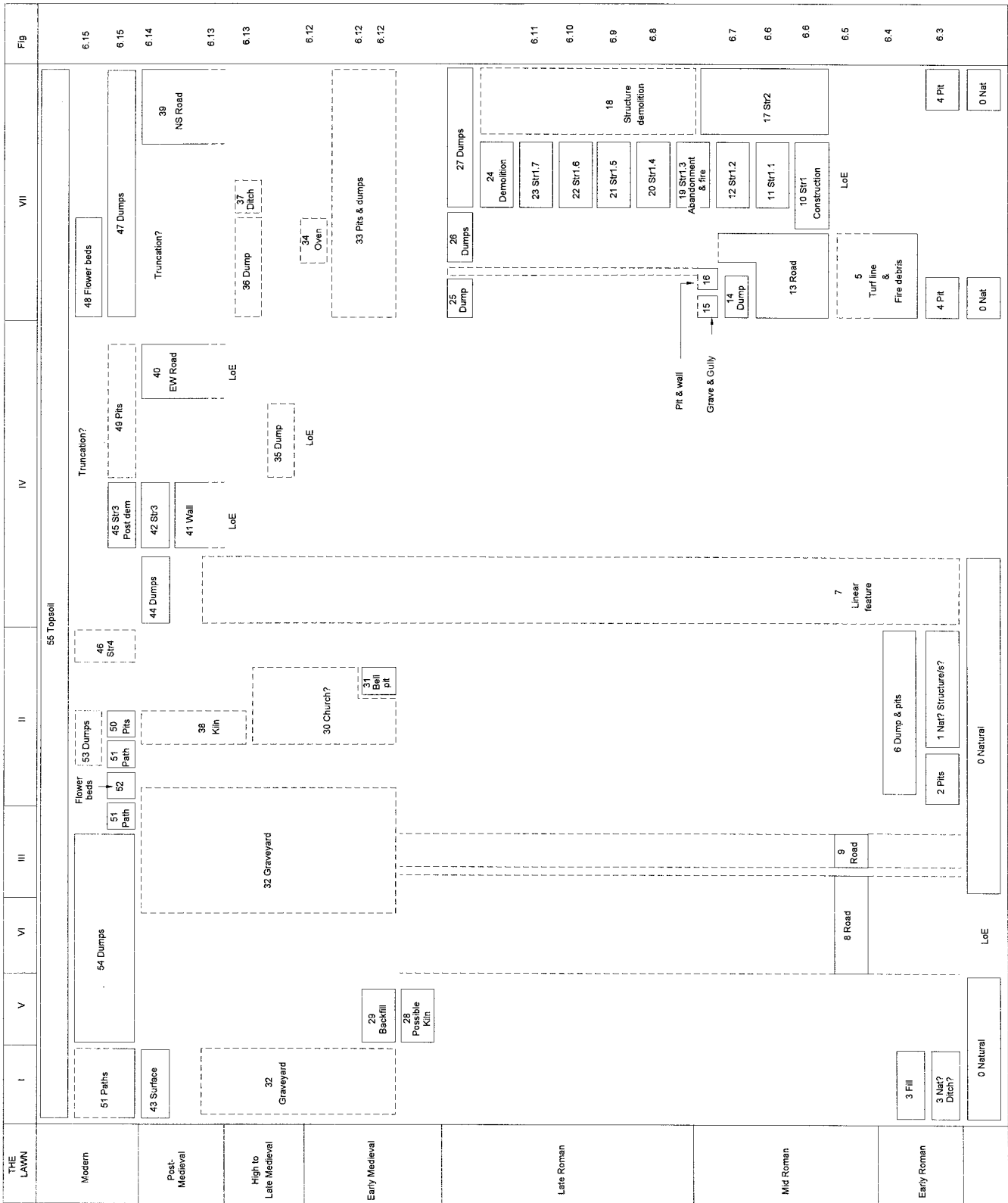


Fig 6.2 LUB diagram for the Lawn excavations



and modern (LUBs 54–5) stratigraphy. The most intensive occupation was found in Area VII, the east–west trench excavated by the TLA between 1986–7: this area contained natural (LUB 0), Roman (LUBs 4–5, 10–27), medieval (LUBs 33–4 and 36–7), post medieval (LUB 39), and modern (LUBs 47–8 and 55) stratigraphy.

Large assemblages of Roman (6,592 sherds) and post-Roman (1,591 sherds) pottery, together with a total of 745 registered finds were recovered from the site, mostly from the 1985 and 1986 excavations. More than half of the non-ceramic material was of metal, principally ironwork (representing 43% of the total), although this included a large quantity of nails. A relatively small proportion (10.2%) of copper alloy (Roman brooches: Mackreth 1993) included eight coins and jetons; there were also three silver coins (Roman coins: Davies, J A 1992; Late Saxon coin: Blackburn 1995; medieval coins and jetons: Archibald 1995) and a few objects of lead. All of the metal, particularly the ironwork, was heavily corroded. A higher than average proportion (33.4%) of glass was recovered (Roman glass: Price and Cottam 1995g; decorated medieval window glass: King 1995g; post-medieval vessels: Adams and Henderson 1995), while there were also small quantities of bone, horn and ivory (Rackham 1994), stone (Roe 1995; hones: Moore 1991) and ceramic finds. Scraps of cloth from a modern context (see below, LUB 50, cg110) comprised the only organic material recovered (Walton Rogers 1993). There was a large quantity of building material (1,889 fragments), much of which was Roman tile (stone building material: Roe 1995). Animal bone (3,623 fragments) was found, but

much was of mixed origin and of limited interpretative value (Dobney *et al* 1994c, 1994d). There were remains of 55 inhumations; 1 from LUB 12 and 54 from LUB 32 (Boylston and Roberts 1994).

Post-excavation stratigraphic analysis was undertaken by Chris Guy and Kate Steane. Margaret J Darling worked on the Roman pottery; Jane Young examined the post-Roman pottery. Jen Mann analysed the registered finds and Roman building materials, and Rick Kemp the medieval building materials. Helen Palmer Brown and Zoe Rawlings digitized the plans.

## Excavations

### Natural

Limestone bedrock and brash **LUB 0** was reached in Areas I, II, III, IV and V.

#### *LUB 0 Natural bedrock and brash (Fig 6.3)*

The surface of the natural limestone bedrock was reached over much of Areas I, II and III and also encountered in parts of Area VII.

In Area II the natural limestone was exposed. It comprised tabular limestone below a layer of brash (broken rock). Here the surface of the brash was at c 63.50m OD.

Although natural was exposed in Area III no levels were recorded. In some of the trial holes excavated in Area IV natural was also reached; cg183 (limestone brash) in Trench 7 and cg186 (stone sandy clay) in Trench 6, but again no height was recorded. In Area V, the top of the natural

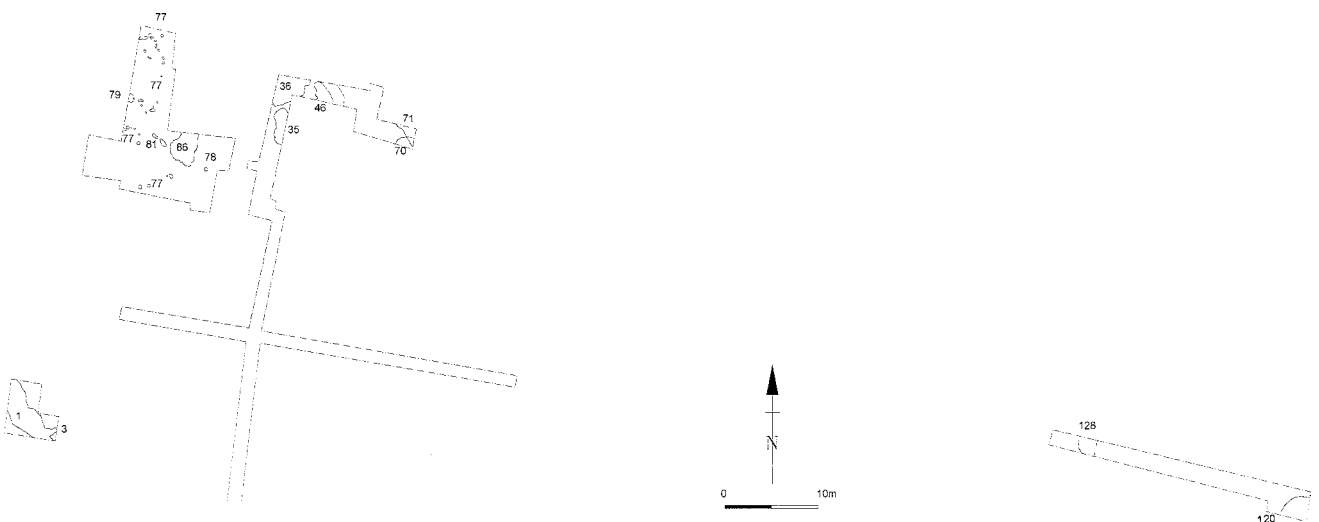


Fig 6.3 Possible legionary structures and pits: LUBs 1, 2, 3 and 4

brash was recorded at c 63.07m OD. Natural was not reached in Area VI. In Area VII, natural brash was recorded at c 62.50m OD at the top of pit cg120 (LUB 4). The recorded levels show that the surface of the natural limestone sloped down gradually from west to east and from north to south.

### *Early Roman*

There was possible evidence for a ditch in Area I and a posthole structure or structures in Area II **LUB 1**; a few sherds of pottery date to the mid 1st century. There were pits in Areas II and III **LUB 2**, possibly limestone quarry pits back-filled with domestic legionary rubbish, including pottery and animal bone. In Area I, the fill of the natural fissure or ditch included discarded military trappings **LUB 3**. Pottery from LUBs 2 and 3 dated to between the mid and late 1st century.

In Area VII were two possible quarry pits **LUB 4**; pottery from these dated from the early–mid 2nd century. To the west of Area VII was a turf line and remains of a fire **LUB 5**, dating between the early and mid 2nd century.

There was a dump and pits **LUB 6**, later than those of **LUB 2**, in Area II; pottery indicated that their fills dated from the early through to the later 2nd century.

In Area IV, Trench 7 was a gully aligned north-south **LUB 7**; there was no dating evidence.

### *LUB 1 Natural? Ditch? and Structure/s? (Figs 6.3 and 6.17)*

In Area I a natural fissure was found aligned north-west/south-east, cg1. This would appear to be a 'gull' parallel to the escarpment to the south-west. At the surface the fissure was c 2m wide. The sides sloped down steeply then dropped almost vertically. The lower part of the 'gull' was c 0.85m wide. It was excavated to a depth of 3.55m. The surface of the natural limestone was at 62.96m OD to the south-west of the fissure and at 63.12m OD to the north-east. Either cutting or cut by fissure cg1 was an east-west gully, cg3, irregular in shape and 0.2m deep which may have been another natural feature.

However, it is also possible that both features cg1 and cg3 had been cut through rock. Feature cg1 could represent a ditch. It is on the same alignment as north-west/south-east road **LUB 8**.

The natural brash (**LUB 0**) in Area II was cut by 33 holes cg77 and hole cg78 together with two gullies cg81, which were formed by a series of connected holes. The widths of the 33 holes cg77 varied between 0.14m and 0.50m; the depths varied between 0.14m and 0.75m; the average (median) width was 0.27m and depth was 0.36m. The hole cg78 was 0.37m wide, and 0.40m deep. The gullies

cg81 had a total extent of 1.8m north-south by 0.22m east-west; the holes were about 0.30m deep. All these features appeared to be waterworn and were filled with yellowish-brown sand, sometimes clayey, some with charcoal flecks and some with small limestone chips and a few with dark silty loam at the bottom; one interpretation is that they were solifluxion holes. Another is that they were structural features (postholes), which subsequently formed an easy passage for rainwater meeting the limestone. From their plan, features cg77 to the north of Area II appear to form a right-angle, suggestive of the corner of a building, and it may be significant that the alignment of these features is the same as roads LUBs 8 and 9. There was also a pit-like feature cg79 (1.02m north-south by at least 0.45m east-west and 0.32m deep) which cut natural limestone (**LUB 0**) in Area II which was filled with sandy clay with charcoal flecks and fragments of limestone; it is possible that feature cg79 represented a post-pit.

If interpreted as postholes these features suggest some sort of earth-fast structure (in the same rock cut style as w73, **LUB 2**), possibly associated with military activity or representing native settlement, outside the fortress. Pottery from pit cg79 (9 sherds) included a RDSL copy of a Rittering 12 bowl, indicating a mid 1st-century date.

### *LUB 2 Pits (Figs 6.3 and 6.18)*

The natural brash (**LUB 0**) in Areas II and III was cut by several large pits, cg35, cg36, cg46 and cg86; cg36 was 1.45m deep and cg35, cg46 and cg86 were not bottomed. The most likely interpretation of these features is that they represent quarry pits; they all cut into the solid limestone and their large amorphous shape is not usual of rubbish pits. The pits do not suggest large-scale limestone extraction, but small-scale investigation of the underlying stone. They were backfilled with rubbish. Pit cg86 contained a small assemblage of animal bone, including the remains of caprovid, cattle, horse and pig; the remains were dominated by cranial fragments (Dobney *et al* 1994c). Sealing the fill of pit cg36 was a layer of material cg58.

In the north-east part of Area III, the natural brash (**LUB 0**) was cut by a pit, cg70, which was only partially excavated, since it lay mainly to the south and east of the trench. A further intrusion cg71, lying mainly to the north and east of the trench, cut pit cg70.

There were pottery joins between pits cg36 and cg86. The pottery from the fills of most of these pits would suggest that they were backfilled in the second half of the 1st century. Pottery sherds from pit cg35 (16 sherds) were all of fabrics current in the legionary period, and included a flake from a Pompeian red

ware platter (PRW3). Pit cg36 contained some intrusive post-Roman sherds together with 544 Roman sherds; the Roman fabrics from cg36 included all those normally seen in legionary period contexts, CR, PINK, LEG, RDSL, OXSA. Over half the sherds from cg46 (52 sherds) were in mid 1st-century LEG fabric, mostly from jars or beakers with either rouletting or rusticated web decoration. Included with the pottery in pit cg86 (254 sherds) were a number of notable vessels represented by several joining sherds, suggesting fresh rubbish deposition; most of the fabrics and forms are consistent with a mid to late 1st-century date. Layer cg58 (86 sherds) contained pottery dating to the mid 1st century, except for a GREY flanged bowl of the reeded rim type which could continue later.

The other finds from these pits included 1st-century material and mostly comprised domestic refuse, together with some building debris. Part of a pyramidal fired clay loomweight (85–5) <LA55> and an iron drill-bit (84-L49) <LH274> were also recovered. Price and Cottam (1995g) comment that the glass is entirely consistent with a 1st-century assemblage, while the absence of colourless vessels (which first occur in small numbers in the late Neronian and early Flavian period), the occurrence of strongly coloured vessels, and the quantity of early Flavian forms, suggest that the date can be refined still further to the third quarter of the 1st century, ie to the legionary period.

The fills of the pits suggest that there was much disposal of rubbish from the mid to late 1st-century occupation, although it may not have been dumped here until the beginning of the *colonia* period.

#### *LUB 3 Fill of 'gull' or ditch*

In Area I, the natural 'gull' or ditch, cg1 (LUB 1) was backfilled with silty sands and charcoal cg2. The fill cg2 included several items of military metalwork, notably four decorated and plated copper alloy studs which are almost certainly harness-fittings, and other 1st-century material. Three (84-C29) <LH162> of the studs are virtually identical, and probably tinned; these are paralleled by studs – thought to be part of military (harness?) equipment – from a hoard found at Fremington Hagg, Yorkshire (Webster 1971, fig 13, 38), which is likely to be of pre-Flavian date. The fourth (84-C29) <LH214> may be silvered rather than tinned, and is possibly also decorated with niello. Other finds from the 'gull' included a coarse iron file (84-C29) <LH160>, possibly a farrier's rasp, and part of a cast copper-alloy vessel (84-C29) <LH161> with plated (?tinned) internal surface.

Of the pottery from cg2 (74 sherds), virtually all of fabrics and forms would normally be seen in the legionary period; otherwise there was a GREY

flanged bowl of the reeded variety, but without reeding, which could date to later in the 1st century.

#### *LUB 4 Pits in Area VII (Fig 6.3)*

Towards the west end of Area VII, cutting into the natural brash (LUB 0), there was a pit cg128 which was only partly excavated.

At the east end of Area VII, cutting into natural brash, there was a further pit cg120. The fills of pit cg120 were sealed by a layer of sandy clay with limestone rubble cg121, up to 0.78m thick.

These pits may have represented quarry pits, backfilled with rubbish.

The single sherd from cg128 was a body sherd from a PINK closed vessel. The pottery from cg120 (54 sherds) included five BB1 sherds, body sherds from cooking pots and a flanged bowl or dish fragment; GREY bowls of the types B334 and B321, and the appearance of linear rustication suggest an early 2nd-century or later date. The pottery from cg121 (71 sherds) included 24 BB1 sherds, among them a plain-rimmed dish similar to Gillam 1976, no 75, with decoration intermediate between lattice and intersecting arc decoration; a cooking pot similar to Gillam 1976, no 30 is of similar early to mid 2nd-century date; there was a mortarium with a fragmentary stamp probably by the Lincoln area potter Q. Iustus Crescens, dated c AD100–120. Layer cg121 dated to the early to mid 2nd century.

#### *LUB 5 Turf line and fire debris*

To the west of Area VII pit cg128 (LUB 4) was sealed by a thin layer of silty sand with charcoal and a few sherds of early to mid 2nd-century pottery; this layer was interpreted on site as a turf-line, cg129, with its surface at 62.57m OD.

To the east and possibly contemporary with layer cg129, at the limit of excavation there were spreads of sand or sandy clay with charcoal and ash cg130; this may have been the remains of a fire or possibly spreads of debris from hearths or fires outside the area of excavation, perhaps from demolition of timber buildings.

Pottery from cg129 (9 sherds) included a BB1 grooved dish rim with lattice decoration, a GREY body sherd from a probable beaker with vertical burnished line decoration, and body sherds with linear rustication, all dating to the early to mid 2nd century. Pottery from cg130 (11 sherds) included a jar with linear rustication, and a bowl of the type B333 which suggest an early to mid 2nd-century date.

#### *LUB 6 Dump and pits (Fig 6.4)*

Pit cg86 (LUB 2) in Area II was sealed by a disturbed deposit of dark earth cg114.

Cutting natural brash (LUB 0) in Area II was a small pit cg80 which was sealed by a layer of sandy clay with much limestone rubble cg82. Rubble cg82 also sealed possible postholes cg77, cg78, cg79 and cg81 (all LUB 1). Cutting cg82 were several other pits cg83, cg84, cg85 (only partially excavated), cg88 (unplanned) and cg89.

Pottery from cg114 (38 sherds) was mostly of residual 1st-century vessels, but a BB1 cooking pot body sherd occurred suggesting an early to mid 2nd-century date. Pottery from cg80 (8 sherds) included 4 sherds of BB1 and GREY which gave no strong evidence, suggesting a mid 2nd-century or later date. Pottery from cg82 (8 sherds), cg83 (234 sherds), cg84 (15 sherds), cg85 (38 sherds) and cg89 (52 sherds) was residual. There was a sherd of intrusive modern pottery in cg82 and an intrusive clay tobacco pipe stem in cg83.

#### *LUB 7 Linear feature*

A gully cg184 aligned north–south cut natural cg183 (LUB 0) in Trench 7, Area IV (unplanned). It was considered by the excavator to be of Roman date but no pottery or finds exist to support this. On the basis of stratigraphy and dating evidence, it could have been of any date from the Roman period to the post medieval.

#### *Mid Roman*

A road ran north-west to south-east across the site **LUB 8** in Areas III and VI; there was evidence for a ditch to the west of it. Part of what may have been another road **LUB 9** ran south-west to north-east in Area III. These roads may have been constructed in the mid 2nd century, but the pottery evidence is scarce and inconclusive.

At the east end of the site, in Area VII, was a stone-founded building, Structure 1, **LUB 10**. In its first phase of use it had a mortar floor, clay hearth and a pit **LUB 11**; these were sealed by a clay/sand with mortar floor cut by an infant burial and associated with a tiled hearth **LUB 12**. Each phase of Structure 1 has been dated by pottery; the construction of the building (LUB 10) and its first use (LUB 11) dates to the mid–late 2nd century; the second phase (LUB 12) dates from the late 2nd to the (early?) 3rd century.

Also in Area VII, and contemporary with the first phase of Structure 1, was a road to the west **LUB 13**; the make-up for the surface contained mid to late 2nd-century pottery. Partly sealing the surface and spreading to the west was a dump **LUB 14**. Cutting the dump **LUB 14**, at the west end of Area VII, was a grave, separated from the area to the east by a gully **LUB 15**, which contained a sherd

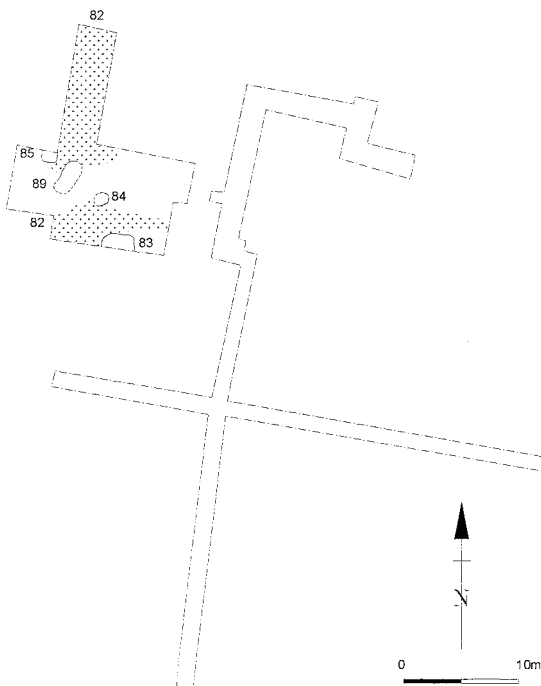


Fig 6.4 Dump and pits: LUB 6

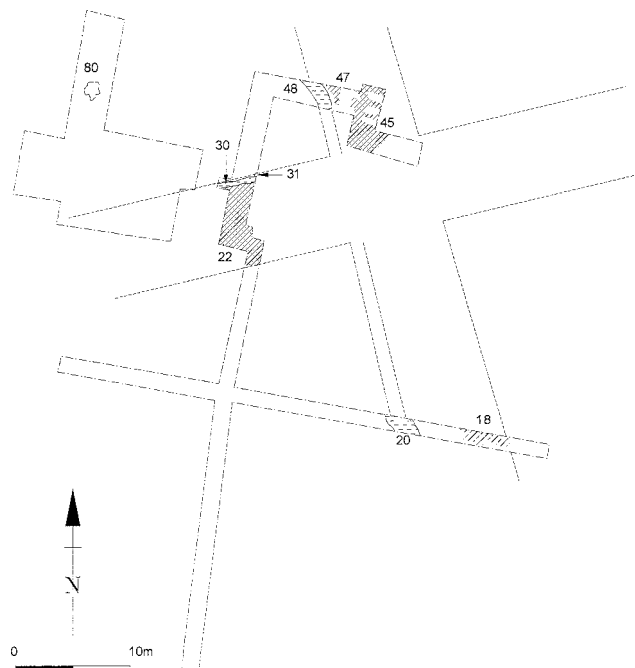


Fig 6.5 Possible roads: LUBs 8 and 9

of early 3rd-century pottery. Further east, cutting dump LUB 14, was a pit, and further still a north-south wall LUB 16. At the east end of Area VII was Structure 2 LUB 17, probably contemporary with Structure 1; the pottery was residual.

*LUB 8 North-west to south-east road? (Figs 6.5 and 6.19)*

Surface cg45 sealed natural (LUB 0) in the east part of Area III. It was composed of a layer of small-medium limestone fragments, of which very occasional pieces had been burnt, suggesting reused material. Some of these were laid flat while others were pitched; their surfaces showed much evidence of having been worn smooth. There was loam with tiny fragments of stone and occasional pebbles between the limestones (Fig 6.19). The surface had in part been made up over the natural, and in part the natural bedrock formed the surface – some of the natural bedrock had also been worn down in places.

The alignment of this surface cg45 is unclear but it appeared most likely that it ran north-west to south-east. Just to its west the fills of pit cg46 (LUB 2) were sealed by a layer (0.50m thick) of sandy loam, cg203, which was probably a levelling layer as it was itself sealed by a spread of limestone fragments cg47. Some of the stones were also pitched, while others were laid flat and they could have formed a rough surface. A ditch, cg48, cut the edge of this surface to the west; the ditch was aligned north-west to south-east and was 1.3m wide with a depth of 0.78m. The fill of the ditch was sandy loam with occasional limestones and flecks of charcoal.

Limestone surfaces cg45 and cg47 probably represent the same feature; they had been recorded as two patches, because they had been divided by later pits. The level of these patches was very similar; the top OD for cg45 was 63.58m to the north and 63.46m to the south, while cg47 was 63.44m.

To the south of Area VI was another stretch of north-west to south-east road. Possibly acting as make-up for this road was a layer of sandy loam and limestone cg17, at least 0.33m thick and not fully excavated as it was recovered at the limit of excavation; layer cg17 contained an intrusive fragment of modern glass. It had been sealed by a surface of small-medium limestone pieces cg18, extending *c* 7.5m east-west at an average height of 63.73m OD. The surface cg18 contained a single Roman sherd together with two intrusive sherds from a single Saxo-Norman vessel. Layer cg17 had also been cut by a ditch, cg20, which lay just to the west of the road surface cg18 and ran parallel to it. The ditch was *c* 1.8m wide and over 0.55m deep,

and its fill was sandy loam with a band of rubble and occasional tile, deliberately infilled.

From the overall plan of the site it seems likely that the surfaces in the two areas may have been part of the same north-west to south-east road with a ditch to its west. The ditches cg48 and cg20 were similar in size and construction. The spatial evidence (plan and ODs) also suggests that the surfaces may have formed part of the same road.

The dating of the pottery from cg45 (4 sherds), to the early 2nd century, Hadrianic or later rested on the presence of BB1. The dating of the pottery from cg203 (48 sherds) to the mid to late 2nd century rests on a BB1 triangular rimmed bowl or dish with pointed intersecting arc decoration, and a fragment of a GREY flanged bowl. There was no pottery from cg47. The pottery from cg48 (20 sherds) was residual from the legionary period. The pottery sherds from cg17 (24 sherds) was of mixed date, and included at least three GREY vessels of BB type indicating a mid 2nd-century date. The single sherd from cg18 was undiagnostic. The pottery from cg20 (19 sherds) included a DWSH flanged bowl which provides the main dating evidence, and suggests a 4th-century date.

The pottery perhaps suggests the road was constructed in the mid 2nd century and continued through to the 4th century. However, the evidence is not conclusive, the extent of excavation was limited and the dating evidence scarce.

*LUB 9 North-east to south-west road (Fig 6.5)*

Overlying natural (LUB 0) in the southern part of Area III, was an area of tiny limestone fragments cg22 with sandy loam, sand and charcoal between the stones; the stones had smooth upper surfaces as a result of wear. The surface extended over an area *c* 3.90m north-south by at least 3.90m east-west. The north end of the surface was recorded as being 'cemented'.

To the south of the surface cg22 the limestone brash (LUB 0) was overlain by a layer of sand, cg23, 0.19m thick which contained some limestone and charcoal. To the north of surface cg22, and possibly associated with it, the limestone brash (LUB 0) was cut by a small ditch aligned north-east to south-west, cg30, which averaged 0.42m in width and 0.24m in depth. The ditch was filled with mixed sandy loam and sand. It was cut by a posthole cg31.

This limestone surface cg22 might have been part of a road aligned south-west to north-east. The Roman pottery from cg22 was possibly residual: the road may have been contemporary with road LUB 8, and might have crossed or formed a right-angled junction with it (the site of the possible junction had not been excavated).

The only Roman pottery dating evidence came

from cg22 (12 sherds) and included some abraded sherds; only four body sherds in CR and GREY provided dating evidence, giving a broad 1st- to 2nd-century date. There was also some intrusive post-Roman pottery – one sherd of middle Saxon, one medieval and one modern sherd of pottery.

*LUB 10 Structure 1 Construction (Fig 6.6 and 6.16)*

At the limit of excavation in Area VII was wall cg123, the foundations of which were 0.7m wide, composed of limestone facing blocks with a rubble core. It survived to a height of two courses (there was also evidence for offsets). It represented the east wall of Structure 1.1. The building was 6m across with a west wall cg122 which was 0.8m wide at its foundation, surviving to three courses. Wall cg122 was offset on both sides, reducing in width to 0.66m wide; six courses of large, even-sized, well-coursed limestone blocks bonded with sandy mortar were found.

Excavated up against the west wall of Structure 1 was a 'hollow' c 2.8m wide with its bottom at 61.55m OD. This had been filled with sandy clay, silty sand with rubble and mortar and sealed by sand cg132, some of which contained rubble, mortar and tile. Finds from cg132 largely comprised domestic refuse, including part of a worn lava quern (86–286) <L387>, together with nails and other building debris. Because the wall cg122 was not excavated but was left *in situ*, and the excavations did not reach natural at this point, it seems likely that the layers cg132 were related to the construction of the building. On closer examination of the records, particularly the section (Fig 6.16), it would seem that the term 'hollow' partly reflects the depths reached, rather than both edges of a feature. The sloping nature of the deposits and their composition of sand, rubble, mortar and tile all argue for the levelling of the site by using debris from the demolition of buildings

elsewhere in the Upper City, dumped here and used to consolidate the ground before construction.

Pottery from wall cg123 (7 sherds), all GREY, dated to the 2nd century or later. The dating for the construction of Structure 1 was provided by pottery from the 'hollow' cg132 (252 sherds), which included at least eight vessels of BB1 which have burnished intersecting arc decoration; the GREY wares ranged in date, and included bowls of B318, B333, B334 and B38 types, the latter being in a fine fabric. Both the BB1 and GREY indicate a deposition date of the mid to late 2nd century.

*LUB 11 Structure 1.1 (Fig 6.6 and 6.16)*

The internal face of the west wall cg122 (LUB 10), Structure 1, Area VII, was abutted by the make-up for a sand and mortar floor with limestone fragments and pebbles, cg124 at 62.22m OD. Contemporary with floor cg124 was a clay hearth cg125; this was 0.50m by 0.45m in extent and 0.08m thick. The central part of the hearth was very hard and red from burning. It lay 2.20m west of wall cg123 (LUB 10). Just overlapping the east side of the hearth and covering an area 1.5m north–south by 1.4m east–west was a layer of charcoal with pockets of silt (0.02m thick). The hearth was probably domestic rather than industrial.

The floor cg124 was cut by a shallow rectangular pit, cg126, close to the east wall of the building. This pit had vertical sides and a flat bottom; it was 0.95m east–west, at least 0.25m north–south, and 0.2m deep, with its base at 61.97m OD. It was filled with silty sand with much charcoal, traces of ash and some fragments of limestone. It may have been a post-pit or the base for a structural feature as the east edge of the pit was only 0.8m west of wall cg123 (LUB 10). The presence of so much charcoal might indicate an association with a hearth (an ash pit?).

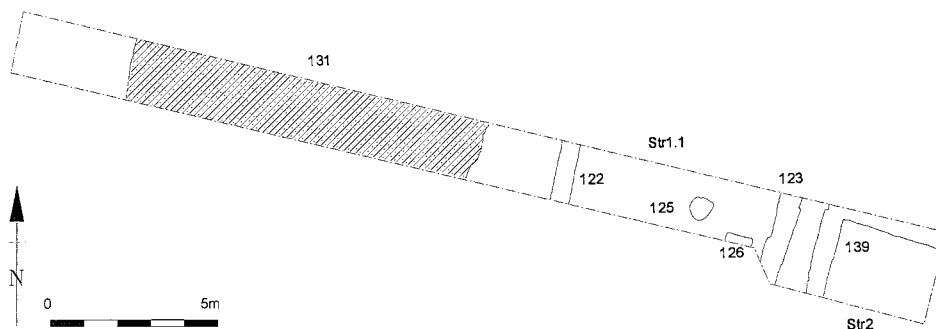


Fig 6.6 Structure 1.1 and yard, and Structure 2 (Area VII): LUBs 10, 11, 13 and 17

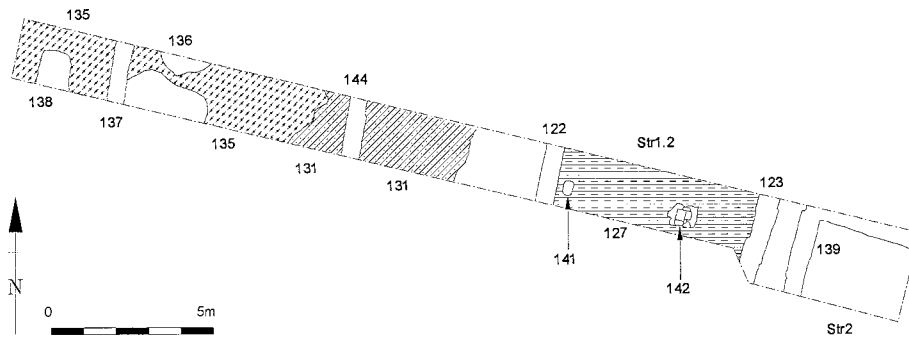


Fig 6.7 Structure 1.2, dump, grave and gully, pit and wall and Structure 2 (Area VII): LUBs 12, 14, 15, 16 and 17

Pottery from cg124 (32 sherds) consisted entirely of body sherds of GREY, CR and BB1, the only dating indicator, suggesting a mid to late 2nd-century date, being traces of possible burnished arc decoration on a GREY body or dish sherd. Pottery from cg125 (5 sherds) and cg126 (2 sherds) was probably of a similar date; there was no clear indication of anything later.

#### LUB 12 Structure 1.2 (Figs 6.7, 6.16, 6.20)

Overlapping the east edge of floor cg124 (LUB 11), adjacent to the internal face of the east wall cg123 (LUB 10) of Structure 1, Area VII, there was a patchy make-up layer of silty clay and sand with some small fragments of limestone. Sealing almost the whole area between walls cg122 and cg123 (both LUB 10) was a floor of clay/sand mortar cg127, which contained very small fragments of limestone and some pebbles. A good flat surface survived in places but most of it had been worn away. On average the surface was at 62.15m OD but was higher towards the walls.

Close to the west wall cg122 (LUB 10) of the building, the floor was cut by a small pit (0.48m north–south, 0.32m east–west and 0.22m deep with steep sides) containing the skeleton of a neonatal infant in sandy silt, cg141 (Boylston and Roberts 1994); sealing the skeleton was a layer of clay (0.15m thick). A hearth of brick and tile, set on a base of ash and sand, cg142 (0.75m north–south by 0.92m east–west; 0.08m thick), sealed floor cg127 and would probably have been contemporary with the floor.

Pottery from cg127 (58 sherds) included two NVCC vessels, a cornice rimmed beaker with barbotine decoration, and a fragment of a probable box; one of the GREY cooking pots was more probably of 3rd-century date, and a segmental bowl could be of similar dating. Overall the deposition date of cg127 was probably the early 3rd century

or later. Pottery from cg141 (6 sherds) included an undecorated BB2 bowl or dish of the rim type of Gillam 225, dating to the later 2nd to 3rd century.

#### LUB 13 Road (Fig 6.6 and 6.16)

Sealing cg129 and cg130 (LUB 5), in Area VII was lane or surface cg131; this consisted of a thick deposit of sand and limestone (up to 0.69m thick), sealed by a layer (0.10m thick) of sandy clay with a high concentration of small limestone rubble; it measured 10.5m east–west at around 62.77m OD. The western 3m of the surface was flat, but it then sloped down gradually towards the east; the surface cg131 may have represented a road.

Pottery from the make-up of cg131 (215 sherds) included a possible BB2 flange fragment from a bowl or dish; GREY included a bowl of type B321, a plate derived from the Camulodunum 16 type, an unusual body with applied strips reminiscent of a copy of a glass pillar-moulded bowl, several fragments from bowls probably of B334 type, and a body sherd from a poppy-head beaker; two rough-cast beakers are represented, one probably from Central Gaul. The date of deposition of the pottery from cg131 was from the mid to late 2nd century.

#### LUB 14 Dump (Fig 6.7)

In Area VII, to the west of surface cg131 (LUB 13) and partially sealing it, were deposits of sandy clay cg135 which contained a noticeable quantity of building material (tiles, stone tesserae and nails) together with a little domestic refuse and a small assemblage of animal bone, dominated by cattle scapulae and pelvises – all fairly heavily butchered with several scapulae showing hook perforations through the blade (Dobney *et al* 1994c).

Pottery from cg135 (342 sherds) included four sherds of SAMSG extending to the Flavian period and 25 sherds of SAMCG, ranging from the Trajanic

through to the Antonine period. The samian reflects the wide date-range of this assemblage back to the 1st century, with quantities of 2nd-century pottery. Some of the GREY cooking pots resemble 3rd-century types, and there were sherds of a GREY folded beaker; the latest date is probably later 2nd to early 3rd century.

*LUB 15 Grave and gully (Fig 6.7)*

Dump cg135 (LUB 14) was cut to the west of Area VII by a grave aligned north–south cg138 (only partly excavated). It was 1m wide and 0.75m deep with steeply sloping sides and a slightly rounded base. The fill of burial cg138 contained some tile, together with two dozen nails and three dozen hobnails, part of a nailed iron fitting and a virtually complete pair of iron dividers (86–261) <L317>. All of these finds could simply have been within the material used to backfill the grave, and thus may represent redeposited refuse from the earlier dumps in this area; there is no evidence that any were buried with the body. Although the hobnails could have come from shoes on the feet of the skeleton when it was buried, the original plan shows the bones of only one foot surviving – implying that the burial had been disturbed in some way.

The grave was separated from the area to the east by gully cg137; this was also aligned north–south (0.75m wide and 0.30m deep with gently sloping sides and a rounded bottom with a sandy fill).

Pottery from the grave cg138 (20 sherds) included fragments of BB1 cooking pot rims suggesting a date after the mid 2nd century. Pottery from the gully cg137 (14 sherds) included no strong evidence, but a NVCC rouletted beaker sherd was more probably early 3rd century than earlier.

*LUB 16 Pit and wall (Fig 6.7–11 and 6.16)*

To the east of the gully cg137 (LUB 15), cutting cg135 (LUB 14), was pit cg136; it was at least 0.77m north–south and 1.80m east–west. Its depth was not recorded and it may not have been fully excavated. From the plan it appears to have had sloping sides; it was filled with clay and sand which contained mortar flecks together with residual pottery, a little tile, and bone.

About 7m from gully cg137 (LUB 15), set directly on to surface cg131 (LUB 13), was a wall cg144, aligned north–south; it was located 5.80m west of Structure 1 and constructed at 62.75m OD. Wall cg144 was 0.65m wide with a facing of blocks and a rubble core. Only two or three courses survived, to a maximum height of 0.25m.

Pottery from cg136 (19 sherds) contained no strong evidence, although a GREY cooking pot rim fragment resembles a later 2nd-century type, suggesting the deposit was mid 2nd century or later.

There was a sherd link to gully cg137 (LUB 15) suggesting some contemporaneity.

*LUB 17 Structure 2 (Figs 6.6–11 and 6.22)*

About a metre to the east of Structure 1, in Area VII, was another building, Structure 2. The west wall cg139 was 0.6m wide and a second wall ran east from its north end (Fig 6.22). West wall cg139 cut layer cg121 (LUB 4). The north wall was only partly within the trench and it is thus unknown whether it was an external or partition wall, but the second is probable. Both walls had pitched limestone footings and an offset course, but only one course of the wall remained above this level. No layers within Structure 2 were identified as floors; layer cg121 (LUB 4) was sealed by demolition debris cg158 (LUB 18) possibly suggesting that whatever flooring material had been present had been robbed away.

Pottery from cg139 (8 sherds) included a SAMCG 27, dated to the Hadrianic to early Antonine period and suggesting an early to mid 2nd-century or later date; the remaining coarse wares offer no strong dating. As Structure 1 dated to the second half of the 2nd century, and the two buildings may have been constructed as part of the same complex (given their proximity), it seems more probable given the paucity of dating evidence that Structure 2 also dated to the second half of the 2nd century.

*Late Roman*

It is possible that roads LUBs 8 and 9 continued in use throughout this period.

At the east end of Area VII, Structure 2 was demolished **LUB 18**; the pottery suggests a mid 3rd-century or later date, but the lack of dated stratigraphy associated with Structure 2 means that its date of demolition is not clear and that this pottery may be residual. It may have been demolished at the same time as Structure 1.3, but it was perhaps more likely to have been demolished at the same time as 1.7, in the early 4th century.

In the mid 3rd century (on the basis of the pottery) Structure 1 seems to have undergone a period of abandonment, followed by fire **LUB 19**. This was followed by refurbishment soon after, with an internal wall **LUB 20**; pottery also indicates a mid 3rd-century date. This internal wall was subsequently demolished, the east wall was rebuilt **LUB 21**, and new floors laid **LUB 22** and **LUB 23** between the mid and later 3rd century and into the early 4th century (on the basis of the pottery). The building was finally demolished **LUB 24**, probably around the early 4th century, as indicated by the pottery from LUB 23.

A dump **LUB 25** in the west part of Area VII was



bounded by the north–south wall cg144 (LUB 16). There were also dumps **LUB 26** to the east of this wall. Over the demolished remains of Structures 1 and 2 (LUBs 18 and 24), were dumps **LUB 27**. All these dumps were similar in that they contained residual pottery, building debris and domestic rubbish; it seemed probable that these dumps constituted secondary rubbish, redeposited here in the 4th century.

*LUB 18 Structure 2 demolition (Fig 6.16)*

The west wall cg139 (LUB 17) of Structure 2, in Area VII, was robbed cg156. Layer cg121 (LUB 4), within the confines of the robbed walls, was sealed by a layer of mixed clay, sand and rubble cg158. Between Structures 1 and 2, in Area VII, there were thin spreads of debris cg140 containing brick, tile, and plaster, which partially sealed pit cg121 (LUB 4). Layer cg159 and layer cg140 were sealed by limestone rubble cg159 with plaster and tile.

Pottery from cg156 (6 sherds) was all GREY, the only dating evidence being fragments of a wide-mouthed bowl with a curved rim, more of the Rookery Lane type than later, giving a possible mid 3rd-century date. Pottery from cg158 (42 sherds)

gave no strong dating evidence. Pottery from cg140 (22 sherds) was residual. That from cg159 (45 sherds) included a DWSH dales ware jar, and a NVCC beaker probably of the funnel-necked type, also providing evidence for a possible mid 3rd-century date.

*LUB 19 Structure 1.3 Fire? and abandonment (Fig 6.16)*

Sealing the hearth cg142, the burial cg141 and floor cg127 (all LUB 12) in Structure 1, Area VII, were layers of silty sand and charcoal cg143 (0.04m thick), which possibly represent trample and fire-ash debris within the building. They were sealed by a layer of charcoal and burnt wood, cg146 (0.02m thick) which spread between the walls cg122 and cg123 (both LUB 10) indicating perhaps a roof fire, or systematic demolition of the building and combustion of redundant timbers.

Pottery from cg143 (38) was residual. Pottery from cg146 (30 sherds) included GREY sherds, fragments of which came from a wide-mouthed bowl with a plain curved rim and the rim of a cooking pot, both of 3rd-century type; there was also DWSH, a dales ware jar and NVCC beaker

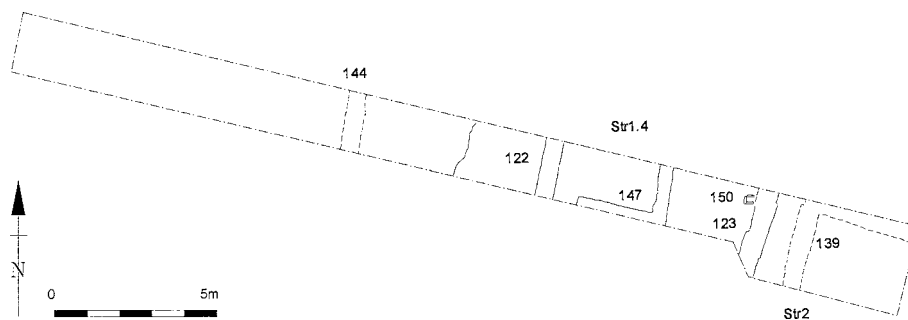


Fig 6.8 Structure 1.4, wall cg144 and Structure 2 (Area VII): LUBs 16, 17 and 20

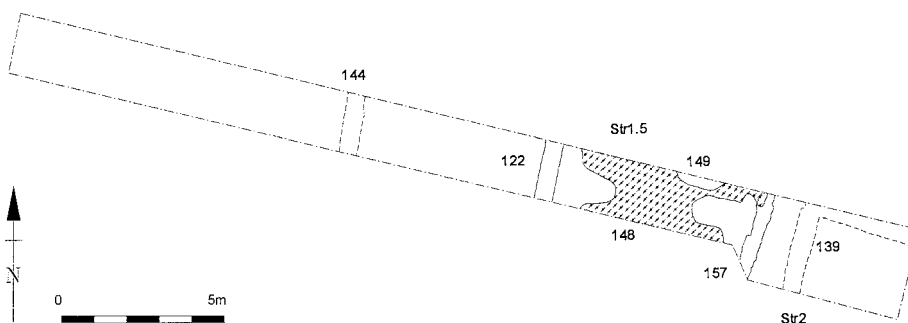


Fig 6.9 Structure 1.5, wall cg144 and Structure 2 (Area VII): LUBs 16, 17 and 21

sherds, including a fragment from a plain-rimmed beaker and a box, indicating a mid 3rd-century date.

*LUB 20 Structure 1.4 (Fig 6.8 and 6.16)*

Internal wall footings cg147 at 62.30m OD sealed charcoal cg146 (LUB 19) in Structure 1, Area VII. They were 0.45m wide and partitioned off the space to the west of the building. The footings survived only to one course high; they were faced with limestone blocks, bonded with very sandy mortar, and had a rubble core. It is difficult to tell whether the gap between the west end of cg147 and cg122 (LUB 10) represents a doorway, but this is possible; otherwise the foundations may have been robbed away at this point. A stone-packed posthole cg150, close to the east wall cg123 (LUB 10) of Structure 1, may also have served a similar structural purpose.

Pottery from cg147 (12 sherds) included DWSH sherds giving a mid 3rd-century date.

*LUB 21 Structure 1.5 (Fig 6.9 and 6.16)*

The east wall cg123 (LUB 10) of Structure 1, in Area VII, was demolished; a dump of silty sand with mortar, pebbles, charcoal and traces of ash

cg148 sealed the internal walls cg147 (LUB 20) and also partly sealed the east wall cg123 (LUB 10). Dump cg148 appeared to respect posthole cg150 (LUB 20) suggesting the post might still have been in place. The east wall of Structure 1 was rebuilt in the same position, cg157, but was now slightly narrower. Only one course survived, not as well-built as the earlier wall. A possible hearth, cg149, within the structure, may have been associated with the rebuilding. It took the form of an area of clay above dump cg148, which showed signs of burning.

Pottery from cg148 (148 sherds) produced DWSH dales ware jars, a complete profile of a GREY wide-mouthed bowl (22 sherds), two mid to late 3rd-century cooking pots, NVCC beakers, a probable box, and a jug of the type RPNV 64, and a painted segmental bowl in PARC fabric, which together suggest a mid to late 3rd-century date. Pottery from cg157 (22 sherds) included a NVCC flagon handle and a GREY straight-sided, angular plain rim dish; both would suggest a mid to late 3rd-century date. A SHEL body sherd possibly came from an open form, which could indicate a later, 4th-century date, but this sherd could have been intrusive from the demolition of the building.

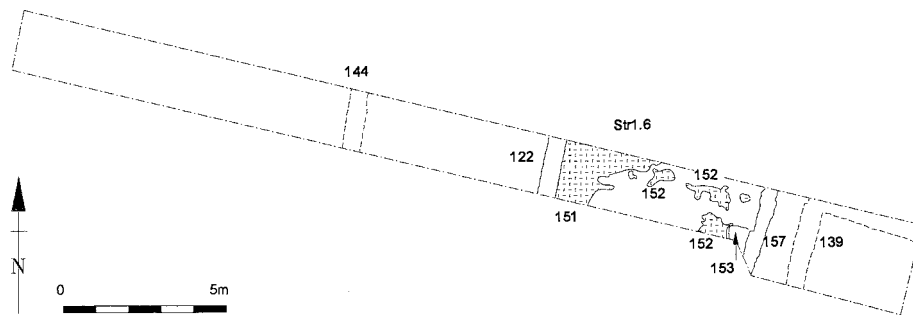


Fig 6.10 Structure 1.6, wall cg144 and Structure 2 (Area VII): LUBs 16, 17 and 22

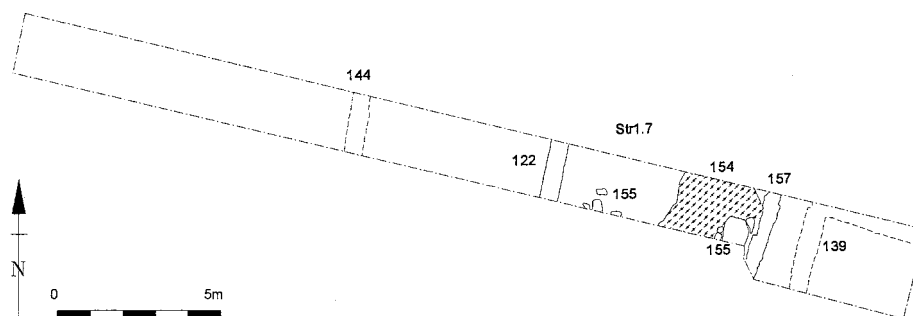


Fig 6.11 Structure 1.7, wall cg144 and Structure 2 (Area VII): LUBs 16, 17 and 23

*LUB 22 Structure 1.6 (Fig 6.10 and 6.16)*

Hearth cg149 (LUB 21) and posthole cg150 (LUB 20) were sealed by a new clay floor cg151 and cg152, laid within Structure 1, in Area VII. A small stone-lined pit, cg153, adjacent to the east wall of the building, cut floor cg152.

Pottery from cg151 (144 sherds) included over 100 sherds derived from seven vessels which had been burnt and shattered, including a BB1 plain rimmed undecorated dish, a BB2 bowl or dish of the rim type of Gillam 225, a GREY closed vessel, probably a narrow-necked jar, a jar or beaker with everted rim and lattice decoration, two handled jars, and a NVCC box; DWSH occurred as dales ware jars and a rounded rim jar, and a NVCC plain rimmed beaker was in a later 3rd century fabric. Overall the pottery from cg151 indicated a mid 3rd-century or later date. Pottery from pit cg153 (3 sherds) included a SAMEG form 33 dated to the late 2nd to mid 3rd century, and a body sherd from a NVCC folded beaker, with a high fired metallic fabric indicating a mid 3rd-century date.

*LUB 23 Structure 1.7 (Fig 6.11 and 6.16)*

The final evidence for activity in Structure 1, in Area VII, was the deposition of a layer of clay and sand cg154, with much charcoal and ash in the eastern part of the building (*c.* 0.15m thick). It formed a make-up dump, the setting for a surface of stone slabs cg155, few of which survived later robbing.

Pottery from cg154 (19 sherds) produced seven sherds making a complete profile of a BB1 high bead-and-flange bowl, a DWSH dales ware jar, a GREY straight-sided, plain-rimmed undecorated dish, and a NVCC beaker, probably of the scaled decorated folded type; an early 4th-century deposition date is based on the BB1 bowl.

*LUB 24 Demolition (Fig 6.16)*

In Area VII, the walls cg122 (LUB 10) and cg157 (LUB 21) were demolished and robbed, together with the stone slabbed floor cg155 (LUB 23). The walls had been truncated and the floor only survived in part. There was no pottery dating evidence for this event.

*LUB 25 Dump (Fig 6.16)*

To the west of wall cg144 (LUB 16) and abutting it, there was an extensive deposit of sandy clay cg145 (0.30m thick). This deposit contained a moderately-sized assemblage of animal bone with a high proportion of cattle fragments, of which more than half were horncores; many of the horncores had been chopped at their base, suggesting waste from a craft process (Dobney *et al* 1994c).

Pottery from cg145 (347 sherds) consisted mainly

of scrappy, secondary rubbish including some 1st-century, but mostly 2nd-century types; only three sherds of NVCC beakers occurred, one of which was possibly from a flagon or other closed vessel, and this appears to be the latest identifiable sherd, giving the deposit an early 3rd-century date. However it seems probable that the dump was a secondary deposit brought from elsewhere, and that none of the pottery closely dates the deposit. This seems likely given the similar dumps LUBs 26 and 27 to the east.

*LUB 26 Dumps (Fig 6.16)*

Sealing the fill of the hollow cg132 (LUB 10) was a layer of silty clay with large flecks of charcoal and small fragments of mortar and painted plaster, cg133, which had been deposited against the outside of the west wall cg122 (LUB 10) of Structure 1. Sealing destruction layer cg133, against the west wall of Structure 1, and extending as far as surface cg131 (LUB 13), were dumps of sandy clay cg134, with lenses of charcoal; these contained building debris and some domestic refuse together with bone waste – either ‘blanks’ for bone tool manufacture or waste from manufacture.

Sealing cg134, there were dumps of building debris cg168, with a total thickness of *c.* 0.50m which extended to wall cg144 (LUB 16). A large assemblage of fragmented animal bone was also found in dump cg168, with almost half the total number (*i.e.* approximately 100 fragments) being small pieces of large mammal shaft fragments interpreted as ‘blanks’ for bone tool manufacture or waste from manufacture (Dobney *et al* 1994c) similar to the material from cg134 (above). Other finds from cg168 included building debris and domestic rubbish, particularly vessel glass.

Pottery from cg133 (46 sherds) included mid to late 2nd-century sherds, and a tiny body sherd from an NVCC beaker which could take the date of the dump into the 3rd century. Pottery from cg134 (123 sherds) was a mixed date group of secondary rubbish, including 1st- and 2nd-century pottery, but the presence of NVCC beakers, particularly folded beakers, and GREY jar type J105 indicate an early 3rd-century or later date. Pottery from cg168 (443 sherds) included a group of abraded scrappy sherds of secondary rubbish, some very residual; there was notably no DWSH, and the NVCC sherds came from cornice and barbotine decorated beakers, the folded beaker sherds probably coming from the curved rim earlier type; a sub-round handle and body sherd from a flagon or flask also occurred; a tiny fragment of a MOSL beaker with a beaded funnel neck and the occasional BB1 cooking pot rim fragment confirm an early 3rd-century date, although much of the pottery was of the 2nd

century. There was an intrusive early medieval sherd from cg168.

It seems probable that the dumps were all secondary deposits brought from elsewhere and that the pottery was accordingly residual. This seems likely given the similar dumps on the site, LUB 25 to the west and LUB 27 to the east. The material may have been imported for horticultural purposes.

#### *LUB 27 Dumps over demolished building (Fig 6.16)*

Within the area of Structure 1, limestone rubble, mortar and plaster cg161 sealed floor cg151 (LUB 23) and piled up against the remains of the internal face of the west wall cg122 (LUB 10). Both cg161 and the remains of surface cg155 (LUB 23) were sealed by a layer of sandy clay and limestone rubble cg162.

A layer of sandy clay and limestone rubble cg160 partially sealed the robbed remains of east wall cg157 (LUB 21) of Structure 1 and the remains cg159 (LUB 18) of Structure 2. Over cg160 and cg162 was destruction debris cg163.

Pottery from cg161 (13 sherds) included eight from a single PART closed form, either a flask or beaker with rouletting, possibly dating to the 3rd century. Pottery from cg162 (26 sherds) included a DWSH dales ware jar, a complete profile of a GREY bowl of the Gillam 225 type and rim fragments from two wide-mouthed bowls, of indeterminate type between the products of the Rookery Lane and Swanpool kilns; these suggest a mid 3rd-century or later date. Pottery from cg160 (59 sherds)

included a DWSH dales ware jar, a GREY wide-mouthed bowl of the Rookery Lane kiln type, and NVCC beaker sherds in later fabrics, giving a mid 3rd-century or later date. Among the pottery from cg163 (78 sherds) were coarse wares, including some 1st- and 2nd-century vessels, but the presence of DWSH, a MOMH hammer-head mortarium, a NVCC grooved rim bowl, later NVCC beaker fabrics and a sherd from a MHAD closed vessel indicate a later 3rd-century date. There were no certain 4th-century vessels. All the pottery was residual.

#### *Early medieval*

Cutting natural limestone in Area V, there was a possible kiln **LUB 28**, in Area V; this was backfilled and cut by a possible ditch **LUB 29**. A robber trench in Area II could be evidence of St Bartholomew's church **LUB 30** and associated bell casting pit **LUB 31**. The fill of the kiln and the bell pit both produced late 11th- to early 12th-century pottery, providing a terminus post quem for the church's construction. There were many inhumations **LUB 32** associated with St Bartholomew's church in Areas I, II and III; the pottery suggests that the graveyard was in use from the medieval into the post-medieval periods.

In the east part of the site in Area VII, were pits and dumps **LUB 33**; later, just to the east of pits and cutting the dumps **LUB 33**, was an oven **LUB 34**. Pottery from the pits **LUB 34** dated to the early medieval period.

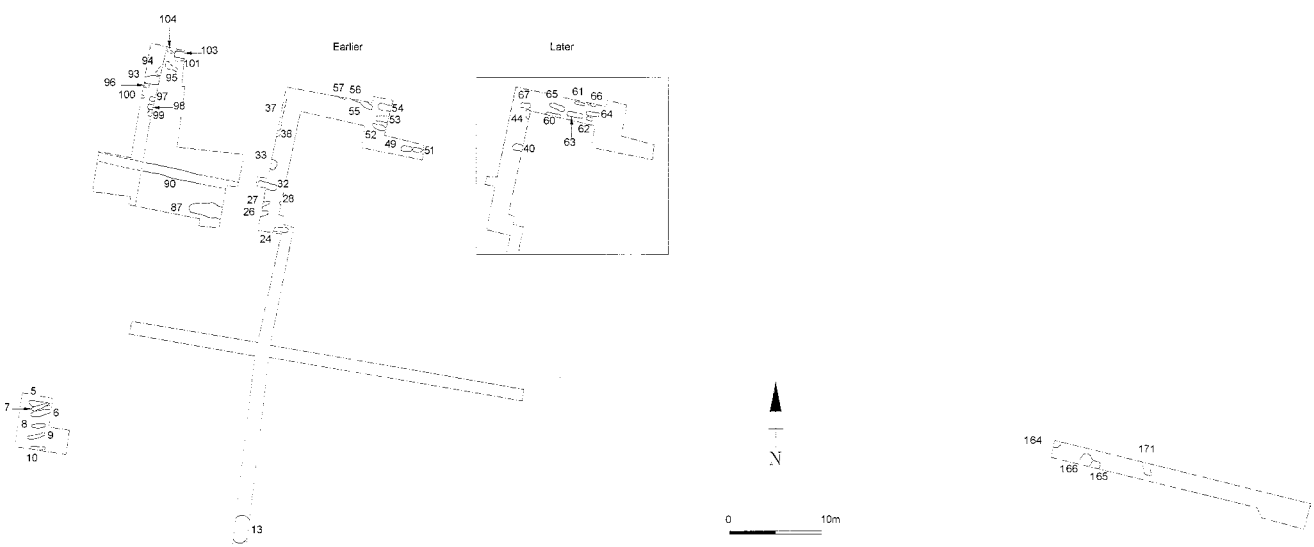


Fig 6.12 *St Bartholomew's church(?) and graveyard, wall, bell-casting pit and possible kiln: LUBs 28, 30, 31, 32; and pits and oven in Area VII: LUBs 33,34*

*LUB 28 Possible kiln (Fig 6.12)*

In Area V there was a possible kiln cg13, which cut the natural limestone brash (LUB 0). It had a lining of rough limestone slabs laid in courses and measured *c* 2.5m north–south, at least 1m east–west and over 0.7m deep. There was no trace of burning on the lining and the feature was not fully excavated; its function remains unclear. No internal or external surfaces survived which may have been associated with the feature. As the fill cg14 (LUB 29) contained late 11th- to early 12th-century pottery, its construction may have been a little earlier, but the site yielded no evidence for 10th-century occupation.

*LUB 29 Disuse and dismantling of possible kiln*

In Area V, possible kiln cg13 (LUB 28) had been infilled with dumps of sandy loam cg14. Sealing these were further dumps cg206. Its north side had been cut by a trench aligned roughly east–west, cg15. It was at least 1.5m wide and had been filled with sandy loam. It may have acted as a ditch.

The fill cg14 of the possible kiln cg13 (LUB 28) produced a group of 121 post-Roman sherds. The group consisted mainly of LFS jars typical of the late 11th to early 12th century, along with contemporary ST and THET wares and residual MAX vessels. Included was the oval base of an unusual LFS vessel, possibly an early dripping pan. The dumps cg206 were of later date and contained sherds of mid to late 12th-century date.

*LUB 30 St Bartholomew's church? (Fig 6.12)*

In Area II pit fills cg84, cg85 and cg89 (all LUB 6) were cut by a trench cg90 aligned east–west. This was at least 3.6m long (extending beyond the excavation limits in both directions), 1m wide and up to 0.5m deep (the depth was variable; it was deeper at the west end where it was 0.50m deep).

This trench probably represented the thoroughly robbed foundations (LUB 38) of an east–west wall (no ODs were recorded). There were no signs of returns at either end but a return to the south at the west end may have been removed by a later feature (cg91, LUB 38). From the position of the bell pit (LUB 31) and the inhumations (LUB 32), it is conceivable that this wall represented the north wall of the medieval church of St Bartholomew, but it is equally possible that the church lay outside the excavated area, especially since the bell casting pit (LUB 31) would otherwise have been a feature internal to the church. The only direct dating evidence was residual; a single sherd of MAX was recovered from cg90.

*LUB 31 Bell casting pit and mortar surfaces (Fig 6.12)*

Cutting layer cg82, together with pits cg83 and cg88 (all LUB 6), on the east side of Area II was a bell-casting pit, cg87. It measured 1.36m north–south, at least 3.18m east–west, and was up to 0.52m deep, with steeply sloping sides. Set within it was a base of limestone and clay with a central flue *c* 1m long, 0.30m wide and *c* 0.28m deep. They had been subjected to heat from within the channel. There was a layer of ash and charcoal 0.04m thick within the channel. The pit was filled with clayey sand with flecks of mortar, charcoal and burnt clay. A small assemblage from within the pit comprised a few pieces of fired clay bell-mould (84-D26) <LH287> (86–26) <L46> and small fragments of copper alloy waste. The mould fragments in the pit cg87 came from the bell mould which would have been placed on the base and a furnace built round it.

To the south of trench cg90 (LUB 31) were patches of at least one, if not more, mortar surfaces cg106 which sealed bell pit cg87 and Roman pits cg83 and cg88 (both LUB 6). The patches of mortar cg106 consisted of an area of sandy mortar with slight traces of clay, at least 1.60m north–south and 1.20m east–west, and 0.02m thick. It sealed pit fill cg88 (LUB 6) and was overlain by a layer of sandy clay and mortar with small fragments of limestone (at least 2.30m north–south, over 1.55m east–west and 0.05m thick), together with another similar layer to the south which extended at least 1.25m north–south and 2m east–west and was 0.01m thick (this sealed pit fill cg83, (LUB 6)). These patches of mortar surfaces may have represented part of the floor surface or make-up within the church.

A small group of pottery (31 post-Roman sherds) recovered from the bell casting pit was mostly made up of late 11th- to early 12th-century LFS jars but also included three residual MAX sherds. This group was contemporary in date to the cg14 fill of the possible kiln in LUB 29. Surfaces cg106 contained one post-medieval sherd and one modern sherd.

*LUB 32 Graveyard (Figs 6.12, 6.19, 6.23, 6.24 and 6.33)*

Sealing cg3 (LUB 3) in Area I was a layer of brown loam cg4, probably a re-worked soil horizon; several burials cut cg4. One inhumation was in a stone-lined grave cg6; no other evidence for stone-lining or coffins was found in the nearby graves cg7, cg8, cg9 and cg10. One grave cg5 contained no burial: it may have been disturbed by cg7.

In Area II there was an extensive layer of sandy clay with some small fragments of limestone cg92, which sealed cg89 and cg82 (both LUB 6). Layer cg92 was cut by 13 graves, either individual inhumations cg96, cg97, cg98, cg99, cg100, cg102,

cg104 and cg105 or apparently mass burials, cg93, cg94, cg95, cg101 and cg103 (cg102 and cg105 were unplanned). Many of the graves had been disturbed by landscaping in the 19th century. In most cases, no actual grave cut could be detected and there was no evidence for coffins or cists. The mass burials clearly represented the burial of several persons at one time, not a sequence of burials in the same grave-plot.

Further south-east, in Area III, surface cg22 (LUB 9) was cut or sealed by inhumations cg24, cg26 (with traces of a coffin), cg27 and cg28. Overlying the earlier road cg22 (LUB 9) and associated with these inhumations, was a layer of rubble sealed by a layer of sandy loam with some small limestone fragments, numerous lumps of mortar, a little charcoal and some gravel cg25, which probably represented reworking of the surface of Roman road by the graveyard. Gully cg30 (LUB 9) was cut by cist burial cg32. Pit cg35 (LUB 2) was sealed by loam cg39, and this in turn was cut by inhumation cg40. The natural limestone (LUB 0) had been cut for the grave containing cist burial cg49 and possibly inhumation cg50 (there was limited record of this inhumation). Pit cg71 (LUB 2) was cut by cist burial cg51, which was not excavated. Surface cg45 (LUB 8) was cut by cist burials cg52 and cg54, and possible unexcavated graves cg53 and cg55. Surface cg47 (LUB 8) was cut by cist burials cg56 and cg57. The inhumations in Area III included many cists. There may have been a further grave, cg33, in the south-west corner of the area which cut cg30 (LUB 9); it was a pit with steeply sloping sides and a flat bottom that measured 1.1m north–south, at least 0.7m east–west and was 0.3m deep. However, there was no record of a skeleton, cist or coffin in the excavated portion of the feature.

Cutting layer cg58 (LUB 2), also in Area III, were limestone pieces laid flat in up to two rough courses cg37, which were cut on the south by a posthole, cg38. This might represent some sort of division or feature in the graveyard. The possible Roman quarry pit cg35 (LUB 2) was sealed by a layer of loam with much stone, cg39; this probably represents reworking of the ground as a graveyard. It was cut by a cist burial cg40. Cutting layer cg58 in Area III, was a mass burial cg44, and sealing layer cg58 was an undescribed graveyard layer cg59. Stratigraphically later than inhumations cg49, cg51, cg52, cg55, cg56 and cg57 (all excavated in 1985), were inhumations cg60, cg61, cg62, cg63, cg64, cg65, cg66 and cg67 (all excavated in 1984), which all cut layer cg59. Another context, cg68, cut cg59; it was recorded as “grave fill” but there was no indication of an associated grave. Layer cg69 probably represented the cleaning up of surface cg47 (LUB 8), removing traces of the graveyard deposits.

In Area VI, surface cg18 (LUB 8) was cut by a disturbed grave cg19. This area may have included

many more burials; it had been truncated by later landscaping.

The burials represented the remains of at least 58 individuals; several inhumations (double or mass graves) shared the same context group numbers, while there was also a quantity of disarticulated bone from later levels (LUBs 51–3), much of which almost certainly represents material redeposited by disturbances to the medieval and later graveyard.

Of the skeletons that could be aged or sexed, it was possible to identify 13 males (and possibly 7 others), 5 females (and possibly 3 others) and 12 subadults, leaving a further 18 adults unsexed. Skeletal preservation was variable: over 75% of the skeleton survived only in 7 inhumations, and more than 50% in just 6, while less than 50% survived in the other 33 (Boylston and Roberts 1994, table 1). Preservation was dictated largely by the nature of the excavation (and, to some extent, by the nature of burial – see below), as the preservation of individual bones was good in most cases, with cortical and joint surfaces remaining largely intact. However, observation of pathological distributions was undoubtedly affected by the fact that skulls and lower extremities often were not recovered or fell outside the area of excavation.

There were clearly two burial styles. The first consisted of well-ordered graves, some of them in stone cists, where the individuals had been carefully laid out. The second type was mass burial, with one shared grave cg99 where the two incumbents were buried almost in a sitting position, and another possible double grave cg96 containing the remains of two individuals. Ceremony here was perfunctory, with no evidence of shrouds or coffins. Within the first group of burials there was a fairly even distribution of sex and age at death; where the bones from the mass graves could be sexed, these were mostly male, although an equal proportion could only be identified as adults; the majority fell within the age range 20–35 years.

Palaeopathology included individual dental anomalies, developmental anomalies, infection, signs of healed fractures and dislocation, as well as evidence for nutritional deficiencies, joint diseases and even bone tumour (Boylston and Roberts 1994, 8–17). The mass grave cg100 (where many individuals lay on their right side) seemed to include individuals of both sexes along with some children, and may have been the result of a – for that group – cataclysmic event, such as an epidemic of plague, or some other infectious disease (Boylston and Roberts 1994, 18). One of the individuals in the double grave cg99 was a male aged between 25 and 35 years who not only sported a well-healed neck injury, probably caused by an attack with a sharp-edged weapon, but shortly before death (perhaps a few days since

some healing had taken place) had been attacked from behind, most likely with an axe, as well as being wounded twice by piercing weapons – probably the point of a pike or halberd and a bodkin arrow (Boylston and Roberts 1994, 13–14). This individual was buried in the same grave as another, similar to burials that resulted from conflict, in the cemetery of St Andrew, Fishergate, York (Mackinnon pers. comm.).

The sparse pottery (86 post-Roman sherds) from the graveyard indicated a medieval use continuing possibly into the post-medieval period, with early modern contamination; it also suggested that there had been Middle Saxon, if not Early Anglo-Saxon, occupation in the area. Layer cg92 contained a single early medieval sherd and layer cg69 contained medieval and middle Saxon material. Loam layer cg25 contained two medieval sherds and two early modern sherds; layer cg4 in Area I produced a range of material up to early modern date that included one Early Saxon and 13 Middle Saxon vessels. Layer cg59 also contained a range of material up to the post-medieval period that included five Middle Saxon MAX vessels. Burials cg101, cg32, cg65, cg68 and cg95 all produced a few sherds of pottery of medieval date. Burials cg94 and cg44 contained post-medieval sherds. Residual Middle Saxon pottery was found in cg102, cg32 and cg44, with the last two burials also containing sherds of Early Saxon date.

Little other material came from any of these levels; very small assemblages from cg25, cg39, cg59 and cg69 were mostly of nails, while the only datable piece from cg25 was a clay tobacco pipe stem fragment of late 17th- or 18th-century date. Burials

cg32, cg65, cg66, cg68 and cg97 all produced one or two iron nails. The only registered find from cg94 was part of an iron knife blade. Mass burial cg44 contained a mixture of redeposited Roman material together with part of a 17th- or 18th-century wine bottle, and a copper-alloy handle with escutcheon, of mid to late 18th-century date. Contamination is possible.

#### *LUB 33 Pits and dumps (Figs 6.12 and 6.16)*

The Roman deposits in Area VII, layer cg145 (LUB 25) were cut by pits cg164 and cg165. Both these features extended beyond the limit of excavation. Pit cg165 was cut by another pit, cg166. The pits were sealed by dump cg167. Sealing dump cg167 and the whole of Area VII (including Roman LUBs 26 and 27), was a thick dump of sandy clay with limestone cg169. Sealing dump cg169, and covering much of the eastern part of Area VII, was a dump of sandy clay and rubble cg170. The consistency of this was not always differentiated from the underlying dump cg169, which suggests that they were the same material.

The pottery (51 post-Roman sherds) does not indicate that these are rubbish pits, although there was some animal bone present. There was a small assemblage of animal bone in dump cg169, dominated by cattle, with caprovid and pig remains making up most of the rest; cattle was represented mostly by scapulae, all showing evidence of butchery (Dobney *et al* 1994c). Dump cg170 contained a moderate assemblage of animal bone, with the remains of cattle, caprovid and a few pigs; a single cattle tibia showed some kind of possible functional

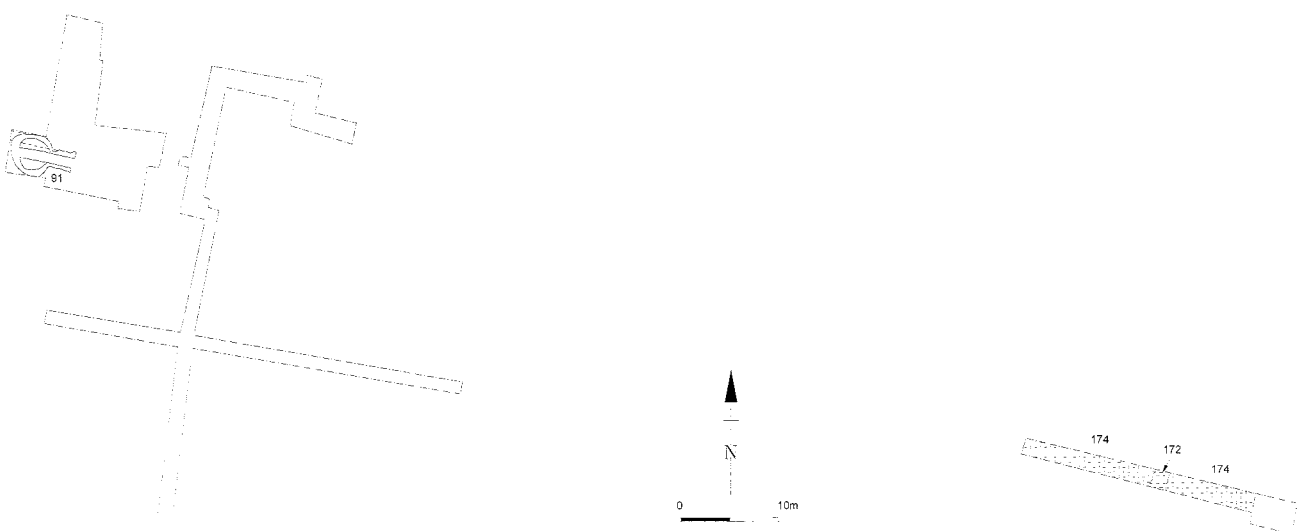


Fig 6.13 Dump cg174 cut by ditch cg172 in Area VII, and lime-kiln in Area II: LUBs 36, 37 and 38

wear as evidenced by polishing on its surface (Dobney *et al* 1994c). Pit cg165 contained only three post-Roman sherds of Saxo-Norman or early medieval date. Pit cg166 and levelling deposits cg167 and cg169 each contained a few sherds of early medieval date. There was some intrusive early modern material in cg167, cg169 and cg170.

#### *LUB 34 Oven/hearth? (Fig 6.12)*

Dump cg169 (LUB 33) in Area VII was cut by a possible oven or hearth, cg171. This was an irregular bowl-like depression with traces of burning on the sides and bottom. Although a single sherd of Saxo-Norman or early medieval date was recovered from cg171, the layer cg169 (LUB 33), cut through by oven cg171, sealed layers which contained pottery dating to the early medieval period.

#### *High Medieval to Late Medieval*

The graveyard LUB 32, in Areas I, II and III, probably continued in use throughout this period; the church, LUB 30, continued in use through part of this period.

In Trench 3, Area IV, was building debris LUB 35; this was dated by sherds of high medieval pottery.

In Area VII there was a rubble dump LUB 36, possibly late medieval in date. Cutting some of the eastern part of Area VII was a north–south ditch LUB 37.

In Area II, the possible church (LUB 30) was demolished, its foundations robbed and a lime kiln constructed LUB 38; although 14th- to 15th-century pottery was found in association, the date of the kiln is likely to be later if LUB 30 represents the church (see Discussion).

#### *LUB 35 Dump*

On the south side of Area IV, at the bottom of Trench 3, a layer of building debris, including much limestone rubble cg195, was observed. Only two sherds of early 13th- to early 14th-century pottery, along with a residual early/mid 12th-century NSP spouted pitcher, were recovered from cg195.

#### *LUB 36 Dump (Figs 6.13 and 6.16)*

The oven cg171 (LUB 34) in Area VII was backfilled with sand and limestone cg205 and this was sealed by sandy clay layer cg174 (0.25m thick).

Pottery from cg174 (36 post-Roman sherds) and cg205 (12 post-Roman sherds) was, with the exception of a single early modern sherd, of Saxo-Norman to early medieval date; the high proportion of LFS sherds indicates a date before the late 12th century. However, the form of a virtually complete iron barrel-padlock (86–208) <L94> from cg174, with its end-plates recessed into the case, and a

thin plate separating case and arm tube, suggests that this is more likely to be of later medieval (13th- or 14th-century) date (see Ottaway 1992, 666). Associated fragments of bottle glass and clay tobacco pipe of 18th- or 19th-century date, however, suggest that this lock may be intrusive as well.

#### *LUB 37 North–south ditch (Figs 6.13 and 6.16)*

Layer cg170 (LUB 33) was cut by a ditch aligned north–south cg172. It was 1.98m wide, 0.6m deep and was filled with sand. There was no dating evidence.

#### *LUB 38 Lime kiln (Figs 6.13 and 6.25)*

In Area II, trench cg90 (LUB 30) was robbed and backfilled with sand and clay cg204 with slight traces of mortar bonded limestone rubble; the backfill cg204 was cut by the north wall of the flue of a large lime kiln, cg91. The bowl of the kiln was c 4.2m in diameter and at least 1.56m deep and was lined with limestone walling, much of which had been heavily burnt or oxidised. To the east of the bowl was a flue 3.6m long and 1m wide, retained on both sides by walls of flat limestone fragments laid in thin, even courses. The channel of the flue continued across the bowl of the kiln, and at its west end there was pitched limestone which appeared to have formed part of the last charge of the kiln. To the east of the flue was a bowl-shaped depression, perhaps the stoke-hole. The flue and most of the kiln were sealed by a layer of lime, with lumps of burnt limestone and partly burnt lime, up to 0.8m thick. Within the lime were 160 nails, mostly bent and many fragmentary, possibly indicating the use of old structural timbers as fuel.

The stone from foundation trench cg90 (LUB 30) was completely robbed cg204; It may have been both a source of stone for the construction of the kiln, and could also have been used as raw material in the kiln.

Ten sherds of a 14th- or 15th-century LSW3 jug were recovered from robbing cg204, along with a sherd of a medieval POTT cooking pot and one of a residual early medieval jug. Only two post-Roman sherds were recovered from the lime kiln: one was a residual Middle Saxon sherd and the other was of 13th- or 14th-century date. On the evidence of the pottery, it would seem likely that the church had been demolished and this kiln constructed in either the 14th or 15th century, or even later (see Discussion).

#### *Post Medieval*

The use of Areas II and III for burials continued during part of this period (LUB 32).

At the east end of the site, in Area VII, was the



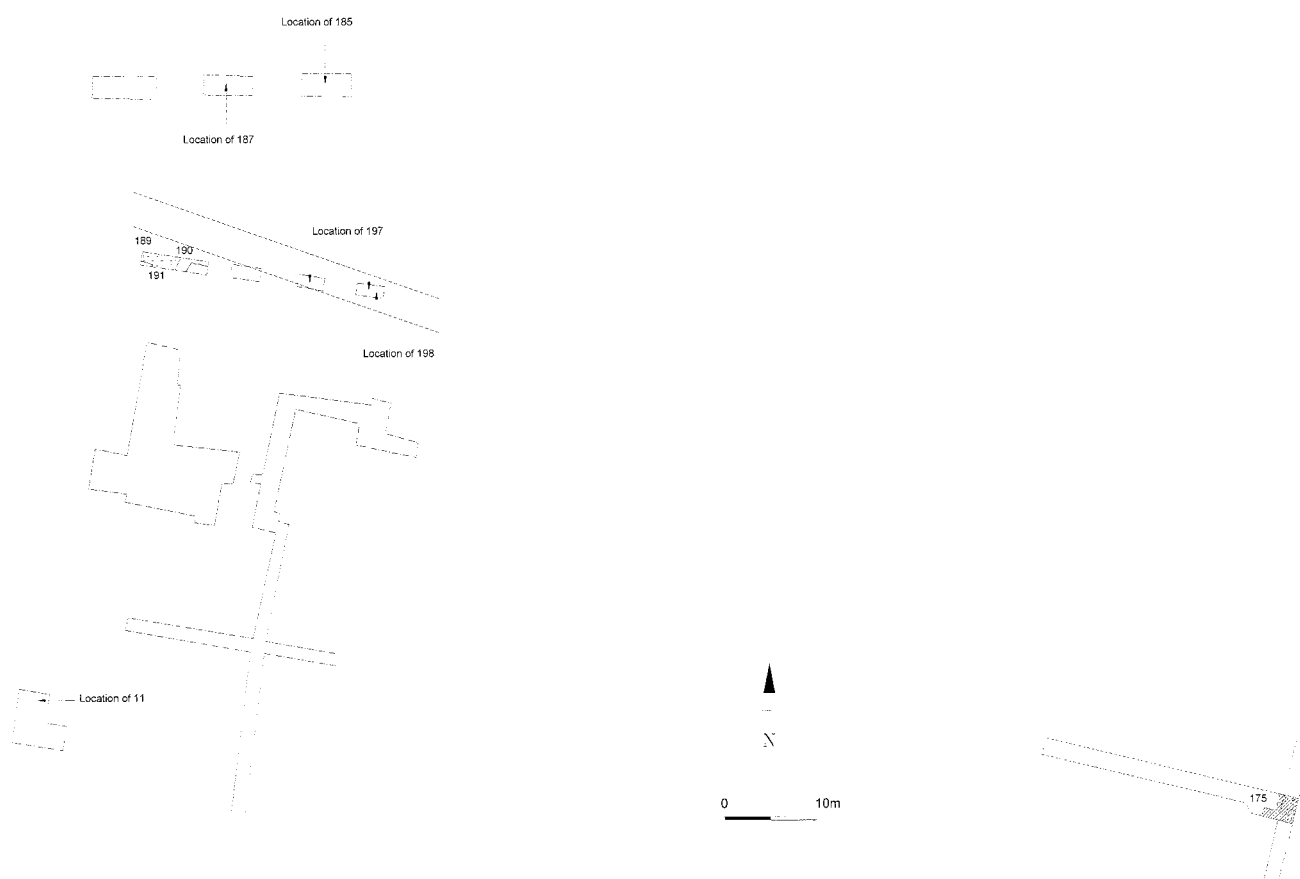


Fig 6.14 North–south road cg175 in area VII, Structure 3 in area IV, location of east–west road cg197, surface cg11 and dumps cg185 and cg187 in area IV: LUBs 39, 40, 42, 43 and 44

west side of a north–south road **LUB 39** associated with 17th/18th-century bottle glass.

There was evidence for an east–west road **LUB 40** in the north part of the site in Trenches 1 and 2, Area IV. In Trench 4, Area IV, was an east–west wall **LUB 41**; there was no direct dating evidence, but it was parallel to road LUB 40. Sealing the levelled wall LUB 41 was the corner of a building **LUB 42** (Structure 3); its construction was associated with 17th/18th-century pottery.

Further south, in Area 1, and sealing burials (LUB 32) was a possible limestone surface **LUB 43**.

Trenches 6 and 7, Area IV, contained a levelling dump **LUB 44**.

#### *LUB 39 North–south road (Figs 6.14 and 6.26)*

At the east end of Area VII was a crushed limestone surface cg175 at the limit of excavation. It was aligned north–south, and the surface, at 63m OD, was rutted (Fig 6.26). Metalled surface cg175 contained a single post-Roman sherd of late 16th- to mid 17th-century date and post-medieval to early modern glass, together with some residual Roman material. A

sherd-link back to the dump over Structure 1 (cg160, LUB 27) suggests that at least some of the finds represent redeposited material from the underlying Roman levels.

Overlying road surface cg175 was a thin layer of silty sand with small flecks of limestone and charcoal cg176. This mainly survived within the ruts in the surface.

#### *LUB 40 East–west road (Fig 6.14)*

At the limit of excavation in Trenches 1 and 2, Area IV, there was evidence for a road cg197, aligned roughly east–west. It was described as a very hard compacted limestone layer including brick fragments. There were ruts cg198 in this surface. There was no dating evidence.

#### *LUB 41 Wall*

Aligned north–west to south–east, at the bottom of Trench 4 on the south side of Area IV, was a wall cg188; it had foundations which had a south face of large roughly-faced limestone ashlar and a core of smaller stones bonded with clay. The wall was very

fragmentary, but was at least 1.2m long and over 0.65m wide (its north face was not investigated). The wall was built from 64.26m OD; it ran parallel and just south of the road (LUB 40). There was no record of what the wall cut, and there was no dating evidence, except that it was demolished in the post-medieval period (LUB 42).

*LUB 42 Structure 3 (Figs 6.14 and 6.27)*

Wall cg188 (LUB 41), in Trench 4, Area IV, was levelled and sealed by hard sandy clay deposit cg189 with fragments and chips of limestone and tile; this layer contained three sherds of pottery which dated between the 17th and 18th centuries. Cutting layer cg189 was a limestone wall cg190 built

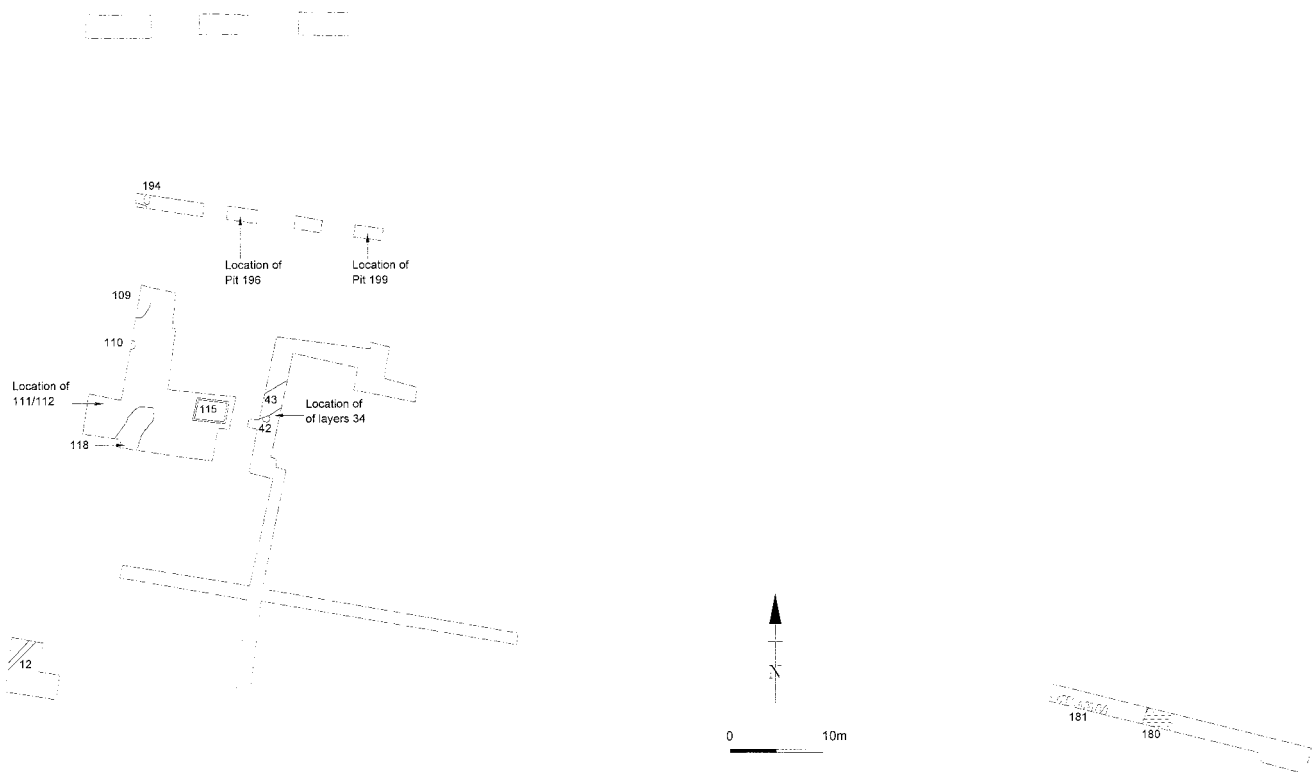


Fig 6.15 Dog burial cg194 and location of pits cg198 and cg199 in Area IV; dog burial cg110 and pits cg111 and 112 in Area II; the cellar cg115 of Structure 4, paths in Areas I, II and III, flowerbed cg109 in Area II, as well as horticultural activity cg180 and cg181 in Area VII: LUBs 45, 46, 48, 49, 50, 51 and 52

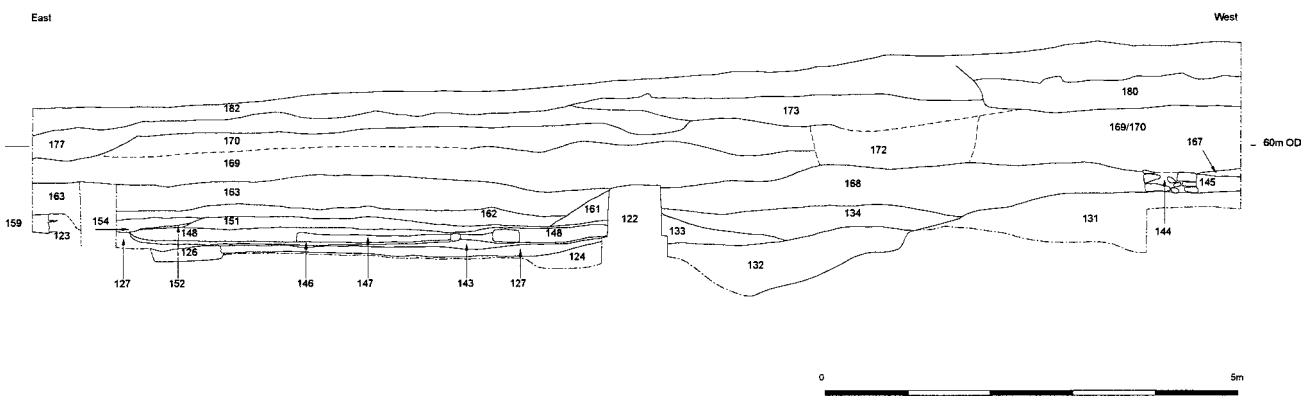


Fig 6.16 East-west section along part of the south side of Area VII.

at 64.24m OD. It was aligned north–south with a return to the east at its north end.

Also cutting layer cg189 was a pit cg191; this was described as “E/W burial and fill” but no skeleton and little of the pit was excavated.

#### *LUB 43 Surface? (Fig 6.14)*

In Area I, the burials (LUB 32) were sealed by a layer of broken limestone cg11; the limestone was possibly worn in places with some sandy loam between the stones. It appears to have been a surface. There was no dating evidence for this, except the stratigraphy.

#### *LUB 44 Dumps (Fig 6.14)*

In Trench 7, Area IV, sealing gully cg184 (LUB 7) and the rest of the trench was grey-brown loam cg185. In Trench 6, Area IV, possible natural cg186 (LUB 0) was sealed by a dump of clay and limestone cg187.

#### **Modern**

In Trench 4, Area IV, Structure 3 was demolished LUB 45; this was dated by its position in the stratigraphic sequence. In Area II, a building (Structure 4) was constructed of which only the cellar LUB 46 was found; it was associated with early modern pottery.

Sealing Area VII were dumps LUB 47, into which a pit and soakaways were inserted, probably flower-beds LUB 48.

In Trenches 1 and 3, Area IV, were pits LUB 49 one of which was dated by early modern pottery. There were also pits in Area II LUB 50.

Sealing LUB 43 in Area I, LUB 6 in Area II and LUB 32 in Area III, was one or more paths, LUB 51. In Area II, partly sealing LUB 32 was a possible raised flower-bed LUB 52. Over part of Area II were dumps of sandy loam LUB 53. Sealing LUB 32 in Area II were loam dumps LUB 54. Over the whole site was topsoil LUB 55.

#### *LUB 45 Post demolition of Structure 3 (Fig 6.15)*

Robbing wall cg190 (LUB 42), Trench 4, Area IV, was a robber trench cg192, which was sealed by a layer of clay with limestone cg193. This dump was cut by a pit cg194 which contained the skeleton of a dog. The robber trench cg192 contained a single residual late 15th- or 16th-century sherd.

#### *LUB 46 Structure 4 (Fig 6.15)*

A stone-walled cellar cg115 in Area II cut layer cg114 (LUB 6). It was 2.30m north–south by 2.90m east–west internally and was partially excavated to 1.80m deep. These were the only surviving traces of this building on the site. A small group of post-

Roman pottery (27 post-Roman sherds) and other finds was recovered ranging from Anglo-Saxon to Early Modern.

#### *LUB 47 Dumps (Fig 6.16)*

At the east end of Area VII, sealing layer cg170 (LUB 33), was an extensive layer of sandy clay with some flecks of limestone and charcoal cg177. The fill of ditch cg172 (LUB 37) and dump cg177 was truncated and sealed by a spread of limestones in sandy clay cg173. The latest finds from cg177 were of modern date.

#### *LUB 48 Flower-beds (Figs 6.15, 6.16, 6.28 and 6.29)*

Above dumps cg173 and cg177 (both LUB 47) there was a spread of limestone rubble, cg178. This spread may have represented a surface, possibly a wide garden path, although there was no evidence of wear on the stones (Fig 6.28).

A dump of sandy clay 0.2m thick cg179 overlaid the west end of the trench sealing layer cg174 (LUB 36); dump cg179 contained 28 sherds of 18th/19th-century pottery and modern bottle glass. Surface cg178 and dump cg179 were cut by a shallow north–south channel cg180 filled with sandy mortar and lime. Cut into layer cg179 were several soakaways comprising rubble-filled voids, cg181 (Fig 6.29). Both features suggest horticultural activity and were probably flower-beds.

#### *LUB 49 Pits (Fig 6.15)*

In Trench 1, Area IV ruts cg198 (LUB 40) were cut by a pit cg199, filled with brick, tile and limestone rubble; this was sealed by an undescribed layer cg200, removed by machine.

The medieval building debris cg195 (LUB 35) in Trench 3, Area IV, was cut by a pit, cg196. The pit was only partly excavated since most of it lay outside the area of excavation. Pit cg196 contained two early modern sherds.

#### *LUB 50 Pits (Fig 6.15)*

In Area II, the fill of the lime kiln cg91 (LUB 38) was cut by two pits cg111 and cg112. Pit cg110 cut layer cg92 (LUB 32); it contained the almost complete remains of a large dog, missing only the skull, and from the plan it would seem that the absence of a head suggests limited excavation rather than later disturbance. It was clearly an aged individual, judging by the acute arthropathy affecting many of the major long-bones (Dobney *et al* 1994c). The remains of a textile, now existing as parallel S-spun threads, 6 per cm, and matted together as if the textile originally had a nap, were found around the edge of the dog burial. These represent a coarse piece of lindsey-woolsey (linen-wool union fabric), from which the linen had decayed. Analysis of dye

by absorption spectrophotometry revealed the presence of indigodisulfonic acid, indicating the semi-synthetic dye, Saxe Blue, which was used in Europe from 1740 to 1900 (Walton Rogers 1993). This is typical blanket material and may have been used to wrap or cover the dog.

*LUB 51 Paths (Figs 6.15 and 6.30)*

Sealing surface cg11 (LUB 43), in Area I, was a crushed limestone and pebble surface cg12, c 0.80m wide, which was part of a north-east to south-west path. Garden path cg12 contained one Anglo-Saxon and seven Middle Saxon sherds probably derived from landscaping on the site.

In Area II, layer cg82 (LUB 6) was sealed by sandy clay cg107, over which was sandy clay with rubble cg113. Over this in turn was a layer of sandy clay with limestone rubble and some fragments of unfrogged bricks cg118, which appeared to form a path 2.3m wide (Fig 6.30).

Inhumations cg37, cg38 and cg40 (LUB 32) in Area III were sealed by deposit cg41; this had been cut by a charnel pit cg42, which probably served as a receptacle for bone retrieved from disturbed burials in the vicinity when the area was undergoing landscaping. The pit cg42 was sealed by a layer of limestone and ironstone rubble cg43, the southern part of which was smooth, suggesting use as a path; however, no dimensions were recorded.

Although surfaces cg12, cg118 and cg43 were all running in the same direction, each stretch was of very different construction and probably indicated different paths, possibly not even contemporary.

*LUB 52 Flower-bed? (Figs 6.15 and 6.31)*

At the north end of Area II there was part of an ornamental feature cg109, cutting inhumations cg92 and cg94 (LUB 32); this was defined by a single course of stones which sealed inhumation cg94 and layer cg92 (both LUB 32). This was perhaps a raised circular flower-bed.

*LUB 53 Dumps*

In Area II, sealing flower-bed? cg109 (LUB 52) and pits cg110, cg111 and cg112 (all LUB 50), as well as numerous graves (cg93–100 and cg102; LUB 32), was sandy clay cg116 with some limestone chips, charcoal and fragments of brick; it was very extensive and 0.20m thick. The east end of trench cg90 (LUB 30) – the possible church wall – was sealed by a layer of sandy clay with some small fragments of limestone cg108; this was very similar in description to cg116 and may be equivalent. Sealing cg106 (LUB 31) was sandy clay cg117 with some limestone rubble and much broken human bone. The latest finds from cg117 were of the 18th century.

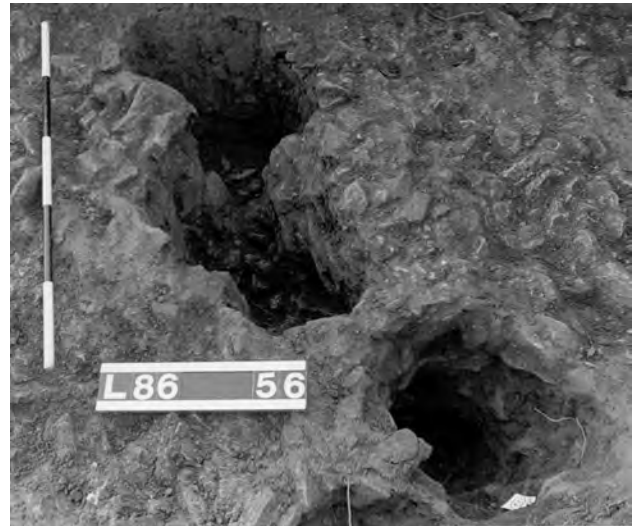


Fig 6.17 Looking west at holes cg77: LUB 1



Fig 6.18 Looking south at pit cg36: LUB 2

*LUB 54 Dumps*

In Area III, burials cg26, cg27 and cg28 (LUB 32) were sealed by a layer containing bone and 'cement' chippings. To the south, grave cg24 (LUB 32) and surface cg22 (LUB 9) were sealed by a layer of sandy loam with numerous small limestone fragments, some charcoal and mortar. Both these layers were interpreted as part of the same stratigraphic unit, cg29. Inhumation cg32 (LUB 32) in Area III was sealed by similar layer cg34 (not recorded in detail). In Area III, sealing path cg43 (LUB 51), was sandy silt with much broken limestone cg72.

Sealing the backfill cg14 (LUB 29) of possible kiln



Fig 6.19 Looking north-east at surface cg45 and graves cg49, cg51, cg52, cg53, cg54: LUBs 8 and 32

(LUB 28) and ditch fills cg15 (LUB 29) in Area V, was a levelling dump of sandy loam with limestones cg16. A small group of post-Roman pottery (84 sherds) was recovered, ranging from Middle Saxon to 17th–18th century. A small assemblage of other finds contained a little residual material, but was composed largely of window and vessel glass, the latest of which were late 18th- or 19th-century bottle fragments.

In Area VI, surface cg18, ditch cg20 (both LUB 8) and burial cg19 (LUB 32) were sealed by sandy loam cg21 which contained small fragments of limestone with some gravel, charcoal and lumps of mortar (at least 1.2m north–south, over 14m east–west, and 0.19m thick).

#### *LUB 55 Topsoil (Fig 6.16)*

Area II was sealed by topsoil and turf cg119 (which also includes cleaning layers in preparation of excavation). Area III was sealed by topsoil (unrecorded). All the trenches in Area IV were sealed by topsoil cg201; this was dark brown/black clay loam with charcoal, pebbles and limestone fragments (between 0.35 and 0.50m thick). Areas V and VI were sealed by topsoil (unrecorded). The whole of Area VII was covered by a layer of sandy loam cg182 with much humus and some fragments of limestone (0.25m thick).

## Discussion

### *Topography, before and during the Roman period*

Apart from the site at 181–3 High Street (hg72) in Wigford, The Lawn is the only other site from the



Fig 6.20 Infant burial cg141, within Structure 1.2: LUB 12

1972–87 Lincoln excavations to produce Iron Age-type pottery (Darling and Jones 1988).

The exposed limestone to the west of the site had broken down into brash and was fissured (LUB 0), and may have been riddled with solifluxion holes and ruptured by a fissure (LUB 1), but the alignment of these apparently natural features with the two postulated Roman streets (LUBs 8 and 9) suggests that they may have represented a ditch and postholes. Their existence hints at the possibility of



Fig 6.21 Looking west at tile hearth cg142, within Structure 1.2: LUB 12



Fig 6.22 Looking west at Structure 2 with Structure 1 beyond: LUB 17

either late Iron Age, but more probably, Early Roman military occupation here, outside and to the west of the fortress. The function of such occupation here is uncertain, but there are various possibilities – it might have represented an early military fort or labour camp, an official enclosure or annexe, or even a native or traders' camp.

A number of pits (LUB 2; Fig. 6.18) may be interpreted as quarry or burrow pits; they were back-filled with domestic rubbish. The fill of the natural fissure or ditch contained discarded military trappings (LUB 3). Both the pits and the fissure fill dated to between the mid and late 1st century.

In Area VII, possibly dating to the 2nd century, were possible quarry pits (LUB 4) and a turf line associated with a fire (LUB 5). The Roman pottery from the site divided very clearly into two different spatial groups, that from the trenches to the west, and that from Area VII to the east. The greatest concentration of 1st-century pottery lay in the western trenches (LUBs 1–4), with every LUB group having a strong 1st-century peak. In contrast, only a small amount of 1st-century pottery was present in the earliest LUBs in Area VII (LUBs 4 and 5).

In Area II, the possible structural traces (LUB 1) were sealed by 2nd-century rubble and pits (LUB 6). It would seem that, by the second century, this area was open for a time and used for refuse. It is possible that much of the refuse (LUBs 2, 3, 4 and 6) represented disposal of rubbish after the fortress had been cleared, prior to the development of the *colonia*.

Traces of the possible streets were discernible running north-west to south-east (LUB 8), and south-west to north-east (LUB 9) over the site. The date of their construction is problematic; associated pottery was scarce, but it is entirely possible that they were built in the legionary period, and were thereby associated with the possible ditch and structures of LUB 1. Road LUB 8 had a ditch to the west, and road LUB 9 had a gully to the north. The roads probably continued in use throughout the rest of the Roman period. No trace of a Roman road leading directly west from the west gate of the upper *colonia* was found during the excavations of 1984–7, but during the subsequent laying out of a carpark, the line of such a road was found in 1989, just to the north of Area VII (on159), and it is on to that street that the 2nd to 4th-century buildings found in Area VII presumably fronted.

Another possible 2nd-century road or lane ran north–south (LUB 13), possibly joining with the east–west street at its north end; it was later encroached on to the west by dumps (LUB 14) and sealed by a north–south wall (LUB 16) down the middle of its original width, leaving only 2.5m of



the surface to the east. This surface lay about 3.5m to the west of a building, Structure 1; it may be that the extra area was included later as part of the surface of the road or path (to make it 4m wide). The road/lane went out of use after the demolition of Structure 1, suggesting that it formed an access to this building, or possibly a group of buildings to which Structure 1 belongs. To the east of Structure 1 was Structure 2; Structures 1 and 2 may have originated as part of the same group of buildings. Structures 1 and 2 were the only buildings of mid-Roman date encountered on the site.

There is a possibility that the grave and gully (LUB 15) in Area VII represented the very western edge of a Roman cemetery; this LUB is not very well dated, belonging sometime either in the 3rd or 4th centuries. Finds of cremations were noted in the grounds of the Lawn in the 19th century, but not precisely located.

Structure 1.4 (LUB 20) marks a change in the pottery in Area VII, moving strongly into the 3rd century, although subsequent groups contained increasing proportions of residual pottery.

The latest Roman building was demolished in the early 4th century (LUB 24). There was little 4th-century pottery from the site. For the rest of the 4th century in Area VII, sealing the demolished buildings (LUBs 18 and 24), and also the road (LUB 13), were dumps of material (LUBs 25, 26 and 27) which suggest not only rubbish disposal but also possible horticulture (due to the small size and scrappy nature of the pottery).

Over the other parts of the site, excavations at the Lawn did not produce much mid or late Roman stratigraphy (apart from roads LUBs 8 and 9). This lack of evidence perhaps suggests that the rest of the site was during most of these periods an unused open area.

### *Roman buildings*

The (?post-)holes in Area II, which suggest legionary-period timber structures (LUB 1; Fig. 6.17), seem to represent buildings possibly about 5m or 6m across, with pits (LUB 2) to the east in Areas II and III.

The more substantial mid to late 2nd-century buildings, Structures 1 and 2 (LUBs 10 and 17; Figs 6.21–2) were constructed in stone. Only an area of about 2m by 6m within Structure 1 was excavated, and Structure 2 was very disturbed, so we have limited information of both buildings. However, there was a fair amount of structural information about Structure 1. It appears that the ground was made up for its construction, with substantial limestone walls (LUB 10). In its first phase the building had a mortar floor cg124 and a clay hearth cg125; the floor was cut by a pit (LUB 11). Then a



Fig 6.23 Looking west at truncated inhumations cg93, cg94 and cg95: LUB 32



Fig 6.24 Mass burial cg101: LUB 32

make-up layer of limestone fragments was laid down, over which was another mortar floor cg127; this layer was cut by a burial cg141 (Fig. 6.20) and sealed by a hearth cg142 (LUB 12; Fig. 6.21). The burial cg141 contained a three month old child (Boylston and Roberts 1994).

It appears likely that Structure 1 was possibly demolished, perhaps by an accidental fire or systematically so (LUB 19), in the mid 3rd century. It was subsequently refurbished; a new partition was inserted cg147 (LUB 20). Its east wall was demolished, partly sealed by a dump (which also sealed the internal walls cg147), and rebuilt (LUB 21); clay floors and a stone-lined pit (LUB 22) followed and then there was a stone slab surface cg155 (LUB 23). Eventually in the early 4th century the building was finally demolished.

The mortar and clay floors, the hearths, and pits all suggest a building or the part of a building which was functional rather than formal: possibly the workshop areas of traders' quarters. Structures 1



Fig 6.25 Looking west at lime-kiln cg91: LUB 38



Fig 6.26 Looking south at road with ruts cg175: LUB 39

and 2 probably resembled the extra-mural Roman buildings found in Wigford in some quantity, narrow strip buildings which were gable-ended on to the main road, and which functioned as workshops and commercial outlets as well as domestic quarters.

### *Roman streets*

The Lawn excavations provided evidence for two possible Roman streets (LUBs 8 and 9) and one access road/lane (LUB 13). Each of the streets (LUBs 8 and 9) was associated with a ditch; they would have met at right-angles, forming a cross-roads. Their alignment was not that of the *colonia*, but one may have followed the line of the Lincoln Edge.

### *1st and 2nd century rubbish*

To a great extent the patterns evidenced by the registered finds mirror those produced by the pottery, particularly the concentration of 1st-century material in the western areas. Analysis of both registered finds and building materials has shown that the material used to backfill the natural 'gull' in Area I (LUB 3) and the pits in Areas II and III (LUBs 2 and 6) comprised legionary-period rubbish; the glass, in particular, suggests that the dating of this material can be refined to the third quarter of the 1st century. Much of it comprised domestic refuse, although some military metalwork is present, while the occurrence of building materials within the assemblages suggests that at least some of the rubbish was derived from the demolition of legionary-period buildings. The presence of items such as fragments of window glass and the occasional *tessera* may indicate that these buildings were of some quality.

Very little material was directly associated with any of the Roman structures, while demolition levels (LUB 24) and later dumps (LUBs 25, 26 and 27) contained a high proportion of secondary rubbish, at least some of which is 1st century, and therefore could represent material brought on to the site (including horncore waste LUB 25, and 'blanks' for, or waste from, bone tool manufacture LUB 26). Large assemblages of 2nd-century pottery and other finds from pits and dumps (LUB 33), and the post-medieval road surface cg175 (LUB 39), probably represent further redeposition of the Roman rubbish from the earlier levels (LUBs 25, 26 and 27).

### *Early Anglo-Saxon to Middle Saxon*

Although no stratified features could be dated to the Early Saxon or the Middle Saxon period, in Areas I–VI there was a concentration of Saxon pottery, particularly above the Roman pits (LUBs 2 and 6 in Areas II and III) and the fill of the natural 'gull' (LUB 3, Area I). Sherds of both Early Saxon and Middle Saxon date were recovered. The small number of Early Saxon sherds (six) may indicate





Fig 6.27 Looking west at Structure 3, wall cg190:  
LUB 42

that they had not necessarily come from an earlier phase of occupation, but that activity near the Lawn started at a period of transition from typical Anglo-Saxon wares to the Middle Saxon Maxey-types.

All the 64 sherds of Middle Saxon pottery were of Northern Maxey-type (MAX) with only fabrics A and B being represented. Fabric A appears to be confined to the earliest part of MAX use and 22 of the sherds from the Lawn were in this fabric. This fabric grouping consists of thin-walled, competently made bucket- or barrel-shaped vessels. The fabric is often quite hard, and surfaces finger smoothed, masking the dense fine shell. Much care had been taken with the finishing of these vessels; coils are 10 to 20 millimetres high but are visible in section only. The core is usually reduced and surface colour is patchy reddish brown to black. The rims appear to have been cut leaving a characteristic inner and/or outer lip to the upright flat top.

The other 42 sherds of MAX were of fabric group B and this grouping seems to be less well made, vessels are thicker walled, coils are 15 to 25 millimetres high, and although the surfaces are smoothed, they are not always as successful at masking the shell as in the previous group. Coils are sometimes visible on the surface of sherds, especially on larger vessels. Vessels in this group



Fig 6.28 Looking west at surface? cg178: LUB 48

tend to have a more rounded profile, and rims tend to be more often slightly everted, although most are still flat. The flattening appears on some rims to have been achieved with the fingers. None of this group, however, shows any signs of everted wheel-turned rims, which are thought to have developed on some Maxey-type wares in the ninth century.

The fabric evidence, together with the fact that the grass wiped ELFS fabric, which is usually found on 9th-century sites, is not present at the Lawn, indicates that the Middle Saxon activity in the vicinity of the Lawn excavations was perhaps confined to the late 7th to 8th centuries.

#### *Topography in the medieval period*

The area of the Lawn excavations lay outside and to the west of the walled city. It would appear that in the Late Saxon to Saxo-Norman periods there was little activity on the site, which was probably an open area. There is no evidence for the continued use of any of the roads after the late Roman period.

The medieval period saw the appearance of the church of St Bartholomew with its associated graveyard (LUBs 30–32; Figs 6.19, 6.23–4). A kiln (LUB 28) was possibly associated with its construction. Both the fill of a bell pit (LUB 31), and the backfill of the kiln (LUB 29) contained similar small groups of pottery dating between the late 11th and early 12th centuries. This was the earliest stratified post-Roman pottery on the site. Both of these groups show that, by this time, the traditional reduced sand-tempered Saxo-Norman wares (SNLS and TORC) were no longer in use and there was a short period before 'splashed-glazed' wares were introduced.



Fig 6.29 Looking south at soakaways cg181: LUB 48

During the early medieval period there were pits and dumps (LUB 33) in Area VII, and an oven (LUB 34). This might indicate activity associated with nearby occupation; these features, however, do not suggest that a north–south road, Gallows Lane, was in use by this period, but rather that there may have been access much further west.

The large rectangular earthwork shown on William Stukeley's 1722 map of Lincoln (Fig 6.1) survived to be noted at its north-east corner on 19th-century Ordnance Survey maps as 'Entrenchments', but which may have largely been removed during the subsequent landscaping operations. There has been speculation about the origin of the feature. The Lawn excavations cut across this feature: ditch cg172 (LUB 37) may represent a cut edge to it, and cg174 and cg179 (LUB 36) part of the dumps from which it was formed. The feature might date to before the late 12th century, given the pottery from the dumps (LUB 36). St Bartholmew's graveyard formed the northern boundary of a plot on which trials by battle took place, 'Battleplace', at least in the 13th century (Hill 1948, 359). Perhaps the graveyard also formed the western boundary, and these earthworks a platform on which trial by battle could take place. Evidence for recent battle scars was observed on an individual from grave cg99, LUB 32 (Boylston and Roberts 1994, 13–14).

#### *St Bartholomew's church and graveyard, and later the chapel*

The area of the Lawn was the site of St Bartholomew's church in the early medieval period. It is possible that excavation recovered the north wall (LUB 30) of this church; the bell casting pit (LUB 31), recovered just to the south of this wall was associated with pottery dating between the late

11th and early 12th century. This pit dates the construction of the church; it was sealed by mortar surfaces (LUB 31), possibly floors within the nave. Much of the west of the site, both north and east of the possible church (Areas II, III and VI) as well as south (Area 1), was used as a graveyard. Many of the inhumations were cist burials (see the graveyards at sp72 and sm76 for comparison of their normal date-range (12th–16th centuries)).

The church of St Bartholomew was not specifically documented until c 1189 when Guy de Vere gave the church to the abbey of Selby (Hill 1948, 145). By the end of the 13th century the parish was in straitened circumstances and in 1295 leave was given to the Dean and Chapter and to the constable of the castle to bury their dead in the cemetery of St Bartholomew (Hill 1948, 145–6). This might account for some of the mass burials (LUB 32; Fig. 6.24), although an epidemic seems more likely. In 1297, as the church had had no parishioner for a long time and was for the most part extremely ruinous, it was assigned, on the death of the rector, to the canons of Lincoln as a burial place (Hill 1948, 146).

In the 14th century the Dean and Chapter established a leper hospital near the church (Hill 1948, 149). In 1468 the steeple of the church fell down (Hill 1948, 146) and between 1466 and 1470 one of the Chapter Acts (Lincs Archives Office D & C A/2/3b) decreed the building of a hospital chapel from the fallen stone –

'18 feet long, 14 feet wide and 14 feet high to the top of the stones on the site of St Bartholomew's church and belfry, they having fallen to the ground. The chapter is to have the remaining stones.'

The rest of the remains of the church continued to stand. In 1535 after the church building was condemned, the timber roof was granted to the Warden of the Greyfriars for maintenance of his house (Hill 1956, 21). The building continued to stand roofless, and was badly damaged by fire during the castle siege in 1644 (Hill 1956, 163).

To return to the archaeological evidence, the wall in Area II (LUBs 30 and 31) was demolished, its foundations robbed and a lime kiln erected (LUB 38; Fig. 6.25). Although 14th to 15th century pottery was recovered from the kiln, if wall cg90 (LUB 30) represented the north wall of the church, then the kiln has to be 17th century or later in date as the church was standing in ruins in the 17th century. If wall cg90 was not part of the church, then where was the church? It is apparent from the pottery that the graveyard deposits were reworked in the post-medieval period, although there were only two generations of inhumations at the most.

The hospital chapel was probably standing to at

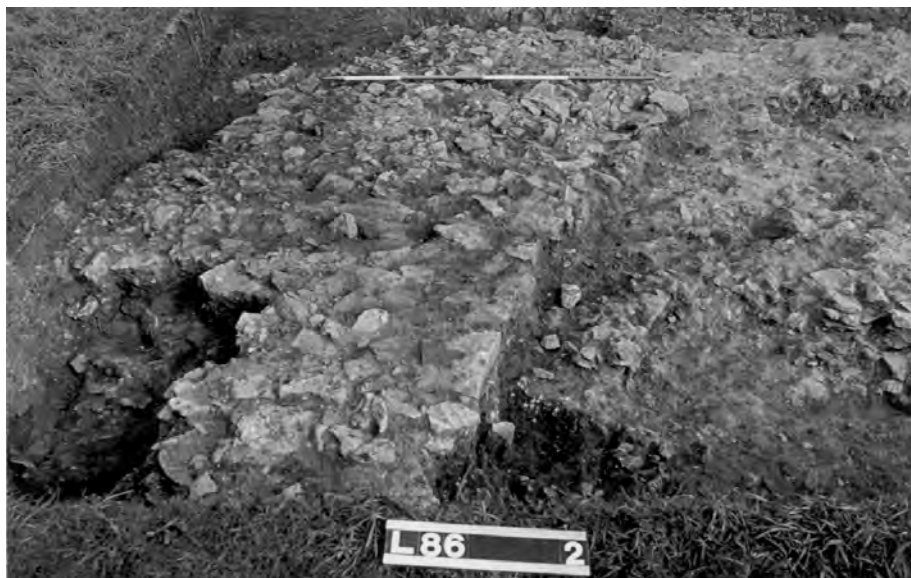


Fig 6.30 Looking north at garden path cg118: LUB 51



Fig 6.31 Looking south at edge of ornamental feature cg109: LUB 52

least 1743; it is visible on Buck's panorama of the city published in 1743. By 1777 it had been entirely demolished, as in the lease to James Bromhead of 27th March 1777 (Lincs Archives Office Cij/91/4), the land was described as being 'where formally stood a chapell or house now entirely demolished'.

#### *Topography in the post-medieval period*

The church was in a ruinous state, but burials in Areas II and III continued during this period (LUB 32).

There was evidence for a north–south road (LUB 39; Fig. 6.26) at the east end of the site; it is dated from the bottle glass to between the late 17th and 18th centuries and represents an earlier line of Union Road, formerly Gallows Lane. There was no evidence for properties to the west of this road.

The east–west surface cg197 (LUB 40) to the north of the site was probably a road referred to in the above mentioned lease to James Bromhead 1777. The lease describes the plot and the plots surrounding it, 'the highway being on the west and north'; this suggests an access road around the property. This has been identified as Cliffgate, the road along the Cliff (Stocker *et al.* 2003). To the north of the site there was a stone wall (LUB 41) parallel with and to the south of road LUB 40. This might define a boundary, or even represent the only remains of a building on the road. It was succeeded by a stone-founded building, Structure 3 (LUB 42; Fig. 6.27).

#### *Topography in the modern period*

Structure 4 with a cellar (LUB 46) appears to have been part of the House of Industry. The plan as allotted for sale of The House of Industry Estate at Lincoln dated to 1837 shows the location of buildings around the north-west of the site. A lease and release dated to July 1797 (Cij 91/4) mentioned Fawsett as an 'assignant' 8th Jan 1789. 'Fawsett,

cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB
1/1	27/32	53/32	79/1	105/32	131/13	157/21	182/55
2/3	28/32	54/32	80/6	106/31	132/10	158/18	183/0
3/1	29/54	55/32	81/1	107/51	133/26	159/18	184/7
4/32	30/9	56/32	82/6	108/53	134/26	160/27	185/44
5/32	31/9	57/32	83/6	109/52	135/14	161/27	186/0
6/32	32/32	58/2	84/6	110/50	136/16	162/27	187/44
7/32	33/32	59/32	85/6	111/50	137/15	163/27	188/41
8/32	34/54	60/32	86/2	112/50	138/15	164/33	189/42
9/32	35/2	61/32	87/31	113/51	139/17	165/33	190/42
10/32	36/2	62/32	88/6	114/6	140/18	166/33	191/42
11/43	37/32	63/32	89/6	115/46	141/12	167/33	192/45
12/51	38/32	64/32	90/30	116/53	142/12	168/26	193/45
13/28	39/32	65/32	91/38	117/53	143/19	169/33	194/45
14/29	40/32	66/32	92/32	118/51	144/16	170/33	195/35
15/29	41/51	67/32	93/32	119/55	145/25	171/34	196/49
16/54	42/51	68/32	94/32	120/4	146/19	172/37	197/40
17/8	43/51	69/32	95/32	121/4	147/20	173/47	198/40
18/8	44/32	70/2	96/32	122/10	148/21	174/36	199/49
19/32	45/8	71/2	97/32	123/10	149/21	175/39	200/49
20/8	46/2	72/54	98/32	124/11	150/20	176/39	201/55
21/54	47/8	73/-	99/32	125/11	151/22	177/47	202/-
22/9	48/8	74/-	100/32	126/11	152/22	178/48	203/8
23/9	49/32	75/-	101/32	127/12	153/22	179/48	204/38
24/32	50/32	76/-	102/32	128/4	154/23	180/48	205/36
25/32	51/32	77/1	103/32	129/5	155/23	181/48	206/29
26/32	52/32	78/1	104/32	130/5	156/18		

Fig 6.32 Concordance of cg numbers with LUB numbers for the Lawn excavations

when in possession had erected a brick and tile bldg. converted into a Hs of Industry for the reception of poor people.' There had already been a glue manufactory on the site (Hill 1966, 183–4). The House of Industry, whose plan, as allotted for sale of The House of Industry Estate 1837, appears to have been extensive, only survived within these excavations as the truncated remains of a cellar (LUB 46). Although this survived to a height of c 1.80m, the walls of the building above did not survive at all, suggesting that the site probably had been truncated and much of the stratigraphy removed after the demise of the building. There was no other clear excavated evidence for the House of Industry, apart from the cellar (LUB 46).

Padley's map of 1819 shows the original wing of the newly built 'lunatic asylum' and the workhouse outside to the north-west of the grounds. The area was levelled and drained to the south and east (including LUB 36, see above). After the demolition of the House of Industry, a plan was drawn up to show the lots for sale in 1847. The OS map of 1912 shows the enlarged extent of the grounds extending over the area formerly occupied by St. Bartholomew's Church, the House of Industry and 'Battleplace'. The northern boundary of the site was changed, with its western end being moved 8.5m south.

	LUB 32
inhumations	14
cist	15
shaft	
vault	
coffin	1
charnel pit	3
double burial	2
mass grave	6
unexcavated	4
generations	2

Fig 6.33 Burial types for LUB 32

There is much evidence for landscaping and gardening associated with the asylum: paths were laid out (LUB 51; Fig. 6.30); there were flower-beds (LUBs 48 and 52; Fig. 6.31). Changes in layout, probably reduction in flower-beds, occurred with loam dump (LUB 53) sealing the underlying flower-bed (LUB 52). Much of the material found in levels associated with 19th-century landscaping of this area was probably brought in, but there was probably some disturbance of the earlier graveyard, as human bone was found in LUBs 51, 52 and 53.

The whole area was then sealed by topsoil and grass (LUB 55), the landscape before excavation.

### ***Stratigraphy***

The nature of the site at the Lawn is more rural than urban. The only intense occupation of the site was during the mid and late Roman period, at the north-east corner (LUBs 10–27) in Area VII. At one time it was assumed that there had been a lot of truncation during the landscaping of the area for the Lawn Hospital gardens, and that this was the reason for the lack of Early Saxon and Middle Saxon

stratigraphy, but the presence of medieval stratigraphy suggests that the 19th century was not the period of truncation. It is unlikely that the medieval graveyard involved wholesale truncation. It is more likely that any greater focus of Anglo-Saxon or Middle Saxon activity lay to the west of this site. The site was outside both the Roman and the medieval walls, and although there was one intense phase of activity in Area VII, the area was not urban in nature. The Roman roads (LUBs 8 and 9) may or may not have continued in use until the medieval period. Linear feature (LUB 7) may be Roman or medieval.

## 7. Mint Wall 1979 (mw79)

### Introduction

In July 1979 development work commenced prior to the conversion of the former North District School to a hotel (Fig 7.1). Before construction took place, Brian Gilmour and Michael Jones directed an excavation on behalf of the Lincoln Archaeological Trust. Two small trenches (I and II) were dug to investigate the nature of Roman deposits in the area to the south of the Mint Wall; this was the site of the former playground to the east of the old school building (Fig 7.2). The excavations were funded by the City Council and the Department of the Environment. Interim reports on this work were published in 1979 and 1980 (Gilmour and Jones 1979a; Gilmour 1980a; Jones and Gilmour 1980).

There were 57 contexts recorded on site; these were interpreted as 28 grouped contexts (cg1–28), which were analysed as 15 LUBs (LUBs 1–15; Figs 7.3 and 7.11). In the land-use diagram the site is examined in three parts; Area 1 forms the southern part of Trench I, Area 2 the north; Area 3 is Trench II (Fig 7.3). Areas 1–3 all included Roman LUB 2, as well as modern LUBs 14 and 15. Area 1 also included Roman LUB 1, Saxo-Norman LUB 5, medieval/post-medieval LUB 12, and post-medieval LUB 13. Area 2 also included Roman LUB 1, late Roman LUB 4, medieval LUBs 8, 9 and 10, and post-medieval LUB 11. Area 3 also included late Roman LUB 4, and medieval LUBs 6, 7, 8 and 9.

A few Roman (55 sherds) and post-Roman (129 sherds) sherds were recovered from mw79, together with twelve registered finds, most of which were of glass (Roman: Price and Cottam 1995d; medieval decorated window: King 1995e), as well as some ironwork and only two copper alloy objects (including a coin: Mann and Reece 1983, 50); all the metalwork was heavily corroded. Several clay tobacco pipes were also found. No organic materials were recovered. Fragments of building materials (93

fragments) were found (stone building material: Roe 1995), together with some fragments of animal bone (60 fragments). The animal bone has been excluded from further study on the grounds of sample size. There was no human bone.

Post-excavation stratigraphic analysis was undertaken by Prince Chitwood and Kate Steane. Margaret J Darling worked on the Roman pottery; Jane Young

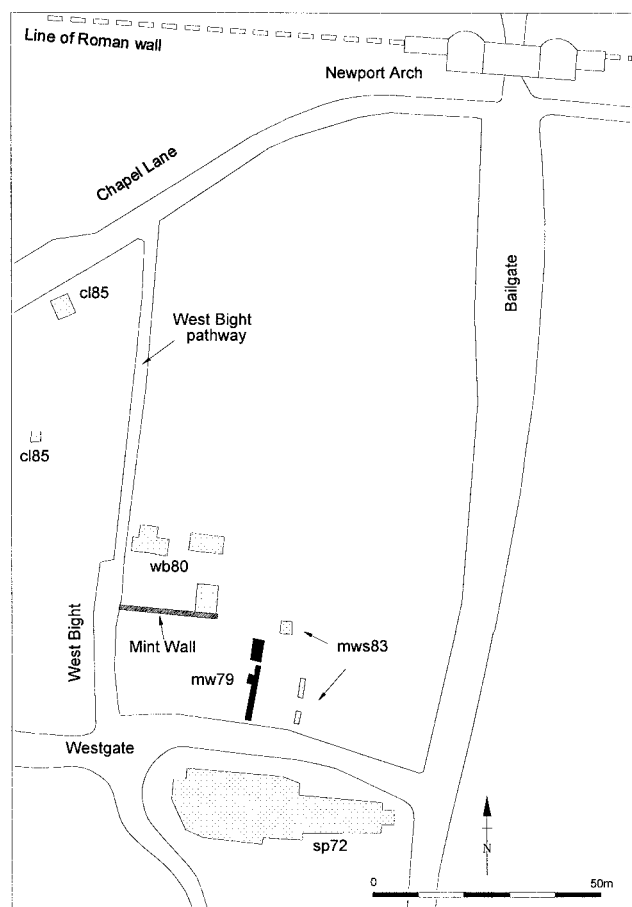


Fig 7.1 Site location plan for mw79

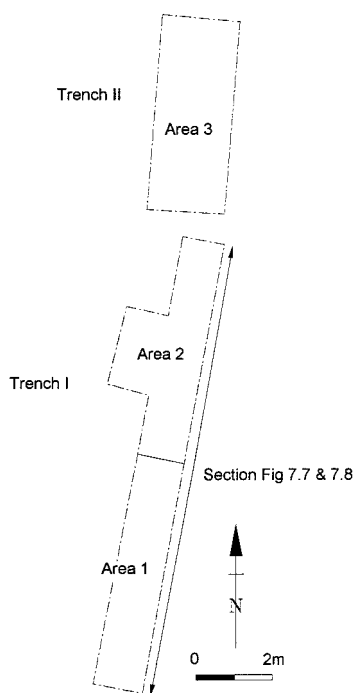


Fig 7.2 Plan showing areas and sections for mw79

examined the post-Roman pottery. Jen Mann analysed the registered finds and Roman building materials, and Rick Kemp the medieval building materials. Helen Palmer Brown and Zoe Rawlings digitized the plans.

## The Excavation

### Early Roman

At the limit of excavation was evidence of demolished timber buildings **LUB 1**. The timber buildings were dated by the pottery to the legionary period.

#### *LUB 1 Demolition (Fig 7.7)*

At the limit of excavation, in Area 2, burnt daub cg20 was recorded. Over this was a layer cg1 containing charcoal and burnt daub.

A *terminus post quem* for the layer cg1 is provided by a coin of Vespasian (BM) <C1>, although this was in poor condition and could not be more closely dated than to within the period AD69–79. Pottery from cg1 (8 sherds) included two SAMSG vessels, one form 18 dated to the Flavian period, and a form 27 dated to the Flavian or Flavian to Trajanic periods; the other six sherds were all of fabrics normally found in legionary contexts and which can only be dated as mid to late 1st century. The burnt material cg1 suggests debris from burnt timber buildings belonging to the legionary period.

### Mid to late Roman

Over **LUB 1** a stone-founded building, Structure 1 **LUB 2** was erected; there was no dating evidence. The floor to the south of wall cg2 was repaired **LUB 3**; there was no dating evidence.

#### *LUB 2 Structure 1 (Figs 7.4, 7.7, 7.8 and 7.9)*

Towards the south end of Area 1, at the limit of excavation, the foundations of an east-west wall cg2, bonded with reddish-yellow sandy mortar, were revealed. These foundations were about 1.5m wide, supporting a wall at least a metre wide.

Further north, cutting into earlier demolition material cg1 (**LUB 1**) in Area 2, was the construction trench of east-west wall cg3; it was built of limestone bonded with hard pebbly pink mortar. The width of the foundations was at least 2m, indicating a very substantial wall. Sealing the construction trench were thin layers of sand and clay cg4 at around 65.90m OD, indicating the building level for this wall. Sealing layers cg4 and raising the level by about a metre was a sequence of dumps into which pitched stones were set, forming the basis for a substantial *opus signinum* floor cg5 at 66.71 to 66.80m OD (Fig 7.9). The dumps which partly made up cg5 consisted of clay, limestone, and pebbles on loose red pebbly mortar, and mortary clay with plaster sealed by clay.

The space between the walls cg2 and cg3 was about 5.5m. Here, at the limit of excavation, was a clay make-up layer, sealed by mortar into which stones were pitched, forming the basis for an *opus signinum* floor cg21 at 65.94m OD (unplanned); this floor butted against the north side of wall cg2.

The walls cg2 and cg3 and the *opus signinum* floors cg5 and cg21 occurred at different levels, suggesting a substantial building.

The only pottery evidence came from cg21 (3 sherds), and was all of fabrics current in the legionary period – mid to late 1st century and most probably residual from **LUB 1**.

#### *LUB 3 Repair to Structure 1 (Figs 7.7 and 7.8)*

The *opus signinum* cg21 (**LUB 2**) had become badly worn and had been extensively patched with flattish limestone cobbles cg22 (unplanned), set in poor quality mortar; these were heavily worn. There was no dating evidence.

### Late Roman-Late Saxon

Structure 1 was demolished **LUB 4**; the later 3rd- to 4th-century pottery was probably residual, from the use of the building.

#### *LUB 4 Demolition and dumping (Fig 7.7)*

Sealing floor cg5 (**LUB 2**) in Areas 2 and 3 were mortar fragments with a large amount of tile, over which was dark grey-brown silty sand cg7 with large

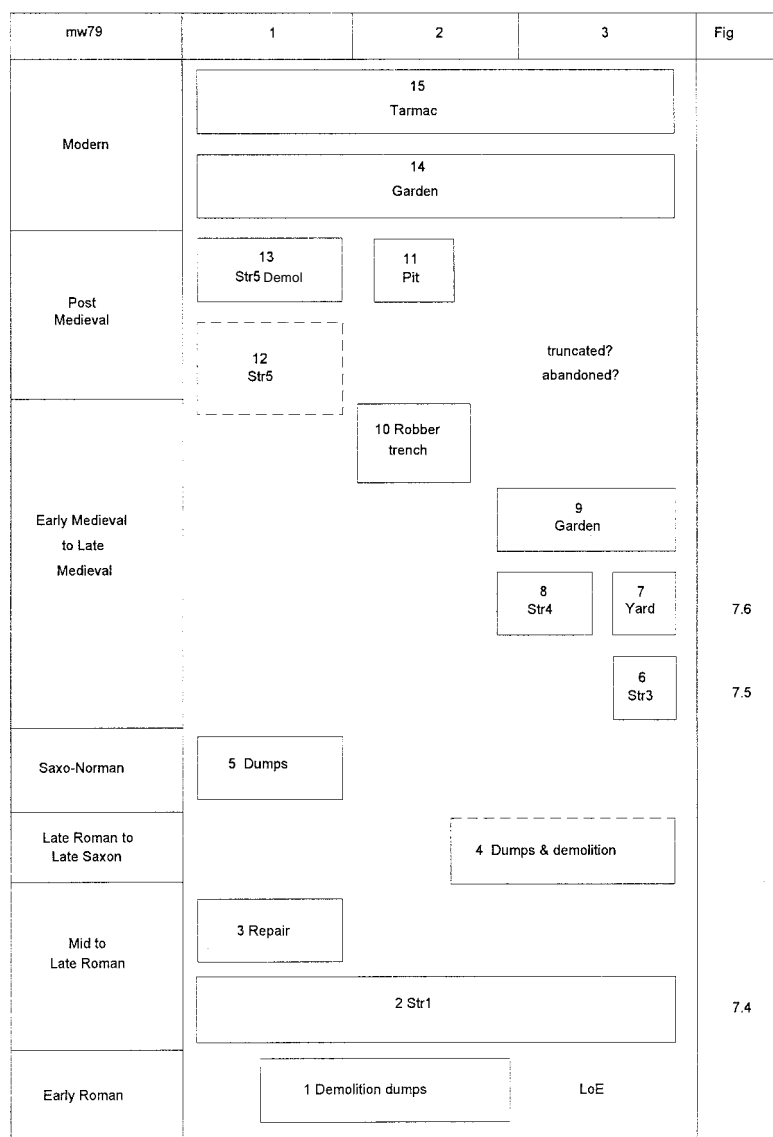


Fig 7.3 LUB diagram for mw79

lumps of mortar, vast amounts of tile, limestone fragments, charcoal flecks and pebbles. Walls cg2 and cg3 (both LUB 2) had probably been demolished by this time.

Pottery from cg7 (11 sherds) included colour-coated sherds amongst which was one from a rouletted beaker, probably late NVCC fabric, suggesting a later 3rd-to 4th-century date; there was also an intrusive clay tobacco pipe stem. The pottery was possibly residual from the later use of Structure 1.

#### Saxo-Norman

Directly sealing traces of Structure 1 (LUB 2) were dumps LUB 5; mid 11th-century pottery was associated with this material.

#### LUB 5 Dumps

In Area 1, traces of the demolished Roman building (foundations cg2, and surfaces cg21:LUB 2 and repair cg22: LUB 3) were sealed by dumps cg6; the dumps consisted of layers of mixed dark greyish-brown sandy clay with frequent tile, limestone, shell, mortar and charcoal flecks. From cg6 a small group of local pottery (15 sherds) was recovered, dating to the mid 11th century. There were no sherds of Roman pottery from cg6.

#### Early Medieval to Late Medieval

Traces of a possible building, Structure 3 LUB 6, may date from this period. It cannot be dated other than by its stratigraphic position, and pottery from



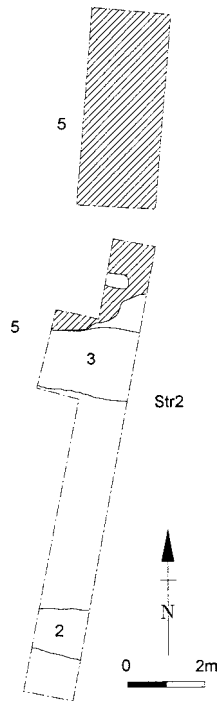


Fig 7.4 Structure 1: LUB 2

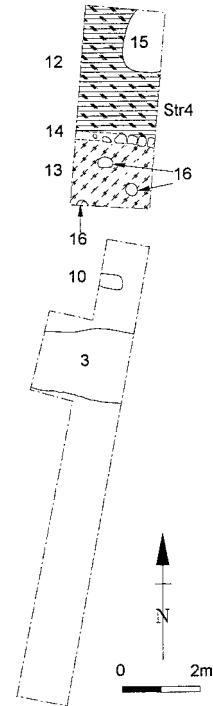


Fig 7.6 Cobbled yard and Structure 4: LUBs 7 and 8

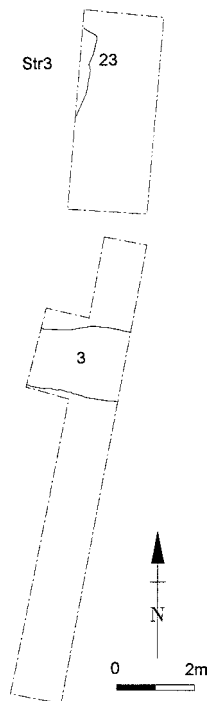


Fig 7.5 Structure 3: LUB 6

LUB 5 acting as a *terminus post quem*. Structure 3 was sealed by a cobbled yard LUB 7 which was contemporary with timber Structure 4 LUB 8. The yard and Structure 4 were both dated by pottery and finds which dated between the early 13th and 14th centuries.

Over Areas 2 and 3, sealing LUBs 7 and 8 was a garden LUB 9, dated to the early 14th century.

There was evidence for the robbing LUB 10 of the foundations of a Roman wall cg3 (LUBs 2 and 3); pottery dated this event to between the late 14th and late 15th centuries. Up to this date it appears that the wall cg3 (LUBs 2 and 3) acted for a while as a boundary wall.

#### LUB 6 Structure 3 (Fig 7.5)

Built on dumps cg7 (LUB 4), in Area 3 was a north-south, possibly drystone wall cg23. It may well have represented the north-east corner of a structure. LUB 4 is undated, but is probably early medieval, as it was sealed by LUB 7.

#### LUB 7 Cobbled Yard (Fig 7.6)

Sealing wall cg23 (LUB 6) in Area 3, was an area of coarse, worn cobbling cg12, which was cut by a pit cg15. Pit cg15 contained a very small group of pottery (25 post-Roman sherds) of which the latest sherds date to between the early 13th and the early 14th century, and part of a small (plated?) iron key (AE) <Fe3>, the lozenge-shaped bow of which suggests it to be of 13th-century date.

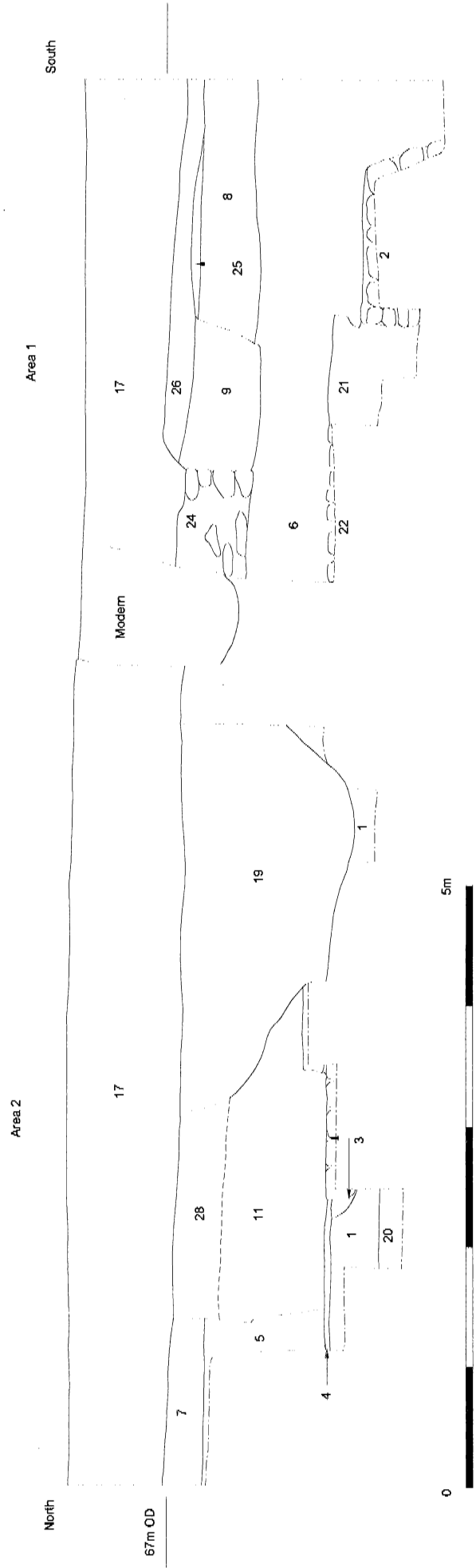


Fig 7.7 North-south section across areas 1 and 2

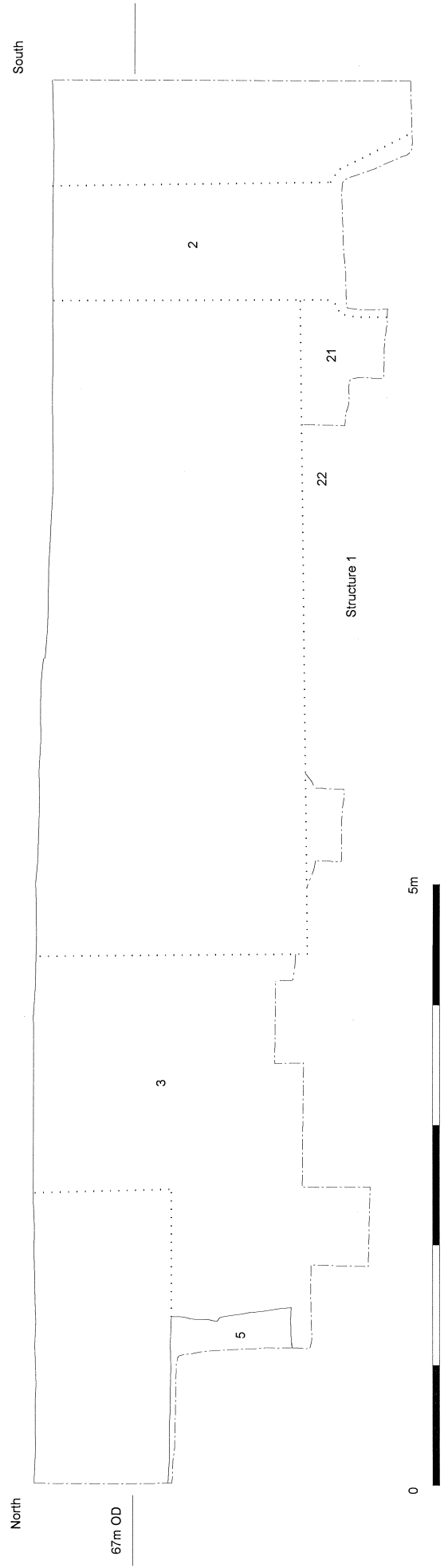


Fig 7.8 Interpretative section through conjectured Structure 1: LUB 2

*LUB 8 Structure 4 (Figs 7.6 and 7.9)*

To the south of the cobbling cg12 (LUB 7) in Area 3 was an insubstantial east-west wall cg14, possibly part of a structure which sealed dumps cg7 (LUB 4). Also sealing dumps cg7 (LUB 4) in Area 3 was a disturbed dump of rubbly silt cg13, which was cut by three postholes cg16. The rubbly silt cg13 contained pottery (19 post-Roman sherds) dating to between the early 13th and the early 14th century. In Area 2, cutting dumps cg7 (LUB 4), was an east-west slot cg10 (Fig 7.9). This may also have been associated with Structure 4.

*LUB 9 Garden Soil*

Sealing cg15 (LUB 7), cg10, cg14 and cg16 (all LUB 8) in Areas 2 and 3 was an area of garden soil cg27. The later pottery from cg27 (23 post-Roman sherds) was of early 14th-century date and formed an unusually homogeneous group to be associated with garden soil, which might suggest that it was dumped.

*LUB 10 Robber trench (Figs 7.7 and 7.9)*

Robbing the foundations of Roman wall cg3 (LUB 2), and cutting through dumps cg7 (LUB 4), and possibly cg27 (LUB 9), was a substantial robber trench cg11 (Fig 7.9). Sealing the lower fills of the trench cg11 was dump cg28.

Only three post-Roman sherds were recovered from the lower fills of the trench cg11, the latest dating to between the late 14th and late 15th centuries. There were only two sherds from cg28; the latest sherd dated to the 11th century. A clay tobacco pipe stem fragment and a piece of post-medieval window glass were probably intrusive.

*Post-Medieval*

Robber trench LUB 10 was cut by a very large pit LUB 11 which contained no dating evidence, but may have been post-medieval.

In Area 1 there was evidence for a tile-floored cellar, Structure 5 LUB 12, probably of post-medieval date, possibly earlier. Pipe stems from the demolition LUB 13 may indicate that the building continued in use to the post-medieval period.

*LUB 11 Pit (Fig 7.7)*

Cutting dump cg28 (LUB 10), in Area 2 was a large pit cg19 containing no dating evidence.

*LUB 12 Structure 5 construction (Figs 7.7 and 7.10)*

In Area 1 was part of a cellared structure. Cutting down into dumps cg6 (LUB 5) was an east-west stone foundation cg24 (Fig 7.10); within the foundation cut there was a make-up layer sealed by a tile floor cg8 to the south. The date of this structure was either late medieval or post-medieval. No tile

was retained from the floor, and there was no other dating evidence, but a tiled cellar is of some note in view of the status or function implicit.

*LUB 13 Structure 5 demolition (Figs 7.7 and 7.10)*

Over the tile floor cg8 (LUB 12) there was a burnt layer cg25, presumed during the excavations to include burnt timber. Cutting into and through layer cg25 was a pit cg9 (Fig 7.10). Sealing pit cg9 was a demolition layer cg26. Structure 5 was robbed. Clay tobacco pipe stems are noted in the context record for cg25, so it is possible that this structure survived into the post-medieval period, unless they were discarded during the destruction process.

*Modern*

Sealing LUBs 9, 11 and 13, was garden soil LUB 14. This was later sealed by tarmac LUB 15. Modern pottery dated the garden soil LUB 14.

*LUB 14 Garden (Fig 7.7)*

Areas 1 and 2 were reworked, truncating cg27 (LUB 9), cg19 (LUB 11) and cg26 (LUB 13). The reworked material cg17 was composed of very dark greyish-



Fig 7.9 Looking north at the opus signinum cg5, cut by feature cg10, and robbed by robber trench cg11: LUBs 2, 8 and 10



Fig 7.10 Looking north-east at wall cg24, with pit cg9 in front of it: LUBs 12 and 13

brown loam, limestone, tile, burnt clay, mortar flecks and fragments, pea gravel and clay tobacco pipe stem fragments; top level was 67.36m OD.

Sealing cg27 (LUB 9) in Area 3 was a layer of very dark greyish-brown loam, containing pottery, tile, bone, charcoal, mortar and limestone fragments cg18; top level was 67.76m OD.

The garden soil cg18 contained a very mixed assemblage of pottery ranging in date from 13th to 19th/20th-century china.

#### LUB 15 Tarmac Playground

The garden soil cg17 and cg18 (LUB 14) was sealed by tarmac.

## Discussion

### Topography

The first trace of Roman occupation on the site was represented by burnt daub and charcoal (LUB 1), possible remains of burnt timber buildings from the legionary period.

In all three areas there was evidence for Structure 1 (LUB 2); this building was probably part of the same building as Structure 1 at mws83 (LUB 1), so that cg3 (LUB 2) on this site was equivalent to cg1 (mws83 LUB 1) at Mint Wall Stables. The floor of *opus signinum*

cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB
1/1	7/4	13/8	19/11	24/12
2/2	8/12	14/8	20/1	25/13
3/2	9/13	15/7	21/2	26/13
4/2	10/8	16/8	22/3	27/9
5/2	11/10	17/14	23/6	28/10
6/5	12/7	18/14		

Fig 7.11 Concordance of cg numbers with LUB numbers for mw79

cg21 at 65.94m OD was similar in height to *opus signinum* floor cg9 (mws83 LUB 1) at 65.87m OD. Both floors were recorded as being very worn.

The raised *opus signinum* floor cg5 (Fig. 7.9) was similar in construction to that at St Paul-in-the-Bail (sp72 cg92, LUB 14) but it was at a higher level – between 66.71 and 66.80m OD. The dating evidence here is unfortunately not good enough to compare with the late 3rd-century floor cg92 at sp72.

The walls and floors (LUB 2) suggest a very substantial building, which from its location to the south of the projected Mint Wall, seems most probably to have been part of the same structure, part of an important civic building, and probably the basilica. From the excavations to the north (wb80, LUB 6), it was found that the construction of the Mint Wall probably dated to the early 3rd century.

There were late or post-Roman dumps in Area 3 and Saxo-Norman dumps cg6 (LUB 5) in Area 1. The earliest stratified post-Roman pottery was from LUB5, and dated to the mid 11th century. A Middle Saxon sherd found in cg28 (LUB 10) occurred in a residual context.

In the medieval period there were traces of a building (Structure 3, LUB 6) followed by cobbled yard cg12 (LUB 7) and another building (Structure 4, LUB 8), sealed by garden soil cg18 (LUB 9). Pottery of the 13th and 14th centuries came from LUBs 7–9 and included small fragments from several finely decorated jugs and a sherd of an imported EGSW jug, possibly indicating high-status occupation.

In the late medieval period the foundations of wall cg3 (LUB 2) were robbed cg11 (LUB 10). Perhaps part of the wall stood above ground at this date (the Mint Wall still stands today).

In the southern part of Area 1 was Structure 5 (LUB 12; Fig 7.10), evidenced by a late or post-medieval cellar. In Area 2, the fill of the robber trench was re-worked, and later cut by a large pit. However, in Area 3 there was no trace of any post-medieval activity; the clear break between early 14th-century garden LUB 9, and modern garden LUB 14 indicates either the truncation of the intermediate stratigraphy or that the area was not occupied during this period.

The whole site was subsequently covered in modern garden soil (LUB 14) and sealed by the tarmac of the school yard (LUB 15).

## 8. Mint Wall Stables 1983 (mws83)

### Introduction

A small scale excavation took place at the Mint Wall Stables in September 1983 (Fig 8.1). Two weeks' excavation were carried out with the hope of learning more about the civic basilica, as the site lay to the south-east of the surviving section of the Mint Wall. The site was mostly occupied by stables and it was proposed to repair these and convert them into an annexe to the Castle Hotel (formerly North District School). Brian Gilmour and Douglas Young directed the excavation on behalf of the Lincoln Archaeological Trust, with funding from the Department of the Environment.

Trenches B and C were in the yard to the east of the southern part of the stable block, while Trench A lay inside the north end of the stable block itself. Excavations in Trench B were restricted by a modern pipe running across the trench. An interim report was published (Gilmour and Jones 1984).

A total of 35 contexts was recognised on site; these are interpreted as sixteen context groups, cg1–19 (not including cg5, cg12 and cg13) and examined in nine land use blocks (LUB 1–9; Figs 8.3 and 8.15). Trench A included Late Medieval LUBs 4 and 5, and Post-Medieval LUBs 6 and 7 – modern stratigraphy was not recorded; Trench C contained Roman LUB 1, Late Roman to Medieval LUBs 2 and 3, Late Post-Medieval LUBs 8 and 9 and modern LUB 10; Trench B only produced modern LUB 10 (Figs 8.2 and 8.3).

A few residual Roman pottery sherds (11 sherds) were recovered, together with a group of 362 post-Roman pottery sherds. Only sixteen registered finds were recovered; most were of heavily corroded metalwork, principally iron (50%) and a few of copper alloy. Two coins (one of silver: Archibald 1995) were also found, but there were very few finds in other materials such as bone (Rackham 1994), ivory and glass. No organic materials were recovered. The small group of building materials

(77 fragments) consisted mostly of medieval/post medieval ceramic tile but also included some stone (stone building material: Roe 1995). The animal bone assemblage (126 fragments) was not considered significant enough to warrant further examination.

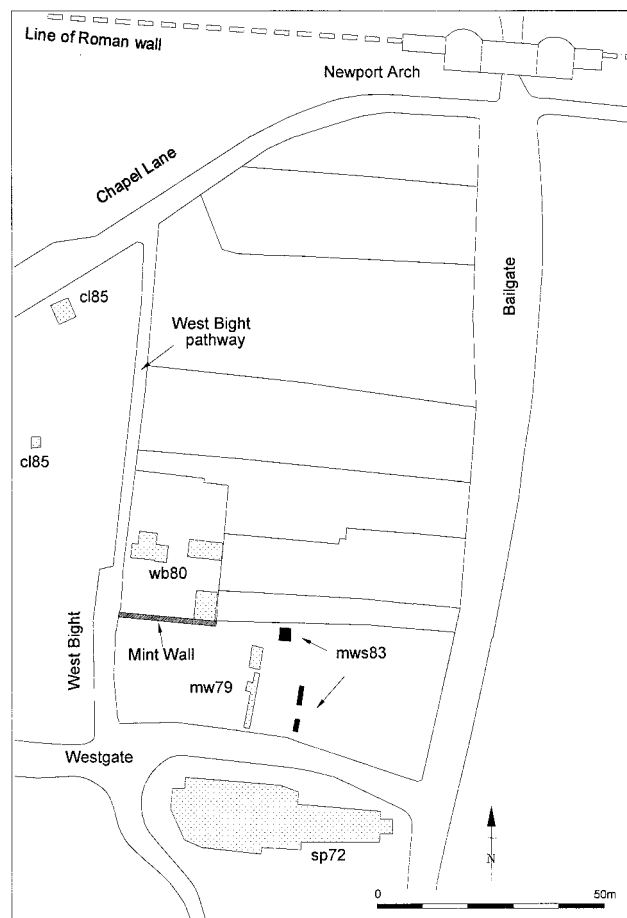


Fig 8.1 Site location plan for mws83

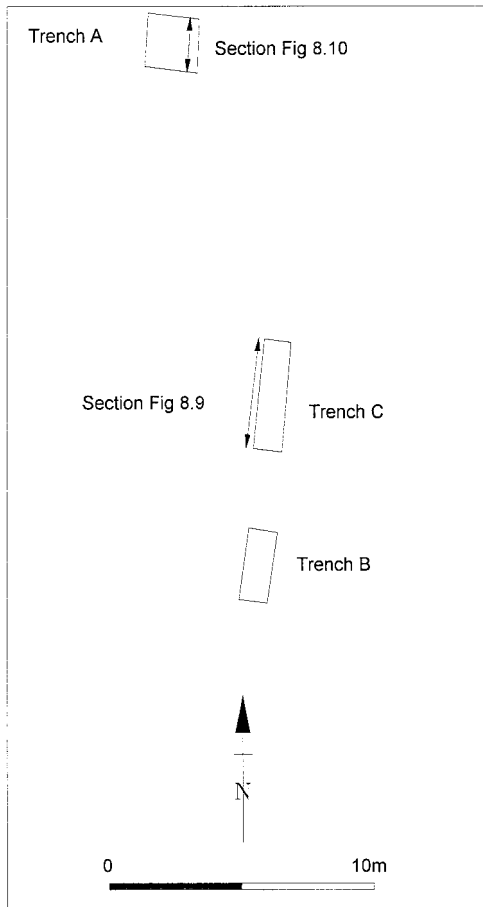


Fig 8.2 Plan showing areas and sections for mws83

Post-excavation stratigraphic analysis was undertaken initially by Prince Chitwood, and later by Kate Steane. Margaret J Darling worked on the Roman pottery; Jane Young examined the post-Roman pottery. Jen Mann analysed the registered finds and Roman building materials, and Rick Kemp the medieval building materials. Helen Palmer Brown and Zoe Rawlings digitized the plans.

### The Excavation

#### Roman

In Trench B there were traces of a building **LUB 1** with a possible *opus signinum* floor (Structure 1); the distinctive character of the floor dates the structure to the Roman period.

#### LUB 1 Structure 1 (Figs 8.4, 8.9 and 8.11)

At the limit of excavation the robbed remains of an east-west wall cg1 (Trench C) were recovered together with a small area (1.10 x 1.20m) of *opus signinum* floor cg9, of very substantial thickness, to the south of the wall at 65.87m OD (Fig 8.11). The wall had been so heavily robbed that only traces of the foundations remained, measuring over 0.75m wide. Not only had the foundations been robbed, but the floor cg9 had been hacked away from around the foundations, so that the junction of the wall and floor was missing. The surviving surface of the floor was well worn and patchy. There was no dating evidence associated either with the floor

mws83	Trench A	Trench C	Trench B	Plan
Modern		10 Stable yard		
Late Post-Medieval	Truncation	9 Back fill		8.8
		8 Lime pit		
Post-Medieval	6 Soakaway	7 Str2		8.7
Late Medieval	5 Backfill of kiln			8.6
	4 Kiln			8.5
Late Roman to Medieval	LOE	3 Robbing		
		2 Dumps		
Roman		1 Str1		8.4

Fig 8.3 LUB diagram for mws83

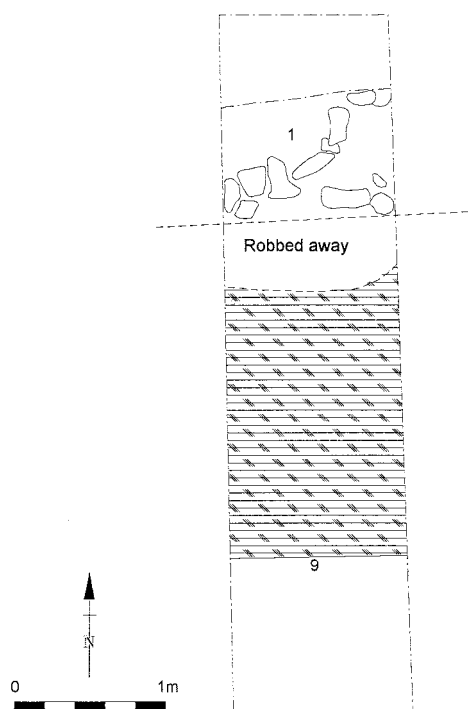


Fig 8.4 Structure 1, the robbed wall and opus signinum floor: LUB 1

or the wall, but the description of the floor as *opus signinum* confirms a Roman date.

#### Late Roman to medieval

Dumps of building material LUB 2 sealed the floor. Structure 1, in Trench C, was robbed LUB 3. There was a lack of dating evidence, but as the structure is considered to be Roman, then it would seem likely that its demolition and robbing took place either in the Late Roman or Early Medieval period.

#### LUB 2 Dumps (Fig 8.9)

Over the floor cg9 (LUB 1) there was a layer of fine dark brown sandy silt cg10 (0.10m thick). Sealing the silt cg10 was a thick layer of building debris consisting almost entirely of large limestone blocks and much tile cg2. There was no dating evidence.

#### LUB 3 Robbing (Fig 8.9)

Cutting through the demolition material cg2 was a robber trench cg11 removing stone from the east-west wall cg1 (LUB 1). There was no dating evidence.

#### Late Medieval

A structure likely to be a malting kiln LUB 4 was found in Trench A. It was partially modified before backfilling LUB 5. The pottery from the backfill was late 15th-century in date.

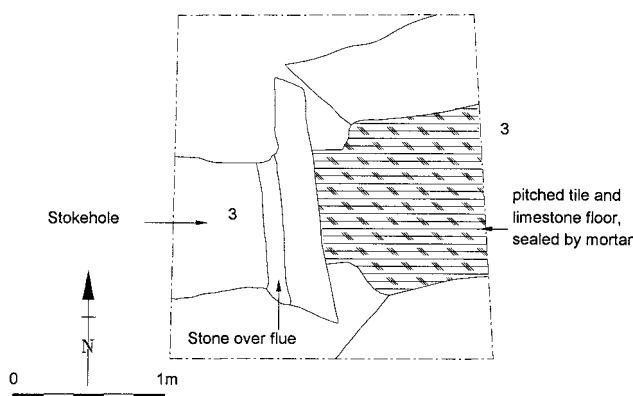


Fig 8.5 Malting kiln: LUB 4

#### LUB 4 Kiln (Figs 8.5, 8.10 and 8.12)

At the limit of excavation in Trench A was a kiln cg3, carefully constructed with blocks of limestone (Fig 8.10). The floor of the kiln was made up of cobbles and pitched roofing tile sealed by mortar which had been reddened from intense and prolonged burning. The walls of the kiln had been constructed with blocks of limestone set on the underlying cobbles. It was aligned west to east, with the flue to the west. The drying chamber walls, which survived to a depth of 1.10m, were battered outwards from the floor, at an angle of 70 degrees. This inclination reduced the uppermost surviving dimensions along one side from at least 2.20m to c 1.10m at floor level. A narrow flue led from the drying chamber to the stoke-hole (which was not excavated). The drying floor (which may have consisted of a wooden frame overlaid with a horse-hair cloth, or perhaps green branches) would have wedged into the battered kiln, at a level over the flue. The kiln was probably used for malting. The only dating material came from its fill (LUB 5) which belonged to the late 15th century.

#### LUB 5 Backfill of the kiln (Figs 8.6 and 8.13)

The kiln cg3 (LUB 4; Trench A) was back-filled with sandy loam and clay cg4. Sealing the dumps within the kiln were two east-west walls cg15 (Fig 8.13); the walls were unmortared and roughly built. They were sealed by a dump of loam cg16.

Although the backfill, walls, and sealing dumps indicate three different stratigraphic events, the pottery analysis showed that there are multiple cross-joins in the pottery between the fills cg4 of the stoke-hole and oven and the material from the walls cg15 and dump cg16, indicating that the fills originated from the same source. A possible explanation is that the kiln went through a stage of being reconstructed. Perhaps it was partially backfilled cg4, and walls cg15 were constructed to



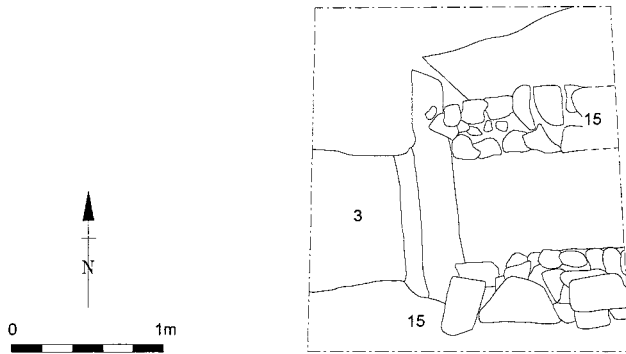


Fig 8.6 East-west walls cg15 within malting kiln:  
LUB 5

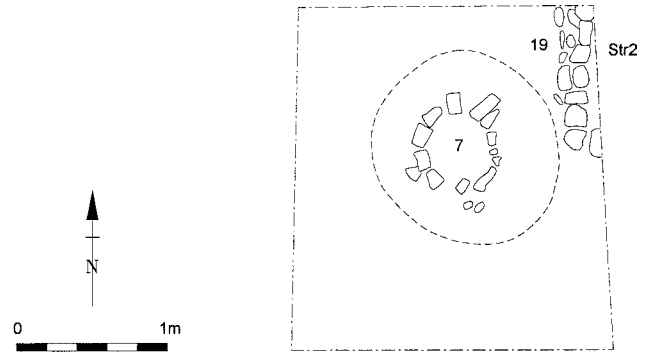


Fig 8.7 Soakaway and Structure 2: LUBs 6 and 7

constrict the area of the kiln, while respecting the flue, with a view to possible re-use within a more restricted area. However, this process seems to have been interrupted and the altered kiln never completed – and instead the kiln was backfilled with similar material as the earlier fill.

The pottery (117 post-Roman sherds) consists almost entirely of contemporary vessels dating to the last quarter of the 15th century. The backfill cg4 also contained a very corroded and worn silver coin; such little detail as survives on this, together with the fact that it had been severely clipped, suggest it to be a penny of *c* 1300 clipped to prolong its circulation into the 15th century (Archibald 1995), thus according well with the associated pottery.

### Post Medieval

In Trench A the backfill of the kiln was cut by a soakaway LUB 6; the bricks from this feature dated to between the mid/late 17th to the early 18th century. Possibly contemporary were the remains of a building, Structure 2 LUB 7.

#### LUB 6 Spread cut by soakaway (Fig 8.7)

Sealing the backfill of the kiln cg16 (LUB 5; Trench A) was a thin spread cg18 cut by a pit which was used to build a brick soakaway or sump cg7. This feature was eventually backfilled cg17.

Pottery from dump cg18 (9 post-Roman sherds) dated to between the late 16th and early 17th centuries. The brick recovered from the fill cg17 of the soakaway/sump cg7 was probably tumble from the actual lining; from the sizes of brick recorded *in situ*, a probable date of mid- to late-17th to early 18th century is reasonable.

#### LUB 7 Structure 2 (Fig 8.7)

In Trench A there were traces of a north-south wall cg19 with a return to the east; the wall sealed cg18

(LUB 6). The wall's foundations appear to be about 0.25m across. It may represent the south-west corner of a building.

### Late Post-Medieval

In Trench C was a lime-burning pit LUB 8; its fill LUB 9 contained 18th-century pottery.

#### LUB 8 Lime-burning pit (Figs 8.8, 8.9 and 8.14)

In Trench C the robber trench cg11 (LUB 3) was cut by a trench to construct a large pit cg6, only part of which was excavated (Fig 8.14). This pit was lined in parts with limestone, and part had roughly mortared sides. The stones on the side of the pit and also the mortar had been heavily burnt; the backfill of the pit cg14 (LUB 9) contained lime.

The limestone mortared sides may have been the remains of the support for a dome beneath which the fire would be lit, with the charge above. As noted below (LUB 9), its fill contained 18th- to 19th-century pottery.

#### LUB 9 Back-fill of pit (Fig 8.9)

The lime-burning pit (LUB 8; Trench C) was back-filled with loam dumps cg14. A large group of pottery was recovered from the backfill (188 post-Roman sherds). The latest pottery dated to the 18th and 19th centuries, and included a large number of badly burnt and fused sherds possibly introduced into the pit while it was still in use. There were also clay tobacco pipes of late 18th or early 19th century date.

### Modern

In Trenches B and C was clay levelling for the stable yard LUB 10.

#### LUB 10 Stable yard (Fig 8.9)

Over dump cg14 (LUB 9) in Trench C was compact clay cg8, a levelling dump for the stable yard (also

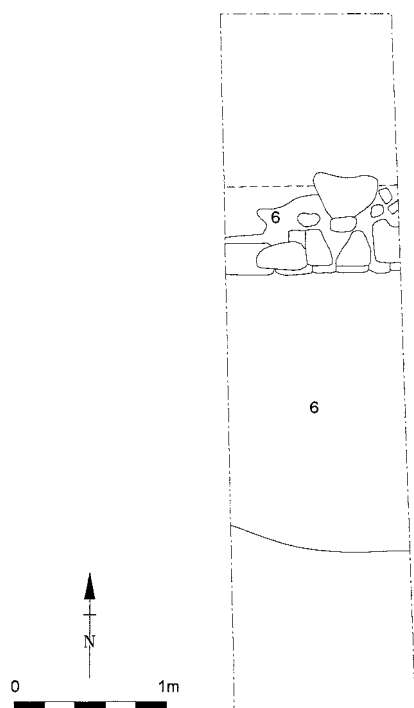


Fig 8.8 Lime-burning pit: LUB 8

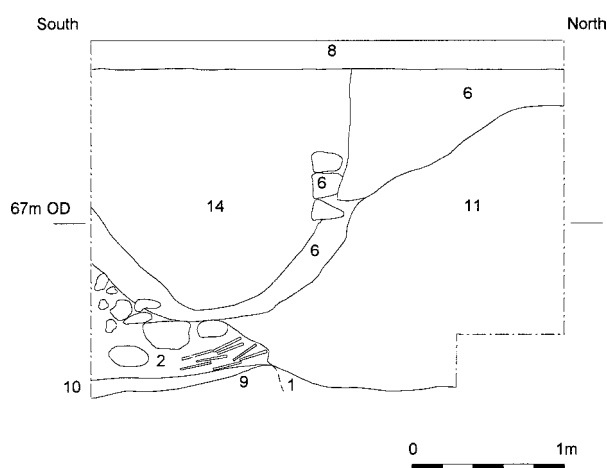


Fig 8.9 Section from south to north, along the west side of Trench C

seen in Trench B). Clay cg8 contained predominantly post-medieval pottery of 18th- to 19th-century date.

## Discussion

### *Part of the basilica structure?*

Wall cg1 (LUB 1; Fig 8.11) in the north part of Trench C, probably represents the robbed remains

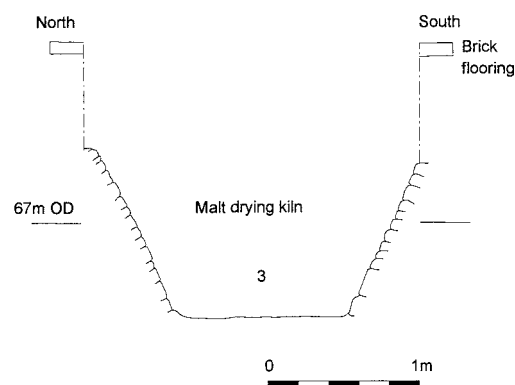


Fig 8.10 Section from north to south, along the east side of Trench A

of an east-west wall (same as cg3, LUB 2 mw79). The floor cg9 (65.87m OD) occurred at around the same level as that found to the west in 1979 (mw79 LUB 2, cg21), at 65.94m OD. Both floors were recorded as being very worn.

It would seem probable that the structure of which the wall cg1 (LUB 1) was part belonged to the civic basilica, the north wall of which survives as the Mint Wall (see LUB 6, wb80). It was hoped to confirm the line of this wall within Trench A, but any traces had been removed by the construction of the malt kiln (LUB 4; Fig 8.12) in the late medieval period and the kiln became the limit of excavation in Trench A.

There was no dating evidence for this building from this site; however, the construction of the Mint Wall (LUB 6, wb80) was thought to have been completed in the early 3rd century.

### *Malt-drying kiln*

The malt-drying kiln cg3 (LUB 4; Figs 8.10, 8.12–13) was located about 35m to the west of Bailgate, to the rear of 29 Bailgate. It was built before the late 15th century, and was associated with a late medieval property fronting on to Bailgate.

The malting kiln cg3 (LUB 4) is similar to other kilns found in the East Midlands. All had a rectangular-walled drying chamber, with a stoke-hole to one side (here only the flue was excavated, not the stoke-hole). Others have been found in Lincoln at West Parade (Jones (ed) 1999, 199–201), and at Flaxengate (Jones R H, 1980, 37–9) to name but two. Both were keyhole-shaped, and of high to late medieval date. One in Stamford dated to the 13th or 14th century (Mahany *et al* 1982, 19–21) and another in Northampton was filled in sometime in the 15th century (Williams 1979, 97); the Northampton kiln contained evidence of charred grain (wheat, barley and oats).

The group of pottery from the backfill of the kiln (LUB 5) consists almost entirely of contemporary vessels dating to the last quarter of the 15th century. It is one of the few assemblages in the city that show that there is a period when LSW3 has fallen out of use before the demise of LLSW. It also confirms the late use of POTT and the introduction of CIST before the 16th century. At least ten of the LLSW jugs have internal white deposits and several are also sooted possibly indicating their use for storing and heating water. Most of the POTT cooking pots are sooted both internally and externally or have carbonised internal deposits as do some of the LLSW jugs. One LLSW sherd shows possible traces of madder. Only one vessel shows traces of decoration and this consists of applied strips with circular grid stamping. Three small CIST cups come from the loam dump cg16. A near complete drinking jug in LLSW was found on the floor of the kiln in the lowest fill of the oven. Two unusual occurrences were a sherd of middle Saxon MAX and the rim of a SIEG Jacobakanne which may have survived in use until its deposition in the kiln.

#### *Soakaway and Structure 2*

The soakaway (LUB 6) was probably inserted in the 17th or 18th century. It seems likely that the location of the malt kiln was apparent, as the soakaway was located centrally within it. Just to the east of the soakaway were the foundations for Structure 2, probably the remains of a shed or outhouse. The soakaway contained further disturbed material from this group, as evidenced by conjoining sherds back to the kiln fills.



*Fig 8.11 Looking north at floor cg9 with robbed wall cg1 behind: LUB 1*

#### *Lime pit*

Although its north wall to the west survives to this day, the rest of the substantial Roman structure (LUB 1) has been demolished. At the location of these excavations there is no dating evidence to indicate when the wall went down; but it is clear that here (Trench A), the wall was thoroughly robbed. The final robbing of the foundations may have occurred in the late post-medieval period as part of the preparation for lime burning (LUB 8; Fig 8.14). This lime-burning activity was probably



*Fig 8.12 Looking east at kiln cg3, showing flue: LUB 4*



Fig 8.13 Looking south-west at the partially backfilled kiln cg3, with stones cg15: LUB 5



Fig 8.14 Looking east at stone lining of pit cg6: LUB 8

cg/LUB	cg/LUB
1/1	11/3
2/2	12/-
3/4	13/-
4/5	14/9
5/-	15/5
6/8	16/5
7/7	17/6
8/10	18/6
9/1	19/7
10/2	

Fig 8.15 Concordance of cg numbers with LUB numbers for mws83

accessed from Westgate, rather than from Bailgate, and may have been related to the demand for mortar as the town was being redeveloped.

The presence of a number of LLSW vessels in the mixed group of pottery from loam dump cg14 (LUB 9) may suggest that the infilling of the kiln was part of a more widespread activity in the area during the late 15th century.

***Stables***

By 1983, the site was mostly occupied by a building range with its gable end fronting on to Westgate. It had been formerly used as stables with a granary above, but had lain derelict for many years. Trench A was located within the stable building, and

Trenches B and C within the yard to the east. At some time before the 19th century the area immediately around Trench A may have ceased to belong to the property of 29 Bailgate, and became part of one fronting on to Westgate.

## 9. St Paul-in-the-Bail (sp72)

### Introduction

Excavations at the site of the Victorian church of St Paul-in-the-Bail, demolished in 1971, were undertaken between 1972 and 1979, and a Roman well within the east range of the forum was emptied in 1984 (Fig 9.1). Permission to excavate was given by the Parochial Church Council, the Church Commissioners, and Lincoln City Council.

Preliminary investigations were carried out in 1972 as an evening class under the aegis of the WEA, and under the overall direction of Christina Colyer. The site supervisors were Catherine Wilson, Ken Wood and John Peaker, on behalf of the Lincoln

Archaeological Research Committee. Some excavation continued in 1973. In the Spring of 1974 the Lincoln Archaeological Trust devoted several weeks to the further removal of the most recent levels. In March 1975 work was resumed on the Georgian and medieval church; work continued until December 1975, under the supervision of Richard Whinney and Michael J Jones. In the autumn of 1977, after clearance of weed growth, work resumed under Brian Gilmour's supervision. During the winter of 1978-9 the site was backfilled and the eastern extension opened up. Excavation on this part of the site was completed that year.

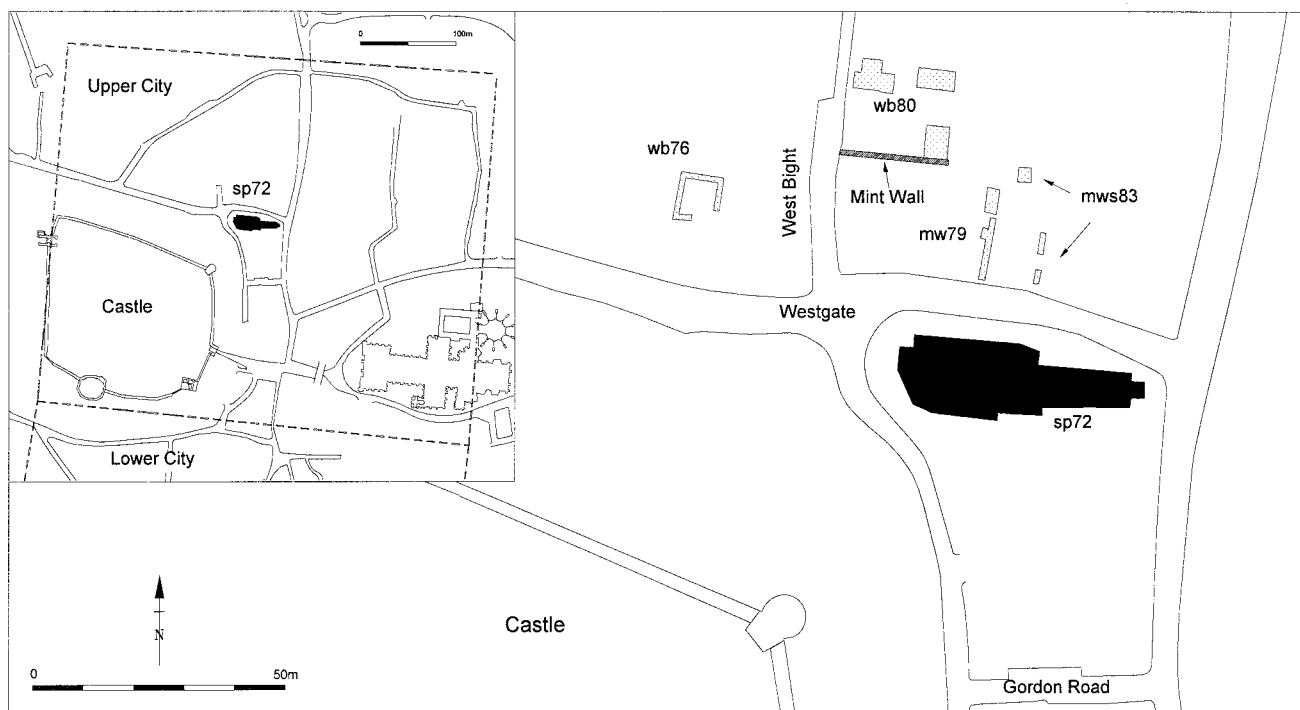


Fig 9.1 Site location plan for sp72

During the 1979 excavations at St Paul-in-the-Bail, the Roman well was discovered but for safety reasons could only be partially explored (to a depth of 9m). In 1983 the site was landscaped as a garden by the City Council and the masonry of the well-head was included in the scheme. The City Council gave permission for the then Trust for Lincolnshire Archaeology to proceed with the complete excavation of the well in April 1984; Kevin Camidge supervised the work. Excavation was completed in that year and involved the use of scaffolding, forced air ventilation, lighting, breathing apparatus, harnesses and safety lines and an intercom system.

Excavations were funded by the Department of the Environment as well as the City and County Councils. In 1973 Lloyds Bank Ltd made a donation towards the cost of excavations, and in February 1979 also donated money to cover the cost of a frame to cover the site in the bad weather. Manpower Services Commission Job Creation schemes provided some of the labour between 1976 and 1979.

Although there were two areas of excavation, (three including the well), the lettering of the contexts followed a single consecutive scheme. Interim accounts (Whinney and Jones 1975; Gilmour and Colyer 1978; Gilmour and Jones 1978; Gilmour 1979a; Gilmour and Jones 1979b; Gilmour 1980b; Camidge 1984), and others for regional and national consumption (Gilmour 1979b; Gilmour and Jones 1980; Jones and Gilmour 1980) have been published. There have been further discussions of the forum (eg Jones 1988, 155–7; Jones 1999) and early churches (Jones 1994).

Of the 3,456 contexts identified on site, 102 were unstratified and the rest were grouped into 1,424 grouped contexts and 119 land-use blocks (cg1–1,466; unused context groups are cg147, cg235, cg303, cg322, cg335, cg337, cg362–3, cg365, cg394, cg397,

cg483, cg584, cg800, cg843, cg878–9, cg881, cg883, cg894, cg897, cg904, cg920, cg932, cg937, cg942, cg952, cg1024, cg1130, cg1164, cg1167–9, cg1171, cg1175–7, cg1180, cg1248, cg1402, cg1435–6). All the context groups are mentioned in the text unless they represent inhumations, charnel pits or graveyard deposits in or later than LUB 32, in which case they are only mentioned specifically when this enhances an understanding of the narrative; this means that 630 of the 1,425 context groups are not discussed; all context groups and their relevant LUBs are listed in Fig 9.93, and details about them, together with the other context groups, can be retrieved from the archive. There are six grouped contexts (cg35, cg38, cg44, cg46, cg48 and cg50) which represent post-pit groups, and for ease of discussion the individual post-pits within them have been given alphabetical sub-numbers (eg post-pits cg35 are made up of post-pits cg35a, cg35b, cg35c, cg35d and cg35e); this has been necessary when comparing the interpretation presented here with the latest preliminary report (Jones and Gilmour 1980; see Discussion). All the context groups from sp72 were interpreted as 120 LUBs (LUBs 0–119). For the purposes of post-excavation analysis the site has been divided into western and eastern areas, as shown on the LUB diagrams (Figs 9.2 and 9.3 to 9.6). LUB diagram Fig 9.3 shows the overall view of the LUBs in the site; Fig 9.4 is an inset for LUBs 8–17, showing in detail the sequence in Structure 2; Figs 9.5 and 9.6 give two alternative interpretations for LUBs 19–23 (the earliest churches). The inhumations have been grouped into LUBs on stratigraphic grounds; some of the groups are tightly encased by stratigraphy (eg, LUB 32 is wedged between LUBs 30 and 43), but others are looser, and some span very long periods (eg, LUB 56, which ranges between the late Saxon and modern periods); this unsatisfactory way of

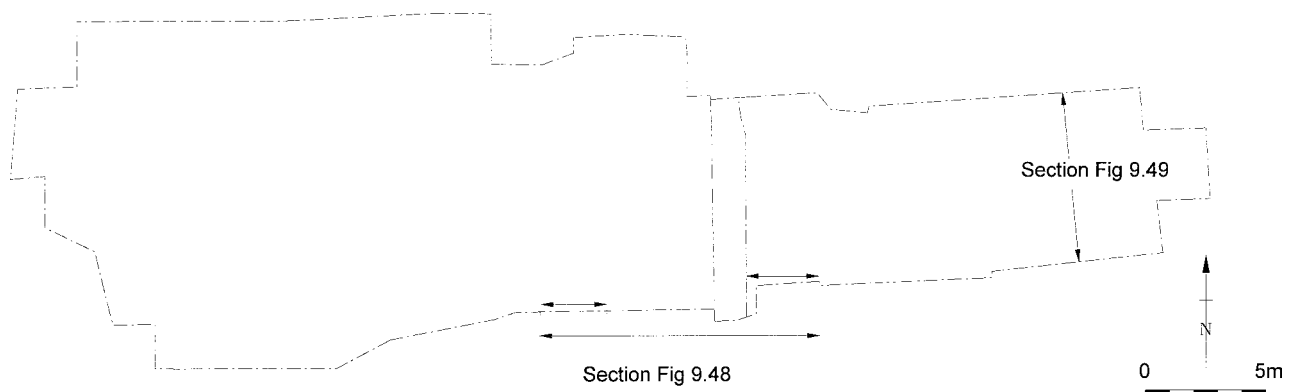


Fig 9.2 Plan showing location of section drawings (Figs 9.48–9)

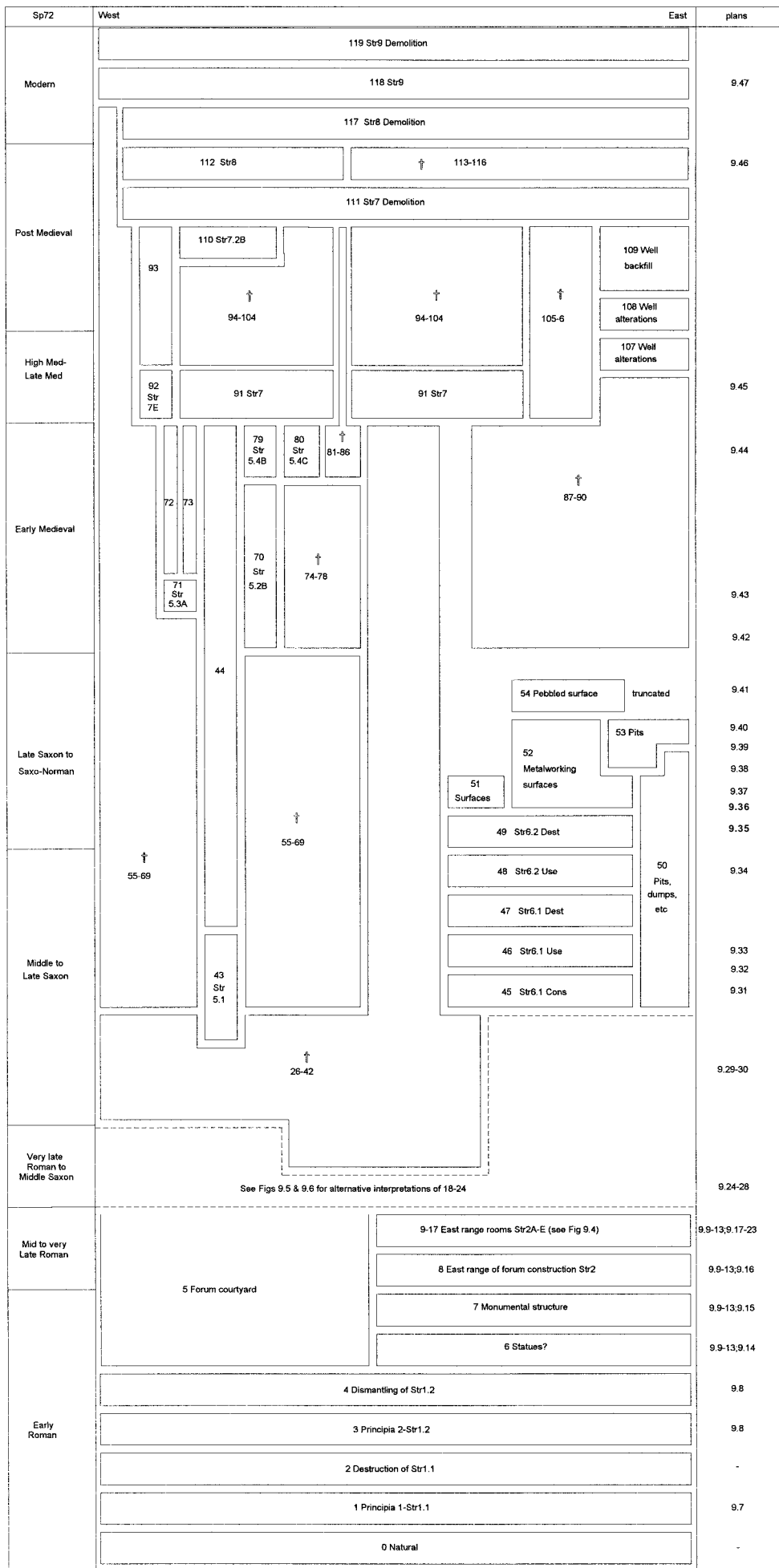


Fig 9.3 LUB diagram 1 for sp72: site-wide LUBs



Very Late Roman	12 Str2A.9	14 Str2B.4 & C.4	15 Str2D.4	16 Str2E.3	Plans	9.23
	11 Str2A.8					15 Str2D.3
Late Roman	10 Str2A.7	14 Str2B.3 & C.3	15 Str2D.2	16 Str2E.2	Plans	9.21
	9 Str2A.6	14 Str2B.2 & C.2				9.20
Mid Roman	9 Str2A.5	Truncation?	15 Str2D.1	16 Str2E.1	Plans	-
	9 Str2A.4					9.19
	9 Str2B.3					9.18
	9 Str2A.2					-
	9 Str2A.1					13 Str2B.1 & C.1
Early Roman	8 Construction of east range of forum Str2		LoE	LoE	Plans	9.16
			17 Str2F		8 Cons Str2	

Fig 9.4 LUB diagram 2 for sp72: East range of forum: LUBs 8–17

	See Fig 9.3				Plans
Middle Saxon	26 Postholes	24			9.28
Very late Roman	21 Str4	23	22	18 Robbing & pits	9.27:9.24
	20 Postholes				9.26
	19 Str3	5 Forum courtyard		9-17 East range rooms (Str2A-E)	9.25:9.17-23

Fig 9.5 LUB diagram 3 for sp72: Structures 3 and 4 as very late Roman

working with the burials has been necessary because of the paucity of dating material associated with the graveyard, and disturbance of the levels from which the graves were cut. Groups of graveyard LUBs, rather than individual LUBs, are located on the LUB diagram Fig 9.3, because of the difficulty in presenting this particular three-dimensional information in two dimensions.

Large assemblages of Roman (6,791 sherds) and post-Roman (8,320 sherds) pottery were recovered from the site together with a considerable number of registered finds (5,762 finds); the registered finds include a high proportion of nails and coffin fittings

from the post-medieval graves. Many of the fittings and nails from single grave cuts were amalgamated and given a single registration number. During 1975 an active discard policy was pursued for many of the post-medieval/modern finds and for the coffin fittings recovered from the upper layers. Simple records of the finds discarded were made and these have been included in the finds database. A large number of finds were examined by external specialists: Roman coins (Mann & Reece 1983; Davies, J A 1992), Roman brooches (Mackreth 1993), Roman glass (Price and Cottam 1995e), imported Roman marble (Peacock and Williams 1992), Late Saxon

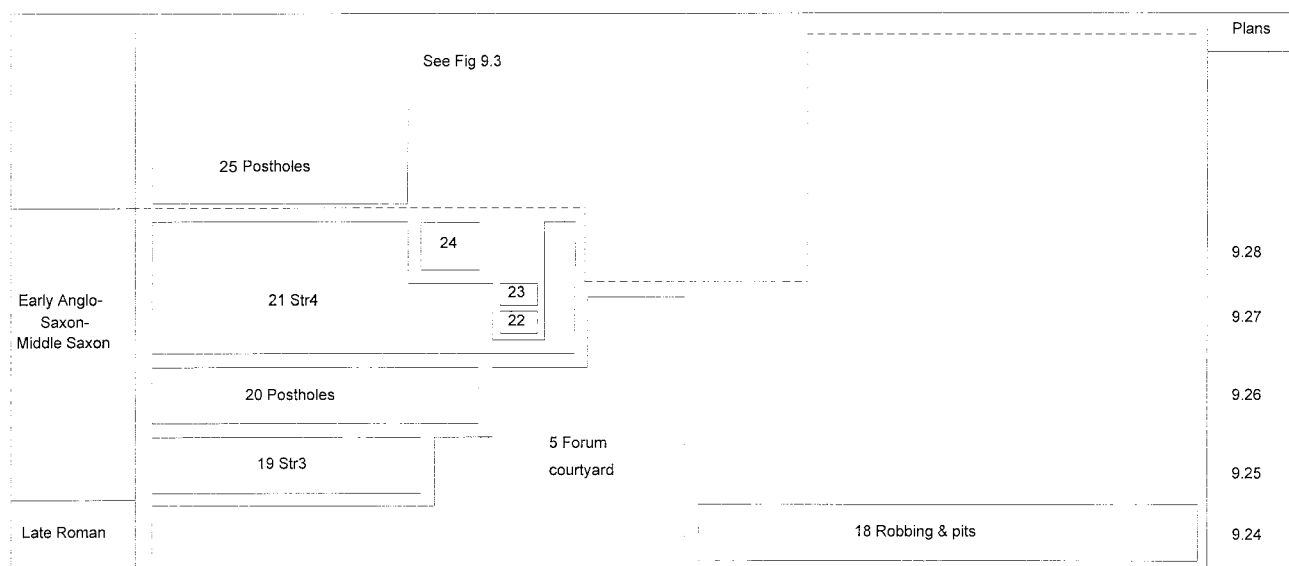


Fig 9.6 LUB diagram 4 for sp72: Structures 3 and 4 as Early or Middle Saxon

coins (Blackburn *et al* 1983), medieval and later coins, jetons and tokens (Archibald 1994), decorated medieval window glass (King 1995a), post-medieval vessel glass (Adams and Henderson 1995), worked bone (Rackham 1994) and stone objects (Roe 1995; hones: Moore 1991). Large quantities of leather (Mould 1996) and wooden objects (Gale 1992; Morris 1996) were recovered, principally from the well; these, and other finds from the well (LUB 109) are to be discussed in another publication (Mann (ed), forthcoming). Apart from finds from the well the only organic material to be recovered from sp72 was a little leather (Mould 1993) and textile (Walton Rogers 1993 and 1998); the majority of these were from the latest graves, the conditions not being suitable for their survival in the earlier deposits. A very small quantity of plant remains was also examined (Moffett 1993; 1996). The total number of building material fragments recovered was 6,591, most of which were Roman and medieval/post-medieval ceramic tile, but also including a large proportion of plaster fragments (stone building material: Roe 1995). Animal bone was recovered from the site in some abundance (9632 fragments); the majority were from the well (Scott 1987; Dobney *et al* 1994e). The human skeletal assemblage was reburied, after preliminary study, but the specialist's full report on the material has not been received. Several radiocarbon determinations were obtained at Harwell for some of the earlier inhumations (Figs 9.30 and 9.105), and we still await the anatomical report on those submitted for this treatment. Owing to pressure of time and lack of information, it was decided to deal cursorily with the inhumations. Plans of the

graves are not included here; the exceptions are grave cg154 (LUB 24) which is planned on Fig 9.28 and located on Fig 9.31, and also the inhumations from which radiocarbon dates were gathered (Fig 9.30). However, each inhumation has a context group and archive information is also available, as for the rest of the site.

Post-excavation stratigraphic analysis was undertaken for this report by Kate Steane, following previous work on the stratigraphic sequence by Brian Gilmour. Sincere thanks are due to Julian Litten and Gerry McDonnell for helpful comments, and to Chris Johnson for documentary information on the church and the parish of St Paul-in-the-Bail. Brian Gilmour, and later Paul Courtney, undertook further documentary research on the parish and its context. Margaret Darling worked on the Roman pottery; contributions to its understanding have been made by Joanna Bird, Brenda Dickinson and Kay Hartley. Jane Young studied the post-Roman pottery. Jane Cowgill and Jen Mann analysed the registered finds. Jen Mann with Rick Kemp worked on the building materials. Pam Graves worked on the architectural fragments incorporating work undertaken by David Stocker (1981–87), Helen Palmer Brown and Zoe Rawlings digitized the plans and Dave Watt drew the finds illustrations.

## The Excavation

The natural limestone brash was sealed by sandy clay LUB 0; this was disturbed by Late Prehistoric or Early Roman activity.

*LUB 0 Disturbed Natural (Fig 9.48)*

The natural brash over solid bedrock had natural sand filled hollows cg1. It was sealed by sandy clay and limestone cg2 which covered the whole area of the site to a depth varying between 0.06 to 0.30m; the top OD, which seemed to have been truncated (by cg21, LUB 2 and later by cg32, LUB 4) lay between 64.60m and 64.85m. This may have represented the trampled ground surface for the earliest occupation.

Cutting into the natural cg1 were four irregular holes, cg3, which may have also cut through the sandy clay cg2. However, no relationship is recorded with cg2. These holes were probably caused by trees.

The presence of a few pieces of brick, tile and mortar within cg2 suggests that this may have been the layer from which Roman buildings were constructed, but this may have been in the *colonia* period rather than the 1st-century occupation. A few sherds of intrusive pottery were recovered from cg2 (13 sherds) and cg3 (one sherd), including nine from IASH closed vessels, probably cooking pots of IA tradition, a PINK body sherd from a closed vessel, and two GREY vessels, one a fragment of an everted rim beaker, while the other rim fragment is similar to a fairly distinctive type known from the fortress at Longthorpe (Dannell and Wild 1987, nos 76e, 87b). A single small body sherd of IASH came from cg3. All the pottery from cg2 and cg3 can be dated to the mid 1st century.

*Early Roman*

Cutting the natural limestone brash LUB 0 was a timber structure, interpreted as the first phase of the north-west corner of the legionary principia, which consisted of an aisled hall (basilica) with a possible water-tank or channel to the west and a verandah round a courtyard to the east, and a north range LUB 1. This was then dismantled LUB 2. A second phase of the structure also included an aisled hall with a north range, but to the east was an enigmatic feature cg23 with post-pits cg35 LUB 3. This too was dismantled LUB 4. Pottery from LUBs 1–4 dated to the 1st century.

In the west part of the site was a sequence of surfaces, possibly part of the forum courtyard LUB 5. Fragmented sherds of pottery from the courtyard dated to the 1st and 2nd centuries; a coin dated the last surface to the very late 4th century (see Late Roman). The absence of pottery from the courtyard indicates that perhaps pottery was not dropped there in the first place, or that the courtyard was kept clean in the mid to late Roman periods. The area to the east possibly held statues LUB 6; no dating evidence was found here but stratigraphy would suggest a date between the 1st and early 2nd century. It was subsequently the location for part of a monumental building LUB 7, while the forum

courtyard (LUB 5) continued in use to the west; both the stratigraphy and pottery from its construction would indicate that this building dated to between the late 1st and early 2nd century.

*LUB 1 Structure 1.1: Principia 1.1*

(Figs 9.7 and 9.52)

At the west end of the site were the remains of two post-pits cg46 (cg46a and cg46b) cutting cg1 (LUB 0), c3m apart, which may have been two of a row of several posts. Only one pit was fully excavated, cg46a; it held a post with a section 0.22 by 0.15m. Possibly of integral construction or at least functioning contemporarily, just to the west of the posts but cutting through the post-pit fills, was a north–south wooden board-sided trench cg52 (1.20m wide and 0.40m deep). Wooden boards had been laid against the sides of the trench; traces of timber were found running north–south along the line of the western edge of the trench. These were pinned to the sides of the trench with wooden stakes. The bottom appeared to have been stone-lined. The lower silting of trench cg52 was layers of sandy silt cg53 which suggests that the timber-lined trench held water.

Two rows of post-pits cg38 (cg38a to cg38i) ran north–south, cutting cg2 (LUB 0), c7m east of post-pits cg46; they did not form pairs, but were seen as being contemporary because both rows were cut by two further rows of pits cg48 (cg48a to cg48j), LUB 3; Fig 9.52). Five post-pits were excavated in the east row but only four in the west row, possibly due to the other being cut away entirely by later features. The pits were up to 1.35m deep and were generally longer north–south than east–west; they contained posts which were rectangular in section (c0.22 by 0.18m), sunk c1m into the pits. The posts would have stood c3m apart.

Adjacent to the east side of the eastern line of posts, were the fragmentary remains of a north–south beam slot cg7 which cut cg2 (LUB 0). The slot may have held a beam, rectangular in section (c0.25 by 0.20); it was cut by a stake-hole which appeared to have been an element in the construction of a north–south wall. The slot was described as lying between the post-pits and so being part of the post-pit structure. However, the slot was also recorded as being cut by post-pits but it is possible that the line of the slot had sunk into the pit and was not identified.

To the west of the two rows of posts cg38 was an east–west slot cg11; it had been truncated by later levelling, so there was no record of what it cut and there was no trace of a beam. Although there was no direct relationship with other features on the site, it seems possible that it was of the same phase as slot cg7; it may have represented an internal division in the hall.

To the north-west of post-pits cg38 was another

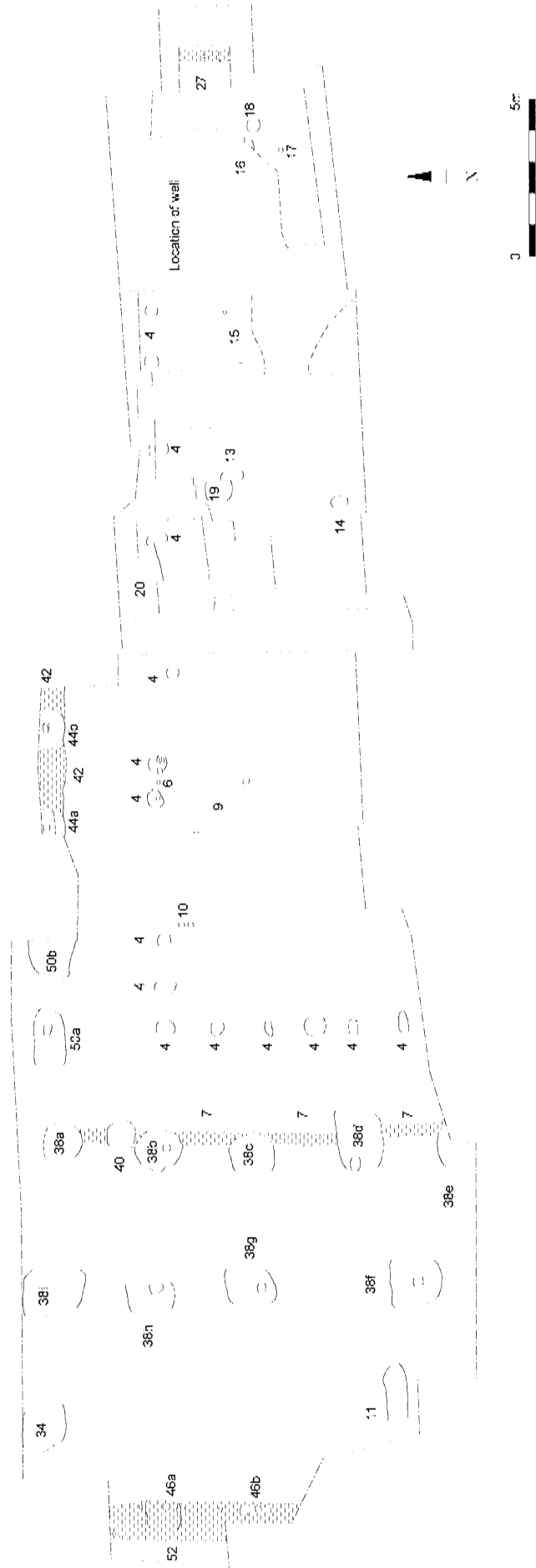


Fig 9.7 Principia 1: LUB 1

post-pit cg34 (there was no record of what it cut). This post-pit might belong to either this phase of building (LUB 1) or the next (LUB 3) or even both building phases (LUBs 1 and 3).

There were several east–west post-pits along the north edge of the site. Slot cg42 cut cg3 (LUB 0); it had a fill cg43 which had been cut by post-pits cg44 (cg44a and cg44b); these would have held posts c3m apart. Two pits cg50 (cg50a and cg50b), which cut cg1 (LUB 0) appeared to be along the same line, possibly part of the same construction.

Fifteen postholes cg4 marked the north and west lines of a presumed verandah; eight of them cut layer cg2 (LUB 0), and the rest probably truncated cg1 (LUB 0). In some of the postholes the packing for the post was distinguishable from the removal and infill cg5 of the hole left by the removal of the post. Four stake-holes cg6 ran between two of the postholes, cutting them.

Probably of the same phase as the posthole structure cg4 was a collection of features within the courtyard, all of which cut cg2 (LUB 0): two postholes cg12 (unplanned) and cg17, six stake-holes cg9, cg10 and cg15, two shallow depressions cg14 and cg18, a scoop with charcoal and burnt sand cg13 and the remains of a cut feature cg16.

What may have been a post-pit cg19 cut through the scoop with charcoal cg13. Partially cutting the edge of one of the postholes cg4 was a large shallow feature cg20. These features appear to belong to this phase of the *principia* as they had been truncated by cg21 (LUB 2) and sealed by the later surface cg22 (LUB 3).

To the east of the site was a north–south slot cg27, which might define the eastern side of the courtyard but there was no record of what it cut. Three stake holes were recorded as cutting the section of slot excavated. It had a fill of sand with some charcoal.

The west side of an aisled hall may be represented by post-pits cg46; to the west of these the wooden board-sided trench probably represents a water-tank or channel. Postpits cg38 indicate the east side of the aisled hall. Beam slot cg7 seems to have carried a wall plate, the main eastern wall of the west range. A north range was indicated by post-pits cg44, cg50 and cg34. Postholes cg4 represent the north-west part of a verandah around a courtyard, within which were several miscellaneous features. North–south slot cg27 may indicate the east side of the courtyard.

There were no surfaces definitely associated with postholes cg4 or the rest of *principia* 1.1. This was because the ground surface had been truncated during demolition cg21 (LUB 2) to about 64.6m OD.

This whole complex is probably part of the first phase of the legionary *principia*, or headquarters (as previously proposed: Jones & Gilmour 1980). The aisled hall to the west was at least 11m wide and

14m long; the buildings along the north side extended at least another 14m and probably more like 35m to the east; the courtyard verandah enclosed a courtyard at least 8m by 23m. The size and nature of the building suggest this, as does its central location in the legionary fortress.

All the pottery (62 sherds) from this LUB dates to the 1st century but precision is difficult. Pottery from cg46 consisted of 6 body sherds and a handle from a single OXSA flagon. Pottery from cg53 (35 sherds) included 31 sherds from a single OXSA closed vessel, one CR and 3 small PINK body sherds. Pottery from cg11 (20 sherds) includes 15 which are from a single CR closed vessel, probably a flagon, and five GREY body sherds. Pottery from cg50 contained one sherd of DR20 amphora, of early fabric type.

#### *LUB 2 Dismantling of Principia 1.1*

Over the initial silting cg53 (LUB 1) of the channel feature cg52 were layers of charcoal and red sand cg54, which had extended beyond the line of the channel and sealed the post-pits cg46 (LUB 1). Further fine silts and clays, some with ash and charcoal cg55, suggest the continued presence of water. The wood-sided feature was then backfilled by 0.40m of sandy clay cg56.

The packing of several of the post-pits cg38 (LUB 1) was disturbed; the posts had been removed cg39, as indicated by one pit cg39d where the post had been cut away. The posts were also removed cg47 from the post-pits cg46 (LUB 1). The timber beams had been removed from slot cg7 (LUB 1) and the resulting void infilled with sand cg8. Between post-pits cg38a and cg38b (both LUB 1), cutting slot fill cg8 was a smaller pit cg40 (0.33m deep; min 0.60m by 0.80m). There was also a pit cg60 (unplanned) which cut into the disturbed natural cg2 (LUB 0) and had been filled with building debris.

The area seems to have been levelled cg21, to about 64.6m OD during demolition before a subsequent phase of construction work was carried out. Levelling the site meant the truncation of postholes cg12 and cg17, depressions cg14 and cg18, stake-holes cg15, post-pit cg19 and feature cg20 (all from LUB 1); it also may have led to the truncation of postholes cg4 (LUB 1). The lack of traces of surfaces related to the rest of *principia* 1.1 may be due to removal of layers at this point.

The dismantling of *principia* 1.1 seems to have been limited to the aisled hall and the verandah; the careful removal of the timbers suggests that they were intended for reuse.

A total of 100 sherds (from cg39, cg47, cg54, cg55, cg56 and cg60) was recovered from this LUB; they were all body sherds of fabrics normal for the legionary period (Neronian–early Flavian), datable to the 1st century. Sherd links occur to the earlier

LUB 1, cg53. Flagon types in CR, PINK and OXSA, and IASH sherds from cooking pots were common, plus sherds from amphorae in DR20, GAU4 and East Mediterranean fabrics; the only samian was a chip of SAMSG datable to the 1st century.

*LUB 3 Structure 1.2: Principia(?) 1.2 (Fig 9.8)*

There was an area of compact clay with sand and limestone fragments, charcoal flecks and white powdery flecks cg41 (64.84m OD; unplanned) which sealed cg40 (LUB 2).

Cutting postholes cg39, post-pits cg38 (both LUB 1) and make-up material cg41 was a second series of a double row of post-pits cg48a–j running north–south. The east row consisted of six post-pits (cg48a–f); the distance between the six posts in this row was c2.60m. Postpit cg48e had another pit cut within it, cg148, which might indicate a replacement. The west row of four (cg48g–j) was not as regular as the east.

Another post-pit cg57 would have held a post c11m to the west of the north–south rows of posts cg48; it cut the backfill cg56 of the channel cg52 (LUB 2). The post was in line with post–pit cg48i. It was probably one of a row running north–south, and forming the west side of the nave.

The levelling cg21 (LUB 2) to the east of the site was sealed by an area of sand with pebble cg22 (unplanned), possibly a surface, bringing the level up to 64.73–.85m OD. Cutting surface cg22 was an east–west slot cg23 (0.50–0.70m deep) with a rectangular scoop at its west end (0.45m deep). The location of the east end of this slot was uncertain as some of its length had been cut away; however it is possible that the slot was c24m long. There may have been a slope along the slot from the east to the west, but the scoop at the west end was slightly more shallow than the west end of the slot. The slot and scoop cg23 had been backfilled with re-deposited natural cg24 with traces of silt. The rectangular scoop and nearest post-pit packing were further sealed by a layer of sandy clay cg36 (unplanned). Cutting the filled trench were at least four post-pits cg35 (cg35b to cg35e) and there may have been others cut away by later features; two stake-holes cg35a probably cut the fill of the scoop. The associated posts and stakes would have been located along the southern side of the post-pit alignment. The post-pits may represent a secondary use of the slot or a new structure.

Surface cg22 was also cut by a shallow rectangular feature cg25 which had a fill of clean sand sealed by dark sandy clay with limestone (redeposited brash); also cutting sand and pebble cg22 was a rectangular cut cg26 sealed by layers of sandy silt with much charcoal.

The post-pits cg34, cg50 and cg44 seem to have continued in use during both phases of the structure, suggesting that only the aisled hall was rebuilt, not

the north range. The north–south wall cg27, at the east end of the site, may have continued in use. Layer cg41 was probably used as levelling material for a construction surface (64.84m OD) associated with the lines of post-pits cg48 which formed the new aisled hall. Another surface which survived was that to the east, consisting of sand and pebbles cg22 (64.73–.85m OD). Other surfaces did not survive the truncation of the site, cg32 (LUB 4), after the building had been dismantled.

*Principia(?) 1.2* consisted of an aisled west hall at least 13m wide east–west and 14m long north–south; the positioning of the post-pits might indicate a hall which measured 10m between the aisles, with an aisle 5m wide on each side – in all 20m wide. Buildings extended at least 14m to the east from this hall, at the north of the site. The hall and the northern building enclosed a courtyard (at least 32m by 8m) within which were the features cg23 and cg35.

As was noted by Jones and Gilmour (1980, 65) it is possible that the Roman well (later with well-head cg65, LUB 8) was originally dug during this period; it may be associated with features cg23 and cg35, which could have been associated with a channel to bring water from the well or fountain to a tank on the site of cg35a.

A small assemblage of pottery (21 sherds) was associated with this LUB (from cg24, cg36 and cg48), and are datable to the 1st century; again flagon and IASH cooking pot sherds were common; 2 SAMSG vessels are dated to the pre-Flavian and Neronian–early Flavian periods.

*LUB 4 Dismantling of Principia(?) 1.2 (Fig 9.8)*

The posts were removed from the post-pits cg35 (LUB 3) leaving postholes cg37. The post removal from the two rows of post-pits cg48 (LUB 3) left postholes cg49 in most pit fills. One pit, without a posthole cg48j (LUB 3), had several backfills including burnt clay lumps and ashy clay, suggesting that the post had been removed with much rocking. The posthole fill cg58 in post-pit cg57 (LUB 3) included white plaster fragments. Possibly related to the demolition of the *principia* was a charcoal-filled hollow cg59 (unplanned) cutting natural cg1 (LUB 0).

The posts were also removed cg45 from the post-pits cg44 (LUB 1). Postpit cg34 (LUB 1 or 3) was levelled cg131. Postpit removal cg51 disturbed the packing of one pit and left a posthole in another (cg50, LUB 1).

It would seem that the site was levelled cg32, truncating many of the features on the site to around 64.7m OD; these included slot cg27 (LUB 1) and features cg37, cg45, cg49, cg51, cg58 and cg59.

The timber components of the structure once

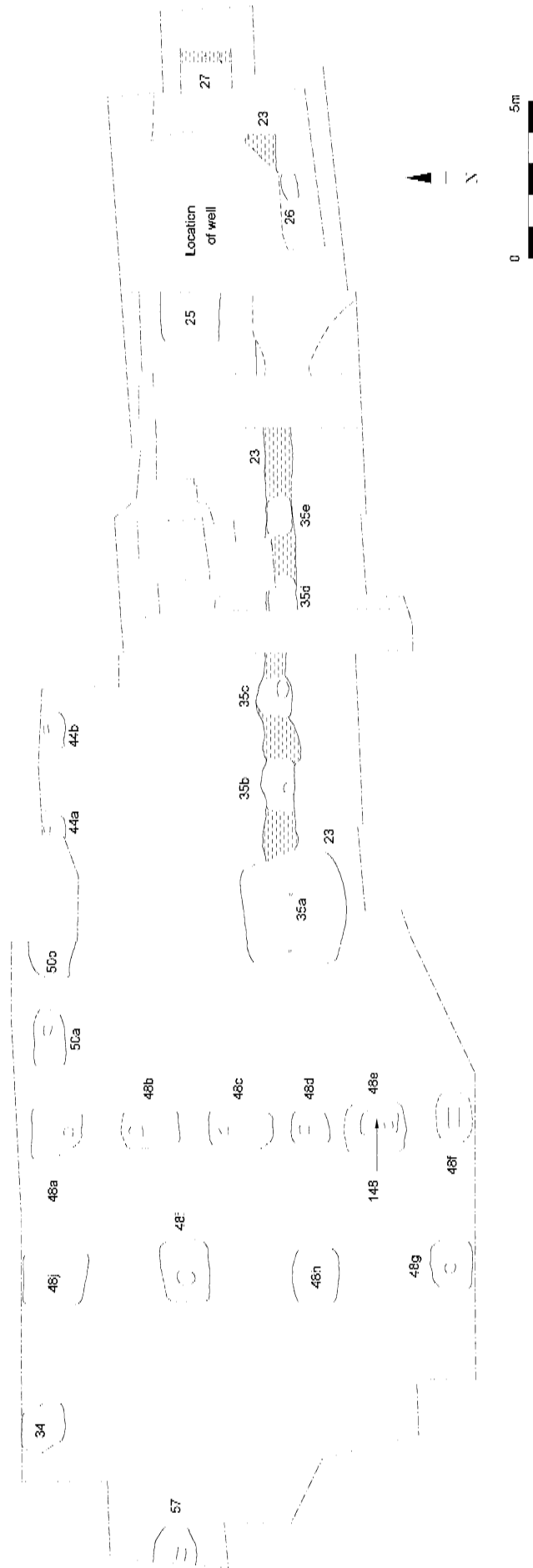


Fig 9.8 Principia 2: LUB 3

again appear to have been carefully removed for reuse.

Only 15 body sherds (from cg49 and cg51) were recovered from this LUB, all fabrics current in the legionary period; DR20 sherds provide a link with the earlier LUB 1, cg50. A worn Claudian *as* (AD 41–54) came from the fill cg49 of one of the post-holes.

*LUB 5 Surfaces and features: the forum courtyard*  
(Figs 9.9–13, 9.48, 9.53 and 9.54)

The western part of the site subsequently became a courtyard, possibly that of the early forum. A whole sequence of courtyard surfaces survived only in small patches, partly due to the disturbance of the site by later burials; in places the surfaces remained as pinnacles between the burials. The patchy nature of the surfaces was also presumably caused by wear and repairs. For these reasons, the stratigraphical sequence is to some extent uncertain.

**Features** (Fig 9.9). There were three pits cg29 which ran in a row north–south, one of which cut the truncated postholes cg37 (LUB 4). (They may be contemporary with another row to the east, two of which survived.) Sealing them was a sandy spread cg110 set with limestone fragments (unplanned; 64.68m–64.79m OD) abutted by a worn surface composed of flat laid limestone fragments and tile set in sandy clay cg109 (64.71m–64.74m OD); this was very similar in nature to a patch of surface to the west cg113 (unplanned; 64.71m OD).

In the north-west part of the site were patches of sandy clay with pebbles set into it together with limestone and tile chips cg114 (64.73m–64.84m OD). To the north of surface cg109 was a levelling dump cg112 of sandy clay with many evenly distributed limestone fragments together with pebble, tile fragments and charcoal flecks (unplanned; 64.67m–64.80m OD), but no associated surface.

Towards the western end of the site, possibly sealing levelling cg32 (LUB 4), were two patches of burnt clay and grey clay and a few pebbles cg117 (64.71m–64.84m OD). Over the eastern part of surfaces cg109 and cg110 was a spread of brown sandy clay with lumps of burnt clay and charcoal cg116. These may represent the remains of open hearths, perhaps connected with construction work. Alternatively, these features may have belonged to the later Roman period.

Patches of pitched limestone fragments, some of which were sealed by flat stones cg111 (64.61m–64.77m OD) were found where they had sunk into earlier post-pits or due to the nature of the underlying dumps. There was no evidence for pitched stones at the edges of the site (Fig 9.48), so unless they had been removed in some areas they did not cover the whole site. Alternatively, these may be definite features, of rectangular plan, used perhaps as bases for water-tanks (as suggested by Jones and Gilmour 1980), and possibly belonging to the legionary *principia*.

Cutting into sandy spread cg110 was a north–

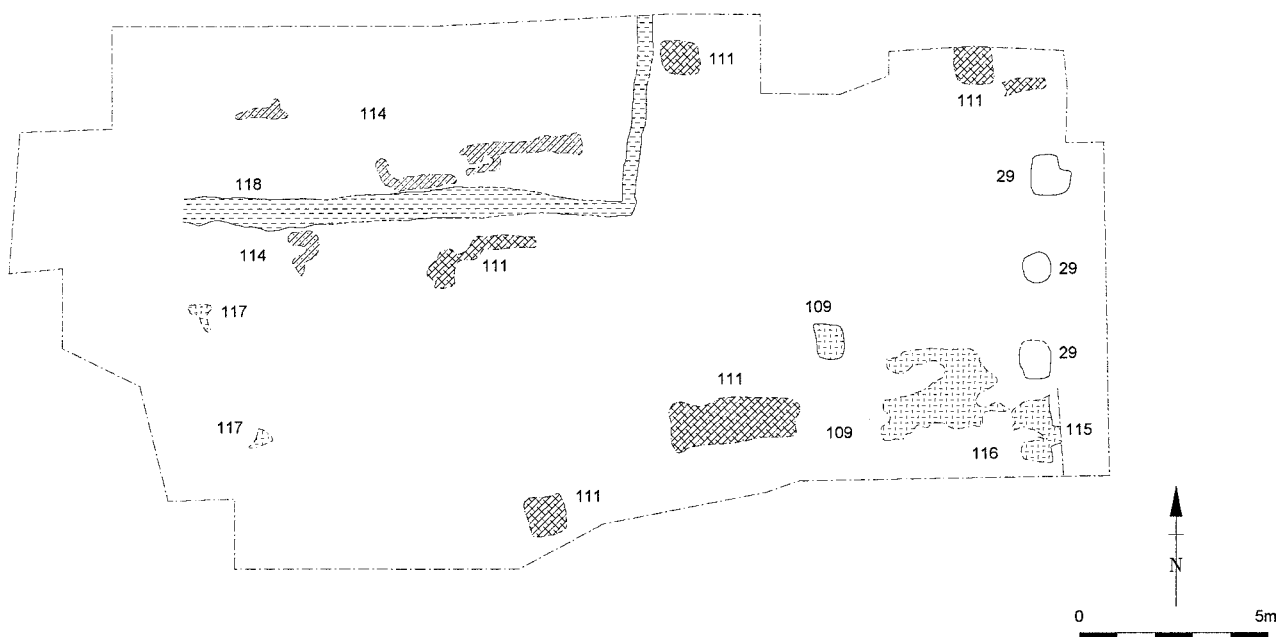


Fig 9.9 The forum courtyard (a): LUB 5



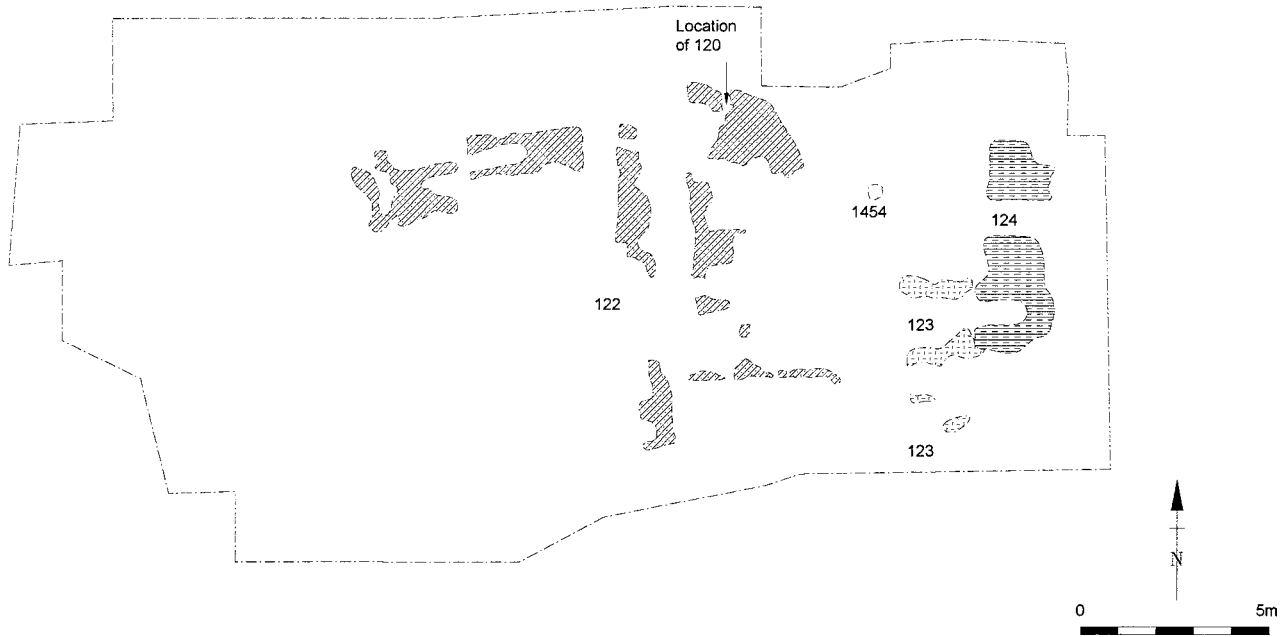


Fig 9.10 The forum courtyard (b): LUB 5

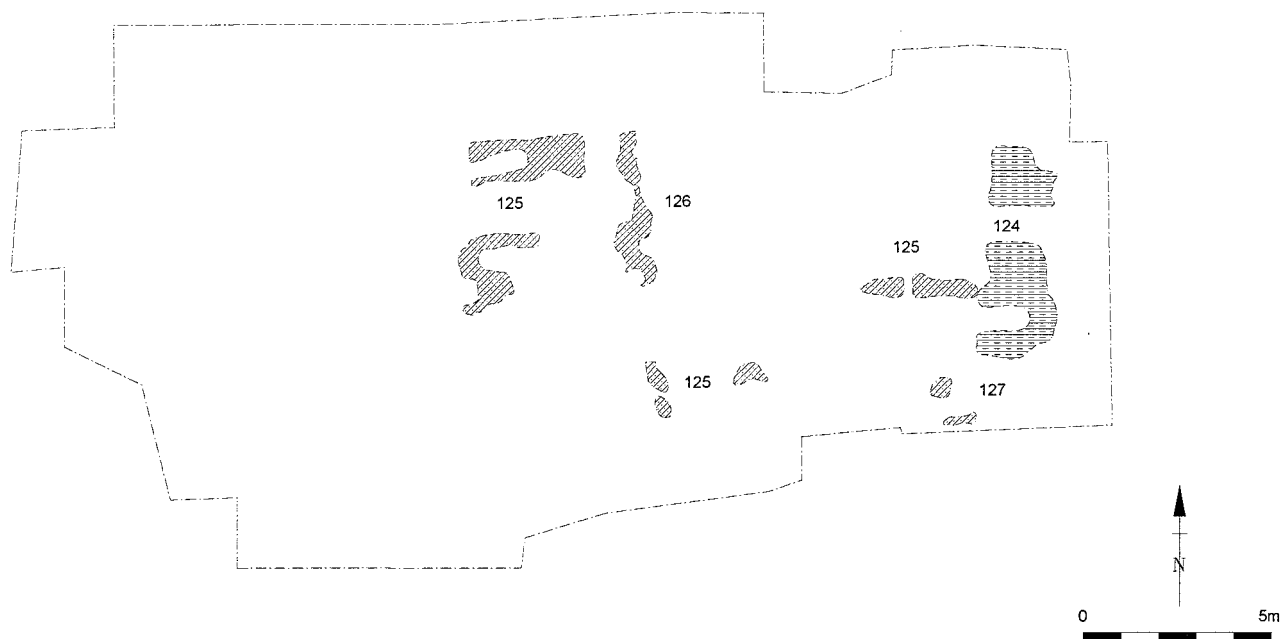


Fig 9.11 The forum courtyard (c): LUB 5

south slot cg115 (at least 1m long) which had been largely cut away (0.12 and 0.06m deep); it had been backfilled with sandy clay, mortar lumps, pebble and tile fragments.

Another slot cg118 cut the pebble surface, cg114; either a timber beam or a drain (0.32 by 0.35m in section) had been packed into the slot. The drain or beam had eventually been removed and the space

backfilled with redeposited natural and building rubble cg119 which included a number of large tile and brick fragments, plaster and mortar and in places a lot of charcoal. Cutting the backfill cg119 was a posthole cg121 (0.15m deep; 0.50m across). Its backfill included a considerable number of pebbles, perhaps disturbed courtyard surface material.

**Surfaces** (Figs 9.10 and 9.11). In a shallow scoop

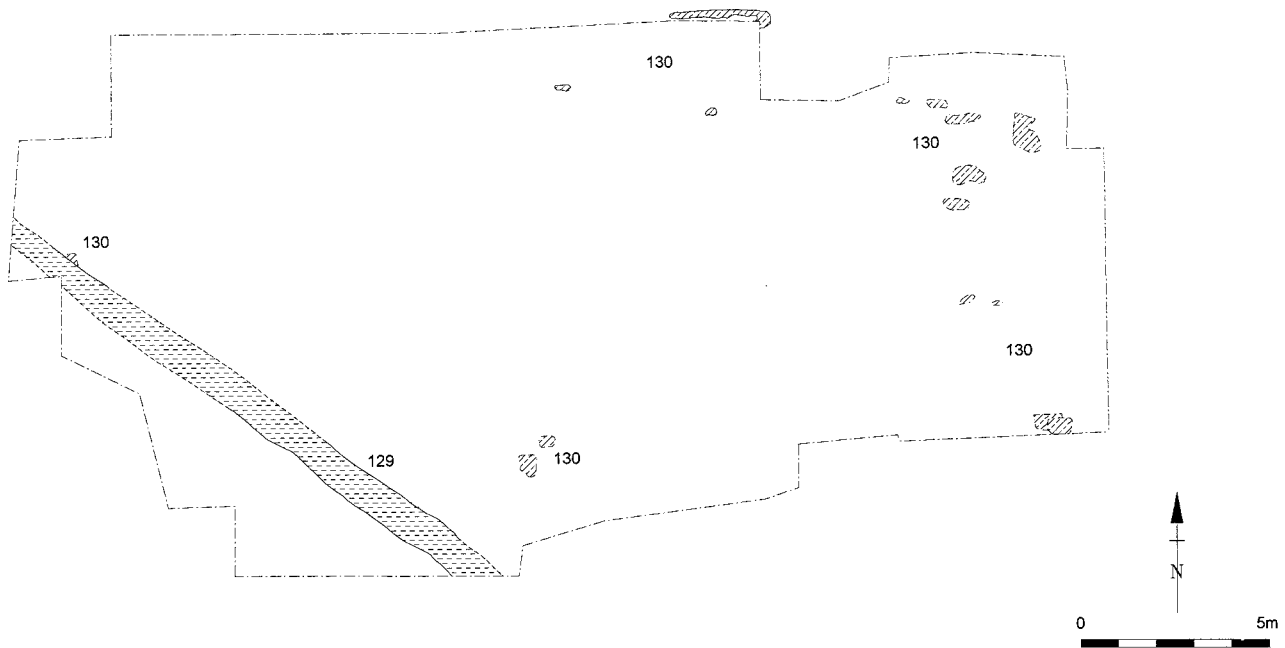


Fig 9.12 The forum courtyard (d): LUB 5

0.01m deep was an infant burial cg120 (unplanned) lying west-north-west to east-south-east. The infant was largely intact. It was thought to have been part of pebbly surface cg122 (64.72m–64.85m OD) which was recovered in patches over the central area of the excavation. Surface cg122 sealed posthole cg121, together with the backfilled slot cg119. To the east of the area surface cg122 consisted of several flat limestone fragments incorporated into the surface together with pebbles which were set into sand or sandy clay.

Sealing pebble and limestone surface cg122, in the eastern part of the forum courtyard, were further patches of pebble set in sandy clay with limestone chips, tile fragments, mortar lumps and charcoal flecks cg123 (64.75m OD). Sealing cg122 were patches of possibly disturbed surface material cg126. Cutting cg122 was an isolated posthole cg1454. Also sealing surfaces cg122 and cg123 was an area of pebbles set in yellow sandy mortar cg125, identified in patches across the area of the forum. The surface varied between 64.75m–64.90m OD (mostly 64.82m). Sealing cg123 was a patch of possible make-up layer of dark loam with pebbles, tile and limestone fragments which was sealed by a possible surface of clayey sand with limestone fragments, tile and pebble cg127.

Set into levelling dump cg112 was a possibly rectangular area (5.20m by 2.60m) of pitched limestone over which was a hard sandy mortar surface cg124 at the east end of the courtyard (its full extent uncertain owing to medieval truncation; Fig 9.53). It

was possibly contemporary with surfaces cg122 and cg125. There was some doubt as to whether a scoop cg128 (0.13m deep; 1.10 by 1.60m; unplanned) cut pitched stone with mortar cg124 or was associated with its construction in some way. It had a fill of sandy clay with charcoal flecks, burnt clay lumps, limestone and tile chips and plaster flecks.

**Surfaces** (Fig 9.12). Sealing surfaces cg125 and cg126 as well as scoop cg128 were patches of a further surface cg130 (64.87–65.02) which had three types of make-up for what was probably the remains of one surface consisting of flat fragments of weathered limestone (one showing signs of a worked surface), and limestone chips and fragments with sandy mortar, forming a hard surface (64.87m–65.02m OD). There were patches of make-up, sandy clay with limestone chips, charcoal flecks, pebble, tile fragments and mortar lumps which had been used as another surface (64.87m–64.99m OD). In some places there was a single make-up layer of sandy clay with limestone and tile fragments, mortar lumps, pebble and some bone; in other places there were two layers of make-up for the surface. The lower make-up dump was of sandy clay with tile and limestone chips, mortar lumps and charcoal flecks; the upper make-up dump was of loose sandy clay with tile and limestone chips, pebble, charcoal and mortar flecks.

Gully cg129 ran diagonally north-west to south-east across the south-west part of the site for at least 13.20m; it was 0.15m deep (probably truncated; and possibly had been covered) and 0.90m wide. It was

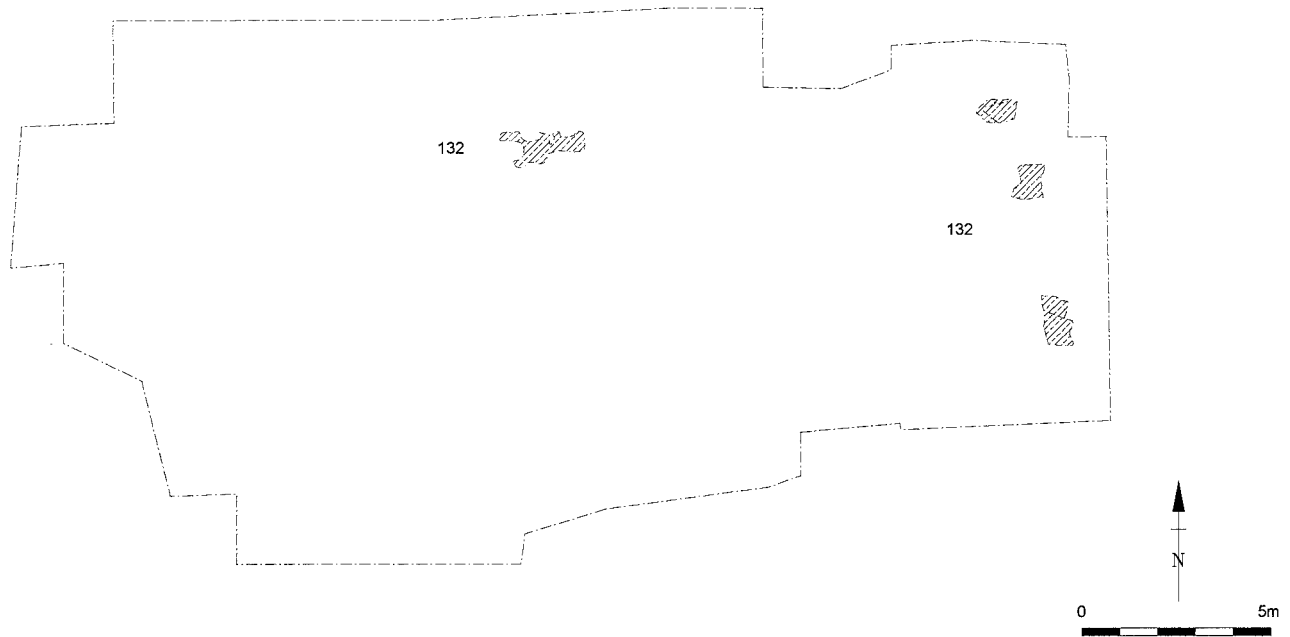


Fig 9.13 The forum courtyard (e): LUB 5

contemporary with surface cg130 which was partially recovered along its edge. The gully cg129 was backfilled with limestone fragments and chips in sand with a little clay cg134. It probably represents a drainage trench.

**Surfaces** (Fig 9.13). Partly sealing surfaces cg125 and cg130 were patches of make-up dump which in turn were sealed by fragments of a surface cg132 giving a level of 65.10m–65.23m OD (Fig 9.54). The dump consisted of sandy clay with pebbles, limestone fragments, tile chips and charcoal flecks. It was sealed by a surface of limestone chips and fragments with the occasional larger flat limestone; two fragments, lying directly on the surface cg130, were described as showing a weathered but worked horizontal surface. Sealing surface cg132 (seen only in section) was a patch of the latest surface cg133 which was composed of a clay with sand make-up sealed by a flat limestone with a surface at 65.28m OD (Fig 9.48). Cutting into surface cg132 was a possible repair of limestone fragments and chips with clay traces, some tile and occasional pebble cg139 (giving a surface of 65.16m OD). Cutting into this layer was roughly laid flat limestone with limestone chips and clay cg140 (probably at 65.41m OD, although it was recorded a metre lower). Sealing cg140 were flat laid limestone fragments with clay, tile and pebbles cg141 (probably 65.56m OD although recorded a metre lower). Within cg141 was found a Theodosian *Victoria Auggg* issue of AD 388–402. Sealing or cutting an unrecorded part of the earlier forum surface (at 64.84m OD) was a black ashy charcoal deposit cg146 containing ‘bronze fragments’ scattered throughout.

Surfaces cg122 and cg126, the fill of scoop cg128, later surfaces cg130 and cg141 and deposit cg146 contained evidence for copper alloy smithing and casting, while slight evidence for possible silver working was also found in cg126 and cg141. The latter contained a piece of possible litharge – a ‘cake’ of lead oxide, the waste from refining base metal (usually silver; cf Bayley 1992, 748–9). Although the assemblages are small it is possible that some form of non-ferrous metalworking was practised in or adjacent to the site (see discussion of East range, below). One tentative location could be the scoop cg128, in the fill of which over 20 pieces of sheet and casting waste (including sprues) were found with some slag. Surface cg130, which sealed cg128, also produced four casting waste fragments, including another sprue. Unfortunately, none of the ‘bronze frags’ that were noted throughout the black ashy charcoal deposit cg146 was retained.

The significance of the infant burial cg120 is explored in the Discussion section.

The site generally produced a low animal bone count, but this is one of the few LUBs where it exceeded that of the pottery (218 bone fragments compared to 152 sherds of pottery); pottery was particularly sparse from LUB 5. The reasons are unknown, since so much of the pottery was apparently residual. Most of the sherds dated to the 1st century, but there were several which might date to the 2nd (cg126, cg130, cg134 and cg132).

Pottery from cg126 (7 sherds) included a body sherd from the shoulder of a GREY closed vessel with burnishing, which could indicate a date in the 2nd century. Pottery from cg130 (63 sherds) included

a chip from a GREY jar or beaker with burnishing and three tiny body sherds in a fine fabric, akin to Parisian ware, from a closed vessel with a zone of rouletted decoration, which suggest a date in the early 2nd century. Pottery from cg134 (3 sherds) included one sherd from an OX closed vessel which could indicate a 2nd-century date. Pottery from cg132 (16 sherds) included fragments of a GREY cooking pot resembling a BB1 type and a J106 jar in SHEL fabric suggesting an early 2nd-century date.

The dating evidence suggests a sequence of surfaces which extended from the early Roman period at least through into the late 2nd century. The coin from the surface cg141, dating to the very late 4th to early 5th centuries might indicate that the sequence continued through to the very late Roman period, but there are alternative interpretations of not only the surface, but also the significance of the coin (see Discussion). The small size of sherds suggests either that they were in a secondary context, or reflect constant use (trampling?) of the area; the small number of sherds indicates that the area was kept clean of debris.

*LUB 6 Statues? in the east part of the site (Fig 9.14)*  
Pit cg33 (0.55m deep) cut levelling cg32 (LUB 4); possibly associated with it and preserved in a hollow were the remains of a surface, sand with pebbles cg30 (sunk into the truncated post-pits cg37, LUB 4) which was sealed by an uneven layer of sandy clay with limestone and pebble cg31, possibly make-up for a further surface. Pit cg33 was 0.9m by 0.85m in plan. A rectangular feature to its east cg28, packed with pitched limestone, cut rectangular feature cg25 (LUB 3); it measured 0.90m by 0.65m.

There was also a rectangular scoop cg61 which possibly cut the levelling cg32 (LUB 4), or may have been earlier; it was recorded as being 0.06m in depth, and covered an area 1.95m by 1.80m. It contained several layers of construction material, but robbing had removed whatever had sealed these layers. It seems to have represented the remains of the base of an upright feature which was in position for some time; it was respected by the later wall cg62 (LUB 7).

Erected in the east part of the early forum courtyard appears to have been at least one statue (the base being cg61), if not more (bases cg28 and cg33). There was no pottery from this LUB.

*LUB 7 Monumental building: Structure 10 (Figs 9.15, 9.48, 9.55 and 9.56)*

A north-south wall cg62 was constructed; although its construction trench was recorded on both sides, there is no record of what it cut, but the wall was seen to have been built around feature cg61 (LUB 6), the large rectangular scoop. The north-south

wall cg62 kinked around the area of the scoop, and was not so carefully faced at this point, suggesting that the wall was difficult to access where the base and whatever it had supported stood (Fig 9.56). It was 1.45m wide and it ran for a minimum of 11m (extending beyond both excavation limits); it was a mortared wall of faced blocks of limestone with an internal core of rubble and mortar.

To the east of wall cg62, sealing features cg28, cg31 and cg33 (all in LUB 6) was a dump of sandy clay with limestone which was sealed by a layer of mortar with crushed limestone which held loosely-fitting, but sometimes irregular paving stones in place cg63, giving a surface at c64.85m OD (Fig 9.48). The wall's offset was sealed by paving stones cg63, so the wall was earlier than the paving, but possibly of the same building programme. The paving was not exactly squared against the wall, but then the paving was irregular in character. The paving appeared to have respected, but butted up to, whatever had been held by scoop cg61. Many of the

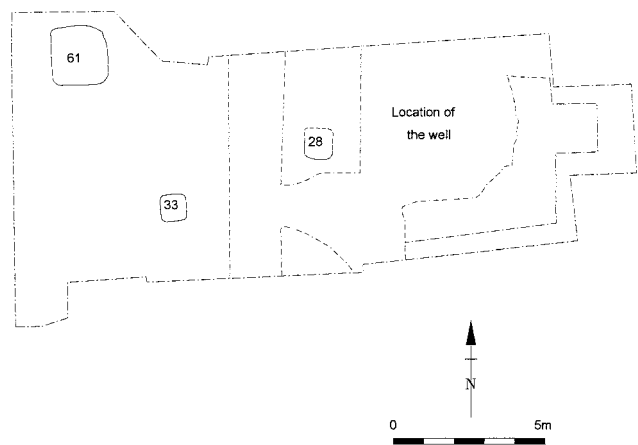


Fig 9.14 Statue-bases(?): LUB 6

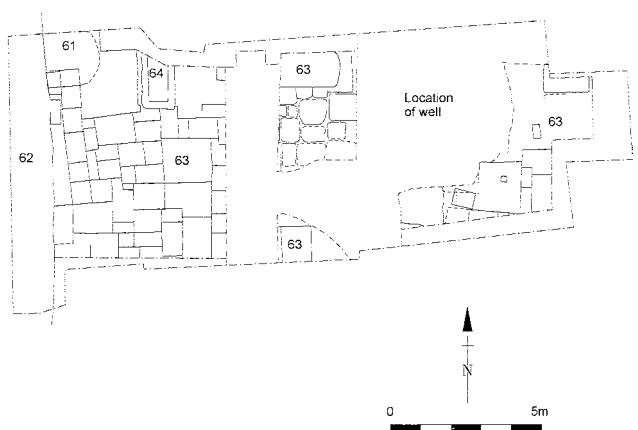


Fig 9.15 Monumental building: LUB 7

flagstones had been left *in situ* and where several had been removed their settings could be traced. One of these flags had been cut, probably before laying, by a hole (c0.22m square). The flagstones were roughly tooled and did not show any clear signs of wear. Sealing flagstones cg63 was a large dressed stone cg64 with 'clawed' tooling. It was recorded as sitting on the flagstones, and no mention was recorded of any bonding. The size of the stone was at least 2.10m long by 1.05m by 0.38m. The top surface showed evidence for a border with a slightly raised central rectangular area (*anathyrosis*); it was possibly a statue or monument base (Fig 9.56).

The lack of any relationship with the stratigraphic sequence to the west of the wall cg62 (truncated by trench cg563, LUB 65) meant that the wall cg62 indicated a division between two areas of the site. To the west were the various features and surfaces (LUB 5), and to the east were first the statues (LUB 6), and then the building (LUB 7), Structure 10.

The link between the wall and the paving, together with the pristine state of the tooled surface, perhaps suggests a large building of which we have only the west wall and part of the interior. This structure measured at least 18m east–west and 11m north–south; it extended north, south and east beyond the limit of excavation. Possibly the paved surface was protected further from weathering. It is possible that the structure was a temple precinct, but too little of it has been revealed for a definite identification.

There was a total absence of pottery from its occupation deposits, not surprisingly given the carefully paved surface; but there are inferences from this cleanliness about the status of the building. Pottery from wall cg62 (7 sherds) included sherds which intruded from the demolition of the wall (LUB 18).

#### *Mid Roman to Very Late Roman*

There was little dating evidence for the use of the forum courtyard LUB 5 during this time. The monumental building LUB 7 would appear to have been replaced, in the earlier part of this period, by another substantial civic building LUB 8, possibly the east range of the forum; the portion of the range excavated here consisted of a portico running north–south, several rooms and a well-head. The level of the floors inside the building was raised dramatically. The pottery suggests that this building was constructed after the early 2nd century but may have been derived from the construction deposits of the earlier phase. Room 2A, to the east of the well-head, went through several changes of use; it was used for non-ferrous metalworking LUB 9; it may have been abandoned LUB 10, before going back into two phases of re-use LUB 11 and LUB 12

through to the very late Roman period. Room 2B and C, after initial use LUB 13, seems to have had stratigraphy truncated before refurbishment in the mid 3rd century, with a substantial opus signinum floor LUB 14, in use through to the late 4th century. Rooms 2D and 2E, though barely within the area of excavation LUB 15 and LUB 16 produced the remains of floor sequences and even traces of metalworking (2D.2); both these sequences also show a mid 2nd- to mid 3rd-century gap in the pottery, but evidence for activity into the late 4th century. Room 2F LUB 17 was apsidal in shape, opening out on to the internal portico, but any surfaces had been removed by later robbing.

Structure 2 was probably partially demolished towards the end of the 4th century; there was pitting, demolition debris and evidence for the robbing of rooms 2A, 2B, 2D and 2E, associated with late to very late 4th-century pottery LUB 18.

#### *LUB 8 East range of forum – construction of Structure 2 (Figs 9.16, 9.48, 9.49, 9.57–63)*

The area of the east range uncovered measured over 13m in width (east–west), and over 7m north–south; it included a portico overlooking the forum courtyard about 6m wide, and rooms off to the east. Further east were rooms facing on to a portico on the main north–south street.

The paving stones cg63 (LUB 7) appear to have been disturbed to one side during the construction of the foundations of the well-head cg65 (Fig 9.57). The well superstructure (c4m square by 2m in height externally), was constructed of small limestone blocks with courses of tile at irregular intervals; there was a large offset c0.40m wide in from the foundations to the wall of the well-head on the east side, c1m up from the construction surface of the paving slabs. Cutting the well-head foundations cg65 was a posthole cg66, which may have been related to the construction of the well-head or even the well itself. The post may have been broken off and the remains probably rotted *in situ*, as the hole was empty of fill.

Internally the well-head had four relieving arches which allowed the rock cut shaft to be narrowed from its 2.4m diameter to approximately 1.2m square at the opening in the masonry (Figs 9.58 and 9.59).

East–west wall cg67 (0.60m wide) was constructed butting up against the well-head cg65. There were traces of mortar or rough plaster on both faces of the wall (there was no record of what it cut; the wall was never removed). The wall stepped in at a point just over c1m above the surface from which it was constructed and one course higher than the well-head step. Pit cg68 (0.35m deep; 1.20 by 2.20m) cut levelling cg131 (LUB 4) and contained material

thrown up from well-head construction cg65 – a large stone, together with silty clay with mortar patches and limestone fragments. The large stone from cg68 was actually mortared into a north–south wall cg69, the construction trench of which cut pit cg68 (Fig 9.60). The wall here was also offset c1m above its construction surface. Between the walls cg67 and cg69 and the well-head cg65 was room 2A; this room was bounded to the south by wall cg257 (no record of what it cut), which lay just outside the area of excavation but was noted in 1983 during the scheme to display the remains (Fig 9.61). To the north of wall cg67 was room 2E.

Walls cg70, all of one build, were erected to the west of the well. The construction trenches were not fully excavated as these walls were not removed. The presence of foundations was recorded in the one place where the construction trench was excavated; they consisted of rubble and mortar. An east wall, a west wall with inbuilt doorway, and an apse were all constructed with roughly dressed limestone blocks. The west wall (leading out from the rooms to the portico) was c1.10m wide with a doorway c2m across into a small room c3m square (room 2B; Fig 9.62). To the west, the area between wall cg62 and structure cg70 (room C) was interpreted as an internal portico (Jones and Gilmour 1980, 66–8). North of room 2B, divided by a wall cg97, was another room of the same east–west dimensions (room 2D); an apse cg70, (room 2F) lay to the south of B; the curve of the wall suggested that the widest internal measurement would have been c3.50m across and the opening would have been c6.50m wide. The east wall cg70, was c1m wide and had been bonded into the pre-existing well-head cg65 with single tile courses (Fig 9.63).

North–south and east–west walls cg67 and cg69 and structure cg70 were probably of the same

building programme as the well-head cg65. Well cg65 was bonded with ‘gritty pebble tempered sandy’ mortar. The limestone blocks of the wall cg67 were bonded with a mortar described as ‘gritty brownish-yellow’ mortar and wall cg69 with yellow mortar. Structure cg70 was bonded with a ‘hard gritty lime’ mortar. In spite of these diverging descriptions, they may well have been similar or even the same mortar.

The area between the north–south wall cg62 and the range itself was raised by c1.00m (Fig 9.48). Sealing cg70 were dumps of sandy clay with limestone cg71 (c0.60m thick) which were cut by trench cg72 which itself had been dug around the site of large limestone block cg64, probably involving the removal of whatever stood on it. This was sealed by a dump of brashy limestone in clay cg73 (0.15–0.25m thick). Robber trench cg74 was later cut through this dump to remove the remains of whatever had been supported by base cg61. Sealing the dump cg73 was a layer of compact limestone mortar with limestone and tile fragments cg75 (0.10m thick: 65.42m OD). Over it was a dark grey ashy silt with charcoal, mortar lumps and sandy patches cg76 (0.04m thick).

A dump of sandy silt with limestone cg77 (0.10–0.15m deep) sealed the flagstones cg63 (LUB 7) inside the walls of the apse cg70. Over this was a layer of hard compact sandy mortar cg77 (c64.75–65.00m OD). Sealing mortar cg77 was a spread of pale brown silty mortar with limestone rubble cg78 (c64.91–65.16m OD). A base silver *denarius* of Septimius Severus (AD 193–211) was found in cg78 and forms the best dating evidence for this building programme. Sealing layer cg76, mortar cg78 and robber trench fill cg74 were dumps sealed by building rubble cg79 (65.81–83m OD). Mortar cg77, mortar and rubble cg78, and rubble cg79 have all been interpreted as construction layers – mortar layers formed on the ground during the process of bonding the walls, and reused building debris used to build up the height of the floor in the apse as in the other parts of Structure 2. However, as the apse (LUB 17) had been heavily robbed cg416 (LUB 45), it is possible that both cg78 and cg79 had been disturbed by it; so it seems highly likely that the coin in cg78 was intrusive.

Fragments of *opus signinum* found within later robbing and associated levels to the south-east of the well-head (LUB 18), and particularly reused in the construction of Structure 6.1 (LUB 45), almost certainly derive from this phase of construction.

Pottery from this LUB totalled 215 sherds (from cg65, cg67, cg70, cg71, cg73, cg74 and cg79), most of which was residual, dating to the 1st century. Pottery from cg79 (112 sherds), although mostly of fabrics and types consistent with a 1st-century date, included some IAGR cooking pots which probably

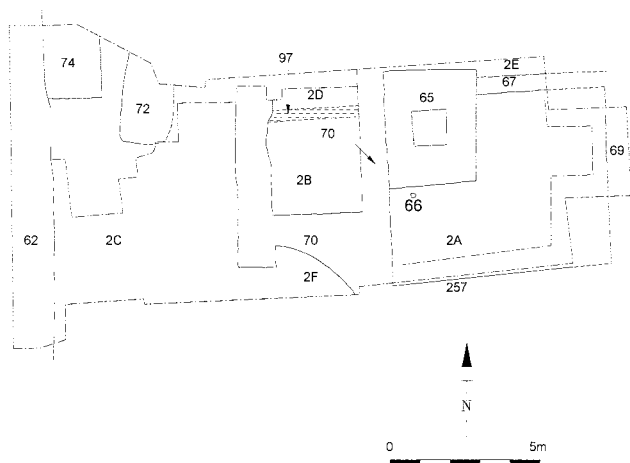


Fig 9.16 East range of forum: LUB 8

continued in use into the 2nd century; the only more certain evidence for a 2nd-century date came from GREY jars, one probably a rusticated type with burnish on the shoulder and interior of the rim, the other only a burnished shoulder sherd, and both these jars suggest an early 2nd-century date. Pottery from wall cg67 included intrusive material from the robbing of the wall (see LUB 18).

*LUB 9 East range: use of room 2A*  
(Figs 9.17–21 and 9.64)

**Room 2A.1** (Figs 9.17 and 9.64). Sealing posthole cg66, east–west wall cg67 and the structure cg70, to the east of the well (all LUB 8) was a floor of pebbles set in clay cg83 (between 65.64m and 65.94m OD).

Sealing pebbles cg83 were laminated layers of hard, brittle, gritty, pale yellow mortar cg84. Possibly cutting these layers cg84 were features – postholes, slots and stake-holes (cg320, cg326, cg328, cg323, cg324); however, it is quite possible that these layers actually built up around the posts, beams and stakes.

Circular posthole cg320 (0.13m deep), containing part of an amphora base, had a fill of loam and possibly burnt daub. It seems likely that the pit represented a posthole in which the amphora sherds formed part of the packing. Post-pit cg326 (depth unrecorded) was lined with upright stones and tiles. The removal of the post left hole and fill of grey sand cg327. At the edge of the excavation was a posthole/pit cg328.

Four stake-holes cg323 ran north–south; two cut alongside the well-head; these may have paired with two stake-holes cg321. Possibly contemporary with the stake-holes cg323 were three slots cg324, north of an east–west slot (0.21m deep; 0.10–0.20m wide) with stake-holes (0.30–0.40m apart) running east from the corner of the well-head; this was interrupted by two short north–south slots with a gap of 0.40m between them, presumably narrow doorways. The east–west slot possibly represented the line of a partition across the room, interrupted by a gap. There was also a north–south slot cg325 (0.16m deep; 0.20m wide) which ran for at least 1.20m from the eastern part of slot cg324; this slot is also best interpreted as an internal partition. The fill of the east–west slot cg324 was of grey sand, but the fills of the short north–south slots were charcoal and burnt sand/daub which also spread to seal the gap. The fills of cg324 were sealed in part by clay cg329, suggesting that this east–west partition went out of use.

The fills of the stake-holes cg323 and cg321 were pale grey and sandy except one, which was dark with charcoal. Slot cg325 had a fill of grey sand.

Pottery from cg83 (88 sherds) included a bowl similar to the B333 type, a body sherd possibly from

a bowl of B334 type, and a fragment of a cooking pot rim, not certainly in BB1 fabric, but of BB1 type, indicating a date possibly around the mid 2nd century. Pottery from cg325 included a BB1 dish base indicating that a date after the mid 2nd century is likely (bearing in mind the early 3rd-century coin from the room to the west).

**Room 2A.2** The fills of features cg321, cg323 and cg325, and layer cg329 were sealed subsequently by a layer of sandy ash with charcoal flecks cg330 which covered the whole area to the east and south of the well-head (max 0.08m with concentrated charcoal to south and east). This layer possibly represented the abandonment of the room for a while.

Sandy ash cg330 was sealed by patches of yellow hard gritty mortar cg331 (65.85m OD) which contained pebbles and fragments of tile. This possible surface was sealed by black and very dark grey ash cg332 (0.11m deep) in large patches, in turn covered partly by patches of pale grey and pale yellowish clay containing some pebble and burnt in places cg333, which probably represented a clay surface (65.95–65.98m OD). The sequence perhaps indicates either regular renewal of the floor surface, or, less likely, intermittent use of the room (the thick ash layers perhaps suggesting times of abandonment).

**Room 2A.3** (Fig 9.18) Crudely constructed wall-footings cg334 of limestone rubble bonded with earthy clay, which had been set into a curving trench (ie, at a corner of a wall division), cut into clay surface cg333. Also cutting the surface cg333 were two postholes cg336.

**Room 2A.4** (Fig 9.19) Postholes cg336 and foundations cg334 were sealed by a sandy deposit capped with a hard brittle mortar cg338, which covered most of the area excavated to the east of the well (65.92–65.98m OD). There was a large assemblage of pottery (234 sherds) from cg338, all

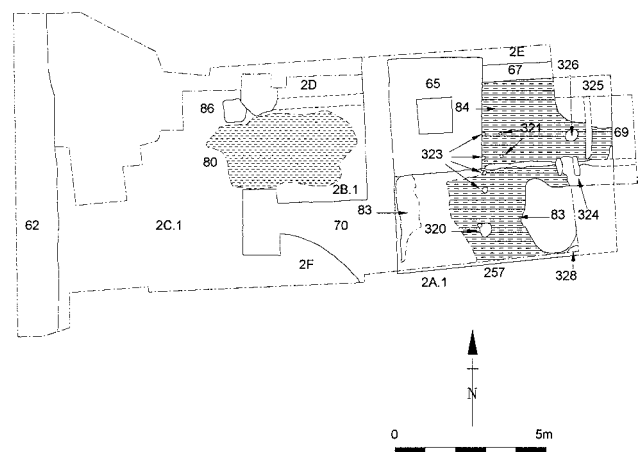


Fig 9.17 East range rooms 2A.1, 2B.1 and 2C.1: LUBs 9 and 13

of which was residual; however, the sherds were notable in that they included large proportions of several vessels, quite apart from the complete but broken Samian form 18R. Set on surface cg338 were the remains of what may have been a raised hearth cg339; only part of the outer casing of tile courses survived with some of the clay core. Cutting surface cg338 were two circular pits; pit cg340 (0.39m deep) was filled with charcoal, ash, slag and vitrified material; pit cg341 (0.20m deep) had a fill of ash and charcoal.

One intrusive very late Roman pottery sherd was recovered from cg338, perhaps indicating some contamination.

**Room 2A.5** (Fig 9.20) Over the filled pits and surface a thin layer of ash and charcoal cg342 had accumulated, perhaps evidence of a hearth. This was sealed by the remains of a degraded mortar surface cg343 (0.06m deep; 66.00m OD), followed by a clay floor cg344 (66.05–66.14m OD), which was described as being very worn in places. Cutting the clay floor cg344 was a shallow circular scoop filled with charcoal flecked gritty ash cg345; it contained pottery which could date as late as the early 3rd century.

Pottery from cg345 (12 sherds) included 5 sherds from a single BB1 plain rimmed dish with burnished arc decoration, and a PARC body sherd from a closed form; both of these would suggest a date of the later 2nd century, possibly extending just into the early 3rd century.

**Room 2A.6** (Fig 9.21) Over ash cg345 was a further mortar surface cg346. Over mortar cg346 which was a thin layer of ash cg347. Sealing ash cg347 was a degraded mortar floor cg348 (66.16–66.18m OD), over which was a layer of sandy ashy clay cg349, possibly the remains of a clay floor with hearth ash. Another decayed mortar surface cg350 (66.17m OD) partly sealed cg349; it was contemporary with posthole cg351. Pale brown/white clay cg352 (66.23m OD) provided a floor sealing both mortar cg350 and posthole cg351. Over this was a thin layer of sand cg353 (66.26m OD), possibly decayed mortar, burnt in places; it was contemporary with a stone-lined posthole cg354.

Pottery from cg346 (48 sherds) has stronger evidence for a 3rd-century date, including a BB1 plain rimmed dish probably with flattened burnished arc decoration, a dales ware jar rim, and four NVCC body sherds, one possibly from a flagon or jug in a light red-brown fabric. An *antoninianus* of Claudius II, issued AD 268–70, reinforces the mid 3rd-century date suggested by the pottery from this layer. Ash cg347 contained two 3rd-century coins, the latest of which was a Carausian issue of AD 286–93.

Finds from the whole sequence of deposits within Room 2A indicate that this area was used at times

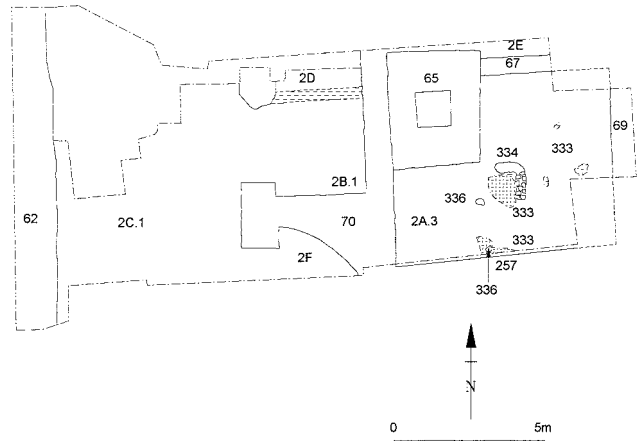


Fig 9.18 East range room 2A.3: LUB 9

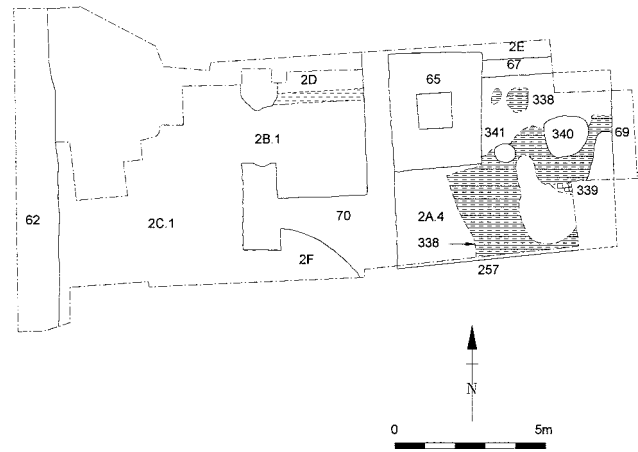


Fig 9.19 East range room 2A.4: LUB 9

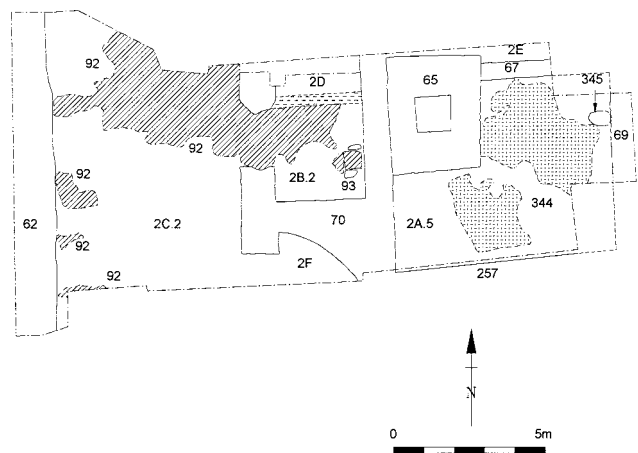


Fig 9.20 East range rooms 2A.5, 2B.2 and 2C.2: LUBs 9 and 14



for non-ferrous metalworking. Copper alloy waste suggests both casting and working in sheet metal, and perhaps wire work. Silver may also have been worked here, or at least refined, as suggested by several fragments of possible litharge. Two samples, from cg340 and cg342, were processed and analysed; both contained a very high quantity of slag, mostly similar to secondary iron smithing slag in external appearance but with a silica-rich interior. Hammer-scale was also detected in fairly large quantities, together with small scraps of iron, often no more than 3mm in length; this indicates that iron smithing was also practised here. The location of the hearth is unknown, but it may have lain beyond the limit of excavation in the south-east corner where there was a concentration of charcoal, although the latter may simply have been stored here (for use as fuel).

The sequence in Room 2A might be interpreted as beginning in the mid 2nd century, probably soon after the construction of the complex, were it not for the Severan coin suggesting an early 3rd-century construction date. The sequence ends in or after the late 3rd century (see below, LUB 10). Although 667 sherds were recovered from cg83, cg84, cg320, cg326, cg328, cg324, cg325, cg330, cg332, cg333, cg334, cg338, cg342, cg344, cg345, cg346, cg347, cg349, cg351 and cg352 most can only be dated to the 1st and early 2nd century. As indicated in the text (above), pottery from cg83, cg325, cg345 and cg346 and coins from cg346 and cg347 help considerably to date the sequence.

#### LUB 10 East range: room 2A.7 disuse

Ash cg355 (0.05m thick) sealed the burnt sand cg353 and posthole cg351 (both LUB 9); the ash cg355 was sealed by a layer of building debris cg356 made up of fragments of broken tile, stone and plaster in a gritty matrix (0.16–0.31m thick).

Pottery from cg355 (55 sherds) included a BB1 cooking pot body sherd with obtuse laticing and fettling internally, dales ware rims in both shell- and quartz-tempered fabrics, NVCC beaker sherds in later fabrics and a probable flagon or flask body sherd which suggest a mid to late 3rd-century date.

Twenty-seven coins were recovered from ash cg355; the latest of these is an irregular *Fel Temp Reparatio* issue of AD 350–364, but this may have been intrusive (fragments of 4th-century and post-medieval glass were also recovered from this layer, perhaps intrusive from slot cg359, LUB 11, which also contained post-medieval glass). Virtually all of the remainder are regular or irregular issues of the mid to late 3rd century and most post date AD 270. All could belong to a single circulation group and most show some evidence of wear, perhaps suggesting that the group as a whole belonged to the last quarter of the 3rd century; this accords well with the associated pottery.

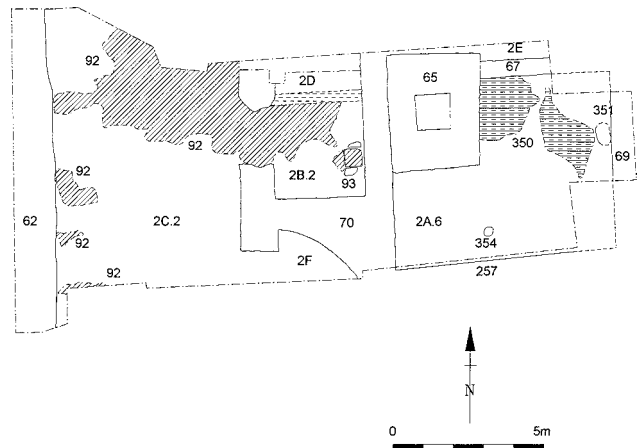


Fig 9.21 East Range Rooms 2A.6, 2B.2 and 2C.2: LUBs 9 and 14

The whole assemblage from cg355 is remarkable in that it shows an unusually high ratio (1:2) of coins to potsherds, all the more significant when it is considered in relation to the thickness (no more than 0.05 m) and relatively small area covered by the deposit. It is just possible that they represent the contents of a purse or safety box that had been dropped and subsequently lost, or simply abandoned, perhaps because of a fire within the building.

Pottery from cg356 (75 sherds) included a group of NVCC sherds, amongst which are body sherds likely to come from either flagons (one painted) or perhaps a jar, and the beakers are in later fabrics, including a funnel-necked with bead rim painted beaker, and another painted beaker sherd; these suggest a later 3rd-century date, slipping into the 4th century. An early 4th-century date for this group is suggested by a single coin, a Constantinian issue of AD 310.

#### LUB 11 East range: room 2A.8 (Fig 9.22)

Cutting into the debris cg356 was an east–west slot cg359 (0.26m deep; 0.48m across and at least 0.80m long) with fragments of tile and stones along its base. To the north of the slot was mortar debris with small pebbles cg357 (66.27m OD); the fill was slightly greenish near the east wall cg69. The slot and the mortar probably served a structural purpose. Both were sealed by ash cg360 (0.10–0.16m thick).

Pottery from cg359 (11 sherds) included 9 sherds of late shell-tempered ware, possible dales ware jars, a closed wheel-thrown vessel and body sherds from a bowl or dish; these indicate a probable mid to late 4th-century date. Pottery from cg357 (40 sherds) included late shell-tempered sherds, DWSH, including a sherd from a probable bowl or dish, NVCC beakers in later fabrics, one with painted decoration, and a handle from a late flask, while the GREY

sherds include a wide-mouthed bowl of Swanpool kiln type, and an inturned bead and flange bowl; these indicate a date in the later 4th century, the bead and flange bowl possibly indicating a very late 4th-century date. Pottery from cg360 (116 sherds) was quite highly fragmented and abraded, and included quantities of DWSH, and four sherds calcite and shell tempered CASH fabric; the NVCC sherds are mostly burnt sherds from closed vessels, with a box and lid; a GREY bead-and-flange bowl with a high bead also occurs. The date indicated for the pottery for cg360 is broadly mid to late 4th century, but probably late.

*LUB 12 East range: room 2A.9 (Fig 9.23)*

Sealing cg360 (LUB 11) were patches of crushed tile fragments with clay and ash (0.03–0.04m thick) cg361. The tile seems to have been deliberately crushed and may represent a surface (66.46m OD). Cutting the crushed tile was the construction trench (0.20m deep; 0.40m wide) for a wall cg398 with foundations of very rough limestone and reused masonry. The wall would have run east–west (a section c1m in length remained; the rest of the foundations had been cut away by later pits); it abutted the well-head c0.50m north of the south-east corner. Banking the foundations to the south were patches of white/red/brown burnt clay cg399 and to the north was a thick strip of pale yellow-brown clay cg400.

To the south-east of the wall cg398, in room 2A, sealing make-up/surface of crushed tile cg361, was a sandy deposit with stones (0.10m thick) cg409, sealed by a mortar deposit cg410 with small stones and fragments of tile (0.09m thick; 66.52m OD), possibly a surface. Dump cg409 contained fragmented sherds of residual pottery. Pit cg413 cut debris cg410 as well as cutting against the well-head; it had a fill of building debris and some burnt bone. Debris cg410 was also cut by a pit cg411 (0.63m deep) with a steep-sided circular hole packed with medium sized stones; it was interpreted either as a post-pit or as a soakaway. Possible surface cg410 was sealed by a layer of burnt mortar, tile, charcoal flecks and fine black ash cg412 (0.06m thick). Sealing this layer was compact loam with fragments of limestone and mortar cg458 (0.04m thick).

The wall cg398 divided this area to the south-east of the well-head from the area to the north; sealing the clay strip cg400 to the north was an area of crushed tile and plaster cg401 (66.32–.49m OD), possibly make-up for a floor or used as a surface. It was sealed by a thickening cg402 to the wall foundation, which survived as a line of stones. Further north, sealing crushed tile cg401 was a spread of very pale yellow and yellowish-red burnt clay cg406 (0.12m deep; 66.40m OD), possibly the remains of a clay floor. This was sealed in turn by a green/brown

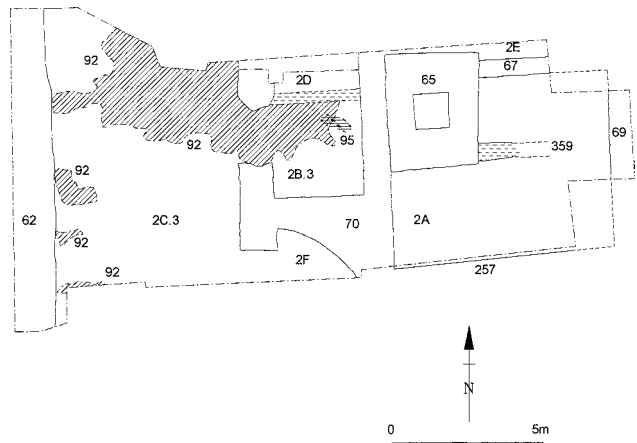


Fig 9.22 East range rooms 2A, 2B.3 and 2C.3: LUBs 11 and 14

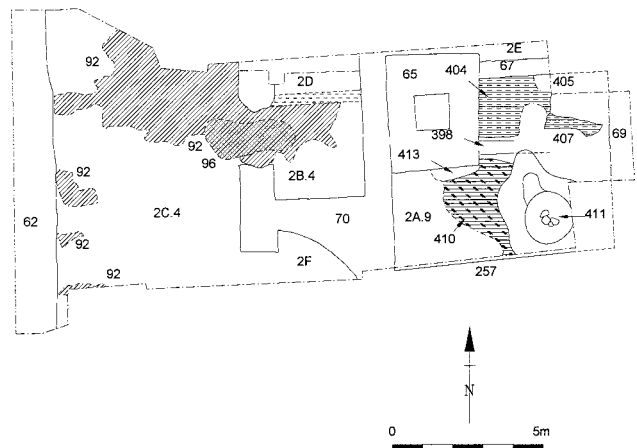


Fig 9.23 East range rooms 2A, 2B.4 and 2C.4: LUBs 12 and 14

crumbly fine deposit cg407 with mortar patches and small stones (66.55m OD), possibly the remains of a surface. In the vicinity of the wall there was a different sequence of events; a thin deposit of degraded mortar and silt cg403, perhaps a floor (66.48m OD) included notably fragmented pottery. Floor cg403 was sealed by a surface of closely packed small pebbles, stones and tile fragments set in loose brownish-yellow mortar cg404 (66.50m OD). Cutting pebbles cg404 was a pit cg405 (0.29m deep; dimensions lost in baulk) with a bottom gritty fill and a secondary fill of a dark deposit, in which were found eleven coins together with pottery, some sherds of which were fragmented.

Pottery from LUB 12 (405 sherds) from cg361, cg398, cg399, cg400, cg401, cg403, cg404, cg405, cg406, cg407, cg409, cg410, cg413 and cg458 was mostly residual; only sherds from cg398, cg399, cg403 and cg405 dated the sequence. Pottery from cg398

(18 sherds) included late shell-tempered DWSH, as did pottery from cg399 (13 sherds) amongst which was a nearly complete plain rimmed dish; a later 4th-century date is indicated. Pottery from cg403 (55 sherds) included a DWSH inturned bead-and-flange bowl, also in GREY fabric, rouletted decoration on a GREY closed vessel normally only seen in 4th-century contexts, and a footring of a bowl, possibly a copy of Samian form 38 in a red slipped HADOX fabric; these suggest a late to very late 4th-century date. Pottery from cg405 (98 sherds) included LCOA body sherds, late shell-tempered DWSH including a body or dish sherd, painted and rouletted NVCC beakers in late fabrics, and a GREY string-marked base with decoration typical of Swanpool kiln products; a late to very late 4th-century date is indicated. Dump cg409 contained three intrusive sherds of late Saxon LKT and cg410 contained an intrusive late Saxon thumb crucible.

*LUB 13 Room 2B.1 and portico 2C.1*  
(Figs 9.17 and 9.65)

To the west of room 2A and the well-head was a small room 2B, c3m square. This room may have given access to the well; it was reached by means of a doorway on to a wide stretch of north-south running corridor c6m wide, interpreted as the portico overlooking the forum courtyard. The length of the portico could not be determined, but measured at least 9m (it extended beyond the limit of excavation in both directions). The room 2B, and the portico 2C shared the same surfaces.

Sealing construction mortar cg79 (LUB 8) was a sandy mortar with darker lenses of thin silty material within it cg80 (0.05m). The lenses suggest a sequence of surfaces, the top of which varied between 65.79 and 65.93m OD. A small, thin spread of black charcoal cg81 with traces of dark silt sealed part of mortar layer cg80. Over this were flat slightly worn limestones with some large pieces of tile set in silty sand cg82. This may have provided a surface c65.90–65.92m OD. It was sealed by silty sand with small limestone chips and charcoal flecks cg88 (0.01m thick), possibly a further surface or make-up for one.

Over surface cg82 was a hard yellow compact mortar layer cg89 which probably acted as a mortar floor at 65.93–65.97m OD. To the north-west of the doorway into room 2B.1 and cutting mortar cg89 was a rectangular pit (0.75m by 0.60m and 0.20m deep) with an *opus signinum* base cg86 (Fig 9.65). The bottom of the pit was grooved along the edges; these grooves perhaps took wooden shuttering. The feature may have acted in some way as the base for a water butt as suggested by Jones and Gilmour (1980, 67) and was similar in construction to cg93 (LUB 14). It had a fill of silty sand with coarse

rubble and mortar cg87; mortar floor cg89 was sealed by a fine silty sand cg90.

Pottery from this LUB (105 sherds) from cg81, cg82, cg87 and cg88 was mostly residual or only broadly datable. Pottery from cg81 consisted of two body sherds, barely datable beyond a broad 1st- to 2nd-century range. Pottery from cg82 (38 sherds) was barely datable beyond a 1st- to 2nd-century range. Pottery from cg87 (3 sherds) included a single SAMCG form 18/31 dated to the Hadrianic period, which gives the date of early 2nd century. Pottery from cg88 (62 sherds) can only be broadly dated to the 1st to 2nd centuries. In view of evidence suggesting an early 3rd-century construction date, this material was derived from earlier contexts.

There is a huge jump in date between this LUB and the next; there may have been some truncation of deposits in the early 3rd century, removing late 2nd- to mid 3rd-century stratigraphy. The insertion of the substantial *opus signinum* floor cg92 (LUB 14) could easily have meant that some underlying deposits were first removed.

*LUB 14 Portico 2B.2–4 and room 2C.2–4*  
(Figs 9.20–23, 9.48 and 9.66)

**Room 2B.2 and portico 2C.2** (Fig 9.20–21). Over floor cg89 (LUB 13) was a sandy brown deposit with greenish tinges in places cg91. Layer cg91 was sealed by pitched stone footings, make-up for an *opus signinum* floor cg92 at 65.92–66.14m OD (Fig 9.48). A floor of this material would have been expensive, but appropriate to a civic building, as well as practical with the well being used as a source of water.

The surface cg92 slightly overlapped the truncated wall to the south of the doorway cg70. This tends to suggest that this wall had been truncated, possibly together with the apse, although this could not be proven owing to later activity in that area. A square feature cg93 (0.26m deep) was located against the east side of room 2B.2 (Fig 9.66). It was in the form of a shallow pit with a concrete base (described as a piece which had been chipped to shape). There was a gap between the concrete and the sides of the pit, and against the west side of the pit three nails were recovered. Feature cg93 was probably partially of wood construction, possibly another water-butt associated with the well; it was similar in construction to cg86. It was probably associated with *opus signinum* floor cg92.

Pottery from cg91 (82 sherds) has little strong dating evidence in this group, but certain burnished decoration on GREY body sherds and a jar type similar to a later Swanpool type could tentatively suggest a 3rd-century or later date; more definite is the string-marked base and sherds of a large jar, most of which occurred in cg94, probably from the

Swanpool kilns, and therefore suggesting late 3rd century at the earliest, and probably more 4th century.

**Room 2B.3 and portico 2C.3** (Fig 9.22). Feature cg93 was backfilled with clayey stoney brown deposit cg94, which extended over part of the room. There was a patch of cobbles cg95 (66.14m OD) over cg94, patching the opus signinum cg92. Pottery from cg94 (38 sherds) included 37 which were from the single GREY large jar, mentioned above.

**Room 2B.4 and portico 2C.4** (Fig 9.23). There was a layer of yellowish-brown very sandy silt, some traces of mortar, some fragments of painted plaster and limestone chips cg96 (0.02m thick) over opus signinum floor cg92. Pottery from layer cg96 was very fragmented and abraded, possibly being caused either by being redeposited or by trampling. Pottery from cg96 (334 sherds) include classic Swanpool kiln products such as collared rim jars with notched decoration, DWSH dales ware jar, NVCC closed vessels with painted and rouletted decoration in later fabrics, and fragmentary shell-tempered rims, possibly of the double lid-seated type; a 4th-century date is certain, and probably late 4th century. The latest of two Constantinian coins from cg96 was issued AD 341–6 (reverse type Victoriae DD Augg Q NN).

Pottery from this LUB (499 sherds) came from cg91, cg92, cg94, cg95 and was dominated by the group from cg96; of these, pottery from cg91, cg94 and cg96 dated the sequence from the late 3rd/early 4th century through to the late 4th century.

#### *LUB 15 Room 2D (Fig 9.49)*

To the north of room C was an east–west internal wall cg97 which had been totally robbed away by later robber trench cg414, LUB 88 (Fig 9.49). It would have sealed or cut the construction fills cg70. It was probably part of the original scheme, but conceivably it could have been inserted at a later date and therefore have sealed or cut later floor levels. Its relationship to room 2B to the south is unknown. The floors of the room to the north which sealed it were not completely excavated, so there may have been earlier floors. The area excavated was limited, but a sequence of surfaces was recovered.

**Room 2D.1** At the limit of excavation make-up dumps of building debris were sealed by mortar cg98 which may have acted as a surface (recorded at 69.91–69.93m OD – higher than later surfaces because it probably curved up to seal the internal wall). There were pottery sherd links between cg98, clay cg352, room 2A.6 LUB 10, and silty sand cg82, room 2B.1 LUB 13, suggesting a certain movement between areas; the sherds from cg98 were somewhat fragmented.

Over mortar cg98 was make-up capped by a

mortar surface cg99 (65.68m OD). This was sealed by a further mortar layer cg100 (65.69m OD), over which was a patch of whitish-yellow mortar cg101 (65.70m OD), the surviving fragment of which lapped up against the internal wall. Over mortar cg101 was a layer of yellowish-grey sand cg102 (0.04m thick). This was sealed by make-up, sand with limestone and pebbles and a surface of hard compact yellow clay cg103 with tile fragments (66.20m OD). Painted wallplaster cg104, applied to the east wall of the room, also sealed clay floor cg103, indicating that it had been applied after the floor had been laid. Partially sealing this plaster cg104 and spreading over the floor was a layer of decayed mortar cg105 (66.23m OD), over which was a layer of dark greenish-grey sandy silt cg106 containing pebbles and tile fragments.

Pottery from cg98 (153 sherds) included 28 CR flagon type sherds, and 13 sherds of a single GFIN cordoned jar or beaker with fine rouletted decoration; an early 2nd-century date is probable. As with rooms B and C, there is an apparent gap in the dated stratigraphy between the mid 2nd and the mid 3rd century. Perhaps here too, this has been caused by a truncation of deposits, probably because of the 3rd-century rebuild or alternatively just very clean 2nd- and early 3rd-century surfaces (so that the above deposits contained only residual material).

**Room 2D.2** Silt cg106 was sealed by dark grey silty sand cg107 with building debris. Over cg107 was a layer of compact clay with some tile chips and flecks of charcoal which probably represented the make-up for a surface which was made up of horizontally laid limestone slabs and tile fragments cg108. The surface cg108 was well-worn, at 66.26m OD. Several iron nails from floor cg103 in Room 2D.1, from cg107 and floor cg108 in Room 2D.2, contained non-ferrous metal droplets within their corrosion products, a feature usually indicative of metalworking.

Pottery from cg107 (4 sherds) included a NVCC barbotine beaker sherd in a light brown fabric, suggesting a 3rd-century date, later rather than early. Pottery from cg108 (33 sherds) included 11 which come from a single GREY grooved rim undecorated dish which, together with four probable DWSH sherds, suggest a mid 3rd-century date.

**Room 2D.3** Surface cg108 was sealed by an ashy deposit with charcoal cg388. Over layer cg388 there was a further charcoal layer cg389. Layer cg389 was sealed by a layer of degraded mortar cg390 (66.28m OD). Pottery sherd links from cg389 and cg390 to slot cg387, room 2E (LUB 16) suggest a relationship between the rooms.

Pottery from cg388 (5 body sherds) included a DWSH body sherd, probably dating to the mid 3rd century. Pottery from cg389 (5 sherds) included a

NVCC burnt beaker body sherd probably in a later fabric, suggesting a mid 3rd-century date. Pottery from cg390 (37 sherds) included 17 DWSH sherds amongst which are sherds from a bowl with a triangular rim, and one sherd from another open form; there are also a GREY bead-and-flange bowl and a NVCC rouletted beaker in a later fabric. A later 4th-century date is indicated for the pottery from cg390.

**Room 2D.4** Mortar cg390 was cut by pit cg391 which had a patch of burning sealed by ash and charcoal at the bottom. It was sealed by building debris cg358.

Pottery from this LUB (265 sherds) came from cg98, cg102, cg103m cg105, cg106, cg107, cg108, cg358, cg388, cg389 and cg390. However, it was only sherds from cg98, cg107, cg108, cg388, cg389 and cg390 which might be used to date the sequence in this room (as described above), and even then most may have been residual. They indicate dates from the early 2nd to the late 4th century, with a gap in the sequence – there was no evidence for deposits dated between the mid 2nd and mid 3rd century.

#### *LUB 16 Room 2E (unplanned layers)*

The area excavated north of the east–west wall cg67, located to the north of room 2A, was very limited, but in spite of this a sequence of floors was revealed.

**Room 2E.1** At the limit of excavation was a layer of sandy mortar with silt, containing many limestone fragments, pebbles and chips of tile cg85 (66.77m OD). It may not have been the first surface associated with wall cg67 and probably sealed earlier dumps, but these were never excavated. Sandy mortar cg85 was sealed by a thin layer of charcoal with silt cg366. Over this was a thin layer of dark silty sand with other material cg367, possibly a make-up layer. Possible make-up cg367 was then sealed by sandy clay with more fragments of building debris cg368 (66.18m OD) which may have been used as a surface. Over it was a layer of dark sandy clay with small debris inclusions cg369 (66.20m OD). Light brown clay with flecks and chips cg370 (66.22m OD) sealed the dark clay; probably also a surface. It was cut by an east–west slot cg371 (0.20m deep; 0.20m across; at least 2.50m long), which ran alongside wall cg67 (LUB 8); it had a fill of dark sandy silt with debris inclusions.

The pottery from cg368 (4 sherds) included a body sherd of IAGR which could span the 1st to 2nd centuries.

**Room 2E.2** The slot cg371 was sealed by compact clay layer cg372 (66.25m OD); the clay formed a surface, with evidence of a stake-hole cg373. A thin layer of ash cg374 sealed the stake-hole. Over this was a layer of degraded mortar cg375 (66.30m OD), possibly the remains of a surface. It was sealed by a

thin layer of clayey ash/charcoal cg376, a clay floor with hearth debris. Over this was sand, possibly the degraded remains of another mortar layer cg377 (66.35m OD), into which was cut stake-hole cg378. It was sealed by a thin layer of ash cg379. A further layer of gritty sand cg380, which may have represented decayed mortar cg380 (66.37m OD), was sealed by a thin ash layer cg381. It was sealed by a layer of brown compact clay cg382 (66.34m OD), possibly a surface, which was cut by a stake-hole cg383. This was sealed by ash layer cg384. Over layer cg384 was a spread of burnt daub/clay cg385 (66.39m OD), sealed by a thin ashy layer cg386. An antoninianus of Gallienus, AD 253–68, was recovered from cg372; the latest of three coins from cg379 was an irregular Fel Temp Reparatio of AD 354–64, although this may be an intrusive piece.

Pottery from cg381 (21 sherds) included DWSH body sherds, a GREY bowl rim fragment possibly as the Rookery Lane kiln type 29, large sherds of an undecorated plain-rimmed dish, a fragment from an everted rim jar, possibly from the Swanpool kilns, and the NVCC included a painted beaker of the type RPNV52 in a late fabric and sherds from a slit-folded beaker; a date around the mid 4th century is probable. Pottery from cg384 included a flake from a DWSH bowl or dish, indicating a mid to late 4th-century date.

**Room 2E.3** Ashy layer cg386 was cut by north–south slot (0.30m deep; 0.50m across) cg387; the bottom fill was made up of tile fragments and stone in a loose gritty clayey deposit, sealed by a clayey deposit with stones.

Pottery from cg387 (122 sherds) included a number of definite Swanpool kiln types, and the Swanpool oxidized SPOX and colour-coated SPCC fabrics, the latter as a body sherd only from a painted beaker; apart from DWSH dales ware jars and a dish, a small shell-tempered body sherd is almost certainly from a South Midlands shell-tempered jar (SMSH). The latest of sixteen coins from cg387 (see Discussion) was a *Securitas Reipublicae* issue of Valens, AD 367–75, but a late 4th-century date is indicated by the pottery.

There were 172 sherds from this LUB, from cg367, cg268, cg371, cg381, cg382, cg384, cg386 and cg387. The dating sequence is created by pottery from cg368, coins from cg372 and cg379, pottery from cg381, cg384 and cg387, together with coins from cg387 (see description above); the sequence of room 2E dates from the early 2nd century (pre-construction material?) to the late 4th century.

#### *LUB 17 Room 2F*

Any surfaces in the apse had been removed by later robbing cg416 (LUB 45). There was no dating evidence.

*LUB 18 Robbing and pits (Figs 9.24 and 9.48)*

In room 2B, cutting cg96 (LUB 14) was a small pit or posthole cg393 sealed by demolition debris cg392 (0.09–0.12m thick; Fig 9.48) which was then cut by small pit or posthole cg396.

In room 2E, to the north of Roman wall cg67 (LUB 8) (to the north-east of the site), sealing Roman ash layer cg386 (LUB 16), was a layer of demolition debris, mortary debris with small stones and some tile fragments cg395 (0.14m thick). This was sealed by cg408 (below).

In room 2A, to the south of the well-head, sealing/cutting Roman layer cg332 (LUB 9), were several layers of demolition material cg364 which were most probably the fill of a robber trench, the definition of which had been lost by later truncation. This was cut by a pit cg452 (LUB 50).

Also in room 2A, pit cg411 (LUB 12) was sealed by a fill of debris cg415; a silty deposit with tile and painted plaster (0.43m deep) was followed by a block of fallen masonry (probably from the wall cg257, LUB 8, just beyond the southern limit of excavation) with three courses of bonding tile and sealed by a silty clayish deposit. Cutting the fill cg415 was a small pit cg459 filled with a soft fine deposit. This was sealed by cg460 (see below).

Sealing slot fill debris cg395 in room 2E, and pit fill cg415 in room 2A, as well as cg387 (LUB 15) in 2D, pit fill cg405 (LUB 12) in 2A, mortary layer cg407 (LUB 12) in 2A, and clay cg399 (LUB 12) in 2A, was a brown sandy slightly clayish deposit with mortary inclusions and charcoal flecking cg408 (up to 0.30m thick); this would appear to represent a build up of debris or a dump among the remains of the decaying or demolished building. It would seem likely that wall cg67 (LUB 8) was robbed at least to this level, as cg408 was found both to the north and the south of this wall. Sealing it, as well as layer

cg458 (LUB 12) in room 2A and pit cg459 in room 2A, was an area of loose, hard mortar debris with stone, plaster, broken tile, and iron nails cg460 (up to 0.30m thick; 66.42 to 66.59m OD); this possibly represents collapse or robbing material. Layer cg460 was sealed and cut by activity in LUB 50.

The apse (room 2F) and the well-head itself may have been robbed during this period. Only the robbing deposits themselves were truncated by later activities (LUBs 45 and 107). The wall cg62 to the west of room 2C may well have been robbed during this period; the pottery from the wall included a sherd of DWSH and one of GREY BFBH, giving a late 3rd- or more probably 4th-century date, but they were probably residual. The floor cg92 (LUB 14) of room 2C itself was cut into by later inhumations (LUBs 28 and 29).

There were 212 pottery sherds from this LUB; these were recovered from cg364, cg392, cg393, cg395, cg396, cg408, cg415, cg459 and cg460. Many of the sherds were residual but pottery from cg393, cg396 and cg415 dates the LUB to the late to very late 4th century. Pottery from cg393 (14 sherds) included a DWSH double lid-seated jar, a GREY high bead-and-flange bowl, and a NVCC body sherd from a closed painted vessel in a late fabric; these sherds in particular indicate a date in the late to very late 4th century. Pottery from cg396 (6 sherds) included the late LCOA fabric, indicating a late to very late 4th-century date. Pottery from cg415 (122 sherds) included a DWSH double-lid-seated jar, a GREY bowl with inturned bead and flange, a NVCC bead-and-flange bowl, an OXRC bowl of Samian form 38, SPX sherds from a closed possible flask and an open vessel with painted decoration, and a probable SMSH jar sherd; there was no LCOA, but otherwise the material would date to the late or very late 4th century.

Pit cg396 also contained a single intrusive Saxo-Norman sherd of LFS, and pit fill cg415 contained two intrusive sherds of 10th- or 11th-century date.

*Very Late Roman to Middle/Late Saxon*

The robbing and pitting (LUB 18) of the east range was dated by the pottery as late to very late 4th century; in the absence of a ceramic tradition for the next century or so it is likely that it continued into this period.

Cutting through the forum surfaces (LUB 5) was a timber slot structure LUB 19, the undated remains of a possible small church, Structure 3. This was cut by possible scaffolding postholes LUB 20 for the later timber slot structure LUB 21, an apsidal church, Structure 4. Structures 3 and 4 could date any time from the very late Roman period to as late as the Middle Saxon period (from the stratigraphy).

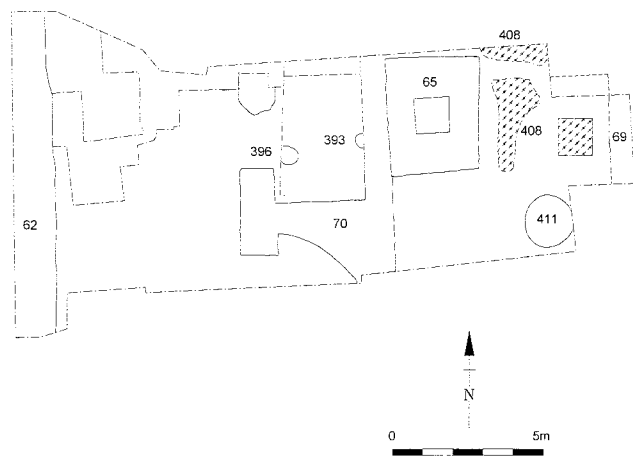


Fig 9.24 Robbing and pits: LUB 18

Cutting the fill of the north–south slot of the second church Structure 4 (LUB 21) were the remains of two inhumations **LUB 22 and 23**. These were probably inserted into the construction fill of this slot; LUB 23 at least represents re-interred remains.

Positioned within the area of the apsidal church (LUB 21) was a cist burial **LUB 24**. Although no trace of the corpse was found, a 7th-century hanging bowl was recovered from the grave (Hunter and Foley 1987).

A number of postholes **LUB 25** post-dated the apsidal church (LUB 21), and may have been associated with the graveyard. Several inhumations directly cut the underlying Roman stratigraphy. One **LUB 26** cut LUB 5; others **LUBs 27, 28 and 29**, at the east end of the site, cut LUBs 14 and/or 18.

The western part and also areas to its east were reworked from graveyard activity and the Roman stratigraphy became sealed by a layer of sandy loam with limestone chips **LUB 30**. Cutting inhumation LUB 26 were inhumations **LUB 31**. Cutting LUB 30 were inhumations **LUBs 32–42**. The range of radiocarbon burial dates suggests that the burial ground was in use for several centuries, certainly from the Middle Saxon period, if not before.

A single cell stone-founded building, Structure 5 **LUB 43**, cut inhumations LUB 32; this suggests that the earliest date of construction could possibly be the Middle Saxon period. On the basis of construction techniques, however, it may be more likely that this building dated to the Late Saxon period.

Radiocarbon dating associated with the use of this building **LUB 44** would also favour a Late Saxon date.

*LUB 19 Structure 3; possible church*  
(Figs 9.25, 9.67 and 9.68)

Recorded as cutting through forum surface cg125 (LUB 5), but possibly having removed later surfaces, were slots cg135 towards the west end of the site. Together with a north–south internal slot and an east–west internal slot (Fig 9.68), they appear to have formed the north-east corner of a structure at least c6m east–west by 6m wide. The slots varied in width between 0.30 and 0.65m across and in depth between 0.13 and 0.36m. One of the north–south slots showed signs of construction backfill which would have packed a horizontal beam; the packing lay along the east side of the slot. At its south end, the construction backfill consisted of sandy clay with large tile fragments with many limestone fragments, white plaster and pebble. At the north-east corner of the structure, the packing consisted of several reused flat slabs (worn, with evidence of burning) probably from the forum courtyard; these were set in dark brown loose clayey loam with pebbles, tile fragments, limestone chips and mortar lumps. There was further mention in the site records of large, worn limestone slabs at the bottom of a slot. Along the north–south internal slot there had been four posts c1.30m apart (postholes minimum diameter 0.30m), but not definitely integral with the external

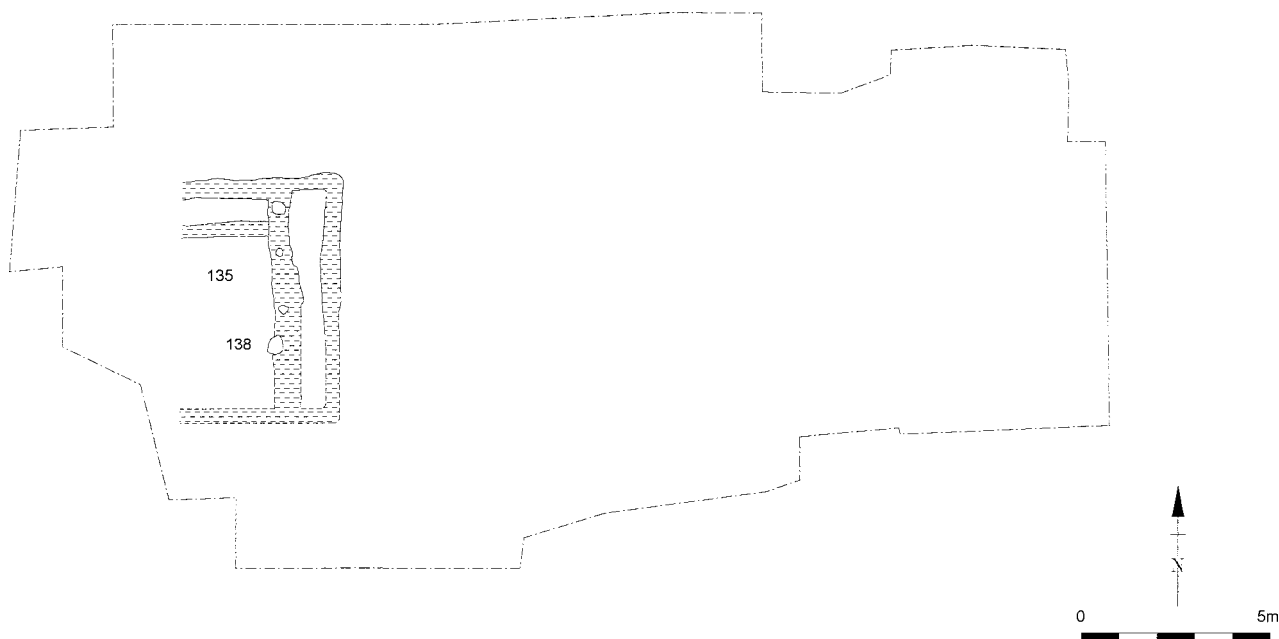


Fig 9.25 Possible church (Structure 3): LUB 19

slots as no corner posts survived; the trench had been backfilled with a construction fill of brown, white flecked clay with charcoal flecks, tile chips and limestone fragments. As first found, this structure was assumed to belong to the early *colonia* period (Jones and Gilmour 1980), since its cut features were found at the same level as others of the *colonia* period, other relationships having been destroyed by later disturbances.

The beams and posts were later removed from slots cg135 and the postholes and slots backfilled with sandy clay/loam with white clay, white plaster or white limey flecks, limestone and tile chips and fragments cg136.

This structure cut the forum courtyard (LUB 5) and was itself cut by postholes (LUB 20); the position of Structure 3 may have influenced the construction of Structure 4 (LUB 21). When their plans are seen together, it can be seen that where Structure 3 would have made a return for its south wall, the wall trench of Structure 4 was wider. It is possible that Structure 4 was a replacement for Structure 3. The 24 sherds of Roman pottery from cg136 have little to date them; they were small and fragmented and two were from Roman crucibles. The two sherds from cg135 can be broadly dated to the 1st to 2nd century, which obviously influenced the earlier interpretation. There is nothing against the interpretation of this building as being post-Roman, but specific dating evidence is not available. The building construction would seem to have been timber framed, perhaps with an earth-

fast internal division to the east of the building. The function of the building may have been as a church, on an east-west axis, with a separate area to the east of it for a small altar.

#### LUB 20 Postholes (Fig 9.26)

The depths of the postholes are not given here, as due to the subsequent truncation of the site by inhumations, the depths recovered on excavation would have fallen far short of their original depths.

A large number of postholes cg138 (twenty-six altogether) were grouped as possibly being contemporary; six of these cut the backfill cg136 of Structure 3 (LUB 19) in such a way as to suggest that Structure 3 (LUB 19) had been demolished. Two postholes were recorded as cutting layers of forum surfaces (LUB 6), but although most of the other postholes were recorded as cutting cg2 (LUB 0), they were probably cut from higher up – their relationships having been truncated. All twenty-six postholes had backfills of sandy clay and were generally recorded as being sealed by later loam cg149 (LUB 30).

Most of the postholes were in the area of the succeeding structure, and may have represented some sort of internal scaffolding to erect the timber framework of Structure 4 (LUB 21). There were a few outliers – four to the south and one to the east – which may have been used in other ways. There was no dating evidence for these postholes.

There were five other postholes cg302 which are

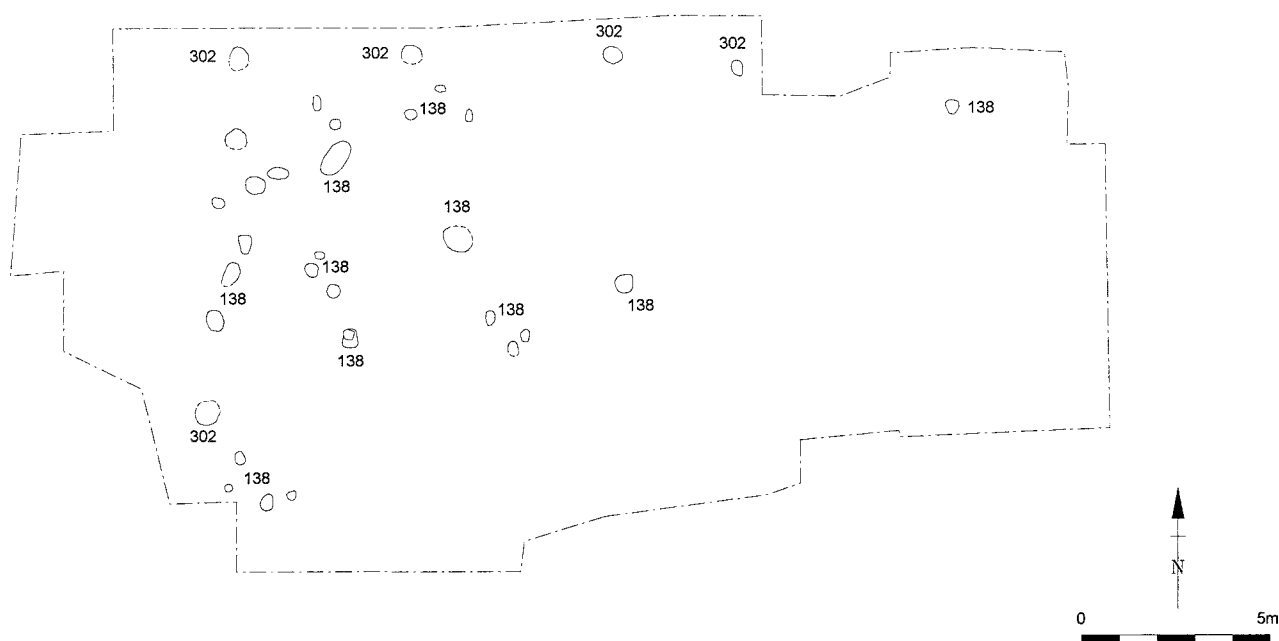


Fig 9.26 Possible scaffolding postholes: LUB 20



even more likely to have been related to the construction of Structure 4 (LUB 21) due to their location outside the north wall of the structure. These are recorded as cutting cg2 (LUB 0), but also perhaps cut surfaces (LUB 5). These postholes also had fills of sandy clay.

*LUB 21 Structure 4: Apical-ended church*  
(Figs 9.27, 9.69, 9.70 and 9.71)

Cutting Structure 3 (LUB 19) were the slots of a structure cg142 (Figs 9.69 and 9.70). Two parallel east–west slots were linked by a north–south slot at their east end. The east–west slots were 0.37–0.50m deep and 1.00–1.15m wide; they were cut from 64.71m OD. The north–south slot was 9.20m long, 0.30m deep and cut from 64.66m OD. There was a shallow elliptical or semi-circular slot to the east which was 0.15m deep and 0.80m wide. The main body of the building measured at least 15m, possibly up to 20m, east–west and c8m north–south; the elliptical east end had internal measurements of c6m east–west by 7m north–south.

In the southern east–west slot limestone blocks had been placed vertically and bonded with dark yellowish-brown slightly clayey loam to form a series of short channels (Fig 9.71); there was also a mass of limestone slabs and fragments some of which were also set vertically and were pitched very loosely with tile chips, bonded with yellowish-brown very gritty clay.

Five postholes were recorded within the north–south slot. There was no indication that the postholes may have been used for stone plinths, as considered at the time of excavation on the assumption that the building was constructed of stone (see Discussion). The postholes were oval/rectangular in shape; the removal of the posts created voids with north–south measurements ranging between 0.55–0.70m and

east–west measurements ranging between 0.40–0.65m; the posts must have originally sunk at least 0.42–0.60m below the top of the slot.

The lower fill cg143 of the north–south slot was described as being made up of flat limestone fragments which were lying horizontally and roughly set in position, bonded by dark fine loose sandy loam with limestone chips and many pebbles. This fill was only found in small patches, between the five postholes. The fill cg143 of the shallow semicircular slot did not contain the large stones characteristic of the north–south slot; it was described as yellowish-brown loose fine very sandy clay with limestone chips and fragments, tile fragments, pebbles, mortar, charcoal flecks and some patches of brownish-yellow very sandy clay.

It seems that much of the fill cg143 of the slots of Structure 4 had been disturbed, possibly due to the removal of beams and posts. The fills of the east–west slots were described as yellowish-brown loose sandy clayey loam with limestone chips, pebbles, tile fragments, mortar and charcoal flecks, large irregular limestone fragments and slabs pitched into the material. The posthole on the south side of the structure had a fill of yellowish-brown very sandy clay, with limestone tile chips with carbon flecks.

The initial interpretation of this structure was as a stone building (see Jones 1994, and Discussion). It was assumed that the “robber trenches” followed a construction trench cut and that the wall had been later dismantled, but the stone not removed. The lack of structural detail on the northern east–west slot may have been due to this assumption, but could possibly have been due to disturbance of the slot fills cg143 on extraction of the timbers. The record of channels between the stones in the south and east slots, and the presence of large vertical, horizontal and pitched pieces of stone appears, however, to indicate that lengths of wooden beam had been packed into place with slabs of stone. The presence of beams into which posts were inserted suggest a timber frame construction for the core of the building, with a screen based on posts dividing the west of the structure from the semicircular apse. There was evidence for a post set just to the south, but cutting the southern east–west slot of the south wall of the structure. The post had apparently been extracted from the backfill of the slot, leaving an oval hole 0.25m deep, 0.50 by 0.73m. Could this posthole have indicated a southern doorway? The apse was probably a relatively insubstantial part of the building; the shallow slot possibly held short beams supporting posts, which did not need packing with stone. It was possible that the apse did not support as high a roof as the rest of the building.

The postholes along the east end of the structure had fills of loose, yellowish-brown, fine, very

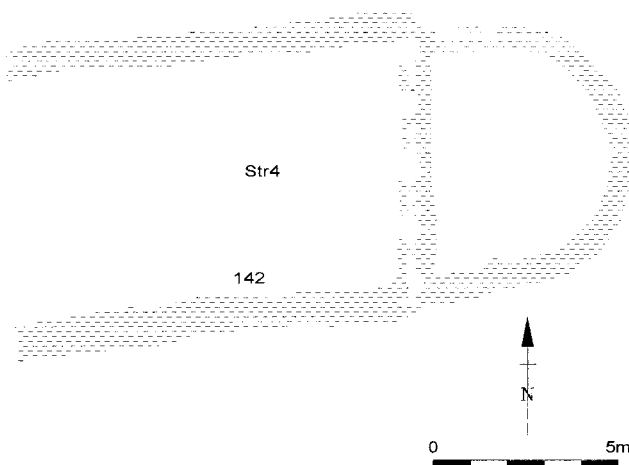


Fig 9.27 Apical church (Structure 4): LUB 21

sandy/gritty clay with tile fragments, pebbles and limestone chips. The upper fill of the north–south slot, which was recorded as sealing the postholes, was made up of large limestone slabs and fragments, some of them ‘monumental’ in scale and lying ‘haphazardly’ within the slot, together with small tile fragments lying in a loose, mixed stoney, yellowish-brown, fine, sandy clayey loam with pebble and tile fragments. The later truncation of the demolished building has blurred the distinction between demolition debris and construction debris. Although the fills of the postholes may well indicate a post-demolition deposit, the upper fill of the north–south trench may well represent disturbed construction fill, rather than demolition.

While it seems likely that all the surfaces belonging to this building had been truncated, it is just possible that surface cg141 (LUB 5) may have belonged to the building, or could have been used as such, rather than being the last of the forum surfaces. If so, the Theodosian coin could date its use. More probably, it was a residual find, together with the metalworking debris from cg141 (see the Discussion).

The 93 sherds of pottery from this LUB were all Roman in date; 92 came from cg143 and the latest of these dated to the 4th century.

*LUB 22 North–south grave (Fig 9.28, 9.30 and 9.105)*  
Burial cg153 (top OD 64.66m; depth 0.05m) was aligned north–south and cut the backfill cg143 (LUB 21) of the trench dividing the apse from the rest of the building. It would seem possible that this inhumation could have been inserted with the construction or into the construction of the apsidal building (LUB 21). A radiocarbon determination of cal AD of 250–650 was obtained from inhumation cg153 (Figs 9.30 and 9.105). The remains,

however, were far from complete; the context sheet described an articulated arm, two vertebrae and part of a pelvis. The rest of the body had been cut away due to the insertion of cg180 (LUB 23).

*LUB 23 North–south grave (Figs 9.28, 9.30 and 9.105)*

North–south inhumation cg180 (top OD 64.76m; depth 0.16m) may have cut or been cut by burial cg153 (LUB 22). A radiocarbon determination of 370 cal BC – cal AD 220 was obtained from inhumation cg180 (Figs 9.30 and 9.105). It seems quite probable that the body had been re-interred here rather than there being problems with the C14 dating. It had been disturbed by later burials and was sealed by a much later layer cg700 (LUB 94).

Both cg153 (LUB 22) and cg180 (LUB 23) were located in the centre of the north–south slot. It would appear that these inhumations or skeletal fragments were inserted here during the life of the building, possibly early in its use. They respect the slot and the postholes cg142 (LUB 21).

*LUB 24 Cist burial with hanging bowl (Figs 9.28, 9.72, 9.73 and 9.88)*

The cist grave cg154 (top OD 64.45m; depth 0.12m) cut the slot fill cg119 (LUB 5). There were several limestone slabs of irregular shape and varying size lying horizontally over part of where the inhumation had laid (east, north and west). Under one of the limestone slabs, to the west of the associated (missing) inhumation, a 7th-century hanging bowl (BKM) <SP77:AE81> was found (Figs 9.72, 9.73 and 9.88). The vessel is complete, with three enamelled hook escutcheons, three triskele-shaped appliques placed equidistantly between them on its shoulder, and two basal escutcheons; it has been described and briefly

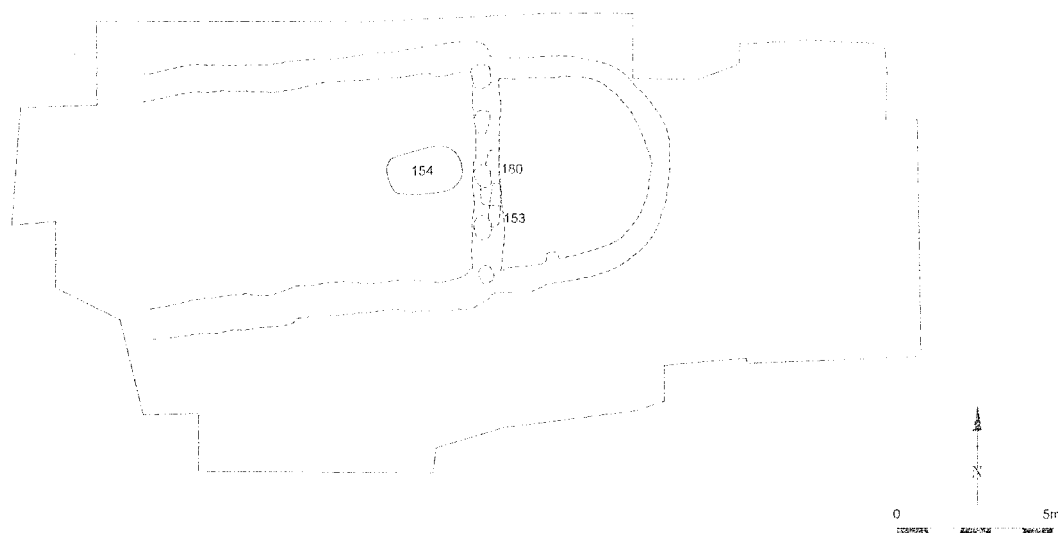


Fig. 9.28 Location of north–south inhumations and cist burial in relation to apsidal church: LUBs 22, 23 and 24

discussed by Rupert Bruce-Mitford (1993, 52). There were patches of dark brown fine loam at the base of the grave cut. What was described as the 'general fill' of the grave was yellowish-brown compacted sandy loam with small pebbles, tile fragments, molluscs and limestone chips; some bone was recorded. A single sherd of Roman pottery and a small circular twist of copper alloy wire (BKM) <SP77:AE82> were also found in the fill of the grave. While there was no evidence of the remains of a skeleton, there was also no record of a robber trench. However, it seems probable that stones had covered the whole inhumation and that these had been removed to the south and in the centre of the grave. It is unlikely that the limestone slabs had been removed through the intrusion of inhumation cg221 (LUB 37), as the bottom of that burial was recorded at 64.56m OD, 0.11m above the level of the top of the cist grave cg154. However, inhumation cg221 (LUB 37) was described as having a cut like a pit, so it is possible that grave cg154 was robbed from the top of the loam layer cg149 (LUB 30) and the robber trench either partially silted up or was partially backfilled before being used for an inhumation. It is also unlikely that the conditions of burial had led to the total decay of the skeleton (although the bone of some of the later skeletons had partially decayed); this would not explain the removal of the limestone slabs over the grave. It was suggested on the context sheet that the body had been removed, or 'translated', and this seems the most likely explanation; the 'general fill' would then represent the robber trench fill. The

inhumation was recorded as being sealed by loam cg149 (LUB 30) and certainly it was situated deeper than the rest of the inhumations.

It would have been possible for burial cg154 to have been inserted when the apsidal building cg142 (LUB 21) was standing, but it may have post-dated the building. It may have determined and even occasioned the location of the later single-cell building (LUB 43).

*LUB 25 Postholes later than the apsidal building (Figs 9.29–.30)*

Postholes cg144 had loam fills (unlike postholes cg138, LUB 20); they were recorded as being sealed by loam cg149 (LUB 30) or being truncated by later features, but the loam fill suggests they were open or in use during the formation of the loam through reworking. The apse of the apsidal building had been cut by two postholes. Several postholes were recorded as cutting earlier forum surfaces cg122 and cg130 (both LUB 5). Two postholes had a horizontally laid limestone in the base. Fills of two of the larger postholes included human bone. The postholes were recorded as being sealed by the loam cg149 (LUB 30) or had been cut from above by later structures or burials.

Cutting the trench fill cg143 (LUB 21) of the apse was a 'posthole' or more probably a charnel pit cg145 (top OD 64.94; 0.45m deep; 0.45 by 0.40m) which had much broken disarticulated human bone in its fill. It was sealed by loam cg149 (LUB 30).

The presence of the charnel pit, along with the

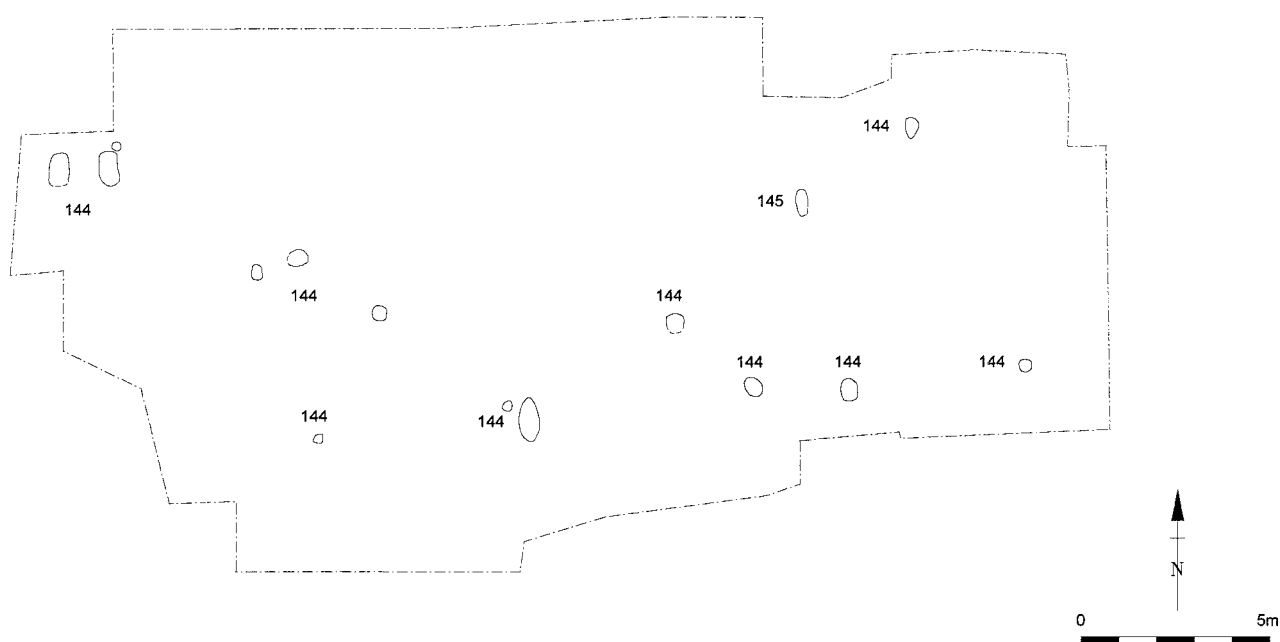


Fig 9.29 Postholes later than the apsidal building: LUB 25

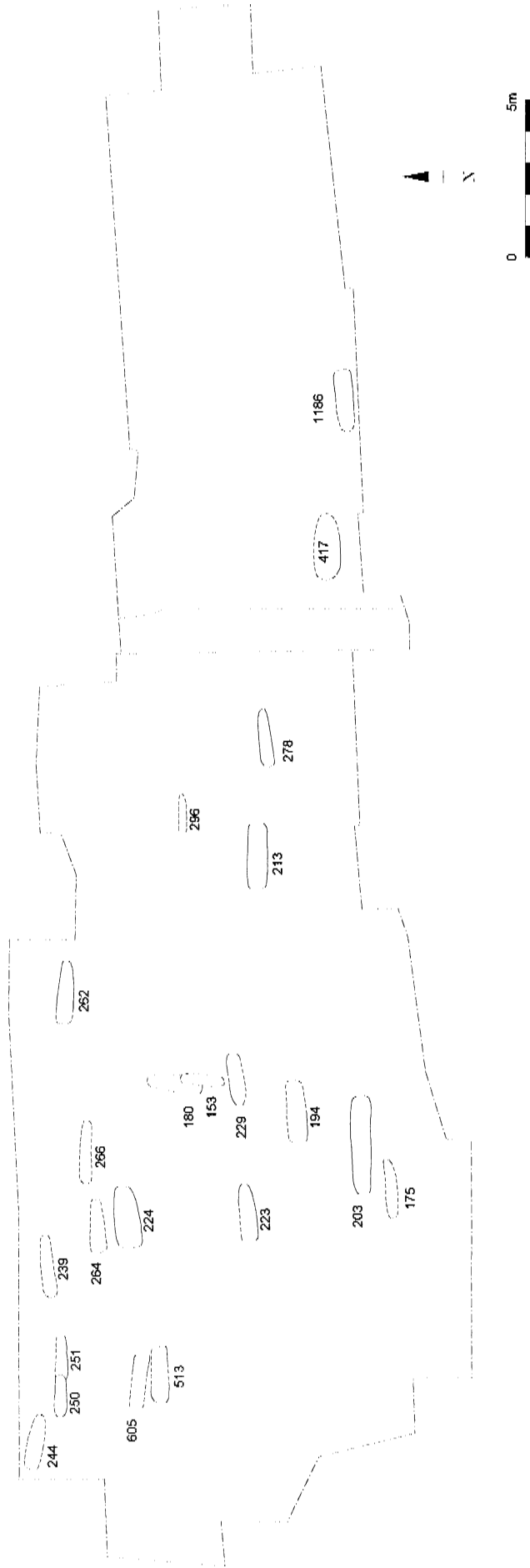


Fig 9.30 Inhumations subjected to radiocarbon dating analysis

human bone in the postholes, suggests that by this LUB the area was being used as a graveyard. There were very few finds; the only datable pieces are Roman and all are likely to be redeposited and/or residual.

*LUB 26 Grave probably earlier than Structure 5 in the centre of the site*

Cutting into surface cg141 (LUB 5) was an inhumation cg219. It was sealed by layer cg507 (LUB 44). There is no precise dating evidence.

*LUB 27 Graveyard to east of site, earlier than or contemporary with Structure 6 (Figs 9.30 and 9.105)*  
Cutting debris cg392 (LUB 18) were inhumations cg417, cg418 and cg419; inhumation cg421 cut inhumations cg419 and cg420. They all held the remains of skeletons. The grave fills were of sandy loam with debris from the Roman buildings.

These inhumations are seen as a group because although they may have been either earlier (and possibly cut by) or contemporary with the sunken building cg423 (LUB 45), they were definitely cut by its later phase cg443 (LUB 48). A radiocarbon determination of cal AD 550–890 was obtained from inhumation cg417 (Figs 9.30 and 9.105). Because of their stratigraphic position between the Roman material and the sunken building, Structure 6, the inhumations can all be said to date to between the 5th and the 11th centuries. A single, possibly intrusive post-Roman sherd of 11th century SNLS was recovered from inhumation cg419.

*LUB 28 Graveyard to the east, possibly very early but possibly contemporary with use of Structure 5*  
Cutting into and sealing Roman *opus signinum* cg92 (LUB 14) was a sequence of inhumations and layers of graveyard deposits. Over the *opus signinum* was reworked loam cg1219, sealed by a similar layer cg1220; cutting this was a sequence of inhumations cg1221, cg1222, cg1223, cg1224, contemporary with inhumation cg1225. Directly cutting cg92 was cut cg1226, possibly the edge of an inhumation. All these inhumations were sealed by dump cg1227. This dump was cut by inhumation cg1232 and cist burial cg1230, which was cut itself by another cist burial cg1231. Both cg1232 and cg1231 were cut by the foundations of the chancel cg850 (LUB 91).

The dating of this LUB relies on the stratigraphy. Sherds of late Saxon, early medieval and post-medieval pottery (4 post-Roman sherds) were recovered from cist burial cg1230 and a single late medieval sherd was found in inhumation cg1232; cg1225 contained part of a 17th-century plated coffin grip.

*LUB 29 Graveyard to the east, possibly very early but possibly contemporary with use of Structure 5*  
Cutting inhumation cg1232 (LUB 28) was inhumation cg1233. Cutting layer cg1227 (LUB 28) were inhumations cg1228 and cg1229. Directly cutting cg92 (LUB 14) was a possible inhumation cg1218 and inhumation cg1206. Inhumation cg1210 cut inhumation cg1207 which cut cg92 (LUB 14); inhumation cg1211 cut inhumations cg1208, cg1210 and cg1206. There was a charnel pit cg1457 which cut cg92 (LUB 14); it was truncated by an un-numbered 'vault'.

This LUB consists of several inhumations which cut the Roman stratigraphy and were sealed by graveyard deposit cg1234 (LUB 105). There is no relevant dating evidence apart from the stratigraphy.

*LUB 30 Graveyard loam over much of the site*

In the west of the site and part of the east the Roman stratigraphy had been reworked by grave digging, producing a layer of loam cg149; this was recorded separately for different parts of the site. It was generally referred to as loose sandy loam with limestone chips and fragments of tile and occasionally some mortar (in section the loam cg151 between 65.28 and 65.88m OD was not differentiated into layers). To the west of the excavation the graveyard deposit consisted of pebbly clayey loam. It ranged in depth between 0.07–0.30m with the OD level of the top of the layer between 64.74 and 65.63m. It was recorded as sealing postholes cg138 (LUB 19), Structure 4 (LUB 21), grave cg154 (LUB 24), postholes cg144 (LUB 25), north–south burial cg153 (LUB 22) and charnel pit cg145 (LUB 25). These all represent the bottoms of cut features that survived the later reworking. When loam cg149 had been removed the site appeared to be covered in an orange, red, pebbly and clayey layer cg137; this was the first view of the surviving remains of the reworked Roman material.

The small group of ten post-Roman sherds ranging from late Saxon to medieval, low number of animal bones and late medieval/post-medieval glass from cg149 are all consistent with graveyard material – a low number of finds, some of which are intrusive. There were also residual Roman sherds dating to the very late 4th-century period, suggesting the re-working of underlying Roman stratigraphy. Some Late Saxon box fittings (Fig 9.90) found in cg149 consist of simple angled strap bindings, staples and hasps; these, and associated nails, may have come from coffin furniture. Other finds from the graveyard soil include a simple square copper alloy weight (3 gms) with tapering sides (AXO) <SP77:AE64> and part of a copper alloy finger ring (AXO) <SP77:AE61>. There was also a silver penny of Alfred, a *Lunette* issue, of AD 871–5 (Blackburn *et al* 1983, 10, fig 15). The date from which the area was used as a burial ground cannot rely entirely on the few finds from cg149, but

depends on the interpretation of radiocarbon dates from inhumations from LUBs 32 and 33.

*LUB 31 Graves to the east of the site, contemporary or later than Structure 6 but not later than the use of Structure 5.*

Cutting inhumations cg417, cg418 and cg421 (LUB 27) were three inhumations cg1201, cg1202 and cg1203 which were truncated and sealed by graveyard deposit cg1234 (LUB 105). Both cg1201 and cg1202 were cist burials.

*LUBs 32–42 Inhumations and graveyard (Figs 9.30, 9.94, 9.95 and 9.105)*

**LUB 32** Graveyard earlier than Structure 5 in the centre of the site (Figs 9.30 and 9.105). Several inhumations cut into the loam layer cg149 (LUB 30) and were stratigraphically earlier than the single-cell building Structure 5.1 (LUB 43). Of these, cg262, cg250 and probably cg278 were stratigraphically later than the apsidal building, Structure 4 (LUB 21). This would indicate that there was a graveyard here that existed for a time when Structure 4 had been demolished and before Structure 5.1 (LUB 43) had been built.

Radiocarbon determinations were obtained from several inhumations (LUB 32); cal AD 650–960 from cg194; cal AD 420–690 from cg250; cal AD 450–770 from cg262; cal AD 550–860 from cg264; cal AD 390–680 from cg266; cal AD 860–1160 from cg278; this is probably from a later phase, possibly LUB 41 (Figs 9.30 and 9.105). A single Saxo-Norman sherd of SNLS came from cg231 (LUB 32), probably intrusive.

**LUB 33** Graveyard earlier than or within Structure 5.1 (Figs 9.30 and 9.105). Inhumations cg229 and cg232 cut cg149 (LUB 30) and were sealed by what has been interpreted as the internal surface cg230 (LUB 44) to the single-cell building. They may have been earlier, or contemporary with the use of the single-cell building. In LUB 33 a radiocarbon determination of cal AD 780–1180 was obtained from inhumation cg229 and cal AD 60–560 from cg 232 (LUB 33; Figs 9.30 and 9.105).

**LUB 34** Graveyard earlier than or to the east of Structure 5.1 (Figs 9.30 and 9.105). Cutting into loam cg149 (LUB 30) were a large number of inhumations and a few pits, some of which cut into, or overlay others. These were all sealed by loam cg508 (LUB 52). The OD levels at the top or truncated top of the inhumations ranged between 64.59–65.06m with the bottom of grave OD levels ranging between 64.51–65.01m. The depth of the inhumations, often truncated, varied between 0.02–0.22m; however, there was one which was 0.35m deep (cg240). All the skeletons were supine except for one which was crouched cg251. The bone had sometimes been described on the context sheet as showing signs of

decay (cg157, cg163, cg165, cg170, cg172, cg209, cg215, cg279, cg313); this included the bones of both adults and children, and affected burials overlying/cutting others as well as those first cutting loam cg149 (LUB 30). There was also evidence for bodies inhumed in coffins: traces of wood were recorded in several graves and nails recorded in a few others. One corpse had been placed directly in the ground; burial cg212 had a scoop cut at the west end for the head. A grave-like pit cg173 (top OD 64.92m; 0.12m deep; 0.22m by 1.35m) had a fill which had a large proportion of charcoal, but no evidence of bones. Pit cg150 (top OD 64.85; depth 0.12m) had a loose loam fill with limestone chips and no bone. Other small pits (cg158, cg179, cg249, cg283; ranging in depth between 0.15–.35m and in size between 0.60 by 0.50m and 0.58 by 1.20m) had fills which included quantities of disarticulated bones.

Radiocarbon determinations were obtained from several inhumations (LUB 34); cal AD 880–1160 from cg175; cal AD 550–855 from cg203; cal AD 400–670 from cg213; cal AD 650–960 from cg239; cal AD 540–890 from cg251 (Figs 9.30 and 9.105). Within the fill of inhumation cg171 was a cut silver farthing of Aethelred II's *First Hand* issue of AD 979–85, but which may have continued in circulation for several years after its demonetization (Blackburn *et al* 1983, 16, fig 29).

**LUB 35** Graveyard earlier or to the south of Structure 5.1 (Figs 9.30 and 9.105). Inhumations cut graveyard deposit cg149 (LUB 30) and were sealed/cut by chancel cg534 (LUB 70). In LUB 35 a radiocarbon determination cal AD 890–1170 was obtained from inhumation cg296 (Figs 9.30 and 9.105).

**LUB 36** Graveyard earlier or to the south of Structure 5.1–3. Inhumations cut graveyard deposit cg149 (LUB 30) and were sealed/cut by widened chancel cg542 (LUB 79).

**LUB 37** Graves earlier than or within Structure 5.1 or the nave of Structure 5.2–4 (Figs 9.30 and 9.105). Inhumations cut graveyard deposit cg149 (LUB 30) and were sealed by graveyard deposit cg700 (LUB 94). These were located within the area of the single-cell building, although whether they were earlier than or contemporary with it is not evident. They include inhumation cg221. A single Saxo-Norman sherd of LFS came from cg223. A radiocarbon determination cal AD 30–380 (a particularly early date) was obtained from inhumation cg223 and cal AD 770–1030 was obtained from inhumation cg224 (Figs 9.30 and 9.105).

**LUB 38** Graveyard earlier than or to the south of Structure 5.1–3. Inhumations cut cg149 (LUB 30) and were sealed/cut by extended south aisle cg675 (LUB 80).

**LUB 39** Graveyard earlier than or to the south of Structure 5.1–4. Inhumations cut cg149 (LUB 30)

and these were sealed/cut by church cg850 (LUB 91).

LUB 40 Graveyard earlier than or to the east of Structure 5.1–4. Inhumations cut graveyard deposit cg149 (LUB 30) and were sealed/cut by the foundations of the chancel arch cg734 (LUB 91).

LUB 41 Graveyard earlier than or to the south and east of Structure 5.1–2. Inhumations and stone trough cg293 cut graveyard deposit cg149 (LUB 30) and were sealed by loam cg574 (LUB 75).

LUB 42 Graveyard earlier than or to the east of the site before the use of Structure 7. Inhumations cut graveyard deposit cg149 (LUB 30) and were sealed/cut by the extended chancel cg850 (LUB 91).

*LUB 43 Construction of Structure 5.1 (single-cell ?chapel) (Figs 9.31 and 9.74)*

The foundation trench cg319 for the single-cell building cut into several inhumations cg168, cg231, cg236, cg250, cg262, cg264, cg265 and cg266 (LUB 32). Foundation trenches cg319 (top level OD ranged between 64.84–65.42m and bottom level between 64.53–64.88m; 0.20–0.40m deep; 1.30–1.55m wide) were not on the square; the west side was 6.20m long, the east side 7.10m; the north side measured 9.60m and the south 8.50m (external dimensions). These trenches were filled with small limestone fragments, some larger stone and occasional *opus signinum* fragments together with loose dark brown gritty sandy loam with tile fragments and pebbles (Fig 9.74). This material possibly formed the foundation for a single-cell structure of

either stone or wood. The internal measurements were approximately 4.2m north–south and 7m east–west.

The foundations for Structure 5.1 consisted of many reused Roman limestone fragments. Most pieces had traces of mortar on faces which would have been exposed in their original use. It is almost impossible, however, to tell how many times these pieces may have been reused. The only indications are where two or three different types of tooling cut each other, or there are obviously sequential layers of mortar.

The single-cell building may have been constructed over the location of grave cg154 (LUB 24), which contained the hanging bowl; this grave certainly appears to be central to the building. It is also possible that the position of the building was due to its central location in the remains of the forum and that its relationship with grave cg154 was fortuitous.

The foundations can be related stratigraphically to the graveyard loams; they are earlier than LUB 30 and LUB 52 post-dates them. The strongest dating evidence is provided by inhumations which were cut by the structure. These might suggest that the single-cell building was either of Middle Saxon construction or later.

*LUB 44 Use of Structure 5.1 (Figs 9.31 and 9.105)*

There was an internal surface cg230 to the single-celled structure, which may have post-dated its construction. It was a stone surface (OD 64.83–

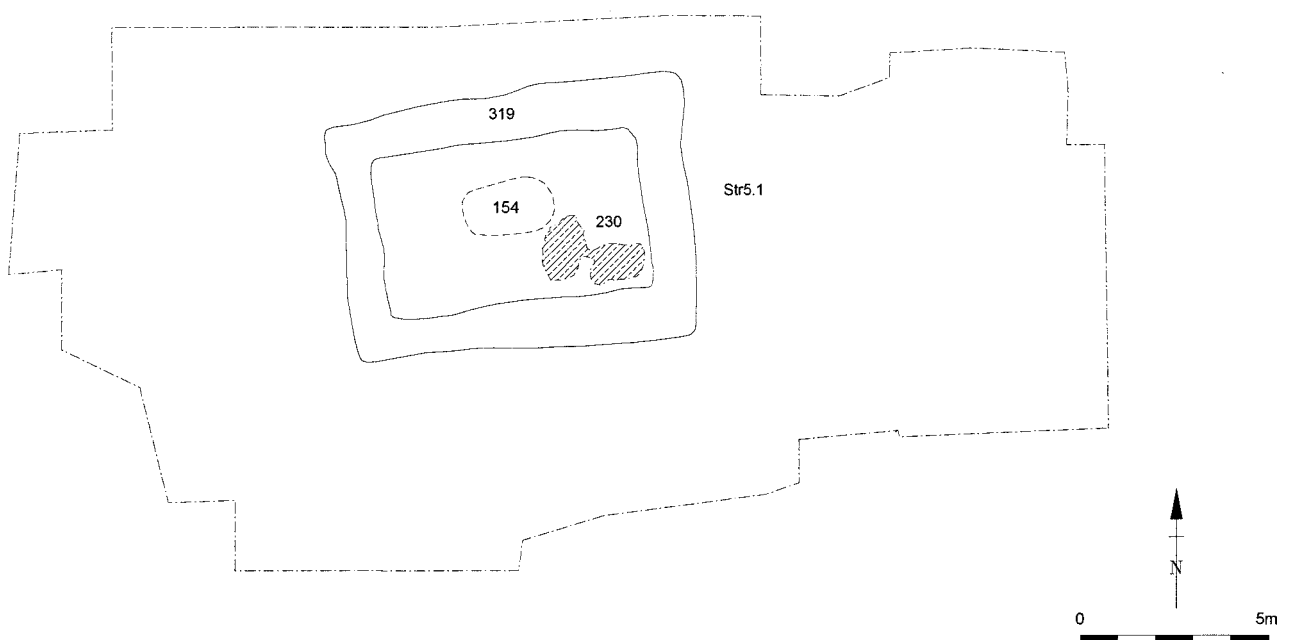


Fig 9.31 Single-cell building (Structure 5.1) with surface, and location of cist burial: LUBs 43 and 44

64.97m) consisting of brown silty sand with tightly packed limestone rubble and mortar flecks and a scatter of limestones, very loosely deposited, with some tile and pebbles. It was recovered over an area of 1.20m by 0.90m and 1.20m by 1.50m. Surface cg230 sealed cg229 and cg232 (both LUB 33) and was dated by the radiocarbon determination of cal AD 780–1180 from inhumation cg229 (Figs 9.30 and 9.105). This might suggest either that the surface was secondary to the construction of the single-cell building or that the building was late Saxon rather than middle Saxon.

Sealing inhumation cg219 (LUB 26) was a series of sandy loam layers cg507, preserved as a pillar amid the grave cuts. They may represent floor layers within the single-cell building.

### Late Saxon to Saxo-Norman

Probably contemporary with the use of the single-cell building (LUB 44), either encroaching on the graveyard to the east, or to the east of the graveyard, was Structure 6.1 LUB 45, a sunken building among the ruins of Structure 2C (LUB 14); its construction was associated with late 10th-century pottery and its use LUB 46 dated from the late 10th century into the 11th century. This building collapsed LUB 47 and was rebuilt, Structure 6.2 LUB 48, in the 11th century, and later abandoned LUB 49 in the second half of the 11th century. Structure 6.1 was associated with metalworking. Pits, dumps and surfaces were contemporary with Structure 6 LUB 50.

Over LUB 49 were remains of surfaces or floors LUB 51, and metalworking surfaces LUB 52 dated by the pottery to the late 11th century. LUB 52 was cut by pits to the east of the site LUB 53. Over LUBS 52 and 53 was a cobbled surface LUB 54 associated with a large group of 11th-century pottery.

Associated with the single-cell building, Structure 5.1 were a number of inhumations and graveyard dumps LUB 55–69.

### LUB 45 Construction of Structure 6.1 (Figs 9.32, 9.48 and 9.75–77)

Although interpreted as the result of collapse or robbing material, cg460 (LUB 18) might alternatively have served as a rough surface; it may be that it was used during the construction of Structure 6.

Cutting debris cg392 (LUB 19) was a large robber trench cg416 which removed part of the foundations of the Roman walls and apse; cg416 contained large, fresh sherds of 10th-century pottery (31 sherds). Set into the robber trench fill cg416 were large, vertically placed fragments of *opus signinum*, with their smooth (worn) face to the south; these provided the north wall of a sunken path between the room and its entrance towards the Roman well-head (Fig 9.75).

The *opus signinum* blocks butted against the remains of Roman wall cg70 (LUB 8), which was reused as the east wall of the sunken room; its robbed remains had stood to an OD height of 66.15m and were supplemented by roughly dressed limestone blocks (reused Roman masonry) bonded with brown, very sandy, crumbly mortar with pebbles and small limestone flecks. This addition to the wall had added at least an extra 0.28m, giving a height at its top of 66.43m. The new passage-walls were used to retain the robbing debris to the east and north.

To the south of the reused *opus signinum* wall, running parallel was a wall of reused limestone masonry, tile and *opus signinum* fragments roughly bonded with a soft pale yellow sandy mortar (a length of 3.65m was visible in the section to a height of 1.35m; top 66.88m OD). This formed the south wall of the sunken path (Fig 9.76). At the west end of this area, between the two walls, was an apparent threshold (1.15m across) of small square stones loosely bonded with a pale brown soft sandy mortar (Fig 9.77).

The threshold provided a step down of 0.29m into the sunken room. The room itself cg423 cut through the robbing debris cg392 (LUB 19) of the Roman portico, from a height of at least c66.45m OD. The floor had been created by cutting into the Roman make-up dump cg71 (LUB 8); this dump had consisted of sandy clay with limestone and pebbles and had been trampled, creating a surface of rounded cobbles, closely packed in a pale brownish yellow clay (65.11–65.21m OD).

In surface cg423 were five postholes cg436 (Fig 9.48). They were placed round the edge of the cut of the room. They were 0.11–0.34m deep of various dimensions; two had packing of small flat stones set upright around the inside edge of the hole.

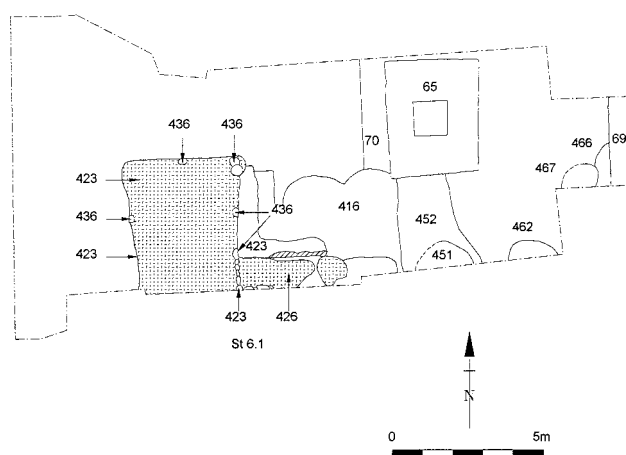


Fig 9.32 Structure 6.1 and contemporary pits: LUBs 45, 46 and 50



The depth of the sunken building below what may have been the contemporary ground surface (robbing debris cg392; LUB 19) was c1.34m. The dimensions of the cut of the room were irregular: the east–west dimensions against the north side measured c4.0m while immediately north of the entrance it measured c3.3m. The north–south extent was never fully determined as the southern end of the room lay outside the area of excavation; the area uncovered extended for 4.5m.

Single sherds each of LFS and LKT were found in cg423 and, if they are not intrusive, date this structure to the late 10th century at the earliest.

#### LUB 46 Use of Structure 6.1

(Figs 9.32, 9.33 and 9.48)

Sealing the robber trench cg416 (LUB 45) was debris cg422 which contained nine sherds of 10th- to 11th-century pottery.

Sealing the construction of the path from the sunken room cg423 (LUB 45) was a layer of compact brownish-yellow clay with small stones cg424 (0.19m thick; 65.13m OD); it was sealed by a clayish gritty deposit cg425 (0.09m thick; 65.35m OD). Over this was clay with mortar lumps, tile and some limestone fragments cg426 (0.08m thick; 65.38m OD). The northern limit of this layer defines the line of the path.

There seems to have been a subsequent alteration or addition to the path leading to the sunken room. To the east of the *opus signinum* retaining wall cg423 was horizontally laid limestone rubble bonded with loose greyish-yellow mortar with small pebbles, limestone fragments and broken tile cg431. It had been set into the west side of a pit, the bottom of which went as low as 65.06m OD to the west and

as high as 65.81m to the east. There would have been a slope up from the room towards the east. The maximum remaining height of the revetment was 0.62m; it was on average 0.25m thick. It curved north-east and then north, away from the line followed by the *opus signinum* retaining wall; it then appeared to peter out.

With the addition of this revetment there were different deposits to the west and east of the path. To the west, clay layer cg426 was sealed by a layer of reddish-yellow sand cg427 (0.05m thick; 65.39m OD), over which was a layer of hard, pale, yellowish-brown sandy clay with small pebbles cg428 (0.05m thick; 65.39m OD). It was sealed by a spread of pale yellowish-brown clay with occasional pebbles cg429 (0.05m thick; 65.45m OD). These layers possibly represent a series of surfaces.

To the east of the path clay layer cg426 was sealed by dark brown silty loam with lumps of *opus signinum*, tile, mortar fragments, pebbles and limestone chips cg432 (0.07m thick; 65.77m OD). In turn it was sealed by a layer of very compact, dark-brown, silty sandy loam with many small pebbles cg433 (0.06m thick; ODs 65.31m west–65.69m east). This layer was noted as running along the south face of revetting wall cg431. It was sealed by a layer of very compact silty sandy clay with pebbles, limestone fragments and tile fragments cg434 (0.04m thick; 65.53m OD). Over it was a compact brown sandy silt with pebbles, limestone chips and fragments cg435 (0.05m thick; 65.54m OD). These layers were probably path surfaces, some with evidence of use. The sloping nature of these deposits probably indicates that the path led from the sunken room, up to the well-head.

Sealing two of the postholes cg436 (LUB 45) was a bank of sandy material cg437 (0.10m thick) against the east side of the room. Against the step it was very dark brownish-grey with ash, but to the north it was more sandy. It was sealed by a concentrated spread of charcoal cg438, which was more hard and clayey in the north-west corner of the room (0.03–0.07m; 65.00m OD).

In charcoal layer cg438 were two postholes cg439, 0.80m apart (only seen in plan). They were cut by two later postholes cg446, 0.25m to the south-west. Also cutting charcoal cg438 was a shallow posthole cg479, located in the north-west corner of the room.

One of the postholes cg446 (LUB 45) was sealed by clay cg440, possibly the remaining fragment of a clay floor (65.17m OD). Over this and sealing the other two postholes was a thin deposit of very dark grey ash and charcoal lumps cg441, containing some clay (65.17m OD).

Deposits cg437, cg438, cg441 and cg446 contained evidence of metalworking within Structure 6.1 or the adjacent area; seven sherds of Stamford ware

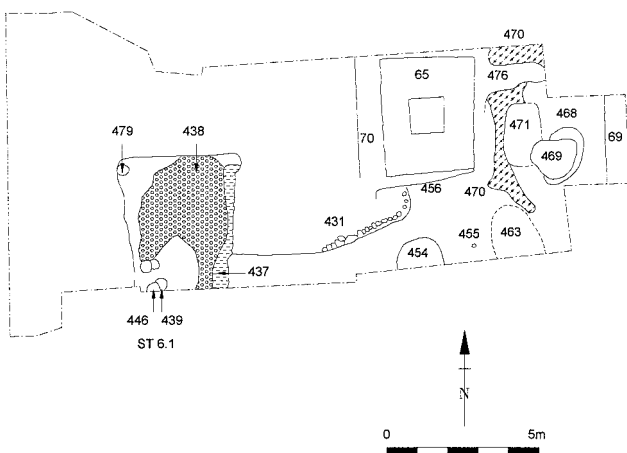


Fig 9.33 Structure 6.1 and contemporary pits and surfaces: LUB 46 and 50

crucibles, a clay mould fragment, two copper alloy droplets, a piece of possible litharge and a small quantity of fuel ash slag. The charcoal incorporated in layer cg438 may have represented the fuel burned and may also have been used to prevent the molten copper from oxidising. No ground level hearth was associated with these deposits; perhaps it was a raised structure in the north-west corner of the room, where cg438 was noted as being harder and more clayey, or the oven may have lain in the south part of the room, or outside. It is likely that some of the clay in the floor layers derived from trampled, unfired moulds.

Very little domestic pottery (21 post-Roman sherds) was associated with the use of Structure 6.1. This pottery dates to between the late 10th and the mid 11th century.

#### LUB 47 Collapse of Structure 6.1

Sealing cg429 (LUB 46) was a layer of a dark brownish-grey deposit with many charcoal lumps and flecks cg430 (0.24m thick), possibly collapsed material. Sealing the room and the path, both layers cg441 (LUB 46) and cg430, were patches of demolition material cg442; at the base of wall cg423 (LUB 45) was a tumble of small-medium sized stones, tile, mortar and *opus signinum* lumps, and within the area of the room was a dump of burnt clay and daub with limestone fragments, bonding tile and stones, which may represent a collapsed hearth.

There are only three possible contemporary sherds associated with this LUB and these date to between the late 10th and mid 11th century.

#### LUB 48 Structure 6.2 (Figs 9.34 and 9.48)

Cutting inhumations cg417, cg418 and cg421 (all LUB 27) was a recut cg443 for a presumed alteration to the sunken room. This cut lay along the west and north sides of the initial cellar and meant that the cut area was an extra c1.00m west and c0.80m north (for north-west corner only). It is possible that the room was extended in this way because the sides had collapsed into the room; the recut was to accommodate new walls on the west and part of the north side.

In the area of the recut, sealing the cut and partly spread into the room sealing demolition material cg442 (LUB 47) was a thick layer of decayed mortar, brown in colour, sandy with pebbles, chips and other fragments (0.22–0.40m thick; 65.29–65.56m OD). The wall footings cg443 were set into the mortar; the footings were made up of large and medium-sized limestone rubble, re-used fragments of *opus signinum* flooring, mortar lumps and tile fragments bonded with soft, loose mortar. They stood to a height of 0.24m. The space between the

wall and the cut was backfilled with building debris.

The east-west dimensions of the room had not altered greatly; they were now 3.70m just north of the doorway and 4.10m at the northern limit. There was no evidence for further occupation of the cellar.

This LUB produced six post-Roman sherds dating to the 11th century, including a single Stamford ware crucible sherd.

#### LUB 49 Abandonment and backfilling of Structure 6.2 (Figs 9.35, 9.48 and 9.49)

The structure over the cellar (LUB 48) had been razed and partly backfilled with several dumps cg444 (Fig 9.48). Tipped from the west were tile fragments, stone, burnt daub and clay (0.09m–0.60m thick). This was sealed by dark, greyish-brown sandy clay with limestone and tile fragments with *opus signinum*, charcoal flecks, large patches of burnt clay and some pebbles (0.10m–0.21m thick), followed by

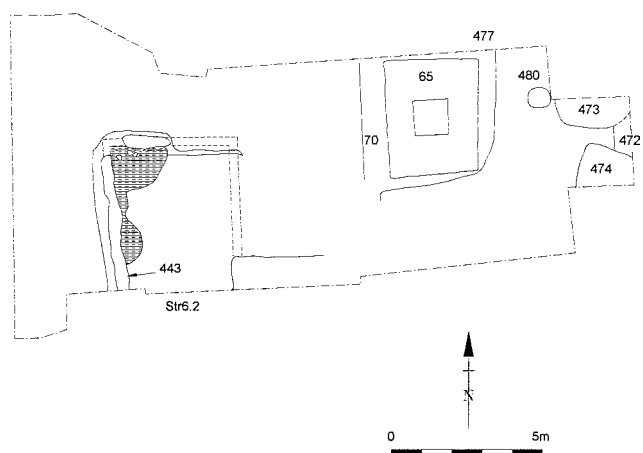


Fig 9.34 Structure 6.2 and contemporary pits: LUB 48 and 50

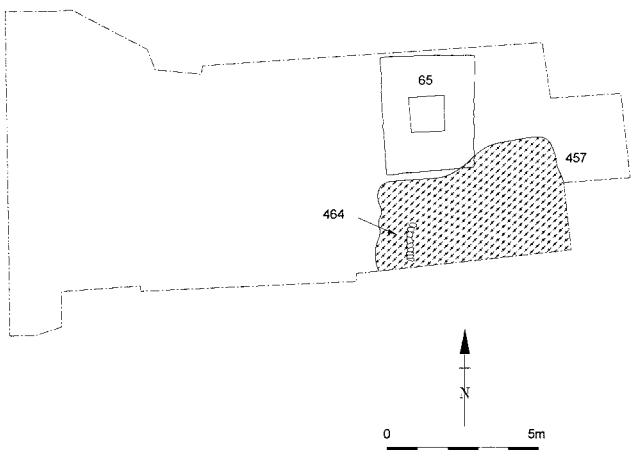


Fig 9.35 Metalworking surfaces(i): LUB 52

yellowish-brown, very sandy clay with pebbles, limestone and tile chips and fragments and mortar lumps (0.30m thick) tipped from the east. Dumps cg444 produced a small group of late Saxon and Saxo-Norman sherds (23 sherds) the latest of which were of the 11th century.

Cutting dumps cg444 was a small circular pit or posthole cg445 with a fill of dark greyish-brown crumbly ash and pebbles.

Further dumps cg457 finally sealed both the cellar and the path (Fig 9.49). In the area of the cellar, sealing pit cg445 was sandy deposit with mortar, pebbles, small stones and tile (0.14m thick) and over this was a layer of a loose, crumbly, dark yellowish-brown deposit with stone/pebble inclusions (0.38m thick), both localised deposits. Yellowish-brown mortar with limestone, tile, pebble, burnt clay, shell and *opus signinum* lumps (up to 0.60m thick) sealed much of the cellar, and over this was a lens of mortar, as well as a layer of very dark greyish-brown sandy silt with pebbles, tile, limestone fragments, shell and mortar lumps (0.25m thick). The last dump which represented the backfill of the cellar consisted of very dark, greyish-brown sandy silt with many pebbles, tile, limestone rubble, shell, and bone (up to 0.50m thick). This material also extended along the path sealing demolition material cg442 (LUB 47) and layer cg422 (LUB 46).

At the east end of the path, sealing post-pit cg454 (LUB 50) was a layer of brown sandy loam with limestone and tile fragments and some pebbles. Over this was a dump of light greyish-brown sandy loam with small limestone fragments, mortar, tile and bone (0.28m thick). The central part of the path was sealed by limestone chips and fragments mixed with dark greyish loam and a scatter of rubble (0.11m thick; 65.84m OD). It was described as being part of wall collapse. Limestone and loam (0.08m thick) together with limestone blocks with pebbles, tile and shell (0.26m thick) was recorded as forming part of the same layer. Sealing this rubbly deposit were patches of compact yellow clay mixed with a few pebbles together with flecks of mortar and charcoal (0.01m thick; 65.86–.96m OD). These were interpreted as patches of demolition material from the revetting wall: 'possibly mortar from the bonding'. Over this clayey layer was yellow/brown sandy loam with tile fragments, shell, pottery, bone, and pebbles (0.07m thick), which was recorded in section as tipping down. The level 66.42m OD may represent the highest part of the wall cg431 to have survived. Also sealing the clayey layer were large tile fragments, limestone fragments, pebbles and pottery with sandy loam (0.05m thick; 65.96m OD); this material was also dumped south of the revetment wall cg431. Over it was a tipped layer of brown sandy loam with some building debris and

mussel shell, and this was sealed in turn by a dump of loose sandy loam with stone, tile and lumps of mortar (0.50m thick). Also sealing rubbly layers was sandy loam with mortar flecks and pebbles, itself sealed by sandy silt with pebbles. Further layers of dark, yellowish-brown sandy loam, a loose deposit with many mussel shells and building debris (up to 0.30m thick), sealed it.

Dumps cg457 contained a large group of material (194 post-Roman sherds), mostly of 11th-century date. The high number of LFS sherds present indicates a date in the second half of the 11th century for the group.

Dumps cg444 and cg457 contained further evidence of non-ferrous metalworking in the form of Stamford ware crucibles, copper alloy droplets, sheet and wire waste, lead sheet and melt waste, possible litharge and slags. Some of the large 'colourful' pieces of fuel ash slag were analysed by a scanning electron microscope, and the droplets incorporated within them were found to be of both copper alloy and silver, suggesting that a range of metals was being worked. Some of the waste products may have been derived from earlier levels in LUB 48.

#### *LUB 50 Pits, dumps and surfaces contemporary with Structure 6 (Figs 9.32–34)*

Pit cg451 cut dump cg412 (LUB 18) and had a fill of light brown sandy silt with limestone and tile fragments. Pit cg452 cut pits cg451 and cg364; it had a fill of dark greyish-brown loam, mixed with mortar, tile and limestone fragments with pottery.

Cutting the fill of pit cg452 was a large post-pit cg454 (0.64m deep; 0.62m diameter) with a fill of very dark, greyish-black silty loam with tile fragments, pottery, loose stones, pebbles, charcoal and bone. The pit had held a post, possibly as large as 0.40m across. The remaining hole had a fill of very dark greyish-black silty loam cg455, suggesting the possibility that at least part of the post had rotted *in situ*. Also cutting pit cg452 was a short north–south slot cg453 (0.13m deep; unplanned) which was cut by an east–west trench cg456 (0.14m deep) running along the south side and delineating the well-head.

Possible surface cg460 (LUB 18) was sealed by a compacted trampled clay surface cg461 (0.03m thick; 66.73m OD on the west and 66.48m OD on the east). Cutting clay trample cg461 was a pit cg462 (0.22m deep; 0.64 by 0.41m). It had a fill of dark greyish silty loam with limestone blocks, tile fragments, charcoal flecks, mortar, pottery and snail shells. It was cut by pit cg463 (0.43m deep; min 1.84m by 1.96m) which may have been a robber trench; it had a fill of an ashy deposit with clay, many stones and tile fragments.

Cutting stoney layer cg460 (LUB 18) were several

pits apparently intercutting; cg466 with a dark clayish fill, a mortar lens and sealed by a dark ashy fill; cg467 with a mortar fill, silty deposit with mortar lumps; cg468 with a fill of a loose deposit with stones; cg469 filled with a compact clayish deposit and mortar (Fig 9.33). Pit cg469 was cut by a robber trench cg472 (unplanned) removing stone from the Roman wall cg69 against the east section of the trench; it had a fill of crumbly mortar, sealed by silt and small stones.

Alongside these pits and the robber trench was a dark deposit cg470 of stones, tile and mortar (0.26m thick) which sealed stoney surface cg460 (LUB 18). It had been cut by a robber trench cg476, which had removed stone from the foundations of the Roman wall cg67 (LUB 8); it had a fill of a gritty deposit and small stones. This wall had already been robbed, possibly to the contemporary ground level in LUB 18.

A large pit cg471 cut dump cg470 and was backfilled with various building debris including stone and mortar. Other pits cut into pit cg471; there was pit cg474 with a clayish fill, sealed by a dark greyish deposit which was sealed by a spread of dark clayish silt cg475; there was pit cg473 with bottom fills of building debris, sealed by layers including silt and dark rubbly loam with shell; pit cg480 was very small with a fill of silty sand. Sealing spread cg475 and pit cg473 were dumps of rubble, sealed by loam and rubble cg478; these were cut by trench cg477 which delineated the top of the Roman well-head. It cut down to a depth of 0.59m; it was backfilled with brown silty loam, sand, pebbles, limestone chips and tile fragments together with bone and mortar flecks.

Many of these layers and pits appear to represent robbing operations in the ruins of the east range of the Roman forum. However, pits cg451 and cg462 (Fig 9.32) might be structural, succeeded by pits cg454, cg463 and even cg469; they could have formed elements of Structure 6.

A total of 258 post-Roman sherds was recovered from this LUB. The features contained a high number of Roman and 10th-century sherds of LKT and LSH, some of which were typical of late 9th- to early/mid 10th-century manufacture. Almost all of the features, however, also produced Saxo-Norman wares (LFS, SNLS, TORK and ST) which, while their production begun in the late 10th century, occurred in such high numbers to indicate a date in the 11th century. A few deposits contained only 10th-century material (cg452, cg470, cg469, cg480 and possibly cg471) along with residual Roman.

A small quantity of metalworking debris was found in the pits, robber trench and spreads to the east of the well (it was virtually absent from features to the south). The associated copper alloy and lead

(and silver?) waste included cast, wire and sheet fragments along with quantities of slag, mostly fuel ash slag (a minimum of 988g from ten context groups), some of which was probably derived from non-ferrous metalworking. Objects identifiable as tools are absent from these assemblages, partly because tools are seldom lost but also because the iron is in such poor condition that it is unlikely that they would be identified. There are three ceramic discs shaped from Roman tile and pottery sherds (from cg471 and two from cg476). They are quite large, ranging in diameter from 50mm to 95mm and are fairly crudely shaped. The discs are likely to have been residual Roman finds.

#### *LUB 51 Remains of surfaces or floors*

Sealing dumps cg457 (LUB 49) were remains of activity; the first of these was a small patch of yellow clay cg447 which had been burnt (0.03m thick; 66.28m OD) together with 'traces of discarded material from the "working area" to the east'. Over this was a layer of yellowish-brown soft fine ashy deposit, cg449 with charcoal flecks (0.05m thick; 66.51m OD). It was sealed by a layer of dark brownish-yellow burnt clay with charcoal flecking, cg450 (0.06m thick; 66.00m OD). It sloped down to south and west. A patch of black charcoal, cg448, with tile and limestone fragments, pebbles and sand was located at the edge of the excavation. It may have sealed cg457 (LUB 49) and be associated with cg447, cg449 and cg450.

The pottery (3 post-Roman sherds) dates to the 11th century: from its stratigraphical position the LUB must date to no earlier than the second half of the 11th century. Two small sieved samples from cg447 and cg450 consisted almost entirely of fragments of oxidised baked clay. There are only three crucible sherds, all from cg448, and a very small quantity of hammerscale from these layers.

#### *LUB 52 Metalworking and Related Surfaces*

*(Figs 9.35–39 and 9.49)*

Dumps cg457 (LUB 49) were sealed by a single line of stones cg464 (0.35m high). About a metre to the east was an extensive dump of dark greyish-brown silty loam with sand, pebbles, limestone and tile chips and fragments with ash and charcoal cg465 (0.15m thick; 7.25m by 5.50m) which sloped down over the dumps cg457.

Sealing dump cg465 and stones cg464 was a layer of very dark brown ashy loam with much charcoal, some pebbles and limestone flecks and many crucible fragments cg486 (0.20m thick). This layer appears to be a dump sealed by a sequence of thin layers which have the appearance of floors.

Over dump cg486 was a possible patch of floor composed of yellowish-brown compact clay with

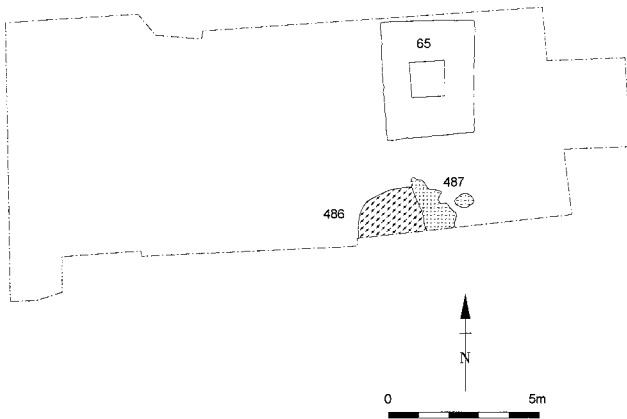


Fig 9.36 Metalworking surfaces(ii): LUB 52

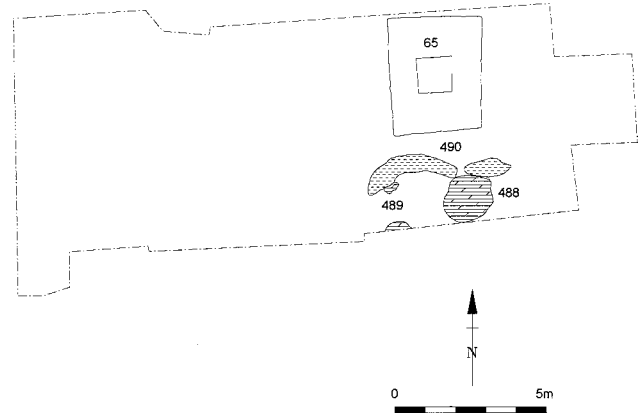


Fig 9.37 Metalworking surfaces(iii): LUB 52

some sand and charcoal flecks cg487 (0.02m thick; 66.76m OD to east; 66.45m OD to west). Sealing floor cg487 was a layer of dark brown silty sand with large amounts of ash and charcoal and some small pebbles, together with small flecks of burnt clay cg488 (0.03m thick) over which was a layer of yellowish-red very mixed fine ash and many small lumps of burnt clay, some silt and charcoal flecks cg489 (0.01m thick). Sealing layer cg489 was a patchy spread of dark brown silty sand cg490 with a few pieces of limestone and some flecks of mortar (0.04m thick; 66.76m OD). It formed a strip around the north of the area covered by the clay and ash; within this area was a layer of very dark silty loam cg491 with some ash and much charcoal, some pebbles and limestone flecks (0.05m thick). An overlying patch of possible floor, was made up of dark yellowish-brown very compact silty burnt clay with some sand and charcoal flecks cg492 (0.03m thick; 66.47m OD). Sealing cg492 was a patch of dark brown very gritty sand cg493 with slight traces of charcoal and ash and some very small pieces of burnt clay (0.05m thick), followed by an area of black charcoal and ash cg494 (0.05m thick). Next was a spread of brownish-yellow ashy clay with charcoal flecks, sand and burnt clay flecks cg495 (0.03m thick; 66.37m OD). It was sealed by a patch of very dark greyish-brown sandy silt with some charcoal and shell flecks cg496 (0.03m thick). Smearred over this was dark yellowish brown mixed burnt clay with silt and charcoal flecks cg497 (0.02m thick; 66.48m OD), over which was a small patch of dark brown sandy silt with some flecks of charcoal and shell cg498 (0.05m thick).

Sealing cg498 was an area of very dark greyish-brown silty sand with much charcoal and some shell flecks cg499 (0.10m thick; 0.40 by 0.70m in area; unplanned) and over this was a surface of brown silty sand with many pebbles, parts of which were very compact; there were some worn

limestone fragments cg500 (0.12m thick; 66.71m OD). The surface was sealed by a patch of very dark greyish-brown silty sand with many limestone fragments, some charcoal flecks and some small pieces of shell cg501 (0.10m thick), probably an attempt to level a depression in the floor. Over it was a layer of very fine dark greyish sandy loam with pebbles, limestone chips and fragments, tile chips and bone cg502 (0.05m thick).

Samples were taken from most contexts and processed on site; analysis of the residues together with the registered finds has shown that, with the exception of cg464 (stones), cg487 (clay floor) and cg497 (burnt clay from which no sample was taken) all the context groups contain evidence of metalworking. Most common are the many Stamford ware crucible sherds (totalling 45); there is also a single locally made thumb crucible from cg486. No mould fragments were recovered but there is a large quantity of small pieces of reduced baked/fired clay amongst the sample residues. These could represent the trampled remains of moulds. There is a small quantity of lead sheet and droplets from these contexts but a notable absence of copper waste; this consists of a single casting sprue from cg495 and a few droplets (no more than ten) that were identified in the samples. Although a casting workshop existed here, there is no evidence for sheet or wire work; this contrasts with the Roman assemblage where copper alloy waste fragments were common and a range of activities was practised. There is no evidence for precious metal working but the crucibles have not been analysed. The only source of fuel noted was charcoal.

Iron smithing was also practised here, as evidenced by a small quantity of smithing slag amongst the copper and fuel ash slags and by hammerscale from most of the context groups. A large quantity from cg493, cg495, cg499, cg502 and in particular cg496 is relatively uncrushed. Ham-

merscale was also noted in the corrosion products on the very few iron objects (fifteen) from this LUB. Very small pieces of scrap iron were noticed in the samples but were not extracted. Whether the iron was worked by the same smith as the copper alloy(s) cannot be deduced nor can the range of artefacts produced.

Two layers (cg489 and cg493) contained lumps of burnt clay, as opposed to flecks; these may indicate the presence of moulds which were not recognised at the time. The amount of sand in the layers cg487, cg488, cg490, cg492, cg493, cg495, cg496 and cg498 seems to be significant; sand may have been used as a matrix for the crucibles. The gritty nature of cg487 was such that a sample was sent for analysis. The extent of these layers was not clearly defined although all were found in the same area. There was little evidence for an associated structure, except possibly silty sand cg490 which appeared as a strip to the north of the area. It may represent remains of the sandy floor pushed to the edge of the room. A large quantity of slag was recovered from layer cg491; most pieces were similar to iron secondary smithing lumps in form and exterior colouration (purple-grey), but they have a bright blue/green silica-rich interior. A number of pieces of slag contain non-ferrous droplets (visible on x-radiograph) and these often have an unusually 'colourful' outer surface. Hammerscale is also present in the surviving samples in fairly large quantities alongside small scraps of iron, often no more than 3mm in length. It indicates that iron was also being smithed within the locality.

The only identifiable finds from these contexts apart from the iron nails are a fragment of an iron spur terminal and a woolcomb tooth (DHB) <SP77:FE473> from cg491 together with a possible tool (DGF) <SP77:FE468> from cg498 and the connecting plate from a horn comb (DFV) <SP77:B9> from cg500;

the possible tool is unfortunately in very poor condition.

A group of 282 non-industrial pottery sherds was present in this LUB. The high proportion of LFS and ST wares indicates a date from the mid 11th century and this is confirmed by the presence of a ST collared pitcher dating from the third quarter of the 11th century (Kilmurry 1980). Layer cg465 included intrusive 13th/14th-century pottery and other intrusive post-medieval finds.

*LUB 53 Pits at the east end the site (Fig 9.40)*

Cutting extensive dump cg465 (LUB 52), at the south-east corner of the site was a pit cg481 with a fill of a dark yellowish-brown gritty slightly ashy deposit. It was in turn cut by pit cg482 with a fill of dark brown silty loam with rubble. Cutting pit cg481 and dumps cg478 (LUB 50) was pit cg484 with a dark silty loam fill over which was dark greyish sandy silt.

The pottery dating was not conclusive; only six

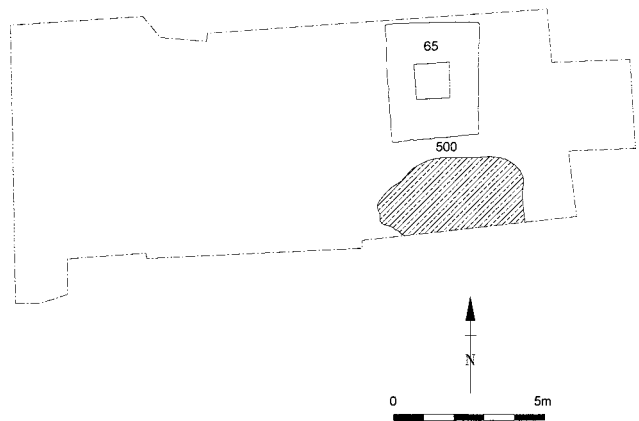


Fig 9.39 Metalworking surfaces(v): LUB 52

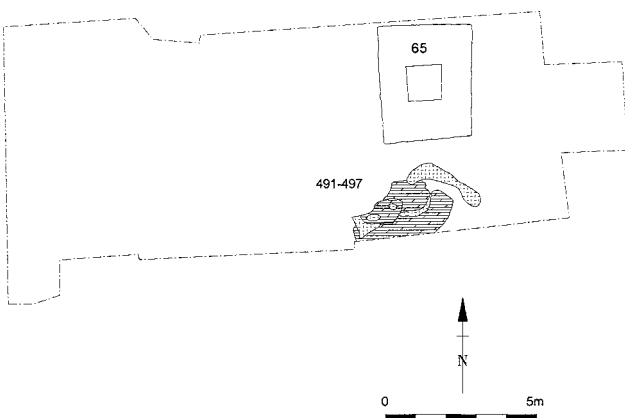


Fig 9.38 Metalworking surfaces(iv): LUB 52

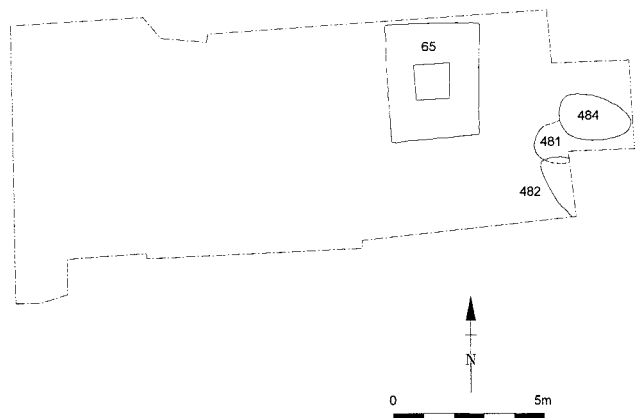


Fig 9.40 Pits at the east end of the site: LUB 53

sherds of both late Saxon and medieval dates were present.

#### *LUB 54 Pebbled surface (Fig 9.41)*

Possibly sealing the whole eastern part of the site (LUBs 52 and 53) was a pebbled surface cg503 (0.31–0.65m thick; 66.80–67.61m OD). Sealing the surface to the south, where they dipped, was a loam deposit cg504 over which was a further patch of pebbled metalling cg505. Sealing cg503 was a scatter of large stones cg1339; this may represent the demolition of a feature associated with the surface.

Pebbled surface cg503 produced a large group (64 post-Roman sherds) of early to mid/late 11th-century sherds including the largest group of SNLS (48 sherds) on the site, along with three sherds of medieval or late medieval date. There was also intrusive post-medieval material from cg503.

#### *LUBs 55–69 Inhumations and graveyard (Figs 9.30, 9.89, 9.96–8 and 9.105)*

**LUB 55** Graveyard around Structure 5.1. Sealing inhumations (LUB 34) around the single-cell Structure 5.1 (LUB 43) was a dump cg508 which was 0.50m deep to the west and 0.20m deep to the east. It may represent a layer covering the site which was cut into by graves (LUBs 56–58 and 60–68) and by the tower of Structure 7 (LUB 92). There was a surviving 'pillar' of graveyard deposits cg615 (0.58m thick), where inhumations (LUB 59) and construction trench cg675 (LUB 80) had failed to cut it away. It seems likely that this was essentially the same material as cg508. Layer cg508 contained angle bindings, staples and hasps, probably from late Saxon box coffins, but surprisingly few (35) nails. If nailed boxes were being used as coffins, perhaps a greater number of nails would be expected in these reworked graveyard deposits.

Four of the registered finds from cg508 are of particular significance here because they almost certainly represent a small but cohesive 9th-century group, disturbed by 10th- or 11th-century activity (Fig 9.89; see Discussion). The pottery from LUB 55 (38 post-Roman sherds) is mainly a small group of mixed 10th- and 11th-century material with one sherd of EST from cg508 possibly dating to the late 9th century. LUB 55 was cut and/or sealed by LUBs 57–70.

**LUB 56** Graves in the centre-west of the site (covering all periods of church use). Inhumations cut graveyard deposit cg508 (LUB 55) and they were sealed by topsoil (LUB 119).

**LUB 57** Graves to the north-west of the site (all periods of church use up to and including Structure 8). Inhumations cut graveyard deposit cg508 (LUB 55) and these were sealed/cut by Victorian church cg1162 (LUB 118).

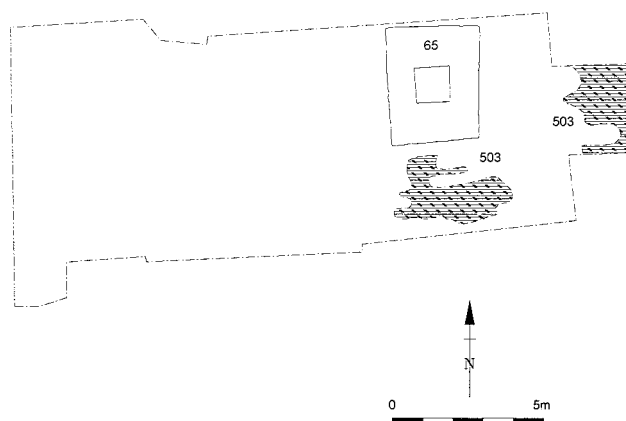


Fig 9.41 Pebbled surface: LUB 54

**LUB 58** Graves in the southern part of the site (during use of Structures 5 and 7). Inhumations cut graveyard deposit cg508 (LUB 55) and they were cut by Georgian church cg1089 (LUB 112). One inhumation cg651 was sand-lined. There were traces of a mortar spread cg699.

**LUB 59** Graveyard to the south of Structure 5.1–3. Inhumations cut graveyard deposit cg615 (LUB 55) and other layers; the LUB was stratigraphically earlier than extended south aisle cg675 (LUB 80). Three sherds of 10th-century date were recovered from graveyard deposit cg644. Graveyard dump cg662 contained a silver cut farthing, an Ethelred II *Crux* issue, of AD 991–7 (Blackburn *et al* 1983, 17, fig 31). Cutting this LUB was the south aisle of Structure 5.4 (LUB 80).

**LUB 60** Graveyard to the south of Structure 5.1–3. Inhumations cut graveyard deposit cg508 (LUB 55) and these were stratified below the south aisle cg538 (LUB 80).

**LUB 61** Graveyard to the west of Structure 5.1–2 (Figs 9.30 and 9.105). Inhumations cut graveyard deposit cg508 (LUB 55); they were stratified below nave extension cg540 (LUB 71). In LUB 61 a radiocarbon determination of cal AD 880–1160 was obtained from inhumation cg513 (Figs 9.30 and 9.105).

**LUB 62** Graveyard to the west of Structure 5.1–4. Inhumations cut graveyard deposit cg508 (LUB 55); they were sealed by graveyard deposit cg837 (LUB 102). One 10th-century sherd and a 13th-century (LSW2) jug handle came from cg652.

**LUB 63** Graveyard to the south of Structure 5.1–4 (Figs 9.30 and 9.105). Inhumations cut graveyard deposit cg508 (LUB 55) and they were sealed by graveyard deposit cg700 (LUB 94), graveyard deposit cg737 (LUB 83), or late medieval church cg850 (LUB 91). One of the cists cg660 was mortar-lined. There were traces of a possible surface, a gravelly/stoney layer cg643. In LUB 63 a radiocarbon

determination of cal AD 890–1210 was obtained from inhumation cg605 (Figs 9.30 and 9.105). Four sherds of early medieval date were found in graveyard deposits cg617 and cg674 and a single 10th-century sherd in layer cg643. A sherd of a glass bowl/beaker from deposit cg674 has been tentatively dated to the 16th century (Adams and Henderson 1995).

**LUB 64** Graveyard to the south of Structure 5.1–3. Inhumations cut graveyard deposit cg508 (LUB 55); they were sealed by graveyard loam cg737 (LUB 83).

**LUB 65** Graveyard to the south and east of Structure 5.1. Inhumations cut graveyard deposit cg508 (LUB 55); they were all sealed by graveyard deposit cg574 (LUB 75) or cg566 (LUB 76). Cutting inhumations cg558, cg559, cg560 and cg561 (all LUB 65), and following the line of the Roman wall cg62 (LUB 7), was a trench cg563, probably for a stone drain, which cut through the graveyard. It was 0.64m deep and 1.05m wide with no apparent gradient. Its backfill of building debris cg564 was sealed by graveyard deposit cg574 (LUB 75). A few sherds of early medieval date were found in cg564 and sherds of late Saxon and Saxo-Norman date in cg565 (2 sherds).

**LUB 66** Graves to the east of Structure 5.1–3. Inhumations cut graveyard deposit cg508 (LUB 55); they were all stratigraphically earlier than the widened chancel cg542 (LUB 79) and graveyard deposit cg737 (LUB 83).

**LUB 67** Graveyard to the east of Structure 5.1. Inhumations cut graveyard deposit cg508 (LUB 55); they were cut by the construction of the chancel cg534 (LUB 70).

**LUB 68** Graveyard to the east of Structure 5.1. Inhumations cut graveyard deposit cg508 (LUB 55); they were sealed by graveyard deposit cg792 (LUB 77).

**LUB 69** Graves in Structure 5.1–4. Inhumations cut floor cg507 (LUB 43) and they were sealed by floor cg701 (LUB 91). A single sherd of 10th-century date came from inhumation cg613. Inhumations which consisted of ‘pillow burial’ cg233 and inhumation cg234 cut the internal surface to the single-cell building cg230 (LUB 43) and were sealed by graveyard deposit cg700 (LUB 94).

### *Early medieval period*

At some date during the latter part of the 12th century or later (as indicated by reused worked stone) a chancel **LUB 70** (Structure 5.2B) was added to the single-cell chapel (LUB 43), cutting two generations of burials. Some time later, cutting four generations of burials, were the foundations for an extension to the nave **LUB 71** (Structure 5.3A). Buttresses were added to the nave **LUB 72**. A

sequence of floors was found inside the nave **LUB 73**. Several inhumations belong to this period of church use **LUBs 74–78**.

There were further alterations to the church; the chancel was widened **LUB 79** (Structure 5.4B) and an aisle was added **LUB 80** (Structure 5.4C) in the early 13th century dated both by pottery from this LUB and worked stone from later contexts. Several inhumations probably belong to this period, around and inside the church **LUBs 81–86**, and to its east **LUBs 87–90**.

### *LUB 70 The chancel – church 5.2B (Fig 9.42)*

Cutting inhumations from LUBs 35 and 67 was an added chancel cg534; the chancel foundations cut through two generations of inhumations. The construction trenches and foundations survived to a depth of 0.70m for the south wall, 0.60m for the north wall and 0.30m for the west wall. The foundations cg534 were of roughly hewn limestone blocks, pitched on the top course and bonded by dark yellowish-brown loam with sand, limestone chips, pebbles and tile; the construction trench was backfilled with similar material. The chancel foundations were about 1m across. Its internal dimensions measured about 3.5m north–south and it added about 6m in length to the church. The top of the surviving foundations was at 65.38m OD.

Some pieces of worked stone were incorporated into the chancel extension. A fragment which probably came from the head and shoulder recesses of a coffin, with pecked and striated bolster tooling (AEC) <NN4>, was found in the south wall. It joins another fragment (AMH) <NN5> which was built into the footings of the east wall of the extension. Head and shoulder recessed coffins are generally of the 13th–14th century, and 12th century at the earliest.

A few post-Roman sherds (13), the latest of which are of Saxo-Norman date, were recovered from the foundations cg534; these would seem to be residual from the dating of the reused worked stone.

### *LUB 71 The nave – church 5.3A (Fig 9.43)*

Cutting/sealing inhumations cg157 (LUB 34), cg527 and cg529 (both LUB 61) was the extension cg540 to the nave of the single-cell chapel (Structure 5.3A). The foundations of the extension were constructed of pieces of flat and pitched limestone and tile fragments in a loamy matrix and set into trenches (0.70–0.94m in depth; at least 64.42m OD). These foundations would have extended the internal dimensions by about 5m to the west (4.2m wide – north–south), to a length of c 13 m.

The extended nave sealed four generations of inhumations, compared to the chancel (LUB 70 Structure 5.2B) which only sealed two generations.



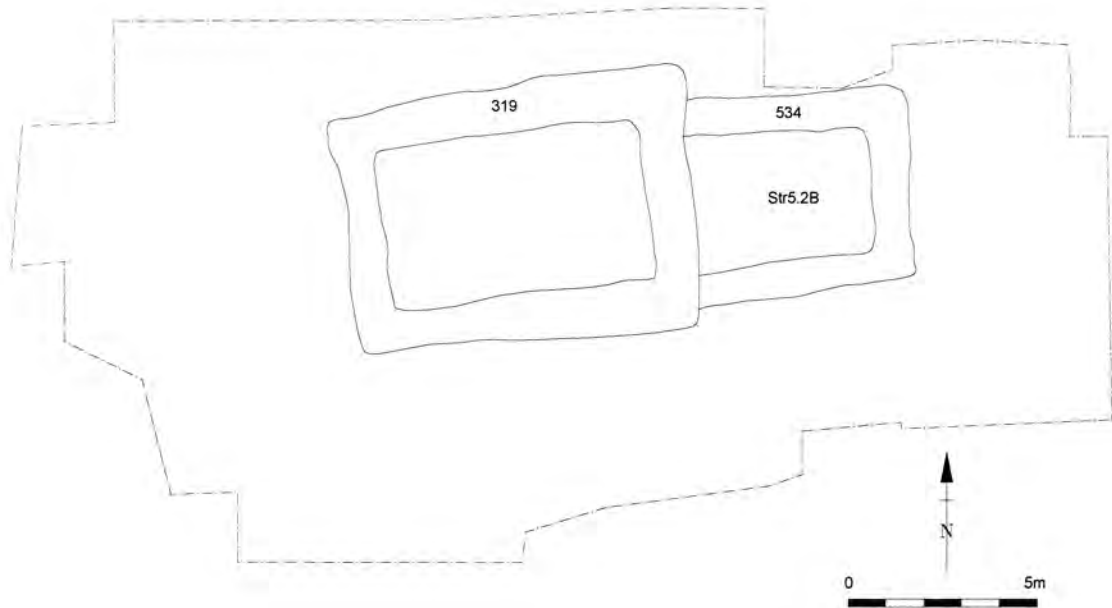


Fig 9.42 The early medieval church with added chancel, Structure 5.2B: LUB 70

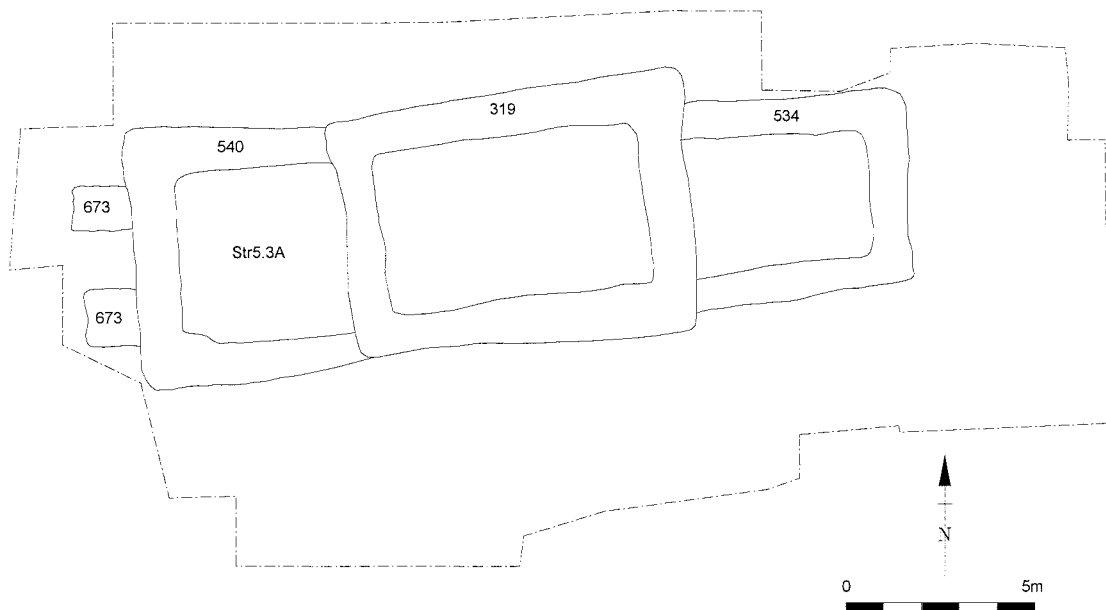


Fig 9.43 The extended nave, Structure 5.3A and buttresses: LUBs 70 and 71

This might be taken as evidence that the extended nave was later than the chancel, possibly some time in the 12th century.

*LUB 72 The nave – buttresses (Fig 9.43)*

Stone buttresses cg673 were set against the west end of the nave extension cg540 (LUB 71); large externally faced limestone blocks were set in construction trenches and packed with graveyard material. The buttresses had foundations of different sizes; the

one to the south was 1.6m wide and the one to the north was 1.2m wide. There was a gap of 1.7m between them. Buttresses cg673 produced a group of pottery (14 post-Roman sherds) and other finds most of which must relate to later robbing activity of the 18th century.

*LUB 73 Church 5.3A floor layers in nave (Fig 9.78)*

The floors within the west end of the nave sealed the lowest offset courses of cg540 (LUB 71). It is

only here that the floor layers of Structure 5 had survived, cut by occasional postholes and small pits. Inhumations had subsequently cut through these layers leaving only a ragged pinnacle of surviving stratigraphy at the west end of the nave (Fig 9.78).

Construction debris cg664, sealing the nave extension cg540 (LUB 71) provided an initial working surface (0.15m thick); there were several burnt patches. Into this was cut a small pit cg665 (unplanned). The debris was sealed by mortar cg666 (0.03m thick) over which was a sandy clay layer cg667 (0.07m thick); these only survived as a pillar cut around by inhumations. Also sealing debris cg664 was a silty sand make-up layer cg668 (0.34m thick); over this was pebbly make-up or repair cg669. In one area, a small pit cg670 cut layer cg668. Also sealing cg664 were several layers of silty sand cg671 (0.01m thick), sealed by compact clay cg672 (0.02m thick) and sandy silt cg676, burnt heavily in places (0.01m thick). Sealing all this initial activity was a sequence of deposits. First a series of ashy layers cg677 (0.01m thick); then layers of very fine silt cg678 (0.02m thick) sealed by sandy silt with building debris fragments cg679 (0.02m thick), over which was compacted reddish-yellow sand cg680; these layers were sealed by sand with pebbles, building debris and carbon flecks cg681.

Layer cg681 formed the surface for alterations as indicated by postholes cg683 and cg684, as well as pit cg682 and cg687; all four cut layer cg681. Sealing the postholes was a coarse rubble deposit cg685 (0.03m thick) and over pit cg687 was a pebbly layer cg686. These two layers were sealed by compacted sand cg688 (0.01m thick) which was itself cut by a pit cg689 containing broken slabs of limestone.

Pits cg687 and cg689 were sealed by a whole sequence of thin layers cg690 which were allocated a single context code; in sequence – clay, mortary sand, ashy charcoal, silty clay, sandy clay, mortary sand and then sandy clay.

Cutting layers cg690 was a pit cg693 with a fill of silty clay cg694; contemporary with this was ash with pebbles cg692. Sealing the pit fill was a layer of sand with limestone fragments cg695, over which was a sequence of deposits – ashy clay, silty clay and red sand cg696.

Layers cg692 and cg696 were sealed by two layers of sandy mortar cg697. Over this was a layer of black charcoal cg990, sealed by at least five or six layers cg991 including sandy clay, mortar, ash and sand. Next was a layer of sandy mortar cg992 (0.01m thick).

Cutting sandy mortar cg992 was a posthole cg993; it was sealed by ash and charcoal cg994 (0.01m thick). It was sealed by sandy silt cg995 (0.01 thick) over which was a fine mortary deposit cg996 with burnt patches; layer cg996 was cut by a stake-

hole cg997 and sealed by a patch of sand cg1023.

Sealing the stake-hole cg998 were at least five layers of silty sand cg998. They were sealed by sandy mortar cg999, burnt in places, over which was a layer of compacted sand cg1019, then a thin compact layer of silty sand cg1020 and finally a layer of sandy silt cg1021.

This sequence sealed the nave extension (LUB 71) with construction debris cg664 and continued through almost to the robbing cg1025 of the early medieval church (LUB 91). The various layers and features amount to at least 33 stratigraphic events (many of the contexts were recorded as containing more than one deposit). Scrutiny of the sequence suggests several periods of building alteration to this part of the church (including the initial construction of the nave extension cg540); these various events are indicated both by pits and postholes – possible scaffolding holes – and by charcoal and burning. In between constructional activities were layers of sandy silt. The fill of pit cg689 included broken slabs of limestone. These may indicate that the nave of the church had been stone-flagged and that the sandy silt represents make-up or their matrix, suggesting that for each sandy layer occurring the flagstones had been lifted and reset.

Dating evidence for the sequence was scarce; a single medieval sherd (LSW2/3) was found in construction debris cg664; pit fill cg694 produced a single sherd of NSP of early medieval date; layers cg990 and cg996 both produced single sherds of 13th-century date.

#### *LUBs 74–78 Inhumations and graveyard (Fig 9.99)*

**LUB 74** Grave between nave and chancel of Structure 5.2–3. Inhumation cg612 cut the east wall of the single-cell chapel cg319 (LUB 43), was sealed by graveyard deposit cg700 (LUB 94), and post-dated the chancel extension (LUB 70).

**LUB 75** Graveyard to the south and east of Structure 5.2–4. Graveyard deposit cg574 sealed LUBs 41 and 65, and was cut by inhumations, some of which, including cg790, were cut by foundations cg850 (LUB 91). A range of sherds (21) from late Saxon to medieval was found in cg574.

**LUB 76** Graveyard to the south and east of Structure 5.2–3. Sealing inhumations cg562 and cg565 and backfill cg564 of drain cg563 (all LUB 65) was graveyard deposit cg566 which was cut by a number of inhumations; these were sealed by graveyard deposit cg737 (LUB 83). Cg566 produced three sherds of 10th-century date.

**LUB 77** Graveyard just to the east of Structure 5.2–4. Sealing inhumations from LUB 68 was graveyard deposit cg792; it was cut by inhumations, some of which were sealed by graveyard deposit cg807 (LUB 84) and others by cg851 (LUB 94). Cg792 contained eight sherds dating to the late Saxon to

medieval periods together with intrusive post-medieval glass and a coffin plate.

**LUB 78** Graveyard to the west of Structure 5.3–4. Inhumation cg691 cut buttresses cg673 (LUB 72) and was cut by tower cg1000 (LUB 92).

*LUB 79 Church 5.4B Chancel widening*  
(Figs 9.44 and 9.79)

A robber trench cg592 was dug to remove stone from the east wall of the chancel cg534 (LUB 70). The chancel was widened cg542, sealing/cutting graveyard LUB 36 to the south and LUB 66 to the north. The construction trench for its north wall was c1m wide and at least 1m deep; the foundations within the trench consisted of large limestone fragments as facing, with reused stone forming the core. The construction trench for the south wall of the chancel was c0.85m and at least 0.45m deep; the foundations within the trench consisted of stones with outward-facing flat faces, and lower courses of larger and flatter blocks (Fig 9.79).

Compact loamy layer containing sand, stone, tile, bone and mortar cg736, (0.13m deep; 65.53m OD) was laid within the widening of the chancel cg542. It was cut by five pitched unworked limestone blocks cg758 (unplanned). These blocks were sealed by cg851 (LUB 94).

The chancel probably had been c3.50m wide internally and was now widened to c 5.30m. The chancel was possibly widened at the same time as the aisle (LUB 80) was added to the building.

Chancel widening cg542 contained a few sherds

of early to early/mid 13th-century pottery; both cg542 and cg592 contained a small quantity of intrusive post-medieval material.

*LUB 80 South aisle, Structure 5.4C*  
(Figs 9.44 and 9.80–1)

A robber trench cg658 cut graveyard cg657 (LUB 60), removing stone from the foundations of the single-cell building.

Sealing inhumations cg523 and cg524 (both LUB 60) were what survived as foundations for the east part of the south aisle, cg538. To the west there was better survival as foundations cg675 (Fig 9.80). The construction trench (0.30–0.55m deep) had cut inhumations cg201, cg509, cg656 (all LUB 38) and cg663 and graveyard deposits cg644 (both LUB 59) and cg615 (LUB 55). A south nave arcade was erected at the same time (construction trench 0.39m deep). The south aisle foundations were of roughly dressed limestone slabs, well laid and faced, bonded with sandy yellowish-brown mortar; there was a rubble core set in sandy loam. Wall cg675 included at least one external buttress to the south of the aisle (Fig 9.81).

Worked stone reused in later contexts suggests the date and form of the aisle (see Discussion); a keeled voussoir may be grouped with a number of other pieces which date to c1200 and include a simple pointed lancet head, considerable evidence for an arcade, and some fine mouldings which follow contemporary arch mouldings at the cathedral. The latest pottery from the south aisle foundations cg538

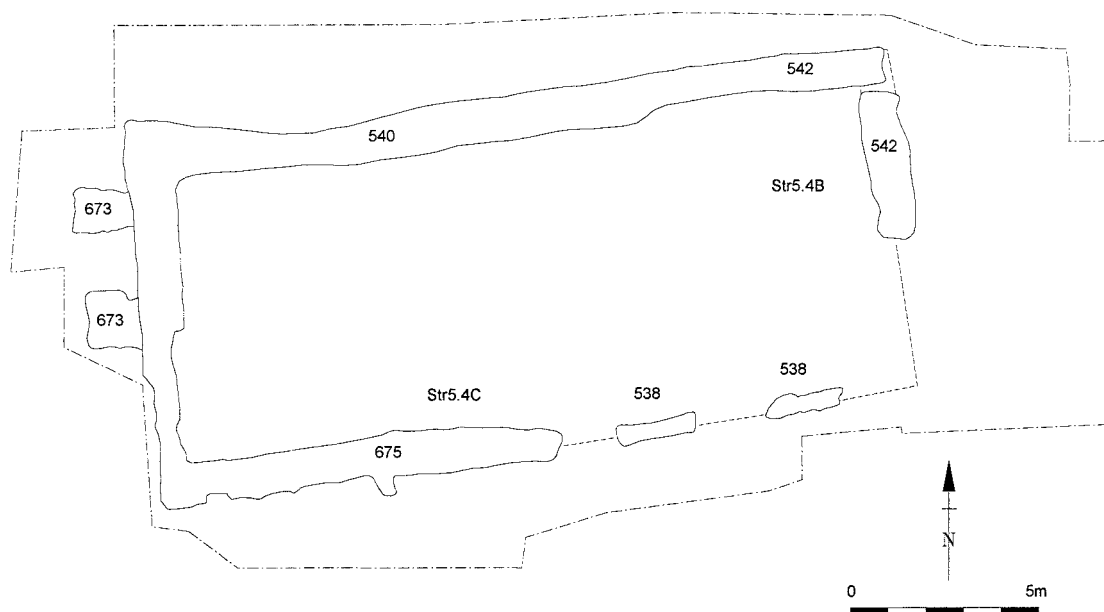


Fig 9.44 The Medieval church, Structure 5.4B with widened chancel and south aisle: LUBs 79 and 80

and cg675 (6 sherds) is probably of early 13th-century date. There was intrusive 18th/19th-century bottle glass in cg675.

*LUBs 81–86 Inhumations and graveyard which post date church 5.4 (Fig 9.100)*

**LUB 81** Graves in the chancel of Structure 5.4. Cutting cg736 (LUB 79) were inhumations cg805, and cg803, which was cut by inhumation cg804; limestone wall cg731 (LUB 110) sealed this LUB.

**LUB 82** Graves in the south aisle of Structure 5.4. Dark brown clayey loam cg931 sealed extended south aisle cg675 (LUB 80) and was sealed by sandy loam cg933 and cut by inhumation cg943, which in turn was cut by inhumation cg944; this was cut by inhumation cg945. Inhumation cg950 was sealed by dump cg950 (LUB 104). A layer of yellowish-brown mortar and sand cg935 was sealed by a layer of mortar cg936; both were layers within the south aisle. Inhumation cg939 cut cg936 and was sealed by a brown deposit cg940. Layer cg934 contained a single intrusive TB sherd of late medieval to post-medieval date whilst an as yet unidentified sherd, possibly an import with a partially glazed orange/yellow fabric, was found in cg938. Cg939 and cg940 both contained medieval and intrusive post-medieval sherds (15 post-Roman sherds). There was intrusive post-medieval coffin furniture in cg939 and other post-medieval finds in cg940.

**LUB 83** Graves in the south aisle of Structure 5.4. Graveyard deposit cg737 sealed inhumations from LUBs 63, 64, 66 and 76; it was cut by inhumations including clay-lined cist cg761. Probably sealing cg737 was a patch of cobbled surface cg759. This LUB was sealed by graveyard deposit cg806 (LUB 85). Medieval sherds were recovered from cg783 (7 post-Roman sherds) and cg785 and a single late Saxon sherd from cg782.

**LUB 84** Graves in the chancel of Structure 5.4. Sandy loam dump cg807 (0.20–0.30m thick) sealed inhumations from LUB 77. A layer of dark yellowish-brown loose loam cg862, with chalk stones, probably represented make-up related to building work in the chancel. It was cut by inhumations cg863, cg864, cg865 and cg866; it was similar in make-up but possibly different in density to the layer above it, cg882. A dump of dark brown mixed sandy loam with small chalky stones, cg882 covered the whole chancel area and ranged in depth from 0.33m to 1.15m. Sealing cg882 was a line of very pale sandy mortar running north–south cg890. This seems likely to be the line of an altar rail as behind its line were five inhumations cg885–9 which would have been located immediately in front of or under the altar. This was sealed by a dark brown very mixed sandy loam, cg891 containing many small chalky stones and some tile (0.06m deep). It was very similar in

material to cg882 and was probably make-up for the final chancel floor (subsequently robbed). This LUB continued until the demolition of the late medieval church (LUB 111) in the late 18th century. Medieval and post-medieval sherds were recovered from cg807, cg882 and cg891 (a total of 28 post-Roman sherds). There was also a quantity of other post-medieval material from this LUB: from inhumations cg808, cg810, cg812, cg863, cg867, cg884, cg886, cg887, cg888 and cg889, make-up cg862, dump cg807, together with layers cg882 and cg891.

**LUB 85** Graves in the south aisle of Structure 5.4. Sealing inhumations from LUB 83 was dark loam cg806. The inhumations of this LUB were themselves sealed by cg850 (LUB 91). A range of sherds dating from the late Saxon to the post-medieval period was found in cg806 and cg827 (22 post-Roman sherds).

**LUB 86** Graves in the nave of Structure 5.4. Inhumations cut graveyard deposit cg737 (LUB 83). Two medieval sherds were recovered from cg750 (LUB 86). The inhumations of this LUB were sealed by graveyard deposit cg837 (LUB 102).

*LUBs 87–90 Inhumations before church cg850 (LUB 91) to the east of Structure 5 (Figs 9.30, 9.49, 9.101 and 9.105)*

**LUB 87** Graveyard to the east of Structure 5.2–4. Sealing cg457 (LUB 49) was graveyard deposit cg1182; this was cut by inhumations cg1195, cg1198 and cg1199 which were in turn cut by late medieval church cg850 (LUB 91). LUB 87 produced a single late Saxon sherd.

**LUB 88** Graveyard to the east of Structure 5.2–4 (Figs 9.30 and 9.105). Possibly sealing cg457 (LUB 49) was a layer of sandy loam cg1181 (0.20m thick; 66.33m OD); it only survived between the graves and probably represents soil reworked by the graveyard. Inhumations cut graveyard deposit cg1182 (LUB 87) and were sealed by graveyard deposit cg1234 (LUB 105).

A radiocarbon determination of cal AD 990–1280 was obtained from inhumation cg1186 (Figs 9.30 and 9.105). There was a large robber trench cg414, cutting robbing debris cg422 (LUB 46) and removing stone from the Roman structures below, including a small part of the well-head (Fig 9.49). A very mixed pottery group was found in robber trench cg414 (56 post-Roman sherds) ranging in date from late Saxon to medieval, the latest sherds of which are likely to date to the early to mid 14th century, while a silver farthing of Edward III, (DEG) <SP77:C75> issued 1335–43, shows little wear and was probably lost before c1350 (Archibald 1995). The latest sherds from the inhumations of LUB 88 were of 13th- to 14th-century date.

**LUB 89** Graveyard to the east of Structure 5.2–4. Sealing a pit cg484 (LUB 53) was an area of dark

brown slightly sandy clay with pebbles, limestone and tile fragments, mortar flecks and bone (0.45m thick) cg485; this contained a range of material up to the 14th or 15th century and was cut by several inhumations. These were sealed by graveyard deposit cg1404 (LUB 111) to the east of the graveyard, which produced pottery (71 post-Roman sherds) of 13th- to 14th-century date.

**LUB 90** Graveyard to the east of Structure 5.2–4. Cutting cg464 and cg465 (both LUB 52) were inhumations together with silty sand cg1455; this LUB was partly cut by well alterations cg1345 (LUB 107) and partly sealed by cg1404 (LUB 111). The inhumations in LUB 90 contained three sherds, the latest of which dated to the 14th century.

### *High Medieval to Late Medieval*

The church was rebuilt **LUB 91** in 1301 after a documented collapse (Structure 7); the tower **LUB 92** (Structure 7E) was probably constructed at the same time. There was a sequence of floor layers within the tower **LUB 93**. Several inhumations **LUBs 94–106** were contemporary with the use of Structure 7 (it is possible that LUBs 103, 104 and 106 began later than the high to late medieval period).

In the late 13th to early 14th century there were alterations to the Roman well-head **LUB 107**.

### *LUB 91 Structure 7ABCD; Rebuilding of church in 1301 (Figs 9.45, 9.50a and 9.82–3)*

The church was rebuilt cg850; the foundations of the east part of the nave and the west end of the church were reused as well as some of the chancel, although the chancel was also extended and the truncated remains of the Roman wall cg62 (LUB 7) reused as foundations. The new, wider south aisle also included an eastern chapel (Fig 9.82). The foundations cg850 sealed/cut inhumations from LUBs 28, 39, 42, 63, 75, 85 and 87.

Before the rebuilding of the church cg850 the earlier chapel, Structure 5, was demolished; large parts of its foundations were robbed, cg1025, cg966 and cg698. Cutting robber trench cg1025 was a series of fifteen postholes cg1026 of varying sizes. These were related to the construction of the late medieval church. Sealing postholes cg1026 was a layer of sandy clay cg1027 (0.02m thick; 65.68m OD), probably created during construction. It was sealed by cg701, another construction layer which consisted of dry flaking mortar patches (0.02m thick; 65.81m OD) which also sealed inhumations from LUB 69.

The construction trenches of the rebuilding cg850 cut a number of inhumations and graveyard deposits: inhumations – cg1205, cg1209 and cg1215 (LUB 28); cg175 (LUB 34); cg176, cg177 and cg178 (all LUB 39); cg306 and cg307 (both LUB 42); cg603,

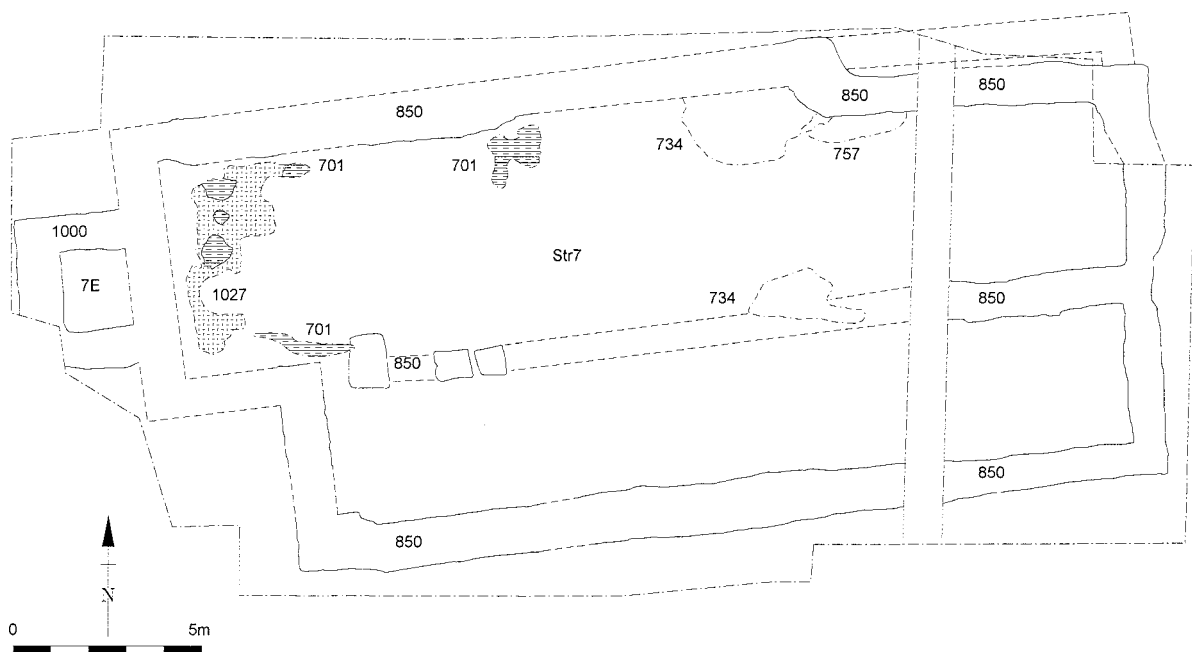


Fig 9.45 The late medieval church, Structure 7, after rebuilding following collapse in 1301: LUB 91 and 92

cg629, cg630, cg631, cg632 and cg634 (LUB 63); cg576 and cg790 (both LUB 75); cg791 (LUB 77); cg824, cg826 and cg827 (all LUB 85); cg738 and cg740 (LUB 86); cg1195, cg1198 and cg1199 (all LUB 87): graveyard deposits – cg615 (LUB 55), cg732 (LUB 63), cg806 and cg828 (both LUB 85).

The foundations of the north wall consisted of regular limestone blocks set in loam and sandy clay; one fragment of the wall survived as faced limestone blocks, bonded with mortar.

The foundations of the south aisle consisted of limestone blocks, some pitched and some laid. Over the foundations were large limestone blocks bonded with sandy loam and in places with a red clay. The west wall of the south aisle showed evidence of an opening, probably for a doorway, 1.2m wide (Fig 9.83). The south aisle was separated from the nave by pillars. A foundation trench had been cut, for blocks of well-laid stone, reused stone, limestone chips and mortar.

Sealing several inhumations cg268, cg270 (both LUB 36), cg271 (LUB 40), and butting up to the chancel foundations cg534 (LUB 70), were rough limestone blocks in sandy loam cg734 lying to the north and south of the chancel opening. They were sealed by layers cg700 and cg851 (both LUB 94) associated with the late medieval church. They have been interpreted as the possible foundations for a chancel arch but they may alternatively represent part of the construction debris.

Roughly dressed limestone blocks cg757 were loosely built up against the north chancel wall cg542 (LUB 79) and possibly formed the base for some internal structure of the church, or simply reinforced the foundations of the wall. The blocks were sealed by deposit cg851 (LUB 94) associated with the late medieval church. There were traces of plaster on the internal faces of the walls. Floor make-up, mortar spreads, sand and even flagstones within the church cg850, were cut by and sealed inhumations, so they have been grouped along with the inhumations into stratigraphically discrete units (LUBs 98, 101, 103 and 106).

The latest sherds in foundations cg850 (54 post-Roman sherds), apart from intrusive post-medieval material, are of 13th- to early 14th-century date. Robbing of foundations cg1025 and cg698 produced similar material.

#### *LUB 92 Tower: Structure 7E (Figs 9.45 and 9.50a)*

Cutting into graveyard deposit cg508 (LUB 55) and sealing the remains of buttresses cg673 was the west tower cg1000. The foundations consisted of rough limestone blocks in courses with a rubble and tile core. At 65.62m OD there was a change from foundation construction to narrower, faced walls, suggesting the original level of the floor.

It is stratigraphically possible either that the tower was built at the same time as the rest of the church, Structure 7, or that it was a later addition. The west tower cg1000 produced four sherds of 13th- to 14th-century date.

#### *LUB 93 Floor layers in Tower: Structure 7E Use (Fig 9.84)*

Inside the tower cg1000 (LUB 92) were dumps cg1001 and cg1002 (and possibly cg1013) over which was a layer of mortar with limestone chips cg1003 (0.02m thick; 65.51m OD), probably make-up for flooring, in which lay the semi-circular remains of a broken quernstone, used as the base for a hearth cg1004 (at 65.61m OD; Fig 9.84). Sealing cg1004 in the tower was a layer of very dark ash cg1005 over which was a layer of clay and sand with ash cg1006 (0.03m).

Sealing cg1006 was a circular hearth constructed of tile cg1007. Tiles were laid horizontally with a surround of raised small tiles; the types of tile used suggest that it was built in the 15th century. It lay in the south-west corner of the tower (65.64m OD). Contemporary with it and probably emanating from it was dark ashy clay cg1008 (0.01m thick). They were both sealed by clay with ash cg1009, over which was a layer of black sooty ash with sand and burnt limestone cg1010, then a layer of black ash with some clay cg1011, over which was a layer of sandy clay cg1012. A dump with burnt rubble cg1013 was sealed by charcoal and ash cg1014 (0.05m thick).

The layer cg1014 in the tower was sealed by a layer of pale brown mortar cg1015 (0.01m thick; 66.68m OD), over which was a layer with charcoal and ash cg1016 (0.05m thick). Then there was another layer of mortar cg1017 (0.01m thick; 66.75m OD). Sealing cg1017 in the tower was a layer of well compacted sandy mortary deposit cg1018 (0.09m thick).

The tower appears then to have been used for certain purposes, on the evidence of the hearths and associated ash layers. The floors seem to have consisted of either sandy clay or mortar. Dumps cg1001 and cg1002 and mortar layer cg1003 all contained a few sherds of 13th- to early 14th-century pottery (14 sherds in total). Clay cg1011 contained a single sherd of late medieval date (LMX). The layer cg1014 contained a sherd of BL, dating to between the 17th and 18th centuries, presumably intrusive from the demolition (LUB 111).

#### *LUBs 96–106 Inhumations contemporary with or later than Structure 7 (Figs 9.102–3)*

**LUB 94** Graves in chancel, nave and south aisle of Structure 7. Graveyard deposit cg700 sealed inhumations from LUBs 23, 37, 63, 69 and 74, and

layers from LUB 91. Inhumations cut graveyard deposit cg700 and were sealed by LUB 111. Two of the coffins, cg848 and cg721, were made of stone. Graveyard deposit cg851 sealed inhumations from LUB 77 and deposits from LUB 79; deposit cg851 was cut by inhumations, but there was no record what these were sealed by; the latest material in cg851 and cg861 was of post-medieval date and in cg855 of early modern date. LUB 94 contained a small amount of pottery, most of which was medieval in date. Graveyard deposit cg700 and inhumations cg705 and cg710 contained post-medieval pottery sherds, and other finds of post-medieval date were recovered from cg817, cg868, cg869, cg727, cg855 and cg974.

**LUB 95** Graves in south-east chapel of Structure 7. Inhumations cut graveyard deposit cg806 (LUB 85) and were sealed by the demolition of the late medieval church (LUB 111). Cutting cg806 (LUB 85) was a posthole cg821, isolated in the south aisle, possibly a scaffold posthole from repair work. Sealing cg850 (LUB 91) was a deposit of dark loam with rubble cg905, over which was a small patch (0.21m by 0.46m) of charcoal cg906 at 65.57m OD, possibly the remains of a small intense bonfire in the graveyard. A range of sherds from Saxo-Norman to post-medieval in date (16 sherds) was recovered from the inhumations and graveyard deposits in LUB 95.

**LUB 96** Graves between chancel and chapel of Structure 7. Inhumations cut the construction layers for cg850 (LUB 91). Sealing loam layer cg871 were several patches of flat limestone flagstones cg873, one patch appearing to be set in strong brown mortar, possibly burned. It was probably the remains of a flagged floor. This LUB was sealed by demolition material (LUB 111).

In LUB 96 the latest pottery sherd from charnel pit cg870 was of medieval date, although there was also a fragment of post-medieval glass. Post-medieval sherds of the 17th to 18th century were found in graveyard loam cg880 and clay tobacco pipe fragments of late 17th/18th-century date were recovered from floor cg873.

**LUB 97** Grave in the south aisle of Structure 7. An inhumation cut graveyard deposit cg700 (LUB 94) and was sealed by graveyard deposit cg837 (LUB 102).

**LUB 98** Graves within the south aisle of Structure 7. There was no record of what these inhumations cut, but they were sealed in the aisle by dump cg950 (LUB 104). A few sherds of medieval and one of post-medieval pottery were associated with inhumations in LUB 98. There were also other post-medieval finds from this LUB.

**LUB 99** Graves within the nave of Structure 7 (LUB 91). Inhumations were sealed by graveyard

deposit cg988. On the south side of the nave was a spread of pale brown mortar cg846 (OD 66.54m). A few sherds of medieval and two of post-medieval pottery were associated with inhumations in LUB 99. There were also other post-medieval finds from this LUB.

**LUB 100** Graves within the nave of Structure 7. Inhumations were sealed by rubble layer cg1036. Several sherds of 17th- and 18th-century post-medieval wares came from LUB 100. There were also other post-medieval finds.

**LUB 101** Graves and floors within the nave of Structure 7. At the west end of the nave there was a sequence of mortar spreads and patches of sand which survived although much cut through by inhumations. A white-sandy yellow mortar layer (66.7m OD), cg1022 was sealed by brown layer cg1050, mortar cg1054, a deposit with charcoal and ash cg1056 and yellow mortar cg1067. Cutting mortar cg1022 was a posthole cg1066. Mortar and tile cg1051 sealed cg1050. Cutting cg1054 was a scoop in the mortar, changed by intense heat. This was also sealed by mortar, plaster and tile fragments cg1059 (0.14m thick), over part of which was a spread of mortar cg1063 (0.10m thick) and a deposit with plaster and limestone cg1060. On it was sand cg1061, then mortar cg1062 (0.01m thick) and then another layer of mortar cg1065 (0.05m thick). Sealing cg1063 were two layers of sand, cg1069 and then cg1070.

Much of this sequence suggests alterations to the church, some possibly structural or some sort of refurbishment; the mortar spreads suggest internal alterations or possibly early floors. The sand layers might indicate stone flagging.

To the south-west of the nave layers were recorded in section: charcoal cg1071, sealed by a series of sand layers cg1072, cg1073, cg1074, cg1075, cg1076, cg1077, cg1078 and cg1079. Then there was a charcoal layer cg1080 sealed by a mortar layer cg1081. There was another sequence in the nave, but to the east of the above; it consisted entirely of sand layers (cg1037, cg1038, cg1039 and cg1040). From these sequences it seems that sand setting for flagstones was dominant, the flags being regularly reset. The charcoal and the mortar suggest other alterations.

This sequence was sealed by the demolition of the late medieval church in the late 18th century. Mortar deposit cg1054 and charcoal/ash deposit cg1056 in LUB 101 both contained a few sherds of medieval pottery (7 sherds). Mortar/plaster/tile layer cg1059 contained six sherds of post-Roman pottery, the latest of which date to the late 14th to 15th century; it also contained post-medieval glass and coffin furniture. Mortar cg1049 produced a small group (52 post-Roman sherds) of 15th-century material including a NHSLIP bowl, part of which

was also recovered from 17th- or 18th-century mortared surface cg1434; this surface also contained post-medieval glass and coffin furniture together with clay tobacco pipe fragments which probably date to the 18th century. Sand layer cg1074 produced a small group (36 sherds) of late 18th-century pottery and cg1070 contained an almost complete CRMWARE bowl with coloured bands also dating to the late 18th century.

**LUB 102** Graves in the nave of Structure 7. Graveyard deposit cg837 sealed LUBs 62, 86 and 97. Inhumations cut graveyard deposit cg837 and cg829; the latest pottery dated to the 17th to 18th century and there were other post-medieval finds from this LUB. The inhumations of this LUB were sealed by LUB 103.

**LUB 103** Graves within the south aisle of Structure 7. Graveyard deposit cg835 sealed LUB 102; it was cut by inhumations which were sealed by graveyard deposit cg950 (LUB 104) in the south aisle; the latest pottery dated to the 17th and 18th centuries. There were also other post-medieval finds from this LUB.

**LUB 104** Graves within the south aisle of Structure 7. In the aisle, sealing LUBs 82, 98 and 103 was a dump with mortar and tile cg950, over which were thin patches of yellow sand cg951, possibly used to set paving. Inhumations, some of which cut cg950, were sealed by the demolition of the late medieval church. In the aisle and the centre of the nave were isolated patches of flooring and make-up amongst the inhumations. There were two small areas of York stone slabs set in sand, one in the aisle, cg955 and one in the nave cg954. There were patches of sand cg959, cg967 and sandy mortar cg962. The latest pottery dated to the 17th to 18th century.

**LUB 105** Graveyard to the east of Structure 7. Sealing LUBs 29, 31 and 88 was graveyard dump cg1234 (0.35m thick); inhumations cut cg1234 and were sealed by graveyard deposit cg1356 (LUB 106). Burial cg1244 consisted of two inhumations. There were two patches of cobbling cg1287. The latest pottery dated to the 17th to 18th century.

**LUB 106** Graveyard to the east of Structures 7 and 8. Sealing LUB 105 was graveyard dump cg1356 (0.20m thick). Inhumations and possible posthole cg1403 cut dump cg1356 and were sealed by graveyard deposit cg1404 (LUB 111). Cut cg1359 consists of two inhumations. LUB 106 produced a range of pottery sherds from medieval to early modern date.

#### *LUB 107 Well Alteration (Figs 9.49 and 9.85)*

A large construction pit cg1345 was dug down to the top of the Roman well shaft. This cut through inhumations cg1200 (LUB 88), cg1340 and cg1343 (LUB 89), and cg1335 and cg1336 (LUB 90), together with inhumations cg1332, cg1333 and cg1334 (LUB 105), as well as through silty sand cg1341 (LUB 90).

A well-head was built up with large roughly shaped limestone blocks (Fig 9.85), the remains of which were found immediately above the level of cg1234 (LUB 105; top level OD 66.51m); the pit was backfilled with rubble, mortar, pebbles and silt. A group of pottery (192 post-Roman sherds) was recovered from the backfill of cg1345, which although including a few 15th- to 16th-century sherds, was made up mainly of 13th- and 14th-century material. Much of the decoration was of early to mid 13th-century type, but the presence of LSW2 rod handles and 15 LSW3 sherds indicates that this activity probably took place between the late 13th and early 14th century.

The bottom of the well had apparently been cleaned out, perhaps when the well-head had been altered, but the bottom fill cg1458 included a few sherds of 14th- to 15th-century pottery (see LUB 108).

Cutting cg1345 on the south-east side was a slot cg1346 running north-west to south-east (c0.36m deep). Its function was not clear, but it may have been created either to aid drainage in the area into the well or to facilitate access to it.

#### *Post Medieval*

The Late Medieval church, Structure 7 continued in use through part of this period: its components included the floors of the tower (LUB 93), together with the internal floors and inhumations – LUBs 94–104; to the east of Structure 7 were graveyard deposits LUBs 105–6 which also continued into this period. LUBs 103, 104 and 106 possibly belonged entirely to this period.

There were further alterations to the well-head, possibly in the 16th century **LUB 108**, before it became disused and was backfilled in the 17th century **LUB 109**.

The chancel and chapel were rebuilt in 1700, on documentary evidence, **LUB 110** (Structure 7.2B). In 1786 the medieval church was demolished **LUB 111** and a smaller church **LUB 112** (Structure 8) erected in its place. Contemporary with the use of this new church were several inhumations **LUB 113–116**.

#### *LUB 108 Well-head alteration (Fig 9.49)*

Cutting the well-head alteration cg1345 (LUB 107) was a trench for a repair cg1347 to the well shaft on its north and west sides. Once the trench had revealed part of the well-head, the limestone blocks of the well-head had been repaired with sandy mortar; the trench was backfilled with a layer of hard brown mortar over which were layers of sandy, clayey loam. Well-head alterations cg1347 produced a small group (17 post-Roman sherds) of early to mid 16th-century pottery.



The well would seem to have been cleared out during this time. This meant that well fill cg1458 (LUB 107) was mostly removed, but a small quantity remained at the bottom of the well. It was sealed by a slump of fresh lias clay from the sides cg1459.

#### *LUB 109 Well backfill*

Sealing the fresh lias clay cg1459 (LUB 108) in the well was a layer cg1410 which suggests use of the well in the late 16th to early 17th century. This was then sealed by backfills cg1466, cg1465, cg1461, cg1462 and cg1463 in the 17th century. The assemblages from the backfill of the well represent the largest collection of 17th-century pottery and other artefacts (Egan 1996) recovered from any site within the city; anaerobic conditions within the lower (waterlogged) levels had preserved a large quantity of organic material, principally of wood (Morris 1996) and leather (Mould 1996). For an analysis of the finds, and a discussion of the nature and origins of the backfill, see Mann (ed) forthcoming.

#### *LUB 110 Rebuilding of the chancel and chapel: Structure 7.2B*

The chancel and chapel were rebuilt cg731 (Structure 7.2B) in 1700. The construction trench for the north wall was recut about a metre to the north of the earlier chapel and there were the remains of limestone blocks loosely packed in loam. It sealed inhumations cg804 and cg805 (both LUB 81), and sealed foundations cg850 (LUB 91). The robber trench cg1101 (LUB 111) is another indication of where this wall would have been. There is no associated pottery and the majority of the registered finds are stone mouldings derived from the earlier buildings.

#### *LUB 111 Demolition of Structure 7*

The late medieval church was razed to the ground leaving some demolition debris; rubble layer cg 1036; deposit with brick and tile cg1046; mortar, plaster and tile cg1047; deposit with charcoal cg 1052; mortar with tile cg1082; mortar with stones cg1083; rubble and loam cg1084; rubble cg1093; collapsed ceiling plaster cg892; loose fine rubble cg893; mortar cg969; loam cg970; plaster and tile cg1090; plaster cg956; loam cg957; sandy loam cg961; rubble cg963; deposit with tile and ash cg958; sandy loam cg964; mortar cg1087. Deposits sealed LUBs 84, 89, 93, 94, 95, 96 and 106. The foundations of the medieval church were robbed in places; the north wall of the nave, cg1088; the south wall of the aisle, cg1091 and cg1155; the east wall of the south aisle, cg877; the east wall of the chancel, cg1100; the north wall of the chancel, cg1101; the south wall of the chancel, cg1097; the arcade between the nave and south aisle, cg1156. Sealing

backfill cg1463 (LUB 109), the well was further backfilled and levelled cg1460 and cg1464; these fills included debris from the demolished medieval church. Sealing the graveyard to the east of the site (LUB 106) was graveyard deposit cg1404, which was probably laid down after the demolition of the medieval church.

There was a large assemblage of pottery and finds recovered from this LUB (see Discussion). Demolition took place immediately before rebuilding, completed in 1786.

#### *LUB 112 Georgian church, Structure 8; 1786 (Figs 9.46, 9.50b and 9.86)*

The foundations for the Georgian church cg1089 cut several inhumations LUB 68 cg860; LUB 94 cg713 and cg714; LUB 99 cg1440 and cg1034, the late medieval church cg850 (LUB 91) and some of its associated demolition cg1083; cg1088; cg1055.

The footings for the south nave wall were formed by placing large limestone blocks, including some reused tombstones, into a construction trench; these stones were inserted between the aisle footings of the late medieval church. The construction trench was backfilled with a loam and mortar deposit. The apse had rubble footings set in a construction trench. There was a brick-lined circular feature (unplanned) at the south-west corner of the church, possibly a soakaway.

The lines of the north and west walls were not so easily differentiated from the late medieval ones; although the church was entirely rebuilt, some of the foundations were reused.

Sealing demolition layer cg1084 was a layer of mortar cg1157, probably make-up for a tile floor for the Georgian church.

#### *LUBs 113–116 Inhumations contemporary with the use of Structure 8 (Figs 9.46 and 9.104)*

**LUB 113** Graveyard to the south of Structure 8. Inhumations cut the demolition of the late medieval church (LUB 111) and were sealed by the demolition of the Georgian church (LUB 117). Sealing inhumation cg1144 was a black deposit cg1145, make-up for a stone-edged mortar path cg1146 (Fig 9.46); it was contemporary with the Georgian church.

**LUB 114** Graveyard to the east and south-east of Structure 8. Inhumations cut the demolition of the late medieval church (LUB 111) and were sealed by graveyard deposit cg1123 (LUB 115). There was a patch of yellowish-brown mortar cg1094.

**LUB 115** Graveyard to the east and south-east of Structure 8. Inhumations cut graveyard deposit cg1123 (LUB 114). There was evidence for a soakaway cg1131 (unplanned) at the south-east corner of the church. Sealing cg1123 was a path cg984 with a make-up of densely packed brick dust

and rubble, sealed by compact loam with pebbles; it ran east-west to the east of the Georgian church. It was sealed by make-up cg1147 for a path of packed loam cg1148, with ironstone and limestone rubble along its north edge (Fig 9.46). Graveyard deposit cg1123 contained material associated with the demolition of the medieval church.

LUB 116 Graveyard to the east of Structure 8. Inhumations cut graveyard deposit cg1404 (LUB 111) and were sealed by layer cg1432 (LUB 119). Cutting cg1404 was a pit cg1409.

### Modern

In 1877 the Georgian church was demolished LUB 117 and a large Victorian church LUB 118 (Structure 9) built to replace it. It was in turn demolished LUB 119 in 1971. The site was subsequently laid out to display the Roman well-head (LUB 8), and stones were laid out to mark out the plan of the apsidal church (LUB 21).

### LUB 117 Structure 8 demolition

The Georgian church was demolished leaving some demolition debris: rubble deposit cg899; rubble and mortar cg900; a deposit with rubble and mortar cg901; a mortar deposit cg902; a rubble deposit cg903; loam levelling cg1149; mortar and loam cg1150; sandy layer cg1153. The foundations of the church were robbed: south wall cg1151; north wall cg1152; apse cg1154.

### LUB 118 Victorian church, Structure 9; 1877

(Figs 9.47, 9.51 and 9.87)

The Victorian church, Structure 9, was constructed in 1877 over the site of the Georgian church, extending over the graveyard as well. There were several construction layers: compact deposit cg1158; loam cg1159; rubble in bands cg1160; sand cg1098; crushed limestone cg1099. Into these the foundations cg1162 of the church were cut. Hard deposit cg1174 was probably part of the construction layers. A construction surface of mortar cg1165 and levelling cg1166 were cut by scaffolding postholes cg1170.

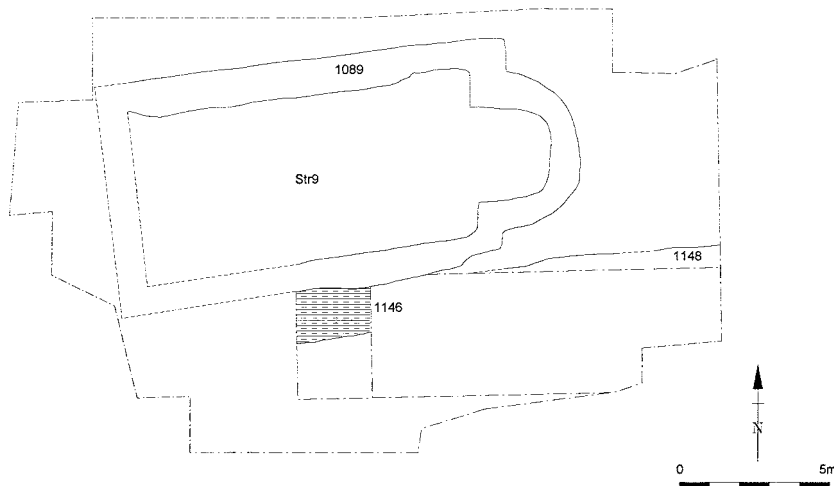


Fig 9.46 Georgian church, Structure 8 (built 1786), with path to south: LUBs 112, 113 and 115

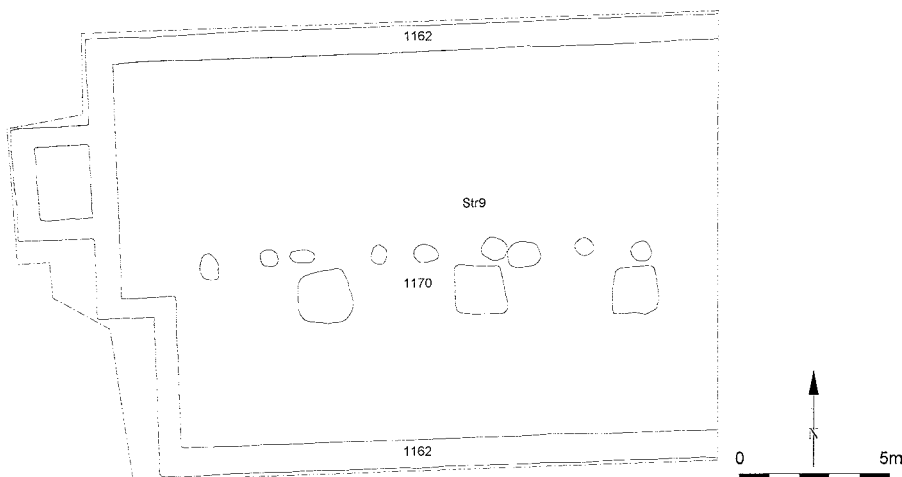


Fig 9.47 The west end of the Victorian church with south aisle, Structure 9: LUB 118

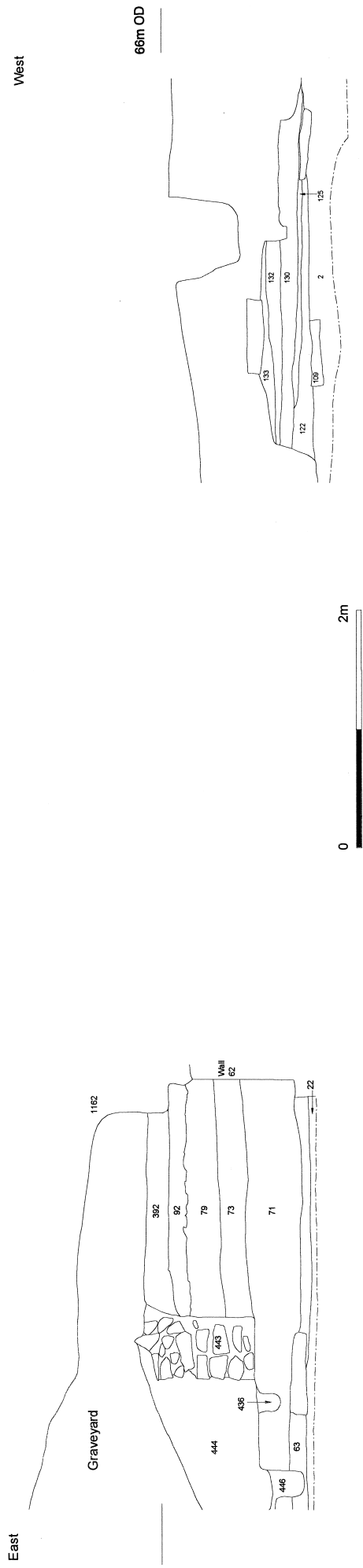


Fig 9.48 East-west section comparing the stratigraphy on both sides of wall cg62 (LUB 7). To the east of the wall are paving slabs cg63 (LUB 7), as well as later wall cg443 (LUB 48) cutting through earlier stratigraphy. A few metres to the west of the wall are the surfaces of the forum courtyard (LUB 5), cut away and sealed by the overlying graveyard.

There was evidence for a sump cg1163. Deposit cg1172 was cut by a pit cg1173 over which was mortar cg1178, possibly the setting for a wooden block floor.

*LUB 119 Demolition of the Victorian church*

The Victorian church was demolished in 1971. Loam cg1179 and cg1432 were associated with this; cg1432 sealed the backfill and levelling of the well cg1464 (LUB 109). The foundations were cut by robber trench cg1433.

**Discussion**

*Interpretation of the Roman sequence*

Soon after the excavation had finished, the excavators published a preliminary report (Jones and Gilmour 1980). The legionary features were interpreted as two phases (*ibid*, 63–66) as they are here (LUBs 1 and 3); the early *colonia* period was distinguished from the later 2nd-century building (*ibid*, 66–68) following a similar pattern as presented

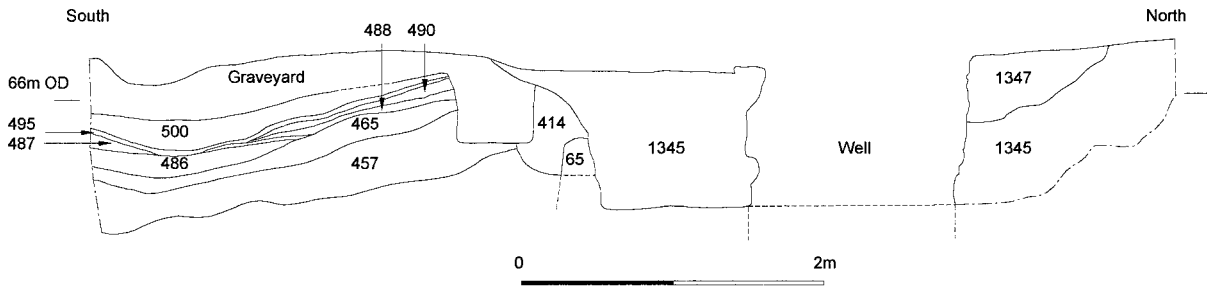


Fig 9.49 A section running from south to north, showing the abandonment of Structure 6, cg457 (LUB 49), sealed by metalworking surfaces LUB 52. The well-head was partly robbed cg414 (LUB 88), and this material in turn was cut by pit cg1345 (LUB 107), leading to a rebuilding of the well-head; further work on the well-head cg1347 (LUB 108) took place

a)



b)



Fig 9.50(a) The Late Medieval Church before its demolition in 1784; (b) the Georgian church soon after its completion in 1786, by S H Grimm



Fig 9.51 View of the Victorian church from the east, shortly before its demolition in 1970

here (LUBs 6 and 7 followed by LUB 8). This preliminary report was written, however, before extensive work was undertaken on the stratigraphic sequence; hence there are many minor differences in interpretation. Most of the differences concentrate on the western part of the site; without recourse to a matrix it must have been difficult to disentangle the sequence of various features and surfaces, but certainty is impossible in view of the absence of stratigraphic links between the various cut features of this period across the site.

Jones and Gilmour included in their first phase post-pit cg48a, (here interpreted as part of *principia* 1.2; LUB 3) and slot cg23 and pits cg35 (here associated with LUB 3). They excluded post-pit cg34, possible post-pit cg19, pits cg40 and cg60, slot cg11, posthole cg17, stake-holes cg9, cg10 and cg15, shallow depressions cg14 and cg18 and cut features cg13 and cg16; some of the features may have been excluded in an attempt to present clearly the main elements of the *principia*. They also considered that, although no internal floor surfaces were associated with the legionary period, an external surface of small pebbles and sand had been laid on the subsoil of stoney clay; most of these pebbly layers are here interpreted as representing the earlier surfaces of the later forum courtyard (LUB 5), as the demolition of the aisled hall led to the levelling cg21 (LUB 2) of the area (Jones and Gilmour 1980, 63).

The feature in the courtyard cg23 and cg35 which Jones and Gilmour (1980, 63–5) included in the first phase of the *principia* is included here in the second phase (LUB 3), because it cut sand and pebble cg22 (which sealed some of the postholes cg4). Jones and Gilmour did not include post-pit cg48i (which they saw as part of the first phase of the *principia*; Jones and Gilmour 1980, 63–4). However, they assigned to it several other features which have here been mostly phased as later – slot cg118, pits cg29, pitched stone areas cg111 (all in LUB 5), limestone filled feature cg28 and pit cg33 (both in LUB 6); on the other hand, some features considered by Jones and Gilmour to be secondary have been phased here as earlier – shallow feature cg19, verandah postholes cg4 (both in LUB 1). There was no clear stratigraphic justification for the phasing of these features by Jones and Gilmour (1980), as a matrix had not been used for this work, but the preliminary report was prepared within months of the completion of the site work.

Some of the features discussed here as part of the forum (LUB 5) were suggested by Jones and Gilmour (1980, 65) to belong to the second phase of the *principia*; these were pits cg29, slot cg118 and pitched stone areas cg111. They also interpreted pit cg33 and limestone-filled feature cg28 (both LUB 6) as part of the second phase of the *principia* (Jones and

Gilmour 1980, 65), rather than evidence for activity after that period.

The early *colonia* period, as interpreted by Jones and Gilmour (1980, 66) included the timber structure now suggested as an early church building cg135 (LUB 19), as well as the paved area to the east (LUB 7). The wall cg62 (LUB 7) was interpreted by them as being much later in date than the paving cg63. This demonstrates how little linking stratigraphy survived between the remains of the various Roman structures.

The 2nd-century building was basically interpreted in a similar way as it is here (LUB 8).

### *Principia*

#### *Principia 1.1 (LUB 1) (Fig 9.52)*

The aisled hall to the west was at least 11m wide and 14m long; the buildings along the north extended at least another 14m and probably more like 35m to the east; the courtyard verandah enclosed a courtyard at least 8m by 23m. Due to their size, these buildings, central within the fortress, can only be interpreted as part of the *principia*, the headquarters building. The closest parallel is the Augustan example at Haltern in Germany (von Schnurbein 1974). The wood-lined trench cg52, to the west of the west hall, appeared to have been located internally or under the eaves, just to the west of the (nave of the) hall, possibly functioning as a water-tank or channel. Water-tanks and channels have been found in association with *principia* elsewhere; at Inchtuthil a tank was located just outside, but linked to, the *principia* complex and originally lined in planks (Pitts and St. Joseph 1985, 79).

#### *Demolition of principia 1.1 (LUB 2)*

The *principia* structure was demolished. Timbers were removed or sawn off and any holes or slots backfilled; the western part of the site, at least, was levelled at this time, possibly the whole area.

#### *Principia 1.2 (LUB 3)*

The *principia* structure appears to have been extensively rebuilt on a slightly grander scale. It consisted of an aisled west hall at least 13m wide east–west and 14m long north–south; the positioning of the post-pits might indicate a hall which measured 10m between the aisles, with an aisle 5m wide on each side – overall 20m wide. Buildings extended at least 14m to the east from this hall, at the northern limit of the site. The hall and the northern building enclosed a courtyard (at least 32m by 8m).

Within the courtyard was the enigmatic feature cg23 with post-pits cg35 (LUB 3) which was originally seen as being part of the first phase of construction (Jones and Gilmour 1980, 64–5).



Fig 9.52 Looking south at the two rows of post-pits cg38 cut by post-pits cg48: LUB 1

However, after post-excavation analysis, it was judged to be later than the postholes. It may have been linked to the first construction of the well, but there is no evidence for this. Although the later well-head cg65 was not excavated, it seems likely that anything of that scale would have removed all traces of an earlier well. The east end of feature cg23 was relatively close to the location of the well and may have replaced the earlier water-tank cg52 to the west of the hall. The feature may have operated in two phases – first as a ground level water channel (traces of silt and the slight slope); this may have been superseded by a channel on timber stilts leading to a tank: the aqueduct at Exeter was carried across the defensive ditch in this way.

#### *Demolition of principia 1.2 (LUB 4)*

The *principia* seemed to have been dismantled and the area apparently levelled cg32 at c 64.65m OD, removing most of the evidence for surfaces and truncating the post-pits (LUB 4).

The post-pits and postholes have allowed a reconstruction of the plan of the *principia* (Jones 1988, fig 7.6). The size of the *principia* was also probably defined by slot cg27 which may or may not have represented the east side of the courtyard; but compared to even the verandah postholes cg4 it is of slight construction, suggesting that the first *principia* was perhaps still larger. Pottery from the *principia* (LUBs 0–4) peaks at cAD 60. The fall into



Fig 9.53 Looking south-east at area of pitched limestone, with mortar surface cg124 in the centre left, with Roman wall cg62 to left. Much of the area had been cut by later inhumations. LUB 5

the 2nd century is consistent with the wide dating given to flagon sherds, although the building was probably dismantled before the end of the 1st century.

### *Forum Courtyard*

Pits, areas of burnt clay, patches of pitched limestones and various slots (LUB 5; Fig 9.53) all indicate that there was considerable activity in this large open area in preparation for or during the initial period of the life of the forum.

The placing of an infant burial within the make-up for limestone/pebble surface cg122 is of some interest; in other Lincoln excavations (and elsewhere) infants have been found associated with the floors of domestic buildings, rather than public areas. This might suggest that, rather than an open metallated surface, there were indeed buildings in the first phases of the forum, of which only slight traces have survived. It is possible that these buildings or building were/was associated with the metalworking. There were further surfaces of pebble set in clay cg123, and then pebble set in mortar cg125. Contemporary with these was an area of pitched stones sealed by mortar cg124.

The surfaces were sealed by another surface cg130, which had make-up layers on which were laid flat limestone slabs (Fig 9.54–7); the remains of these were weathered and may have been removed to leave limestone chips and mortar. Contemporary with the surfaces was diagonal gully cg129, probably used as a water channel or drainage channel. There was also evidence for a further layer of limestone slabs cg132 which may have been repaired cg139. Later limestone surface cg140 was sealed by cg141.

The small patch of late surfaces, surviving in a small area, was ultimately sealed by surface cg141 on which was a Theodosian coin (AD 388–402). The interpretation of where the surface fits into the sequence is difficult, as is the interpretation of the significance of the coin. The surface could belong to a late phase of the forum courtyard or it could belong to Structure 4. The presence of metalworking debris in cg141 suggests that this surface has more in common with the earlier courtyard surfaces, than functioning as the floor of a church, unless this material was residual – in which case the coin too was probably residual. The Theodosian coin associated with surface cg141 could date the late use of the forum surface, or be intrusive in the forum surface, or else it could be residual or date Structure 4: certainty is impossible.

Pottery from LUB 5 exhibits dating a stage on from the earliest material, still with a strong peak around AD 60, but with a stronger presence at the end of the 1st century and tailing into the 2nd



*Fig 9.54 Looking west at limestone paving cg132, sealing paving cg130; later inhumations cut away much of the forum courtyard: LUB 5*



*Fig 9.55 Looking north-west at paving slabs cg63 and kink in wall cg62 around robbed feature cg61: LUB 7*

century. The pottery does not generally reflect the apparent continued use of the forum courtyard through to the 4th century, suggesting either that the area was cleaned regularly, or that pottery was not being deposited here during this time.





Fig 9.56 Looking north at paving cg63. To the right is the dressed stone statue-base cg64, standing above the paving. To the far left the kink in wall cg62, where it respected cg61, is discernible. LUB 7

#### Statues within the forum courtyard (Fig 9.56)

The area to the east of the forum courtyard, at the beginning of its life, possibly held statues (LUB 6). There were the remains of two possible statue foundations (cg28 and cg33), and a rectangular scoop (cg61) from which a base appears to have removed. The well, which may have been dug out as part of the *principia*, may have continued in use during this period.

#### Monumental building: Structure 10 (Figs 9.55–6)

In due course the east part of the site was cleared except for the largest statue base cg61 (about 1.95m by 1.80m), which was retained. The west wall cg62 (LUB 7) of a large building deliberately respected and partly circumnavigated this statue base, to enclose it within the building which extended at least 9m by 18m. The internal area of the building was paved cg63 (LUB 7) and the flagstones show no sign of wear, suggesting perhaps that the floors were little used or weathered or at least partly covered. Sealing some of the flagstones was the stone base (2.10m by 1.05m) for a statue or monument. The

well, possibly created in the *principia* period, might have formed an internal feature of this building.

The construction trenches for the later well-head (cg65) and for the apse and associated walls (cg70), together with dumps cg71 (all LUB 8), contained a large quantity (approximately 30 kg) of painted plaster which almost certainly originated from Structure 10. The majority of the plaster was decoratively painted, with fragments showing curvilinear ornament, possibly part of a floral or foliate scheme; many of these pieces also bear evidence of burnish. A noticeable proportion of the material dumped within the foundations of the apse and the well-head comprises large fragments of stucco, the surfaces of which bear fluted mouldings and which also appear to be slightly convex-curved, perhaps representing column-facings. Some half-dozen tiles of quadrant type, used for column construction, were found in the same contexts as the stucco, supporting this suggestion.

Within later levels associated with the construction of Room 2A.9 (cg361 and cg399, LUB 12) in the east range, were found two small fragments of imported marble wall veneers, one (DPM) <SP77:ST11> possibly from North Italy and the other (DMK) <SP77:ST13> from Euboea (Peacock and Williams 1992). These also are most likely to have originated from Structure 10.

There was slight evidence for glazed windows in Structure 10: later levels in the east range (LUBs 9, 14 and 16) produced four fragments from thick cast panes typical of the 1st–3rd century, in colourless and blue/green glass, and a single piece came from surface cg122 (LUB 5) in the forum courtyard. (Ten other fragments were also recovered from post-Roman contexts.) Three pieces of late Roman blown window glass also came from the east range (LUBs 10, 12 and 16), while another was found in a late Saxon deposit (cg485, LUB 50) in this area of the site, perhaps suggesting that the original windows were repaired or replaced during the 4th century. Although the total quantity recovered is small, this is perhaps to be expected on the site of such an important public building; rubbish is likely to have been disposed of elsewhere.

The use of this building has no material dating evidence, but it would seem that it was erected in the late 1st/early 2nd century.

#### Summary of the early Roman period

In the 1st century the *principia* 1.1 (LUB 1), was later rebuilt (*principia* 1.2; LUB 3); then the site partly consisted (at the east) of a paved area with statues (LUBs 6 and 7); a new wall on its west side may have replaced an earlier one. Subsequently the ground level was raised here to create a double



range of rooms, but this may be a later development (LUB 8). The area to the west continued as an open courtyard (LUB 5). The key location of the site, in the middle of the *colonia*, is one where public buildings would be expected, and the interpretation as a monumental centre reflects the status of the area. They probably belonged to more than one phase of the forum (LUBs 6 and 7; later LUB 8 (Mid Roman)), with its courtyard to the west (LUB 5). Other important elements of the complex lay to the north, south and west of the courtyard. The early monumental building (LUB 7) may have gone up at the end of the 1st century and stood for less than 50 years, but perhaps longer, before the construction of the raised buildings and the well-head (LUB 8) some time later.

### *East range (Figs 9.57–66)*

Sealing or cutting through the paving cg63 (LUB 7) was a well-head cg65 (LUB 8) and rooms A–F which all seem to represent one phase of building which has been interpreted as the east range of the forum (Structure 2), built after the early–mid 2nd century. During the building work the ground was raised, so that the east range was about a metre above the level of the courtyard which lay to its west.

The dumps with mortar (cg373, cg75, cg77 and cg79) might suggest surfacing of some kind; the lack of traces of marks left by slabs or fragments of discarded paving indicates that it was more likely that the mortar was used to consolidate the dumps as the height was raised; this idea is supported by the levels of the offsets of two walls (cg67 and cg69) which were built c1.00 m up from the initial level of construction (the height of the dumps).

The east range seems to have contained several (at times changing) functions. The room to the east of the well (room 2A) operated for a while as a non-ferrous metal workshop behind the well-head. Access to the well seems to have been from the portico (room 2C) and through a small room (room 2B). Room 2B may have only functioned as access to the well; it contained bases for water-butts. The portico (room 2C) was probably part of a walkway around the entire forum courtyard. Only the very southernmost parts of Rooms 2D and 2E were excavated; Room 2D lay to the north of Room 2B and Room 2E lay to the north of Room 2A. The apse (room 2F) may have been one of several, holding a statue, serving as an office, or creating space for a market stall.

Room 2A.1 (LUB 9) was floored with pebbles in the mid 2nd century. The room 2A.1 (LUB 9) was divided into three (Fig 9.64); the function of these cubicles is unknown, but was presumably commercial. Then there was a period of intermittent use

of the whole room 2A.2 (LUB 9), before the room 2A.3 (LUB 9) was sub-divided into at least two separate areas. Room 2A.5 (LUB 9), entirely given over to metalworking, was refloored, and functioned in some other way at least into the early 3rd century, if not later. The room 2A.6 (LUB 9) was floored with a sequence of mortar surfaces. Then Room 2A went into a period of disuse (LUB 10) between the mid 3rd and mid 4th centuries. Between the mid to late 4th century, the room 2A.8 (LUB 11) was reused, divided into two. Room 2A.9 (LUB 12) was again divided into two in the late to very late 4th century.

Pottery from LUB 9 included much residual material, particularly residual Samian, but there was also 2nd- and 3rd-century material. The assemblage from LUB 10 was similar to that from LUB 9, but had a more significant 3rd-century presence, slipping into the 4th century. The pottery from LUB 11 was different from that from previous LUBs in that it was very strongly 3rd- and 4th-century, with virtually no residual 1st-century types, a pattern which continued in the succeeding LUB 12.

Room 2B.1 and portico 2C.1 (LUB 13), dating from after the early 2nd century, were floored with mortar and then possibly with worn limestones and tile and later with limestone chips and mortar. To the north-west of the doorway was a possible water-butt cg86.

The small group of pottery from LUB 13 showed an almost total residual 1st-century emphasis, with a peak cAD 60 but strong presence in cAD 40; the tail into the 2nd century was partly due to the broad dating associated with some sherds.

The room 2B.2 and portico 2C.2 (LUB 14) were re-floored with *opus signinum* (LUB 14), possibly in the late 3rd century. To the east of room 2B.2 was possible water butt base cg93 (LUB 14). There was cobble patching in room 2B.3 and portico 2C.3 (LUB 14). Silt and debris had built up in room 2B.4 and portico 2C.4 (LUB 14) by the mid to late 4th century.

The pottery from LUB 14 was mixed with some 1st-, 2nd- and 3rd-century material, indicating high residuality.

Room 2D.1 (LUB 15) contained early mortar floors. There appears to have been a gap in the stratigraphy until the mid 3rd century when a new surface, of limestone and tile slabs, may have formed the floor of a metal workshop, room 2D.2 (LUB 15). The room may have been through a period of abandonment and re-use for a while, 2D.3 (LUB 15), before being finally abandoned, 2D.4 (LUB 15).

Pottery from LUB 15 was mixed with mostly 2nd- and 3rd-century material, indicating high residuality.

Room 2.1 (LUB 16) showed evidence of mortar surfaces, succeeded by clay floors. These were possibly early in the building sequence; there was



Fig 9.57 Looking west at the construction levels of the well-head cg65 and the east range of the forum. Although the paving stones seem to have mostly been removed to insert the well, one large stone (to the left of the well-head) appears to have been slightly undermined by the well foundation trench. The offset of the well-head cg65 is about a metre above the foundations. The well is abutted by wall cg67, whose offset is slightly higher. The associated floor was above the offset. LUB 8



Fig 9.58 The interior of the well-head, looking north:  
LUB 8



Fig 9.59 The interior of the well-head, looking east:  
LUB 8



Fig 9.60 Looking east at wall cg69 which cut pit cg68:  
LUB 8

a gap in the stratigraphy similar to that in room 2D. Then between the mid 3rd and mid 4th century was a sequence of clay/mortar floors with occasional stake-holes and ash layers (room 2E.2; LUB 16).

The pottery from LUB 16 differed radically from that from LUBs 13–15, as it had a strong later 3rd- to 4th-century profile, and minimal residual 1st-century pottery; it had similarities to the pottery from LUBs 11 and 12, but was more concentrated into the 4th century.

LUBs 13 and 14, together with LUBs 15 and 16, show a lack of deposits dated to the mid 2nd to mid 3rd century. The insertion of the substantial *opus signinum* floor cg92 (LUB 14) could have meant that some underlying deposits were first removed. There is evidence that in the late 3rd century there was a substantial re-flooring of Rooms 2B and 2C with *opus signinum* (LUB 14), which may have led to the removal of earlier deposits. An alternative interpretation is that the portico 2B and rooms 2C, 2D and 2E went through a period of disuse for about a century; this interpretation is supported by the greenish tinges of layer cg91, the first layer described in LUB 14, perhaps indicating abandonment – it may have been this layer which remained open for around a century. The pottery from this layer has little strong dating evidence – a 3rd-century or later date has been suggested – this pottery may well have been deposited just before the floor cg92 was inserted. Alternatively, the east range was not built until the 3rd century, and the pottery found was residual.

The Roman ground level was fairly consistent within the area of the east range; the repaired *opus signinum* cg96 to the west was at 66.14m OD and to the east of the well-head a late surface of pebbles set in mortar cg404 had an OD of 66.50m. However, the east range was constructed at a higher level than the forum courtyard (LUB 5), which built up from 64.68 (cg110) to 65.56m OD (cg141) at its highest. Fig 9.48 illustrates the difference in height between the two areas, divided by wall cg62. There was considerable height variation between surfaces cg109 (64.71–64.74m OD) and cg133 (65.28m OD) and *opus signinum* surface cg92 (65.92–66.14m OD).

Within the east range, the pattern of coin loss illustrates a sharp contrast between the area adjacent to the street – Rooms A and E – and the adjacent rooms to the west (Rooms B, C, D and F). A clear indication of the commercial basis of occupation within this easternmost part of the range, at least in its later phases of use, is given by the number of coins found here: a total of 100 (representing 92.7% of those stratified in Roman levels). No coins whatsoever were recovered from Rooms C, D or F, and only two from the latest level

in Room 2B (where they could well be redeposited; judging by the associated pottery, they are certainly residual).

No coins were recovered from the earliest phases of use within Room 2A (2A.1 – 2A.5), the first occurrence being within the earlier floor and ash levels (cg346, cg347 and cg349) of 2A.6 (LUB 9). Other finds include a small group of metalworking waste; although the two groups may be contemporary, it is perhaps more likely that the metalworking waste derives from earlier levels within the room and, like much of the associated pottery, is residual. Most of the coins are mid 3rd-century issues, according well with the latest pottery. This perhaps suggests that Room 2A underwent a change in use, from metalworking to commerce, around the mid 3rd century.

Room 2A later underwent a period of disuse (Room 2A.7, LUB 10); it is suggested above (p. 148) that this could have resulted from a fire within this part of the east range and that virtually all of the twenty-seven coins from the thick ash deposit cg355 sealing the room represent a single circulation group, possibly dating to the last quarter of the 3rd century. Further, it is just possible that they represent the contents of a lost purse, or a safety box that could not be retrieved from the flames.

Up to this point, the dating provided by the numismatic evidence coincides with that of the associated pottery; thereafter, however, the coins from this part of the east range are clearly residual and, like some of the associated pottery, quite probably redeposited. A further eight coins were recovered from Room 2A.8 (LUB 11), and twenty-four from 2A.9 (LUB 12; eleven of these came from the fill of pit cg405), showing some progression in date from the first quarter to the middle of the 4th century and suggesting continued commercial activity here. Associated pottery, however, is consistently of later date (mid to late and late to very late 4th century respectively) but with a noticeable residual content, frequently with a degree of fragmentation and abrasion that suggests that at least some of the material was redeposited.

Although very little of Room 2E to the north could be investigated, a total of twenty-seven coins was recovered from this area, again suggesting commercial activity. Earlier levels (cg372, cg379, cg381) within Room 2E.2 (LUB 16) contained regular and irregular issues of the mid to late 3rd century, similar to those recovered from Room 2A.6 and 2A.7. A single exception, an irregular *Fel Temp Reparatio* of AD 354–364 from cg379, may have been an intrusive piece. A further sixteen coins were recovered from the fill of slot cg387 in Room 2E.3 (LUB 16); virtually all are Constantinian issues of the mid 4th century, with a single *Securitas Reipublicae* of Valens, AD 367–



Fig 9.61 Looking south at wall cg257, revealed during the conservation and preservation scheme in 1983. The well-head is in the foreground. LUB 8



Fig 9.62 Looking south-west at the construction levels and doorway of room 2B: LUB 8

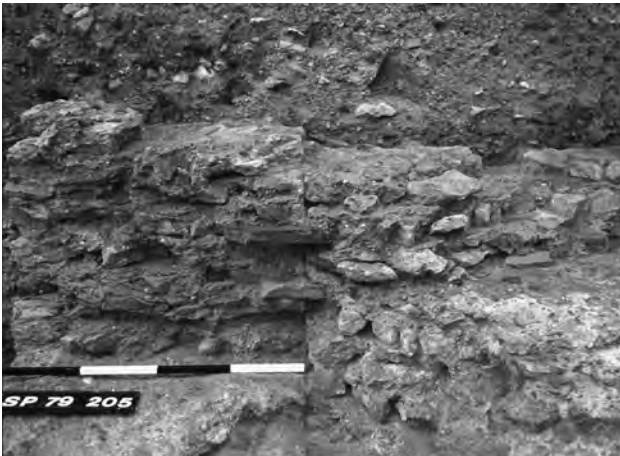


Fig 9.63 Looking north at well-head cg65 (right); on the left, the north-south wall of cg70 which was bonded into the well-head structure with tiles: LUB 8



Fig 9.64 Looking west at the traces of timber partitions around the well-head, room 2A.1: LUB 9

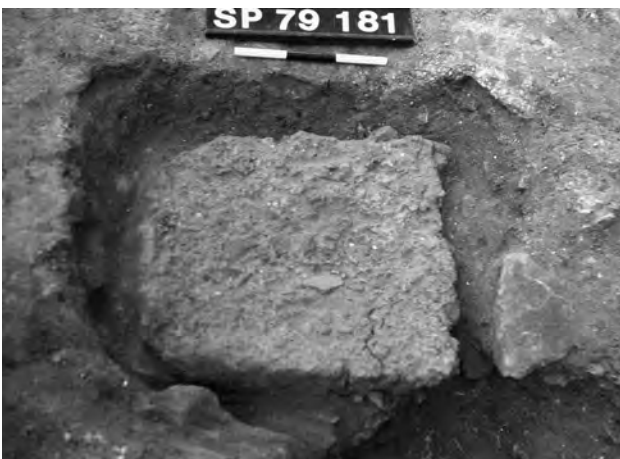


Fig 9.65 Looking east at rectangular cut with opus signinum base cg86 (for water butt?): LUB 13



Fig 9.66 Looking east at the partially robbed apse cg70 on the left and the opus signinum floor with the feature cg93 on the right: LUB 14

75. Again, however, associated pottery indicates that these represent residual material.

At the very least, the presence of such a high number of coins within the easternmost part of the east range indicates commercial activity here, between the mid 3rd and mid 4th centuries. Comparison of the numismatic and associated ceramic evidence, however, suggests that while occupation of this part of the east range continued into the late and possibly very late 4th century, by that time it may no longer have been commercially based.

The disintegration of Structure 2 appears to have begun in the mid 4th century (LUB 10), but some sort of activity continued, at least in 2A, through into the very late 4th century (LUBs 11 and 12). The decay or abandonment process is also reflected in rooms 2B and 2C (LUB 14; 2B.4 and 2C.4), room 2D (LUB 15; 2D.3 and 2D.4) and room 2E (LUB 16; 2E.3); but here activity seems to extend only as far as the late 4th century. It would seem that Structure 2 was partially demolished by the very end of the 4th century. Over the ruined remains of rooms 2A, 2B, 2D and 2E was a spread of debris (LUB 18), which probably extended over the portico area, 2C (but was later cut away – LUB 45).

Much of the pottery from LUB 18 was derived from the underlying sequence, but also included late to very late 4th-century sherds.

By the early Saxon period it seems likely that at least part of the building would probably have survived, if no longer completely preserved. The well-head may have been part of the visible remains.

#### *Roman worked stone, reused in later contexts*

From the foundations of the single-cell building cg319 (LUB 43), several fragments of Roman masonry were recovered. A fragment of moulded cornice, whose profile consists of a cyma (ogee) curve between vertical facets, is notable. It has pecked corduroy and wider striated tooling, and must be of Roman date. A block with a cramp channel has pecked tooling and is probably Roman; a roughly cut fragment with two parallel pecked grooves is either Roman or an early grave slab (AVJ) <SP77:NN35>. All these fragments came from the north wall of the single-cell stone building (LUB 43). The same context produced a fragment which appears to have a 1/4 roll border (AVJ) <SP77:NN37>. It has diagonal pecked tooling more like the Roman and early material than 12th-century diagonal tooling. A piece with a narrow rebate and a deep concave curve on the underside came from the west wall of the single-cell structure (ANU) <SP77:NN21>. This may be a fragment of capital, string course or cornice and may have had a similar profile to (AVJ) <SP77:NN37>. There are two rebated

fragments from the same context. One may be from a capital, impost or string course with a narrow rebate and deep concave curve. It has striated and pecked tooling (AUO) <SP77:NN20> and resembles (ANU) <SP77:NN21>. The second fragment has a rebate (AUO) <SP77:NN24>, but little else and it may have been similar to <SP77:NN20>. All these rebated fragments are probably related and may have come from a similar feature or features.

A rectangular ashlar fragment with punched corduroy tooling, possibly Roman (AIH) <SP77:CS154> was reused in cg673 (LUB 72).

The foundation of the north wall of the western extension cg540 (LUB 71) included a block with five roughly cut faces, and a very small, roughly trapezoidal fragment, both with corduroy striated tooling, and both possibly Roman.

There was one single fragment of worked stone extension; a fragment of uncertain function, was found in the north wall cg542 (LUB 79).

Fragments of a Purbeck marble inscription were also found in the foundations of one of the early churches. The inscription appears to refer to the rebuilding of the temple of the Imperial cult by a *sevir augustalis*, one of the priesthood (Hassall and Tomlin 1979, 345).

#### *The early churches*

Structures 3 and 4 (LUBs 19 and 21) date to sometime before or during the Middle Saxon period, as suggested by the radiocarbon determinations for inhumations (LUB 32) cutting Structure 4 (LUB 21) (Figs 9.30 and 9.105; Jones 1994). They could belong to the Late Roman, Sub-Roman, or Early Saxon period, and there would be significant historical implications in each case. Both buildings were similar in construction – slots within which was limestone packing to hold horizontal beams in place; Structure 3 (LUB 19; Figs 9.67–8) had an eastern partition, divided from the rest of the building by posts while Structure 4 (LUB 21) had an eastern apse, partitioned by posts. Structure 3 (LUB 19) was cut by Structure 4 (LUB 21; Figs 9.69–71); it is possible that they both functioned as churches, one succeeding the other.

From the site as a whole there were single sherds of both Anglo-Saxon pottery and a vessel, possibly of Mayen ware (MAY) which may date to the Middle Saxon period. A small but cohesive group of Middle Saxon finds of the 9th century was recovered from the graveyard cg508 (LUB 55); these are discussed together with the graveyard (p 200).

It is not known whether Structure 3 (LUB 19) was associated with inhumations; Structure 4 (LUB 21) cut inhumations and may well have been contemporary with others. The cist burial (LUB 24) may relate to a graveyard which dated between Structures





Fig 9.67 Near-vertical view, looking west, of the excavated slots of Structure 3: LUB 19



Fig 9.68 Looking north at slabs at the north-east corner of slots cg135: LUB 19



Fig 9.69 Looking south at the east end of Structure 4: LUB 21



Fig 9.71 Looking east at the slots in the south wall-trench cg142 of apsidal building Structure 4: LUB 21



Fig 9.70 Looking west at the excavation of Structure 4: LUB 21

4 and 5.1, and then became the focus for Structure 5.1, or even have been associated from the start with Structure 5.1. There were two inhumations (cg153, LUB 22 and cg180, LUB 23) which cut the construction trench of Structure 4 (LUB 21); they were aligned north–south, cutting the north–south slot which held the posts dividing the apse from the nave. Some inhumations (cg262, cg250 and possibly cg278, all LUB 32) were both later than the apsidal church and earlier than the single-cell chapel, indicating that there must have been a time when the graveyard was associated with a church located beyond the limit of the excavation, or with no church at all.

The graveyard spread to the east: inhumations (LUB 27) cut the truncated remains of Roman wall cg62 to be cut themselves by Structure 6.

#### *Historical reference to a stone church*

Bede wrote that Paulinus made a missionary visit to Lincoln in AD 628/629 and that

'In this city he built a stone church of remarkable workmanship; its roof has now fallen either through long neglect or by the hand of the enemy, but its walls are still standing and every year miracles of healing are performed in the place, for the benefit of those who seek them in faith' (translation from Colgrave and Mynors 1969, 193)

This suggests that Paulinus's church was still standing, as a ruin, in the early 8th century. In the late 12th century Ralph de Diceto implied that St Paul in the Bail was the site of the church of Paulinus, and at least since then tradition has held to that belief (Hill 1948, 103). Structure 4 was initially interpreted by the excavators as Paulinus's stone church (Gilmour 1979a); however, during post-excavation analysis both Brian Gilmour and Kate Steane independently concluded that Structure 4 was constructed of timber. Structure 5, although with stone foundations, was much more of a small funerary monument, rather than a church. Another interpretation of Structure 4 is that, although constructed of timber, it may have appeared to have been constructed of stone; this could have been achieved through external and internal plaster work – of which no trace now survives. In this case Structure 4 might yet be a contender for the role of Paulinus's church (as argued most recently by Sawyer 1998, 226–30).

#### *Middle/Late Saxon to Early Medieval church (Figs 9.72–74; 9.78–81)*

It is possible that Structure 5.1 (LUB 43) served as a

funerary monument, ie, a mausoleum or memorial chapel, related to the hanging bowl inhumation cg154 (LUB 24), although an unequivocal relationship to the grave cg154 and positive evidence is lacking. Although its date is not precisely established, it could be as early as middle Saxon, or it could be late Saxon – the late Saxon date would seem more appropriate to its stone-founded construction. As such it could also be interpreted as a church; although small (internal measurements of 7m by 4.2m), churches of this date were commonly of this scale (eg, Raunds Furnells: Boddington 1996, 8, 16–18, 67: though here interpreted as a field chapel in its initial phase).

An unusual find, the corner of a glazed tile, came from an 11th-century dump cg465 (LUB 52) to the east of Structure 5. This is significant because it is the first example of a Late Saxon tile type to have been recovered (or identified) in Lincoln (Kemp 1994).

A small quantity (1.9 kg) of plaster found within the construction debris cg664 (LUB 73) sealed by the floor of the extended nave, may represent plaster from the original western wall of the single-cell chapel (Structure 5.1), removed when the nave was extended (LUB 71). This is plain, white, lime-washed plaster but most of the fragments show two distinct layers, suggesting at least one period of redecoration.

A small fragment with chamfered reveal and rebate, probably from a jamb, with claw and drag tooling, probably a door jamb, was recovered from the buttresses at the west end of the church cg673 (LUB 72). It is possible that it was from the doorway to the single-cell structure.

A chancel (LUB 70: Structure 5.2B) was added; the earliest date for this would seem to be in the latter part of the 12th century, according to the worked stone reused in the foundations. The earliest reference to any incumbent is in the late 12th century, when William son of Warner described himself in a charter as *persona* (Rector) of the church (*R.A.*, 2637).

Some time after the chancel was added, according to the number of generations of inhumations cut by the foundation trench, the nave was extended (LUB 71: Structure 5.3A) and against the extension were buttresses cg673 (LUB 72).

One of two small fragments of painted window glass, found within a later level (cg690, LUB 73) of the extended nave, is of blue glass and in excellent condition, suggesting that this may be a high potash durable 12th-century piece, although such a date may only be confirmed by scientific analysis (King 1995a). If so, it may represent part of the glazing of this extended western end or even of the earlier chancel. A chevron voussoir (KZ) <SP72:ST166> and a keeled voussoir (KZ) <SP72:ST145> both reused in cg850 (LUB 91) are the earliest Romanesque pieces.



Fig 9.72 Excavation of the hanging bowl in progress:  
LUB 24



Fig 9.73 Looking west at the cist under excavation after the foundations of Structure 5 had been removed, but before the remains of Structure 4 were identified: LUB 24



Fig 9.74 Looking south at the single-cell Structure 5.1:  
LUB 43



Fig 9.75 Looking west along the entrance passage into the sunken room of Structure 6. The robbed Roman apse (right), has been blocked off by re-used pieces of opus signinum, which abut Roman wall cg70. LUB 45



Fig 9.76 Looking south at the south wall of the entrance passage into Structure 6: LUB 45



Fig 9.77 Looking east at the layout of the sunken room, Structure 6, with step into room visible (right). The opus signinum floor of the east range of the forum is visible to the left: LUB 45



The same context also produced the head end of a small lancet window, with a chamfered reveal (KZ) <SP72:ST156>. Both these pieces may have come from the added chancel or nave.

It is possible that the primary function of cg673 (LUB 72) was as bases for buttresses, and/or supported a porch at ground level. It is less likely, but still conceivable, that they represent a parvis leading to an internal upper gallery and bell-cote above. The suggestion of a western gallery can be paralleled elsewhere, eg. Brixworth, Northamptonshire; Deerhurst, Gloucestershire; Tredington, Warwickshire; and Wing, Buckinghamshire, although these were larger establishments altogether. Ostensibly a feature of Anglo-Saxon churches, the practices which western galleries served survived into the post-Conquest period, eg. Ingworth, Norfolk. There were *quotidian* uses for altars in raised galleries, during those services which moved from altar to altar within the church; and there were occasions during the greater festivals, particularly the Holy Week celebrations, when members of the choir would have been positioned above the majority of the congregation (Parsons 1977; Parsons 1989, 13–15; Klukas 1978). It is also possible that the laity were given access to galleries when the Eucharist was dispensed to large numbers (Taylor 1971).

The chancel was widened (LUB 79: Structure 5.4B) and an aisle was added (LUB 80: Structure 5.4C) in the early 13th century (Figs 9.79–81).

Several fragments define the form of a major arcade with a respond consisting of a central keeled shaft. The waterholding base clearly shows the keeled shaft to have been filleted. It was flanked by blank wall with chamfered edges. A full pier base of quatrefoil section, again with filleted shafts, may correspond with the respond, and like it, has a waterholding base. There are several blocks which would have made up the shafts: four are rounded with frontal fillets (+) <SP72:ST2> and <SP72:ST14>, and (EN) <SP72:ST83>, and (TF) <SP77:CS80>; and four are simply curved fragments of a compatible diameter: (TF) <SP77:CS103>, (AET) <SP77:CS72>, (BPP) <NN38>, and (DXW) <SP77:CS152>. There is one example of the bell neck to a rounded shaft capital, with frontal fillet (PQ) <SP72:ST180>. This last can be compared with the arcades of Grimsby, St James, dating to the early 13th century. There is one further fragment from the waterholding base to a column of octagonal section (CMF) <SP77:CS132>.

In Lincolnshire it is quite common to find an early 13th-century arcade of octagonal columns in conjunction with a single keeled respond, with the chamfered backplate as the St Paul's example, eg. the nave south arcade of Marton church, and nave south arcade of West Rasen church. In other instances it is possible to find a keeled respond linked with quatrefoil plan piers, albeit with varied forms,

eg. the main arcades at Dunholme which have keeled responds and piers with nibbed principal shafts and thinner rounded shafts in the diagonals. It is therefore possible to conceive of the keeled respond relating to either a set of octagonal or quatrefoil piers. The consistent feature of the frontal fillet links the first and last.

A late 18th-century representation of the church from the south-west shows a blocked arch in the south wall of the nave (Fig 9.50a). The arch would appear to be double chamfered, supported on a respond with central projecting shaft and flanked by either demi-shafts or a chamfered backplate. The mouldings continue across both and are consistent with an early 13th-century date (cf. both the cathedral and the Bishop's Palace). It is possible that the form shown in the painting is that described by the excavated respond base. That the mouldings would continue across the capital of the respond block can be seen from examples at, eg. Cannock parish church north chapel arch. Double chamfered arcading is a ubiquitous form throughout the middle ages. There are at least nine probable voussoirs from such an arch at St Paul's. Interestingly, almost all these pieces have been treated in the same way, insofar as they have patchy traces of red paint over a white limewash ground; then, at a later point, this colour had all been painted over with a yellow-cream paint, like discoloured whitewash. For the moment we can, therefore, say that we can reconstruct the south arcade as being of c1200, with alternative forms.

The moulding sequences 1–5 are combinations and variations on scrolls and filleted rolls. All can be seen in the blind-arcading surrounding St Hugh's Choir, dating to the 3rd master or c1235 at the latest. They may have been used in a doorway as the south arcade was probably double chamfered. It could be suggested that the south doorway shown in the 18th-century painting may have been a reset 13th-century doorway, as the columns on either side appear to be stiff-leaf, and the arch is heavily moulded. This is purely speculative, but it is common for 13th-century doors to be reused in later medieval fabric, especially the principal parochial entrances.

The lancet head, keeled voussoir and quatrefoil pier base were all found in the foundations of the north wall or arcade of the south aisle presumed to be built in the 14th century. This seems consistent with the demolition of an arcade and at least one external wall.

The scroll and filleted mouldings were found in the lowest courses of the rebuilt 14th-century west tower; rubble from the demolition of the late medieval church; demolition of the Georgian church; and in the building of the Victorian church. There can be no doubt, however, that all these pieces came originally from the same sort of feature.

There is little other structural evidence for the



Fig 9.78 Looking west at the floors of the medieval nave which had been cut through by later inhumations: LUB 73



Fig 9.79 Looking south at the south arm of the chancel widening cg542: LUB 79



Fig 9.80 Looking east along the line of the south aisle cg675 and cg538: LUB 80



Fig 9.81 Looking north at the west end of the early medieval church including the buttressed south aisle cg675: LUB 80



Fig 9.83 Looking north at the doorway and west wall of the later south aisle cg850: LUB 91



Fig 9.82 Looking west along the foundations of the later south aisle cg850: LUB 91

early medieval church, apart from a very small quantity of painted plaster, recovered from the demolition and robbing levels of Structure 5, and from the construction trenches cg850 for the rebuilt church (LUB 91). This is all lime-washed, plain white or creamy-ochre (either painted or discoloured).

#### *Worked stone fragments – pre-Conquest?*

Three stones have been identified by the Corpus of Anglo-Saxon Sculpture from pre-Conquest activity (Everson and Stocker 1999). Two fragments of a grave marker with a crudely incised cross head with splayed arms within a circle (WQ) <SP77:CS6> and (TF) <SP77:CS8> were reused in the south aisle south wall footings cg850 (LUB 91). The cross head is not specifically early, as it is similar to later 11th/12th-century examples, and even some later medieval examples up to the 15th century at Blanchland, Northumberland (Boutell 1854, 57). Everson and Stocker assign the ring to the Anglo-Scandinavian period and compare this stone with an example from St Mark's church, Lincoln, dating to the later 10th–11th century (Gilmour and Stocker 1986, I/17 (st 276), 66 and 71, fig.52). By analogy, the St Paul's grave marker has a date range of between the later 10th and 12th century. The foot end of a flat tapering grave cover, incised with a splayed foot from a decorated cross (DC) <SP72:ST124>, can be compared with an example excavated from St Mark's church, Lincoln, dating to the 11th century (Gilmour and Stocker 1986, I/13 (sts 272, 273), 66 and 70, fig.51). It was reused in the construction of the Victorian church. The third fragment is decorated with incised saltire crosses infilled with nesting triangles. The motif and form of the piece suggest that it might have come from any one of a range of ecclesiastical furniture, such as an altar, screen, chest or chair (Cramp 1986). Everson and Stocker consider that the size of the piece is commensurate with a large decorated coffin. Bede mentions that some royal and saintly individuals were buried in stone sarcophagi (HE IV, 11: Sebbi, king of the East Saxons; HE IV, 19: Aethelthryth of Ely). Cramp has suggested a Mercian tradition of decorated box sarcophagi in the 8th–9th century, cf. the latest example at St Alkmund's church in Derby (Cramp 1977). There are also parallels from the 6th century in Merovingian contexts. If the St Paul's fragment represents a stone sarcophagus of this early a date it is unique, for the geometric design cannot be paralleled before 'double axe' motifs of the 11th century (Everson and Stocker 1999). Alternatively, if the piece is early 12th-century, it fits into what has now been identified as 'a tradition of Romanesque above-ground chest-like funerary monuments in Lincoln and the region' (Everson and Stocker 1999; Stocker 1988; cf. Zarnecki 1988). The

fragment was found in a grave cut which could be anything between Saxon and late medieval.

#### *Historical references to the early medieval church*

It is only in early foundations that St Paul occurs as sole patron of a church (Hill 1948, 103). The earliest reference to any incumbent is in the late 12th century when William son of Warner described himself in a charter as *persona* (ie Rector) of the church (Jones *et al* 1996, 101). References to the church itself in the 13th and 14th centuries, using 12th-century documents (which themselves have not survived) refer to St Paul-in-the-Bail as a *monasterium*, in the Anglo-Saxon sense of Minster as parish church (Jones *et al* 1996, 102).

#### *High Medieval church and its use (Figs 9.82–4)*

The church was rebuilt in 1301 (Structure 7; LUB 91). Levels associated with the later demolition of the late medieval church (LUB 111) in 1786 contained a large quantity of building debris, including at least 24 kg of painted plaster, much of it bearing evidence of redecoration. Little can be said of the ornamental schemes used, because the quantity is relatively small and it is in such fragmentary condition; little can be associated directly with a precise area of the church. Some fragments, however, are painted in a pale yellow-cream similar to that noted on the repainted stone arch voussoirs which are suggested (above, LUB 79) to have come from the south arcade, while a few pieces showing parts of a red-painted design on a pink ground are similar to a small area of plaster cg892 (LUB 111) which had collapsed face downwards in the chancel.

At least some of the windows of the later medieval church were decorated, as evidenced by a small quantity of painted glass, most of the identifiable types of design being datable to between 1280–1350 (King 1995a), and thus almost certainly part of the 1301 rebuild. A few pieces were found in levels associated with the rebuilding of the chancel and chapel in 1700 (LUB 110), while others came from levels associated with later burials.

A clearly datable group of architectural fragments are those relating to windows from Structure 7 (LUB 91) with double chamfered mullions and ogee-headed lights. These describe a common form of window used from the 14th right through to the 16th century in Lincoln and Lincolnshire. A date between the 14th and 15th centuries seems most likely. These may be identified with the windows shown on an 18th-century painting (Fig 9.50a). They pierce the south wall of the south aisle, at the east end, and are typical of a modest chantry or chapel of the time.

One of these window cills was found in the levels



Fig 9.84 Looking south-west at the broken quernstone, used as a hearth cg1004 in the tower: LUB 93



Fig 9.85 Looking west at the well-head after late medieval alterations cg1345, located in the graveyard: LUB 107

associated with the building of the Victorian church, along with two examples of the early 13th-century fine mouldings. Perhaps the other mouldings found in the base of the 14th-century tower confirm that some early features of this sort were demolished and or reused at this time.

The tower (LUB 92: Structure 7E) was probably constructed at the same time the church was rebuilt. In 1700 the chancel was rebuilt (LUB 110: Structure 7.2B).

#### *Georgian and Victorian churches (Figs 9.86–7)*

In 1786 the medieval church was demolished (LUB 111) and a smaller church (LUB 112: Structure 8) erected in its place (Fig 9.50b). In 1877 the Georgian church was demolished (LUB 117) and a large Victorian church (LUB 118: Structure 9) built to replace it (Fig 9.51). It was in turn demolished in 1971 (LUB 119).

#### *Reuse of Roman remains*

The structures of the Roman forum complex presented a source of raw materials for later buildings (cf. p. 192). Wall cg62 (LUB 7) had been robbed to what must have been ground level before the area over it was used as a graveyard (LUBs 27, 28 and 29). Many of the walls around the well-head (LUB 8) had been robbed either in the very late Roman period (LUB 18) or in the late Saxon period (LUB 45); the well-head itself remained relatively intact.

The foundations of Structure 5.1 (LUB 43) incorporated at least ten reused Roman architectural fragments. Although none was identified from the foundations for the chancel, Structure 5.2B (LUB 70), the foundations for the extended nave cg540, Structure 5.3A (LUB 71), included at least two



Fig 9.86 Looking east at the robbed foundations of the Georgian church: LUB 112



Fig 9.87 Looking west at the demolished wall foundations of the Victorian church: LUB 118

possible pieces, and one possible fragment was identified from the buttresses cg673 (LUB 72) and one from the chancel widening 5.4B (LUB 79). It would seem that although much Roman masonry was easily available during the construction of the single-cell building (Mid-Saxon period?), there was perhaps not so much later on.

Structure 6.1 (LUB 45) cut through Roman stratigraphy (LUB 18 and below) and was itself partially constructed from Roman building materials, large vertically placed fragments of *opus signinum* being the most impressive (Figs 9.75–77).

The extensive re-use of Roman stones in the tower of Winteringham church, Lincolnshire, has been noted by Stocker and Everson (1990, 86). Roman limestone was used in the later 11th-century west tower of St Mary-le-Wigford church (Gilmour and Stocker 1986, 85), in the 11th century belfry of St Peter-at-Gowts (Stocker 1997), and the 12th-century St Mary's Guildhall (Stocker and Everson 1990, 87). The optimum reuse of Roman material seems to have occurred between the late 10th and 12th century.

The Roman well-head may have remained open and in use after the Roman period; it may have continued in use in the Middle Saxon period through to the Late Saxon period. Certainly the well-head was visible during the life of Structure 6, delineated by trench cg456 and later by cg477 (both LUB 50). The probable availability of water from the well may have influenced the location of the metalworking (LUBs 45, 47 and 52) in the Late Saxon period. The well-head itself had been much robbed, possibly during this period.

By the time building 6.2 (LUB 47) was constructed much of the Roman building complex cg70 (LUB 8) had been robbed to at least ground surface (much of the apse wall was well below this). Walls cg67 and cg69 (LUB 8) were robbed by the late Saxon period (LUB 43). Fragments of Roman stone were still being reused when the buttress foundations cg673 (LUB 72) were constructed.

With the abandoning of the surfaces (LUB 54) towards the east end of the site and the conversion of this area to graveyard, it would appear that the well and well-head, together with any other open Roman remains in the eastern part of the site, became covered by graveyard deposits and inhumations (LUBs 87–90), possibly from as early as the 12th century. In one place Roman masonry cg65 and cg257 (LUB 8) was robbed in the 14th century (cg414, LUB 88), perhaps during grave-digging.

The well may have continued in use while the area around it was used as a graveyard, or it may have been covered, only to be re-discovered in the early 14th century, possibly during grave digging. A great pit cg1345 (LUB 107) was dug down to the well shaft; the robbed remains of the Roman well-

head apparently lay between 0.5m and 1.5m below the ground level; the well was cleaned out (leaving not a hint of Roman fill) and a new stone well-head constructed (LUB 107) in or after the early 14th century. Alterations were made, possibly in the 16th century (LUB 108). The bulk of the backfill of the well dates from the 17th century (LUB 109) (Mann (ed) forthcoming).

### *The Graveyard*

At first the graveyard seems to have cut straight down into the Roman stratigraphy churning up the upper levels of this material, cg149 (LUB 30). However, after the construction of the single-cell chapel, Structure 5.1 (LUB 43), there was a dump of material cg508 (LUB 55) sealing the first inhumations and into which further inhumations were buried. This dated to the Saxo-Norman period. There were other dumps, in various parts of the graveyard, but none across the board. To the east of the site, dump cg1234 (LUB 105) was associated with the rebuilding of the church (LUB 91), Structure 7, in 1301.

A small but cohesive group of 9th-century finds was recovered from the graveyard cg508 (LUB 55) around Structure 5.1. These consist of a silver strap end (AUW) <SP77:AG2> and a silver buckle (AUW) <SP77:AE70>, both with niello inlay (Fig 9.89), a gilt silver buckle with strap-slider (AUW) <SP77:AG1> (Mann 1979, 29–30), and a small chip from a silver penny of *Lunette* type (AUW) <SP77:C47>, broadly dated AD 863/4–75 (Blackburn *et al* 1983, 10, fig 17). Three other pennies of the same *Lunette* type, issued by Aethelred I or Alfred between AD 870–5 (Blackburn *et al* 1983, 10–11, figs 14–6) were also recovered from different – and mostly later – contexts here (cg149, LUB 30; cg1029, LUB 100; cg842, LUB 104).

The dress fittings are unusual in that finds of unequivocally Middle Saxon date are rarely found in any context within the city; it is even more remarkable that the associated coin is one of four of the same *Lunette* type from the site. One possible explanation is that these finds represent the remnants of a dispersed hoard; with regard solely to the coins, however, this is thought unlikely – partly because they were found in different locations around the church – and it would certainly be unusual for a period when Lindsey is notable for its absence of hoards (Blackburn *et al* 1983, 9, 11). A similar argument could be advanced that they originated from a disturbed Viking burial, or from a church chest where prized possessions were stored for safety but later became scattered during a sudden, catastrophic event (for which there is no other evidence). It is equally unlikely that such a tightly dated group of material represents casual losses within the graveyard; at best it must be

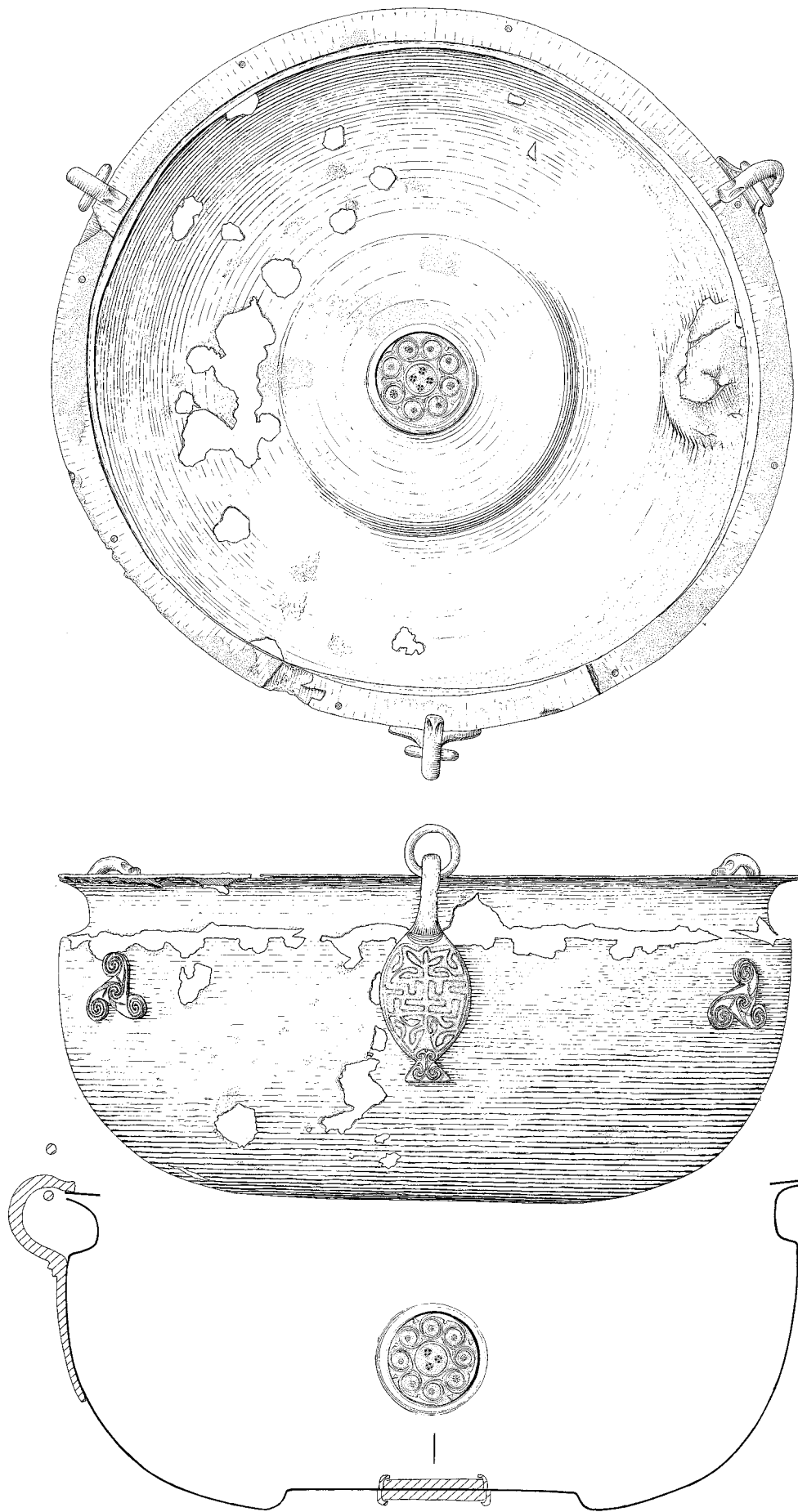


Fig 9.88 Hanging bowl from early church/chapel: LUB 24 (Scale 1:2)



regarded solely as evidence for continued activity of some sort here during the third quarter of the 9th century.

Only a small amount of pottery (189 sherds) dating to between the mid 12th and early/mid 13th century was found on the site, most poorly stratified. Pottery from the medieval to early post-medieval period was very mixed with few real groups occurring. This perhaps indicates that the pottery was only brought on to the site during episodes of dumping and levelling, either associated with church demolition/construction or graveyard make-up. This was certainly the case for the majority of the post-Roman pottery (about 68%) which belonged to the post-medieval period, mainly the 17th and 18th centuries.

There was quite an intense coverage of inhumations cutting into cg149 (LUB 30), probably before the single-cell chapel (LUB 43), Structure 5.1 was constructed; the inhumations extended into the eastern extension of the site, but not to the east of the Roman structure cg70 (LUB 8). Just to the west of this, Structure 6 (LUB 45) cut through inhumations, encroaching on to the graveyard of the Saxo-Norman period. But possibly as early as the 12th century and certainly by the early 14th, inhumations were covering the whole site (LUBs 87–90).

Inhumations (LUB 69) were found in the single-cell chapel (LUB 43), Structure 5.1. Inhumations (LUB 74) post-dated the chancel extension (LUB 70) and were found within the chapel; others (LUB 82) were noted in the south aisle (LUB 80) and more (LUB 84) from the later chancel (LUB 79). Some were also found in the late medieval church, Structure 7 (LUB 91); others (LUBs 96 and 103) from the south aisle, some (LUBs 99 and 101) from different parts of the nave and others (LUB 104) between the aisle and the nave. Neither the Georgian church nor the Victorian church showed any sign of internal graves.

The inhumations can be classified into four chronological groups in order to seek evidence of variations or consistency of burial practice through time. Group 1 consisted of inhumations which were earlier than the single-cell chapel (LUB 43), Structure 5.1 – the cist burial (LUB 24) was not included in this group owing to its uncertain stratigraphic relationships; Group 2 consisted of inhumations which were earlier than the early 14th-century rebuild (LUB 91) Structure 7; Group 3 included only inhumations later than the early 14th-century rebuild (LUB 91) but earlier than the Georgian church (LUB 112); Group 4 consisted of inhumations contemporary with the Georgian church (LUB 112), Structure 8. No inhumations were excavated that were contemporary with the Victorian church.

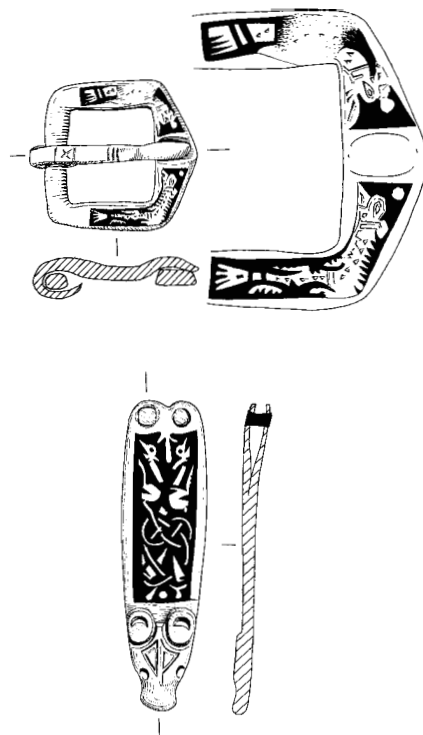


Fig 9.89 Silver objects from early graveyard layers (Scale 1:2)

It is difficult to assess the use of coffins because their survival was not good – in many cases traces of a wood stain or coffin nails indicated their presence but it is possible that nothing survived from many coffins. Taking this into account, it may be meaningless to state that coffins were not used earlier than the single-cell chapel. No other indication of burial containment survived from this group (which after all only amounted to 14 inhumations). In later groups (2, 3 and 4) there was still a high percentage of inhumations which showed no sign of containment, although there was possible evidence for coffins in the form of box fittings from Late Saxon burials or graveyard soils (Fig 9.90). Cists were used solely in Group 2 and 3 indicating a medieval use. Odd stones associated with inhumations were seen to be most popular before the 14th century (Group 2). Shaft coffins seem to come in during Group 3, probably in the post-medieval period, and were more popular during the Georgian period (Group 4). Traces of coffins were by far the most popular form of inhumation containment overall. However in Group 2 stones adorning the grave were more popular than coffins; coffins gain in popularity in Group 3 and wane a little in Group 4 (although the shaft inhumations all had coffins as well as being sunk into brick-lined shafts); coffin fittings were also recovered from medieval and later inhumations (Fig 9.91–2).

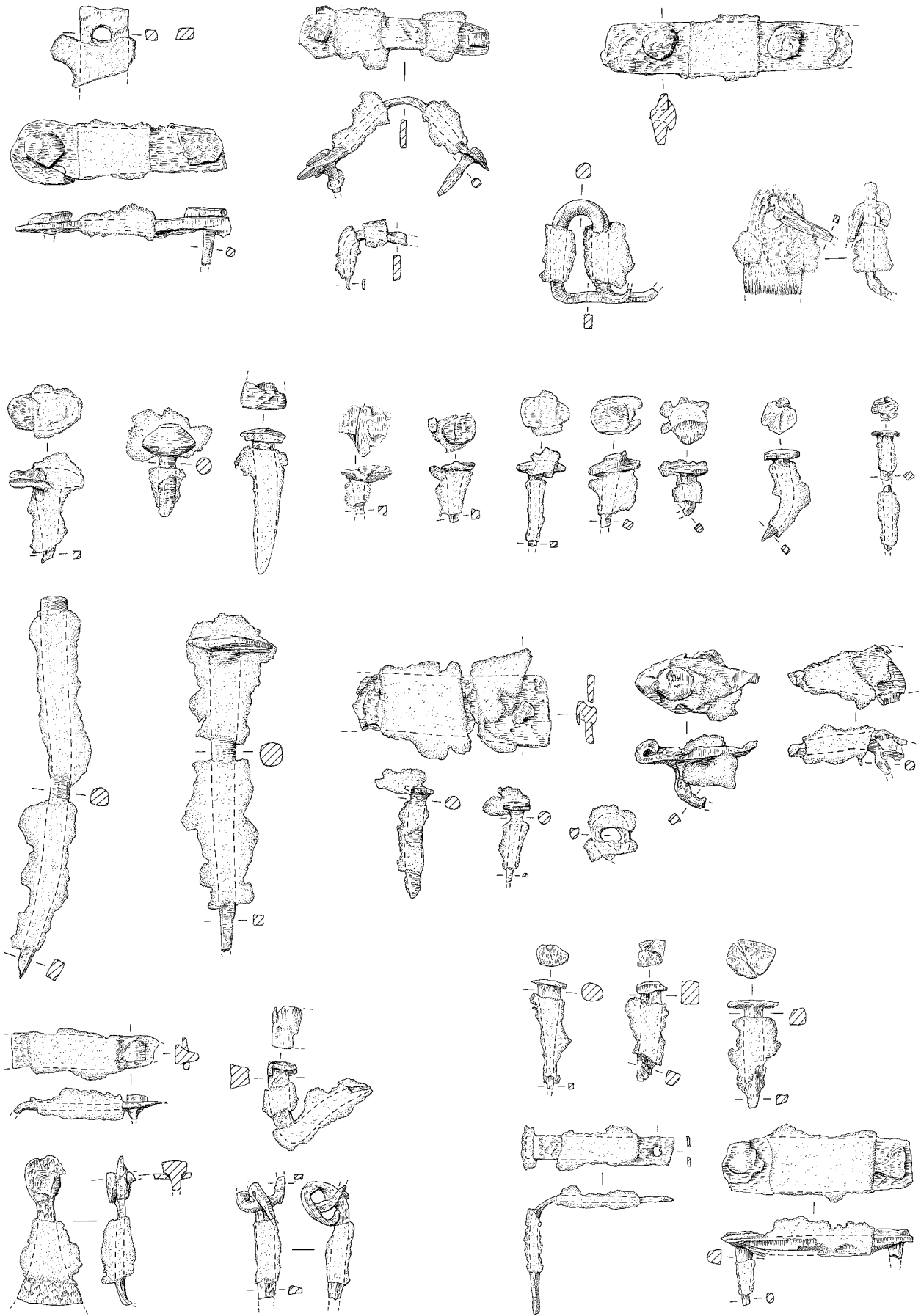


Fig 9.90 Box fittings from Late Saxon burials or graveyard soils (Scale 1:2)



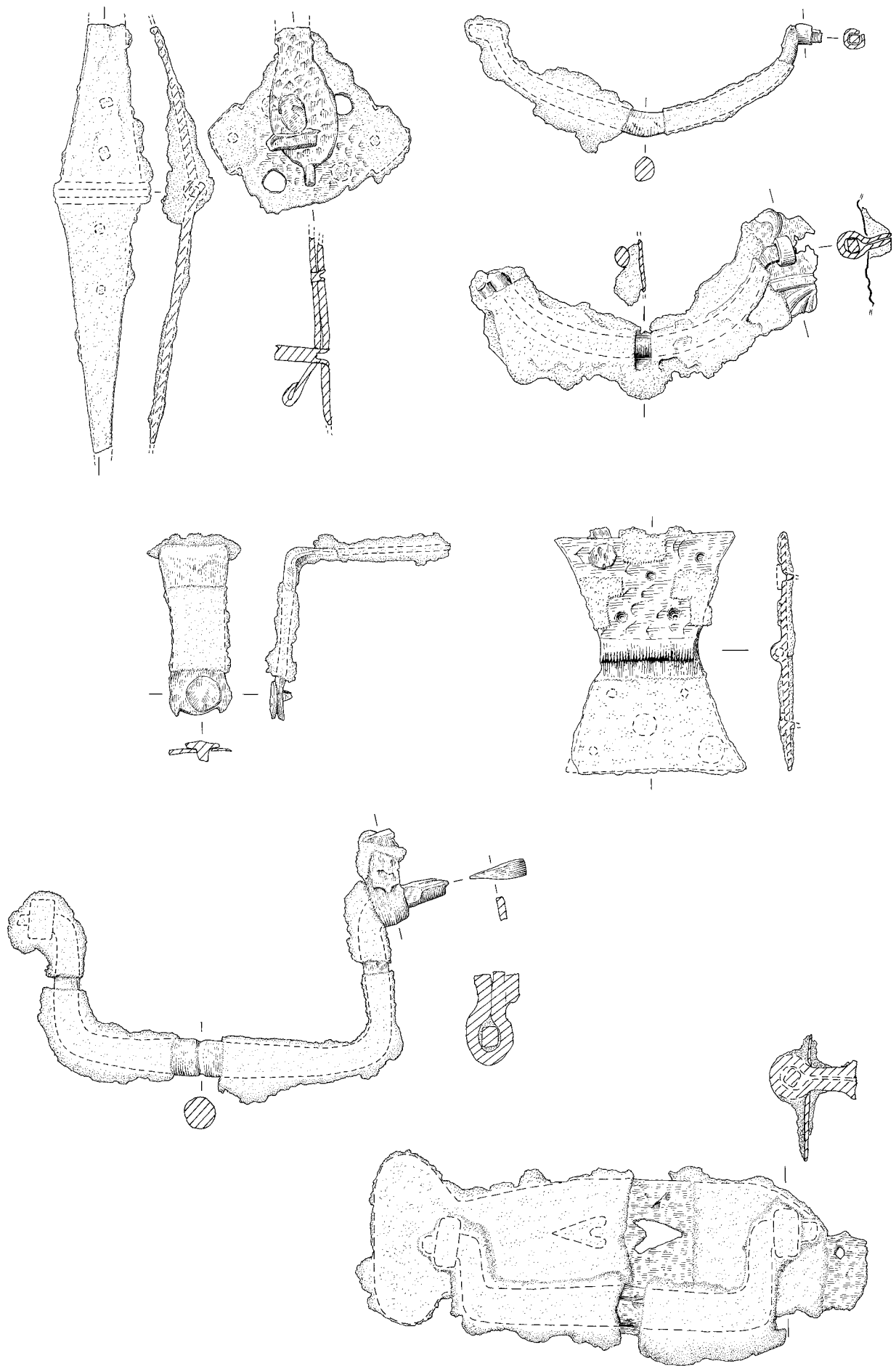


Fig 9.91 Coffin fittings from medieval and post-medieval inhumations (Scale 1:2)

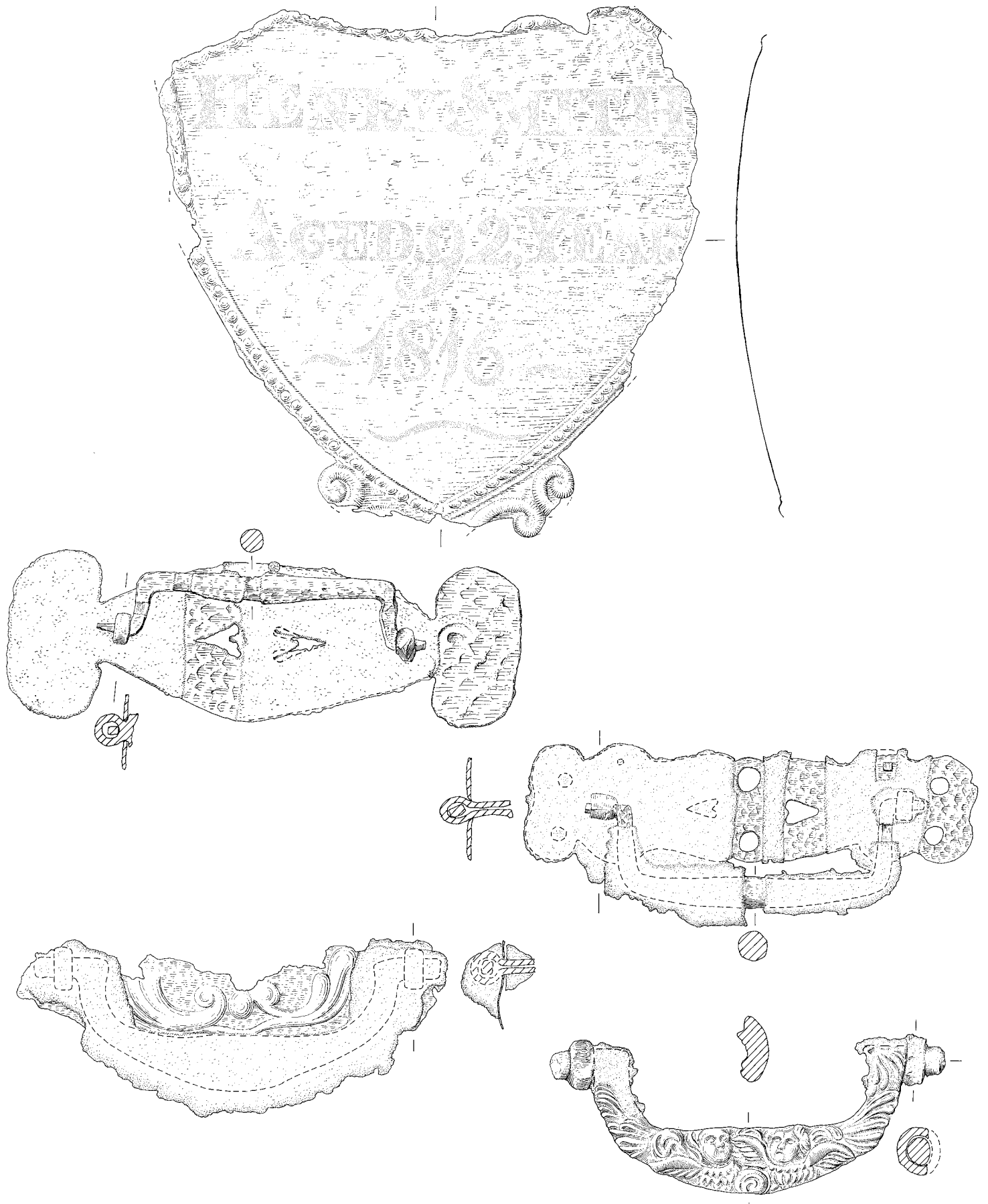


Fig 9.92 Coffin fittings from post-medieval and modern inhumations (Scale 1:2)

cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB
1/0	69/8	137/30	205/34	273/34	341/9	409/12	477/50	545/68	613/69	681/73
2/0	70/8	138/20	206/34	274/34	342/9	410/12	478/50	546/68	614/69	682/73
3/0	71/8	139/5	207/34	275/34	343/9	411/12	479/46	547/68	615/55	683/73
4/1	72/8	140/5	208/34	276/34	344/9	412/12	480/50	548/68	616/56	684/73
5/1	73/8	141/5	209/34	277/34	345/9	413/12	481/53	549/68	617/63	685/73
6/1	74/8	142/21	210/34	278/41	346/9	414/88	482/53	550/68	618/63	686/73
7/1	75/8	143/21	211/34	279/34	347/9	415/18	483/-	551/68	619/63	687/73
8/2	76/8	144/25	212/34	280/41	348/9	416/45	484/53	552/68	620/63	688/73
9/1	77/8	145/25	213/34	281/41	349/9	417/27	485/89	553/41	621/57	689/73
10/1	78/8	146/5	214/34	282/34	350/9	418/27	486/52	554/65	622/57	690/73
11/1	79/8	147/	215/34	283/34	351/9	419/27	487/52	555/41	623/57	691/78
12/1	80/13	148/3	216/34	284/41	352/9	420/27	488/52	556/41	624/64	692/73
13/1	81/13	149/30	217/34	285/41	353/9	421/27	489/52	557/41	625/64	693/73
14/1	82/13	150/34	218/34	286/41	354/9	422/46	490/52	558/65	626/64	694/73
15/1	83/9	151/30	219/26	287/41	355/10	423/45	491/52	559/65	627/64	695/73
16/1	84/9	152/41	220/34	288/41	356/10	424/46	492/52	560/65	628/66	696/73
17/1	85/16	153/22	221/37	289/41	357/11	425/46	493/52	561/65	629/63	697/73
18/1	86/13	154/24	222/37	290/35	358/15	426/46	494/52	562/65	630/63	698/91
19/1	87/13	155/32	223/37	291/41	359/11	427/46	495/52	563/65	631/63	699/58
20/1	88/13	156/34	224/37	292/41	360/11	428/46	496/52	564/65	632/63	700/94
21/2	89/13	157/34	225/32	293/41	361/12	429/46	497/52	565/65	633/63	701/91
22/3	90/13	158/34	226/37	294/35	362/-	430/47	498/52	566/76	634/63	702/100
23/3	91/14	159/34	227/37	295/41	363/-	431/46	499/52	567/76	635/63	703/94
24/3	92/14	160/34	228/37	296/35	364/18	432/46	500/52	568/76	636/63	704/94
25/3	93/14	161/34	229/33	297/41	365/-	433/46	501/52	569/76	637/63	705/94
26/3	94/14	162/34	230/44	298/41	366/16	434/46	502/52	570/76	638/63	706/99
27/1	95/14	163/34	231/32	299/35	367/16	435/46	503/54	571/76	639/63	707/94
28/6	96/14	164/34	232/33	300/41	368/16	436/46	504/54	572/76	640/63	708/99
29/5	97/15	165/34	233/69	301/41	369/16	437/46	505/54	573/76	641/63	709/94
30/6	98/15	166/34	234/69	302/20	370/16	438/46	506/89	574/75	642/59	710/94
31/6	99/15	167/34	235/-	303/-	371/16	439/46	507/44	575/76	643/63	711/94
32/4	100/15	168/32	236/32	304/41	372/16	440/46	508/55	576/75	644/59	712/94
33/6	101/15	169/34	237/34	305/42	373/16	441/46	509/38	577/75	645/63	713/94
34/1	102/15	170/34	238/34	306/42	374/16	442/47	510/61	578/75	646/62	714/94
35/3	103/15	171/34	239/34	307/42	375/16	443/48	511/61	579/67	647/62	715/94
36/3	104/15	172/34	240/34	308/34	376/16	444/49	512/61	580/75	648/58	716/94
37/4	105/15	173/34	241/34	309/34	377/16	445/49	513/61	581/67	649/58	717/94
38/1	106/15	174/34	242/34	310/34	378/16	446/46	514/61	582/75	650/58	718/94
39/2	107/15	175/34	243/34	311/34	379/16	447/51	515/61	583/75	651/58	719/94
40/2	108/15	176/39	244/34	312/34	380/16	448/51	516/61	584/-	652/62	720/94
41/3	109/5	177/39	245/34	313/34	381/16	449/51	517/61	585/75	653/62	721/94
42/1	110/5	178/39	246/34	314/34	382/16	450/51	518/61	586/75	654/62	722/94
43/1	111/5	179/34	247/34	315/34	383/16	451/50	519/61	587/75	655/62	723/94
44/1	112/5	180/23	248/34	316/34	384/16	452/50	520/61	588/75	656/38	724/94
45/4	113/5	181/34	249/34	317/34	385/16	453/50	521/61	589/75	657/60	725/94
46/1	114/5	182/34	250/32	318/34	386/16	454/50	522/61	590/75	658/80	726/94
47/2	115/5	183/34	251/34	319/43	387/16	455/50	523/60	591/75	659/56	727/94
48/3	116/5	184/34	252/34	320/9	388/15	456/50	524/60	592/79	660/63	728/94
49/4	117/5	185/34	253/34	321/9	389/15	457/49	525/62	593/63	661/56	729/94
50/1	118/5	186/34	254/34	322/-	390/15	458/12	526/63	594/63	662/59	730/94
51/4	119/5	187/34	255/34	323/9	391/15	459/18	527/61	595/63	663/59	731/110
52/1	120/5	188/34	256/34	324/9	392/18	460/18	528/61	596/63	664/73	732/63
53/1	121/5	189/34	257/8	325/9	393/18	461/50	529/61	597/63	665/73	733/95
54/2	122/5	190/34	258/34	326/9	394/-	462/50	530/67	598/63	666/73	734/91
55/2	123/5	191/34	259/34	327/9	395/18	463/50	531/67	599/63	667/73	735/95
56/2	124/5	192/34	260/34	328/9	396/18	464/52	532/67	600/63	668/73	736/79
57/3	125/5	193/34	261/34	329/9	397/-	465/52	533/67	601/63	669/73	737/83
58/4	126/5	194/32	262/32	330/9	398/12	466/50	534/70	602/63	670/73	738/86
59/4	127/5	195/34	263/32	331/9	399/12	467/50	535/67	603/63	671/73	739/86
60/2	128/5	196/34	264/32	332/9	400/12	468/50	536/67	604/63	672/73	740/86
61/6	129/5	197/34	265/32	333/9	401/12	469/50	537/67	605/63	673/72	741/86
62/7	130/5	198/34	266/32	334/9	402/12	470/50	538/80	606/63	674/63	742/86
63/7	131/4	199/34	267/36	335/-	403/12	471/50	539/61	607/63	675/80	743/86
64/7	132/5	200/34	268/36	336/9	404/12	472/50	540/71	608/63	676/73	744/86
65/8	133/5	201/38	269/36	337/-	405/12	473/50	541/66	609/63	677/73	745/86
66/8	134/5	202/34	270/36	338/9	406/12	474/50	542/79	610/63	678/73	746/86
67/8	135/19	203/34	271/40	339/9	407/12	475/50	543/68	611/63	679/83	747/86
68/8	136/19	204/34	272/34	340/9	408/18	476/50	544/68	612/74	680/73	748/86

Fig 9.93 Concordance of cg numbers with LUB numbers for sp72

cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB
749/86	815/95	881/-	947/98	1013/93	1077/101	1142/115	1207/28	1272/105	1337/90	1402/-
750/86	816/95	882/84	948/98	1014/93	1078/101	1143/113	1208/28	1273/105	1338/90	1403/106
751/86	817/95	883/-	949/98	1015/93	1079/101	1144/113	1209/28	1274/105	1339/54	1404/111
752/86	818/95	884/84	950/104	1016/93	1080/101	1145/113	1210/29	1275/105	1340/89	1405/116
753/86	819/95	885/84	951/104	1017/93	1081/101	1146/113	1211/29	1276/105	1341/90	1406/116
754/86	820/95	886/84	952/-	1018/93	1082/111	1147/115	1212/28	1277/105	1342/89	1407/116
755/86	821/95	887/84	953/104	1019/73	1083/111	1148/115	1213/28	1278/105	1343/89	1408/116
756/86	822/95	888/84	954/104	1020/73	1084/111	1149/117	1214/28	1279/105	1344/89	1409/116
757/91	823/85	889/84	955/104	1021/73	1085/101	1150/117	1215/28	1280/105	1345/107	1410/109
758/79	824/85	890/84	956/111	1022/101	1086/104	1151/117	1216/28	1281/105	1346/107	1411/116
759/83	825/101	891/84	957/111	1023/73	1087/111	1152/117	1217/28	1282/105	1347/108	1412/116
760/83	826/85	892/111	958/111	1024/-	1088/111	1153/117	1218/29	1283/105	1348/89	1413/116
761/83	827/85	893/111	959/104	1025/91	1089/112	1154/117	1219/28	1284/105	1349/89	1414/116
762/83	828/85	894/-	960/104	1026/91	1090/111	1155/111	1220/28	1285/105	1350/89	1415/116
763/83	829/102	895/101	961/111	1027/91	1091/111	1156/111	1221/28	1286/105	1351/89	1416/116
764/83	830/102	896/101	962/104	1028/100	1092/113	1157/112	1222/28	1287/105	1352/89	1417/116
765/83	831/102	897/-	963/111	1029/100	1093/111	1158/118	1223/28	1288/105	1353/89	1418/116
766/83	832/102	898/101	964/111	1030/100	1094/114	1159/118	1224/28	1289/105	1354/89	1419/116
767/83	833/102	899/117	965/104	1031/100	1095/114	1160/118	1225/28	1290/105	1355/89	1420/116
768/83	834/102	900/117	966/91	1032/100	1096/114	1161/113	1226/28	1291/105	1356/106	1421/116
769/83	835/103	901/117	967/104	1033/100	1097/111	1162/118	1227/28	1292/105	1357/89	1422/116
770/83	836/97	902/117	968/111	1034/100	1098/118	1163/118	1228/29	1293/105	1358/89	1423/116
771/83	837/102	903/117	969/111	1035/100	1099/118	1164/-	1229/29	1294/105	1359/106	1424/116
772/83	838/102	904/-	970/111	1036/111	1100/111	1165/118	1230/28	1295/105	1360/89	1425/116
773/83	839/102	905/95	971/101	1037/101	1101/111	1166/118	1231/28	1296/105	1361/106	1426/116
774/83	840/104	906/95	972/101	1038/101	1102/114	1167/-	1232/28	1297/105	1362/106	1427/116
775/83	841/102	907/95	973/101	1039/101	1103/114	1168/-	1233/29	1298/105	1363/106	1428/116
776/83	842/104	908/95	974/94	1040/101	1104/114	1169/-	1234/105	1299/105	1364/106	1429/116
777/83	843/-	909/95	975/101	1041/101	1105/114	1170/118	1235/105	1300/105	1365/106	1430/116
778/83	844/102	910/95	976/101		1106/114	1171/-	1236/105	1301/105	1366/106	1431/116
779/83	845/104	911/103	977/101	1042/101	1107/114	1172/118	1237/105	1302/105	1367/106	1432/119
780/83	846/99	912/103	978/101	1043/101	1108/114	1173/118	1238/105	1303/105	1368/106	1433/119
781/83	847/100	913/103	979/101	1044/101	1109/114	1174/118	1239/105	1304/105	1369/106	1434/101
782/83	848/94	914/103	980/101	1045/101	1110/114	1175/-	1240/105	1305/105	1370/106	1435/-
783/83	849/99	915/103	981/101	1046/111	1111/114	1176/-	1241/105	1306/105	1371/106	1436/-
784/83	850/91	916/103	982/101	1047/111	1112/114	1177/-	1242/105	1307/105	1372/106	1437/101
785/83	851/94	917/103	983/101	1048/101	1113/114	1178/118	1243/105	1308/105	1373/106	1438/113
786/83	852/94	918/103	984/115	1049/101	1114/114	1179/119	1244/105	1309/105	1374/106	1439/101
787/83	853/94	919/103	985/101	1050/101	1115/114	1180/-	1245/105	1310/105	1375/106	1440/100
788/83	854/94	920/-	986/99	1051/101	1116/114	1181/88	1246/105	1311/105	1376/106	1441/102
789/83	855/94	921/103	987/99	1052/111	1117/114	1182/88	1247/105	1312/105	1377/106	1442/102
790/75	856/94	922/103	988/101	1053/101	1118/114	1183/88	1248/-	1313/105	1378/106	1443/102
791/77	857/94	923/103	989/101	1054/101	1119/114	1184/88	1249/105	1314/105	1379/106	1444/95
792/77	858/94	924/103	990/73	1055/101	1120/114	1185/88	1250/105	1315/105	1380/106	1445/95
793/77	859/94	925/103	991/73	1056/101	1121/114	1186/88	1251/105	1316/105	1381/106	1446/95
794/77	860/94	926/103	992/73	1057/101	1122/114	1187/88	1252/105	1317/105	1382/106	1447/102
795/77	861/94	927/103	993/73	1058/101	1123/115	1188/88	1253/105	1318/105	1383/106	1448/102
796/77	862/84	928/103	994/73	1059/101	1124/115	1189/88	1254/105	1319/105	1384/106	1449/95
797/77	863/84	929/103	995/73	1060/101	1125/115	1190/88	1255/105	1320/105	1385/106	1450/101
798/77	864/84	930/103	996/73	1061/101	1126/115	1191/88	1256/105	1321/105	1386/106	1451/83
799/77	865/84	931/82	997/73	1062/101	1127/115	1192/88	1257/105	1322/105	1387/106	1452/102
800/	866/84	932/-	998/73	1063/101	1128/115	1193/88	1258/105	1323/89	1388/106	1453/56
801/77	867/84	933/82	999/73	1064/101	1129/115	1194/88	1259/105	1324/89	1389/106	1454/5
802/77	868/95	934/82	1000/92	1065/101	1130/-	1195/87	1260/105	1325/105	1390/106	1455/90
803/81	869/95	935/82	1001/93	1066/101	1131/115	1196/88	1261/105	1326/105	1391/106	1456/89
804/81	870/96	936/82	1002/93	1067/101	1132/115	1197/87	1262/105	1327/105	1392/106	1457/29
805/81	871/96	937/-	1003/93	1068/101	1133/115	1198/87	1263/105	1328/105	1393/106	1458/109
806/85	872/95	938/82	1004/93	1069/101	1134/115	1199/87	1264/105	1329/105	1394/106	1459/109
807/84	873/96	939/82	1005/93	1070/101	1135/115	1200/88	1265/105	1330/105	1395/106	1460/111
808/84	874/95	940/82	1006/93	1071/101	1136/115	1201/31	1266/105	1331/105	1396/106	1461/109
809/84	875/96	941/104	1007/93	1072/101	1137/115	1202/31	1267/105	1332/105	1397/106	1462/109
810/84	876/96	942/-	1008/93	1073/101	1138/115	1203/31	1268/105	1333/105	1398/106	1463/109
811/84	877/111	943/82	1009/93	1074/101	1139/115	1204/28	1269/105	1334/105	1399/106	1464/111
812/84	878/-	944/82	1010/93	1075/101	1140/115	1205/28	1270/105	1335/90	1400/106	1465/109
813/84	879/-	945/82	1011/93	1076/101	1141/115	1206/29	1271/105	1336/90	1401/106	1466/109
814/95	880/96	946/98	1012/93							

Fig 9.93 Continued.

Large quantities of coffin furniture were found but some were discarded on site. There are no 'full sets' of fittings surviving because the graves intercut and many also contain earlier redeposited fittings. Although a selection of the range of fittings from the site is illustrated (Figs 9.90–2), a detailed analysis of the coffin furniture has not been possible owing to pressure on resources.

#### *Gravestones*

From the buttress foundations cg673 (LUB 72) several grave cover fragments were reused; a small fragment from a flat grave cover decorated with an incised, tapered base of a cross-shaft, or an unusual cross-head (AIH) <NN32>; a very small fragment from a flat grave cover with curved incised line, probably part of a cross head; a fragment from the edge of a grave cover, with 1/4 roll moulded border, probably coped (AIH) <NN28>.

One large piece of stone, from a flat tapered grave cover, with the foot end broken away (AYR) <NN1>, came from the west end of the south wall of the first south aisle (cg538, LUB 80). Such plain tapered covers have been dated to between the 11th and 13th centuries.

One context constituting part of the south side of the south aisle, (AOE) cg675 LUB 80, was made up of a number of reused grave covers and miscellaneous fragments. These included a large fragment of a slab, with diagonal striated tooling (AOE) <NN33>; a fragment with one cut face in striated tooling (AOE) <SP77:CS158>; a very weathered rectangular block, with rough pecked tooling, probably Roman (AOE) <NN33>; an uncut slab, with lines of crudely punched holes or natural inclusions, weathered but possibly with striated tooling (AOE) <SP77:CS164>; a large fragment of a flat, decorated grave cover, with weathered incised decoration in the form of two concentric curved lines and a shaft (AOE) <SP77:CS164>. There were also two fragments from the foot end of a coped and tapered, undecorated grave cover (AOE) <NN31>, all striated; a fragment of a coped, undecorated grave cover (AOE) <SP77:CS170> with two grades of claw tooling; a block, possibly recut probably from a coped grave cover, with little of the original surface surviving, and striated bolster tooling (AOE) <SP77:CS158>; the head end of a flat tapered grave cover, with crude, striated bolster tooling, all cross-cutting (AOE) <SP77:CS162>.

There were a number of fragments from cg850 (LUB 91) which were grave covers or grave markers, and most were decorated: (KZ) SP77: ST146–51>; ST153–5; ST157; ST165; ST168–9; ST171. Several fragments from medieval gravecovers or markers were reused in the early 18th-century rebuilding of the chancel and chapel cg731 (LUB 110). They

included a small fragment with two cut faces, just off right angles, with striated tooling (TG) <SP77:CS59> (this could be the east wall of the south-east chapel). There was a probable filleted shaft (TF) <SP77:CS80>, a rounded shaft (TF) <SP77:CS103>, a square-plan block with a socket for a wooden upright (TF) <SP77:CS18 & CS36> and a slightly off-square block with striated tooling of the late 12th century (TF) <SP77:CS65>. There were two fragments from tapered, coped gravecovers: (TF) <SP77:CS61>, and one with a raised central shaft or ridge rib of double-chamfered section (TF) <SP77:CS54>; two parts of a round-headed grave marker with incised floreate cross (TF) <SP77:CS7> of the early–mid 13th century; and the head end of a slightly tapered, coped gravecover decorated with a cross pattée with tips of the cross outside the confining circle (TF) <SP77:CS37>, dating to between the 12th and 13th century. The chancel foundations cg731 (LUB 110) also contained a coped and tapered grave cover, undecorated, with striated and polished tooling, with deep cross-cutting concave draughts (TG) <SP77:CS23>; there was a fragment of an undecorated, coped grave cover, with one incised curved line, with very rough bolster and fine striated tooling (TG) <SP77:CS38>; other possible gravecover pieces included a long chamfered block, with precise 45 degree chamfer along one arris, all with rough striated tooling (TG) <SP77:CS34> and a small corner fragment with one chamfered edge, the underside worn to a concave curve, with striated tooling (TG) <SP77:CS52>.

#### *Structure 6 and later surfaces (LUBs 45–49 and 51–54)*

About 15m to the east of the single-cell chapel (LUB 43), possibly encroaching on the graveyard, was a sunken building (LUB 45), among the ruins (LUB 18) of the portico, Structure 2C. This building possibly lay to the rear of a building fronting on the street to the east; certainly the path from the sunken room opens out towards the east, probably giving access to the well (Figs 9.32–34; 9.75–77). The road which lies to the east today (Bailgate), was not located exactly over the Roman street as it seals the colonnade bases associated with the forum-basilica, but the main Roman street lay a little further east, its line moving westwards as the remains of the forum-basilica decayed and fell apart after the Late Roman period. By the 10th century there might then have been a north–south road about 15m to the east of Structure 6. However, the only evidence for occupation to the east of Structure 6, and within the area of excavation, were pits, dumps and surfaces (LUB 50); one of these was clearly a post-pit cg454, possibly supporting a structure at the eastern opening of

	LUB32	LUB33	LUB34	LUB35	LUB36
inhumations	12	2	60	4	4
cist	-	-	1	-	-
shaft	-	-	-	-	-
vault	-	-	-	-	-
coffin	-	-	15	-	-
charnel pit	-	-	4	-	-
generations	2	1	3	3	-

Fig 9.94 Burial types for LUB 32–36

	LUB74	LUB75	LUB76	LUB77	LUB78
inhumations	-	9	5	4	-
cist	-	3	2	1	1
shaft	-	-	-	-	-
vault	-	-	-	-	-
coffin	1	2	1	5	-
charnel pit	-	-	-	-	-
generations	1	4	3	3	1

Fig 9.99 Burial types for LUBs 74–78

	LUB37	LUB38	LUB39	LUB40	LUB41	LUB42
inhumations	5	2	3	-	16	3
cist	1	1	-	-	-	-
shaft	-	-	-	-	-	-
vault	-	-	-	-	-	-
coffin	-	-	-	1	4	-
charnel pit	1	-	-	-	-	-
generations	2	1	1	1	3	2

Fig 9.95 Burial types for LUBs 37–42

	LUB81	LUB82	LUB83	LUB84	LUB85	LUB86
inhumations	3	2	9	9	1	7
cist	-	1	15	-	1	8
shaft	-	-	-	-	1	-
vault	-	-	-	-	-	-
coffin	-	1	5	8	1	4
charnel pit	-	-	-	-	-	-
generations	2	2	3	2	2	2

Fig 9.100 Burial types for LUBs 81–86

	LUB55	LUB56	LUB57	LUB58	LUB59
inhumations	-	-	3	3	2
cist	-	-	-	-	-
shaft	-	-	-	-	-
vault	-	-	-	-	-
coffin	-	2	-	-	-
charnel pit	-	-	-	-	-
generations	-	1	2	2	1

Fig 9.96 Burial types for LUBs 55–59

	LUB87	LUB88	LUB89	LUB90	
inhumations	-	1	3	14	5
cist	-	2	11	-	-
shaft	-	-	-	-	-
vault	-	-	-	-	-
coffin	-	1	-	1	-
charnel pit	-	-	-	-	-
generations	-	2	2	2	1

Fig 9.101 Burial types for LUBs 87–90

	LUB60	LUB61	LUB62	LUB63	LUB64
inhumations	1	11	1	27	4
cist	1	-	2	9	-
shaft	-	-	-	-	-
vault	-	-	-	-	-
coffin	-	2	2	2	-
charnel pit	-	1	-	1	-
generations	1	4	3	2	1

Fig 9.97 Burial types for LUBs 60–64

	LUB94	LUB95	LUB96	LUB97	LUB98	LUB99
inhumations	15	10	2	1	3	1
cist	1	3	-	-	-	-
shaft	-	-	-	-	-	-
vault	-	-	-	-	-	-
coffin	17	5	-	-	1	4
charnel pit	1	1	1	-	-	-
generations	3	2	2	1	1	1

Fig 9.102 Burial types for LUBs 94–99

	LUB65	LUB66	LUB67	LUB68	LUB69
inhumations	5	2	7	8	1
cist	-	3	-	-	-
shaft	-	-	-	-	-
vault	-	-	-	-	-
coffin	-	-	2	2	2
charnel pit	-	-	-	-	-
generations	4	1	2	2	2

Fig 9.98 Burial types for LUBs 65–69

	LUB113	LUB114	LUB115	LUB116
inhumations	3	17	13	12
cist	-	-	-	-
shaft	-	1	-	4
vault	-	1	1	-
coffin	-	1	3	9
charnel pit	-	-	-	-
generations	-	-	-	-

Fig 9.104 Burial types for LUBs 113–116

	LUB100	LUB101	LUB102	LUB103	LUB104	LUB105	LUB106
inhumations	1	4	6	4	4	92	31
cist	-	-	1	-	-	5	-
shaft	4	1	-	-	-	-	-
vault	-	-	-	-	-	-	-
coffin	4	11	9	13	1	-	12
charnel pit	-	-	-	-	-	-	-
generations	3	3	3	2	2	4	2

Fig 9.103 Burial types for LUBs 100–106

LUB No	CG No	Reference No	Stratigraphic/Spatial Position of Burials	Date BP	+/-	1D	1D	2D	2D
22	153	HAR-4177	N-S BURIAL IN TRENCH OF NAVE/APSE DIVISION IN FIRST CHURCH	1580	90	390	590	250	650
27	417	HAR-4121	CUT BY CONSTRUCTION PIT OF LATE SAXON CELLAR	1330	90	635	775	550	890
23	180	HAR-4120	N-S BURIAL IN TRENCH OF NAVE/APSE DIVISION IN FIRST CHURCH	2030	110	190 BC	80	370 BC	220
32	194	HAR-5101	S OF SINGLE-CELLED CHURCH	1240	70	670	890	650	960
32	250	HAR-4131	CUT N WALL/APSE OF FIRST CHURCH; CUT BY SINGLE-CELLED CHURCH	1450	80	545	660	420	690
32	262	HAR-4116	CUT APSE OF FIRST CHURCH; CUT BY SINGLE-CELLED CHURCH	1410	80	565	670	450	770
32	264	HAR-4281	CUT BY N WALL OF SINGLE-CELLED CHURCH	1350	80	630	760	550	860
32	266	HAR-5092	CUT BY SINGLE-CELLED CHURCH	1490	90	440	650	390	680
33	229	HAR-5097	IN SE CORNER OF SINGLE-CELLED CHURCH	1040	90	890	1040	780	1180
33	232	HAR-5098	SEALED BY SURFACE INSIDE SINGLE-CELLED CHURCH	1730	110	140	420	60	560
34	175	HAR-5088	IN WOODEN COFFIN S OF SINGLE-CELLED CHURCH	1040	70	900	1030	880	1160
34	203	HAR-5094	S OF SINGLE-CELLED CHURCH	1360	80	610	690	550	860
34	213	HAR-4143	E OF SINGLE-CELLED CHURCH	1500	80	440	635	400	670
34	239	HAR-5093	NW OF SINGLE-CELLED CHURCH	1240	70	670	890	650	960
34	244	HAR-4280	NW OF SINGLE-CELLED CHURCH	1260	90	660	880	630	950
34	251	HAR-5100	CONTEMPORARY OR EARLIER THAN SINGLE-CELLED CHURCH	1340	100	620	780	540	890
35	296	HAR-5219	CUT BY E WALL OF CHANCEL ADDED TO SINGLE-CELLED CHURCH	1020	70	960	1040	890	1170
37	223	HAR-5096	INSIDE SINGLE-CELLED CHURCH	1820	70	110	320	30	380
37	224	HAR-5089	CIST INSIDE SINGLE-CELLED CHURCH	1110	70	880	1000	770	1030
41/32	278	HAR-5087	OUTSIDE SE CORNER OF EARLY CHANCEL	1030	70	960	1040	860	1160
61	513	HAR-5095	IN WOODEN COFFIN W OF SINGLE-CELLED CHURCH	1040	70	900	1030	880	1160
63	605	HAR-5090	OUTSIDE NW CORNER OF SINGLE-CELLED CHURCH	990	70	980	1160	890	1210
88	1186	HAR-5099	CIST BURIAL - CUT LATE SAXON CELLAR	870	90	1030	1260	990	1280

Fig 9.105 Radiocarbon determinations table for sp72: two standard deviations shown in two columns at right-hand side

Structure 6.1. From the evidence it would seem that the area between Structure 6, and a possible road to the east was open, cut by pits, and sealed by surfaces.

The positioning of the sunken building, Structure 6, may have been influenced by the proximity of the Roman well, just 5m to the north-east; the building was used for metalworking and water was important to the process. Wall cg431 seems to curve round towards the well (LUB 46; Fig 9.33). The well may have also been easily accessible from any road to the east, across the probable open area.

Structure 6 was constructed by digging a very large rectangular pit, over a metre below what might have been current ground surface, about 4m by 3m (LUB 45). The sides of the room were formed of reused Roman materials; lumps of *opus signinum* (from the floor of the portico cg92, LUB 14) were upended to form the north wall of the path down to the sunken room as well as the east wall of the room. Although Roman materials were used, the sunken building was basically earth-fast in construction with postholes cg436 (Fig 9.32). This structure suffered partial collapse (LUB 47), to be rebuilt (Structure 6.2, LUB 48; Fig 9.34). The rebuild certainly cut through burials in the graveyard to the west. A drystone wall cg443 was constructed along the west and north sides of the room, probably to retain the unconsolidated Roman stratigraphy. The room remained roughly the same size.

Structure 6.1 was probably built (LUB 45) in the late 10th century, and LUB 45 contained the earliest well-stratified, post-Roman sherds: Structure 6.1 remained in use until the 11th century. The presence of earlier, late 9th- to early/mid 10th-century pottery types indicates that domestic activity in the area started before the late 10th century. Structure 6.2 was constructed and in use (LUB 48) in the 11th century, but was abandoned during the second half of the 11th century. Probably both structures were associated with metalworking; there is clear evidence in the case of Structure 6.1 (LUB 46), while the demolition deposits of Structure 6.2 contained similar material (LUB 49). It would appear that a range of non-ferrous metals was being worked.

Immediately to the south of the well-head, post-dating Structure 6, were late 11th-century surfaces also associated with non-ferrous metalworking and iron smithing (LUB 52; Figs 9.35–39). This activity may have taken place to the rear of buildings (of which there is no evidence) fronting on to a street to the east. The surfaces were cut by pits (LUB 53) at the very east end of the site.

The area was then cobbled (LUB 54; Fig 9.41) at the end of the 11th century. Perhaps this indicates Norman influence – the tidying up of the area around the well with a cobbled surface which perhaps extended from the possible street to the east, and around the well, at least to the south. It would seem that access to the well was again important.

Large groups of pottery (878 sherds) dating to between the late 10th and the late 11th centuries came from LUBS 49, 50, 52, and 54, indicating continuous activity on the site through this period.

#### *Post-medieval pottery and finds from the demolition of the church in 1786 (LUB 111)*

A large group of about 2000 sherds was recovered from the demolition levels of Structure 7 (LUB 111). The material was mostly very fresh and several almost complete vessels occurred. Although the pottery gave the impression of being contemporary rubbish and certainly some of the creamwares (CRMWARE) and pearlwares (LPM) must be, the high numbers of some of the ware types such as the slipwares (STSL and SLIP) is surprising at this date. It is of course possible that many of these vessels may have survived to have been discarded in 1786, although another explanation may be that an earlier rubbish deposit had been moved on to the church site as make-up to raise the level of the graveyard.

The group is a mixture of table, domestic and drinking vessels in a variety of wares. The most surprising aspect of the assemblage is the presence of 298 fragments of chamberpots representing at least 161 vessels. There are also a large number of medium sized BL bowls that may have been used as stoolpans. Many of these vessels are of the same fabric and shape and may have been bought as a batch.

An equally large assemblage of registered finds was recovered. The majority of the finds consist of glass vessels (bottles, flasks and apothecary bottles), window glass, clay tobacco pipes and ceramic discs, the latter mostly made from BL ware vessels. Much of this assemblage was discarded on site, so the true quantity of artefacts cannot be stated. The glass ranges in date from the 17th through to the 20th century but the majority of the bottles are 18th-century.



## 10. Westgate School 1973 (w73)

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### Introduction

In 1973 planned extensions to Westgate School involved prior investigations of two areas (Trenches I and II) to examine the underlying archaeology (Fig 10.1). The work was directed by Michael Jones and Christina Colyer on behalf of Lincoln Archaeological Trust. Funding came from Lincoln County Borough Council and the Department of the Environment.

These two small areas were expected to reveal the location of the road (*via sagularis*) to the rear of the successive legionary and *colonia* ramparts and whether its position changed as the rampart was widened. It was also hoped to record any traces of buildings of the Roman legionary fortress and upper *colonia* fronting on to the road, to find evidence of occupation between the Roman and medieval periods in terms of rampart build-up and buildings, and to record any evidence of the medieval defences and buildings.

Trench I was located at the north end of the main block of the school and Trench II to the south of the west extension (Fig 10.1). Limited time was available for excavation and Trench II, where it was expected to find the defensive ditches, was excavated by machine along the line of the foundations of the school extension. Trench I on the other hand was excavated manually. The record for this site was a diary; context information noted was later transferred on to record cards. No height levels were recorded either in the diary or on the sections. Both this excavation and earlier work on the site by Graham Webster in 1938–46, were discussed in a synthetic report on the upper Roman defences (Webster 1949; Jones, M J 1980, 29–30); here only the 1973 trenches are analysed.

98 contexts were recorded, and those were interpreted as 63 context groups (cg1–cg64 with cg62 unused). The 63 context groups were gathered into 23 land use blocks (LUBs 0–22; Figs 10.3 and 10.26).

The subdivision of the site into areas for the purpose of the LUB diagram (Fig 10.3) is shown on Fig 10.2; Trench II is divided into Area 1 to the south-west and Area 2 to the north-east. Trench I is divided into Area 3 to the west, and Area 4 to the east of the western part of the trench; the eastern part is divided into Area 5 to the south and Area 6 to the north. Area 1 includes natural (LUB 0), Roman (LUBs 1 and 4) and modern (LUB 22) stratigraphy, as does Area 2 (natural – LUB 0; Roman – LUB 5 and modern – LUB 22); Area 3 includes high to late medieval (LUBs 13 and 15), post-medieval (LUBs 19 and 20), and modern (LUB 21) deposits; Area 4 includes natural (LUB 0), Roman (LUBs 3, 6 and 7), medieval (LUBs 8, 12, 13, 15, 16 and 17), post-medieval (LUBs 19 and 20) and modern (LUB 21), as does Area 5 (natural – LUB 0; Roman – LUBs 2, 3 and 7; medieval – LUBs 9, 10, 11, 12, 16 and 18; post-medieval – LUBs 19 and 20; modern LUB 21), and Area 6 (natural – LUB 0; Roman – LUBs 2, 3 and 7; medieval – LUBs 13, 14 and 16; post-medieval – 19 and 20; modern – LUB 21). The limited scale of the excavation has made interpretation of some aspects of Areas 3–6 problematic. Truncation has removed post-Roman to modern stratigraphy from Areas 1–2.

The Roman pottery from this site totalled 986 sherds and the post-Roman pottery 481 sherds. A modest quantity (71) of registered finds was recovered; most of this was metalwork with, unusually, copper alloy (including six coins) and iron (largely nails) occurring in equal proportions (26.8% each). It should be noted, however, that the total figure for copper alloy is inflated, because some of the individually accessioned copper alloy fragments represent parts of a single unidentified object (see cg11, LUB 6 below). A single piece of lead and a silver coin were also found. An unusually high quantity (33.8%) of glass was recovered, almost all of this being Roman vessel glass, although, again,

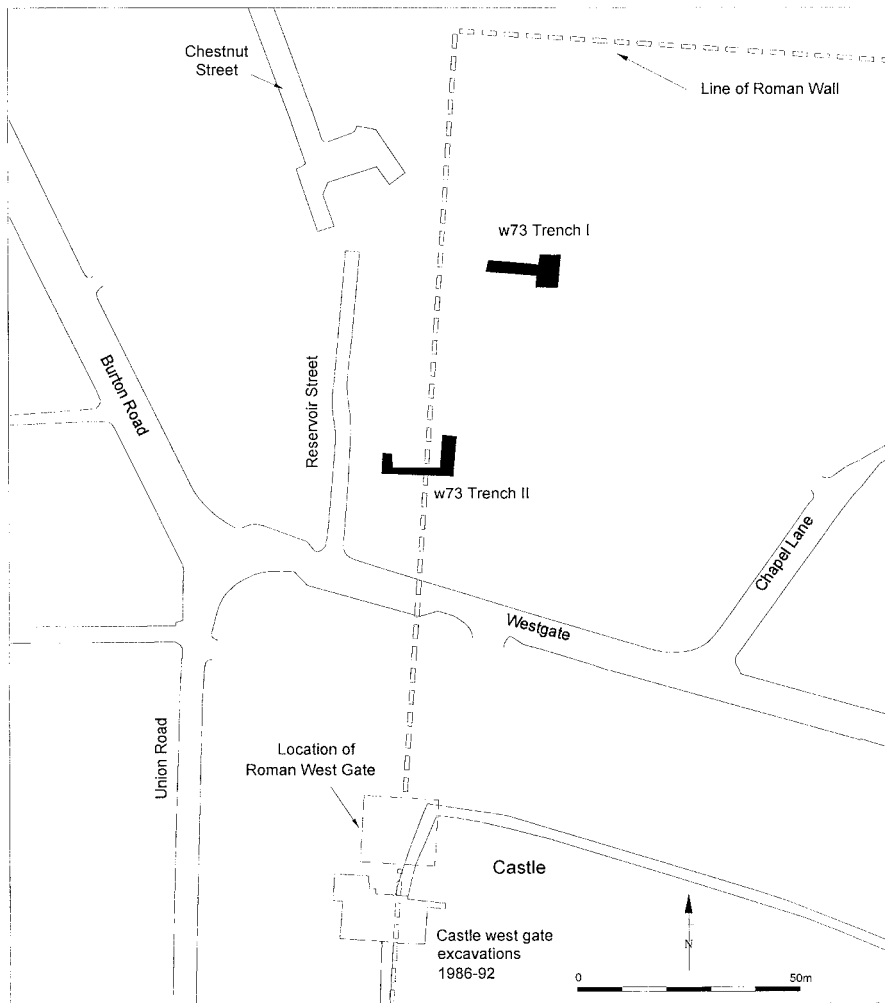


Fig 10.1 Site location plan for w73

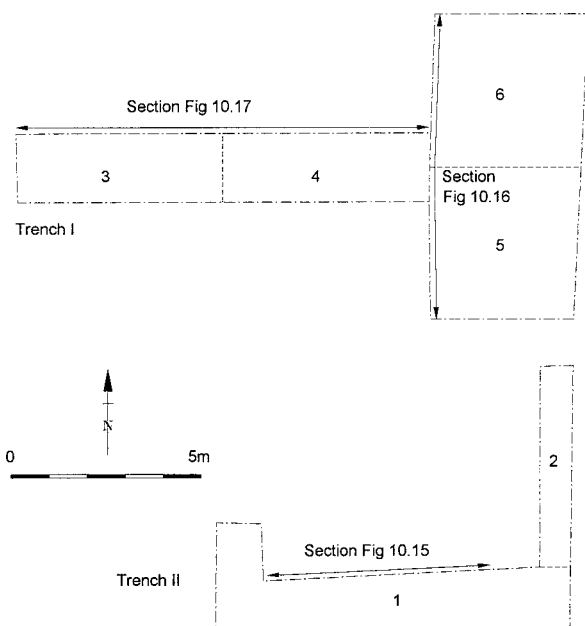


Fig 10.2 Plan showing areas and sections for w73

this figure is slightly inflated by the occurrence of fragments of two vessels within several separately accessioned groups (see cg11, LUB 6 and cg13, LUB 7, in Discussion). There were very few bone, stone, or ceramic finds, and no organic materials. The Roman coins from this site have already been published (Mann and Reece 1983, 49). A number of specialists have examined other material from the site: mortaria (Hartley 1973); medieval and later coins (Archibald 1994); Roman glass (Cool and Price 1987); worked bone (Rackham 1994), and hone stone (Moore 1991). Only 104 fragments of building material were recovered, mostly ceramic tile, of both Roman and medieval/post-medieval date (stone building material: Roe 1995). The animal bone assemblage (293 fragments) has not been analysed; there was no human bone.

Post-excavation stratigraphic analysis was undertaken by Prince Chitwood and Kate Steane. Margaret J Darling worked on the Roman pottery and Jane Young on the post-Roman pottery. Jenny Mann

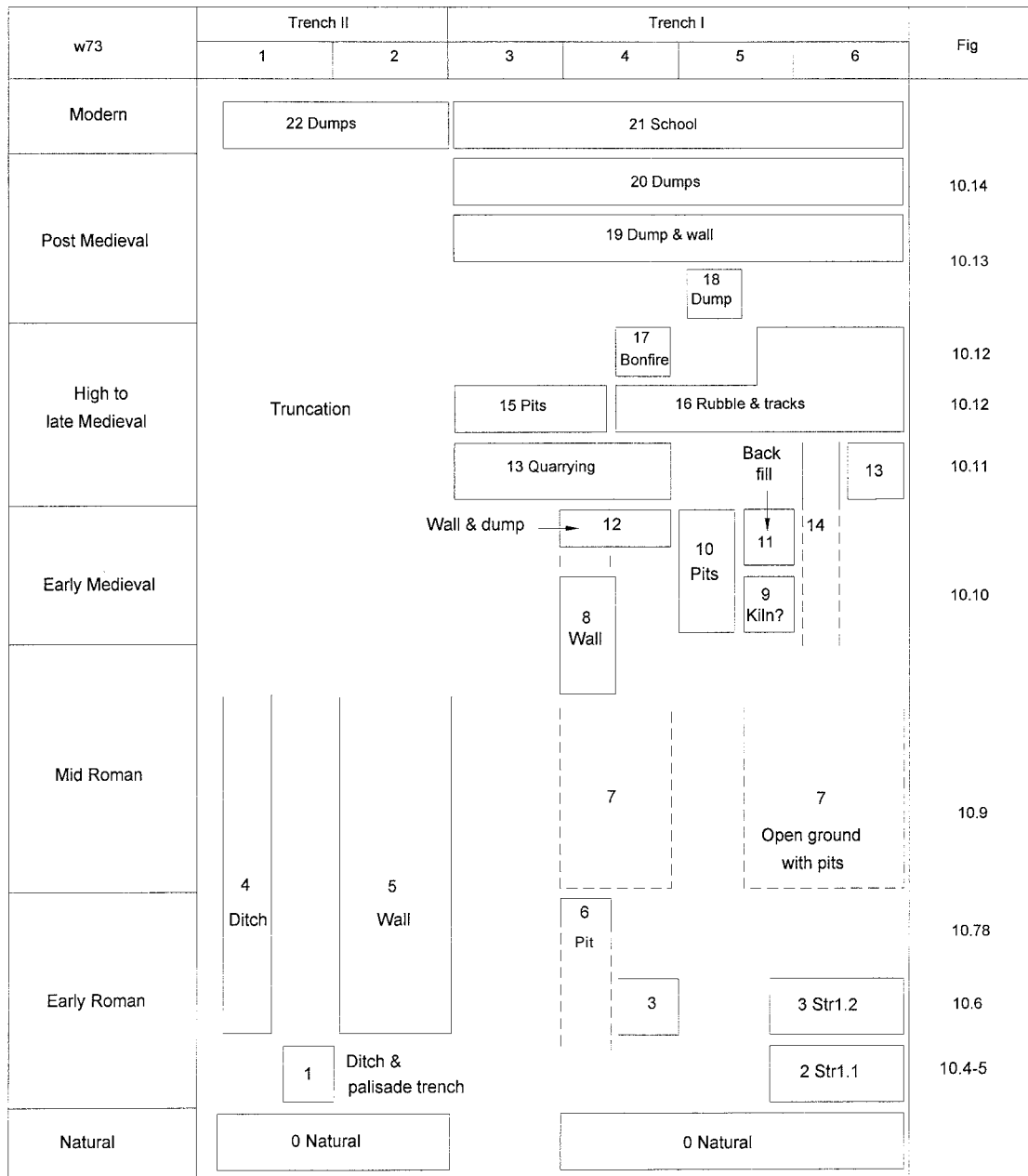


Fig 10.3 LUB diagram for w73

analysed the registered finds and, with Rick Kemp, the building materials. Helen Palmer-Brown and Zoe Rawlings digitized the plans.

**The excavation**

At the limit of excavation was natural limestone brash **LUB 0**.

*LUB 0 Natural (Fig 10.15)*

In Areas 1, 2, 4, 5 and 6 natural limestone brash cg1

sealed bedrock (no OD recorded). It was cut by several natural solution holes cg2, cg48 and cg51, formed when water percolated through the rock; they were all filled with clean orange sticky clay.

In Area 1 a looser layer of limestone brash cg55 sealed cg1. In Area 2, cg1 was also sealed by a looser layer of natural brash cg49.

**Early Roman**

In Area 1 there was evidence of the ditch and rampart palisade trench associated with the fortress

**LUB 1**; there was no dating evidence. In Areas 5 and 6 were traces of a possible legionary building **LUB 2** (Structure 1.1) and subsequently in Areas 4, 5 and 6 a more probable legionary building **LUB 3** (Structure 1.2) associated with mid 1st-century pottery. The legionary ditch and palisade trench **LUB 1** were succeeded by the *colonia* ditch **LUB 4** and a wall **LUB 5** probably of the *colonia* defences (LUBs 4 and 5). Cutting into the remains of Structure 1.2 in Area 4 was a pit **LUB 6**, which contained late 1st- to early 2nd-century pottery.

*LUB 1 Legionary defences* (Figs 10.4, 10.15 and 10.18)  
In Area 1, cutting limestone brash cg55 (LUB 0) were two parallel north-south features. A deep gully cg56 (at least 0.75m wide and over 0.60m deep) had been cut about 0.5m to the east of a wide V-shaped ditch cg57 (at least 1.10m deep and over 3.25m wide); the bottom of the ditch had silted up with sand and silt.

There was no dating evidence for these features as they had been examined by machine. However it was confidently suggested that the gully represented the palisade trench and the ditch, the defensive ditch of the legionary defences (Jones, M J 1980, 29–30).

*LUB 2 Structure 1.1: structural activity* (Fig 10.5)  
In Areas 5 and 6 were several features, cutting into the underlying limestone (LUB 0). Pit cg5 and possible postholes cg4 and cg10, together with irregular depressions cg6 (unplanned), may have

formed the first phase of a timber posthole structure; from cg6 a single piece of Roman *imbrex* tile was recovered. There was no pottery dating evidence.

*LUB 3 Timber building: Structure 1.2*  
(Figs 10.6, 10.16, 10.17 and 10.19)  
Cutting cg4, cg5 and cg10 (LUB 2) was a slot cg7 (0.30–40m wide; 0.25–45m deep) which appeared to define the rooms of a building in Areas 4, 5 and 6. Slot cg7 was made up of an east-west slot and two north-south slots running north from the east-west slot to create two rooms – 1.2A and 1.2B. Posthole cg8 cut cg7 at the south-east corner of

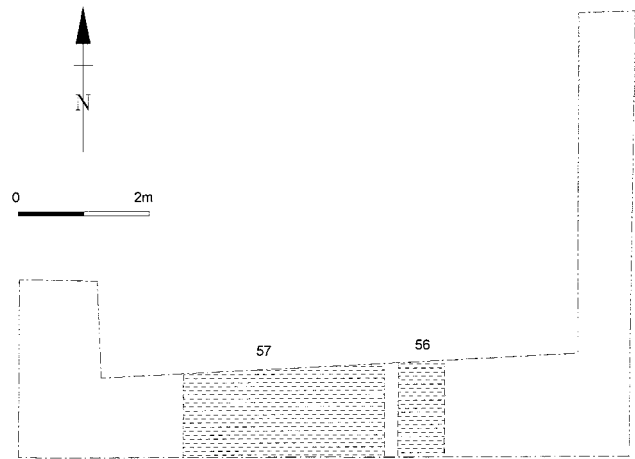


Fig 10.4 Legionary defences: line of ditch (left) and front palisade-trench; LUB 1

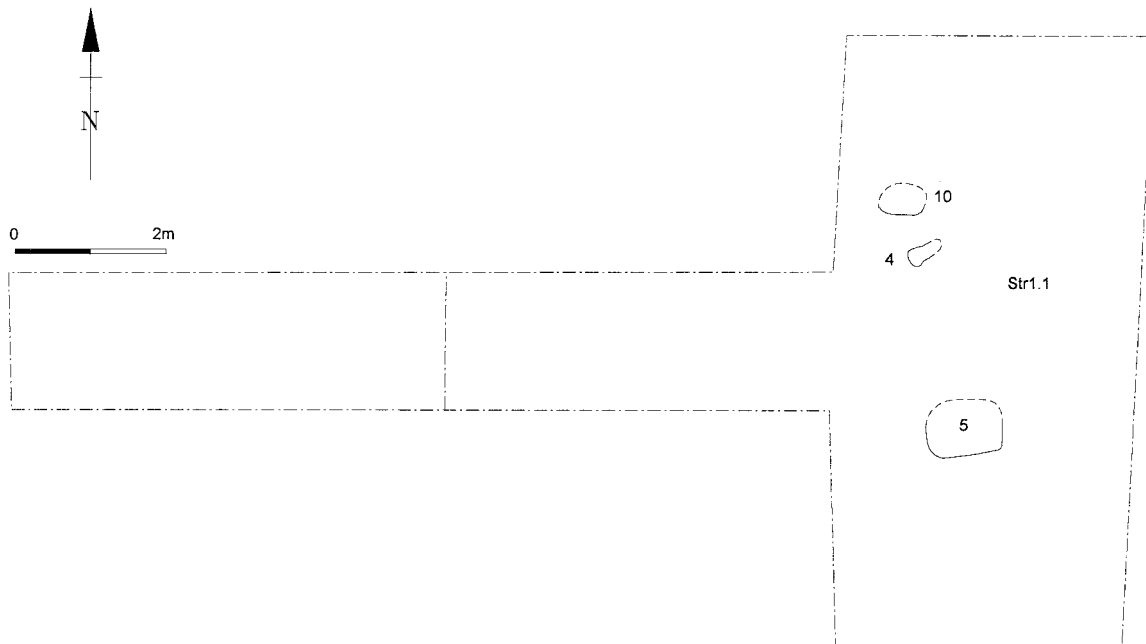


Fig 10.5 Structural features 1.1: LUB 2

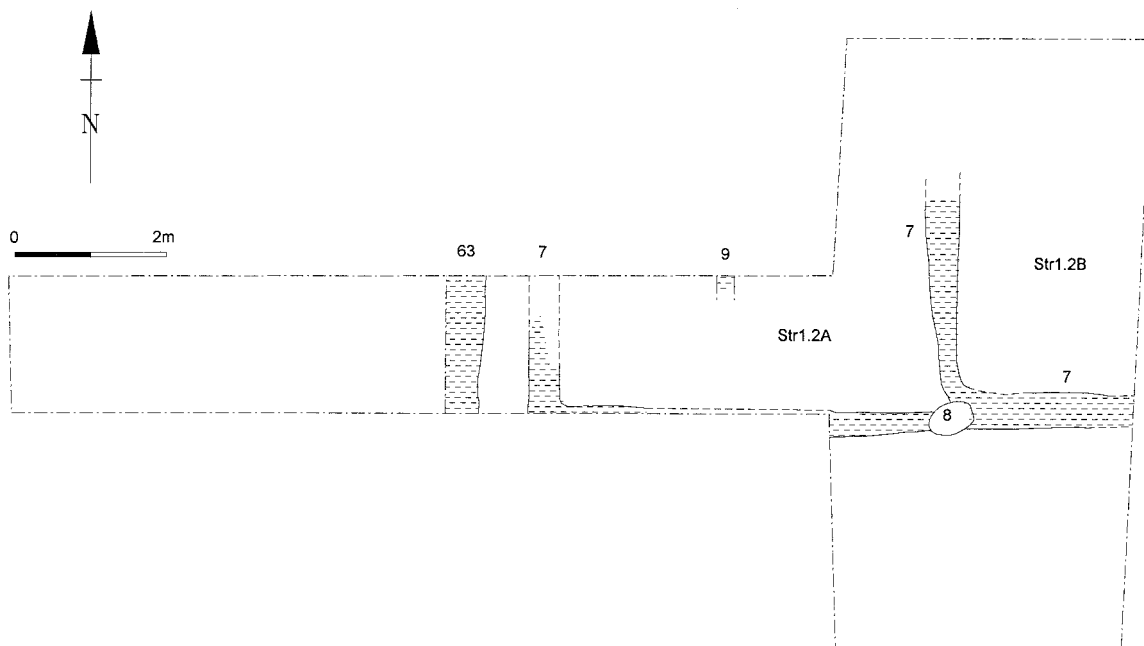


Fig 10.6 Structure 1.2: LUB 3

room 1.2A. The fills of cg7 varied: to the west, in Area 4, were small pieces of limestone and orange clay, to the south-west limestone pieces and pink/yellow silt-sand, and to the south-east orange-brown sandy clay. The slot running north-south between 1.2A and 1.2B was filled with orange silt-sand and some limestone fragments, with dark grey patches of soil together with two pieces of white-painted plaster.

Apparently cutting cg5 was a posthole cg3 (unplanned). In the middle of room 1.2A was a fragment of north-south slot cg9 which cut the natural limestone brash (LUB 0) but was otherwise disturbed by later features. It had a yellow-pink mixed clayey fill with many small stones.

Cutting one of the solution holes cg2 (LUB 0) was a north-south slot cg63 with an initial fill of 'orange green'(!), which suggests decaying organic matter mixed with natural. This probably represented a drain rather than a structural feature.

Room 1.2A measured about 5m east-west – but may have been divided into two by cg9 – and room 1.2B to the east was at least 2.5m east-west; both were at least 3m north-south. This structure has been interpreted as the centurion's end of a Roman timber barrack block.

The only dating evidence came from slot cg63 (3 sherds), all body sherds and all of fabrics normally seen in mid 1st-century legionary contexts.

#### LUB 4 Colonia defences (Figs 10.7 and 10.15)

In Area 1 the legionary ditch and palisade slot (LUB

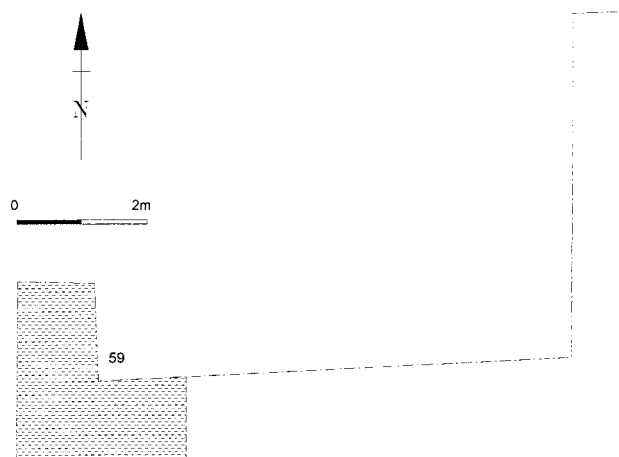


Fig 10.7 Colonia : LUB 4

1) had been deliberately backfilled with re-deposited limestone brash cg58 and replaced by another ditch cg59 immediately to the west.

There was no dating evidence for this feature as it had been examined by machine. However, it was thought that it represented the eastern scarp of the colonia ditch (Jones, M J 1980, 29–30).

#### LUB 5 Wall (Fig 10.20)

Sealing cg49 (LUB 0) in Area 2 were layers of sand, brash and mortar cg53 over which was a sand and mortar deposit cg54. Built up against layers cg54

was a massive east–west wall cg50 of roughly laid limestone and loose mortar. It was faced on the south side, but apparently not on the north side; there was a construction cut only to the south; it was sealed by a layer of compact sand cg52. The wall was only observed to the west of Area 2, not to the east of this machined trench, possibly indicating a return.

It produced no dating evidence and its interpretation is problematic (see Discussion).

*LUB 6 (?Cess) Pit (Figs 10.8, 10.17 and 10.21)*

Cutting possible north–south drain cg63 and possibly cutting slot cg7 (both LUB 3) was a pit cg11. This pit was not fully excavated; the lowest fill examined was a black stained deposit alternating with green-black silt and lenses of brash and orange sand, over which was a layer of grey-white clay, sealed by another green deposit, over which was a green-brown clayey silt mixture, sealed by grey-white clay.

It seems that the fills of this pit consisted of layers of organic waste separated by layers of white clay – which may have represented lime. The finds from the pit largely suggest domestic refuse: pottery (with a few burnt sherds), glass (a plano-convex counter (CO) <G24> and parts of three vessels), and copper alloy, including fragments of sheet almost certainly from a single large but unidentifiable object (CW) <Ae7>; a small copper

alloy ring, and several pieces of white-painted plaster. A single coin (CV) <C7>, a Vespasianic *sestertius* of AD 71, was in good condition and showed little sign of wear, suggesting that it may not have been in circulation for very long before it was lost.

The pottery (92 sherds) from pit cg11 showed low fragmentation, indicating primary dumping; the average sherd weight (excluding amphorae and mortaria) was 32g, indicating fresh rubbish, largely confirmed by the nearly complete Samian vessel and many joining sherds of a flagon. The assemblage contained thirteen sherds of SAMSG, eleven from a nearly complete form 27g stamped by Primus III dated *c* AD55–65, and while another sherd was of Neronian date, a form 30 dated to the Flavian to Trajanic period. Virtually all the coarse wares from cg11 were of fabrics and forms usual in legionary period contexts, and include 38 CR sherds of a single flagon of a well-known Hofheim type. A MICA flanged bowl, lacking its flange, could be of early 2nd-century date, copying either a Ritterling 12 or a Curle 11, and the Samian form 30 dates the context to the late 1st or early 2nd century.

It seems likely that this pit contained rubbish from the occupation on the site, but it is possible that the site was only occupied during the construction of the *colonia* defences before being used for quarrying stone (LUB 7). The pit also contained two intrusive late Saxon sherds (see Discussion).

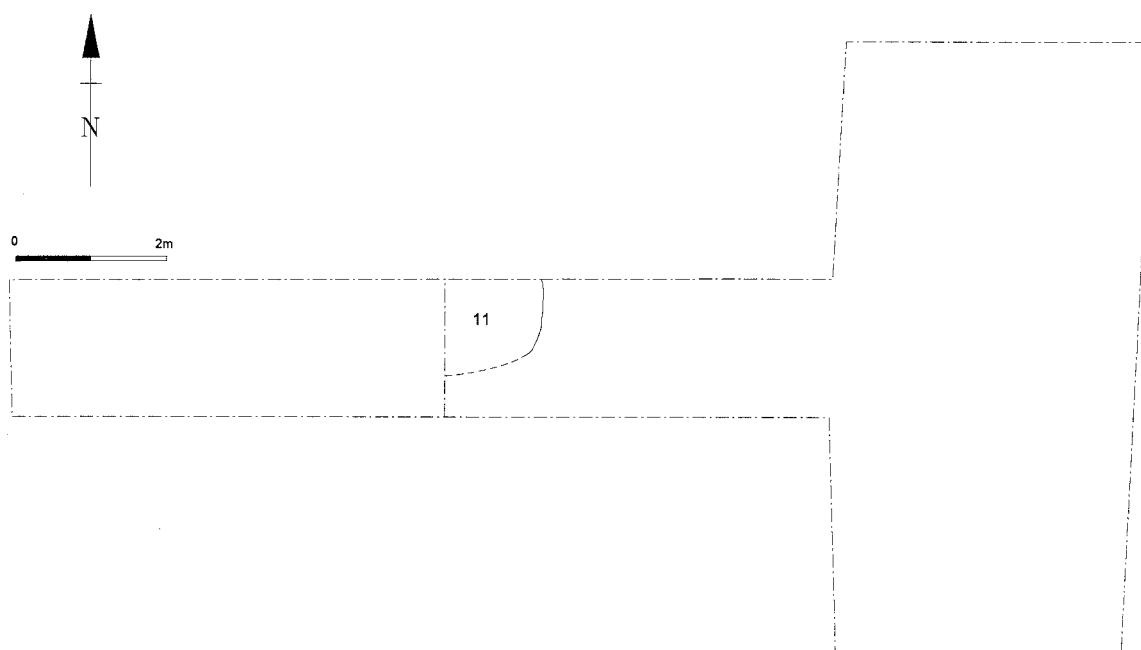


Fig 10.8 Cess pit: LUB 6

### Mid Roman

The remains of Structure 1.2 were cut by pits **LUB 7**; Areas 4, 5 and 6 probably represented open ground with stone (and refuse) pits during the 2nd century. There was no evidence of structures.

In Areas 1 and 2 the ditch (**LUB 4**) and stone defences, including wall (**LUB 5**) may have continued in use.

#### *LUB 7 Open ground with (quarry-) pits* (Figs 10.9, 10.16, 10.17 and 10.21)

Cutting slot cg7 (**LUB 3**) in Area 6 was a large pit cg23 with a 'grey mixed fill' sealed by 'grey ashy material' which spread over the edge of the pit on to the surrounding limestone brash. There was a sherd link from cg23 to pit cg11 (**LUB 6**).

Cutting natural (**LUB 0**) in Area 5 was a pit cg28, possibly dug as a stone quarry, with backfill of lumps of brown soil and limestone. The low average pottery sherd weight from the fill of this pit of 13g indicates secondary rubbish.

Cutting pit cg11 (**LUB 6**) in Area 4, was pit cg13 (unplanned and not fully excavated; with a fill of black loose soil with a little stone and a green lens. The fill of pit cg13 contained some disturbed material from pit cg11 (**LUB 6**), both pottery and glass.

There were 131 sherds of pottery from this **LUB** (from cg23, cg28, and cg13) but some of it was residual; pottery from cg28 and cg13 dated the **LUB**. The pottery from pit cg28 (98 sherds) included 8 sherds of SAMCG, most of Hadrianic to Antonine

date, the latest being a form 33 of Antonine date; there were 15 sherds of BB1, including a flanged bowl or dish with decoration intermediate between lattice and the burnished arc decoration, plus a lid; the pottery indicates a mid to late 2nd-century date. Pottery from pit cg13 (22 sherds) included a sherd of SAMCG form 31, dated to the mid to late Antonine period, and it is this sherd which provides the strongest date of mid to late 2nd century. There were intrusive post-Roman sherds in cg13 (5 sherds) and pit cg28 (1 sherd) .

It would seem that, between the early and late 2nd century, this area represented open ground just within the city walls, where it was possible to dig for stone, and discard rubbish.

### Late Roman – Early Medieval

A north–south dry-stone boundary wall was built **LUB 8**. There was no independent dating for **LUB 8**; it post dated **LUB 7**, and pre-dated **LUB 13**.

#### *LUB 8 Wall (Figs 10.10, 10.17 and 10.22)*

Partly sealing pit cg13 (**LUB 7**) was a north–south, dry-stone wall cg12 (0.6m wide), which extended across the full width of the trench (at least 1.80m long). It had survived in places to three courses, and there was evidence for its having been faced on both sides. Traces of the east side of the wall can be seen in Fig 10.17. It may have defined the area of the kiln to the east (**LUB 9**) from other activity, perhaps agricultural to the west, but may

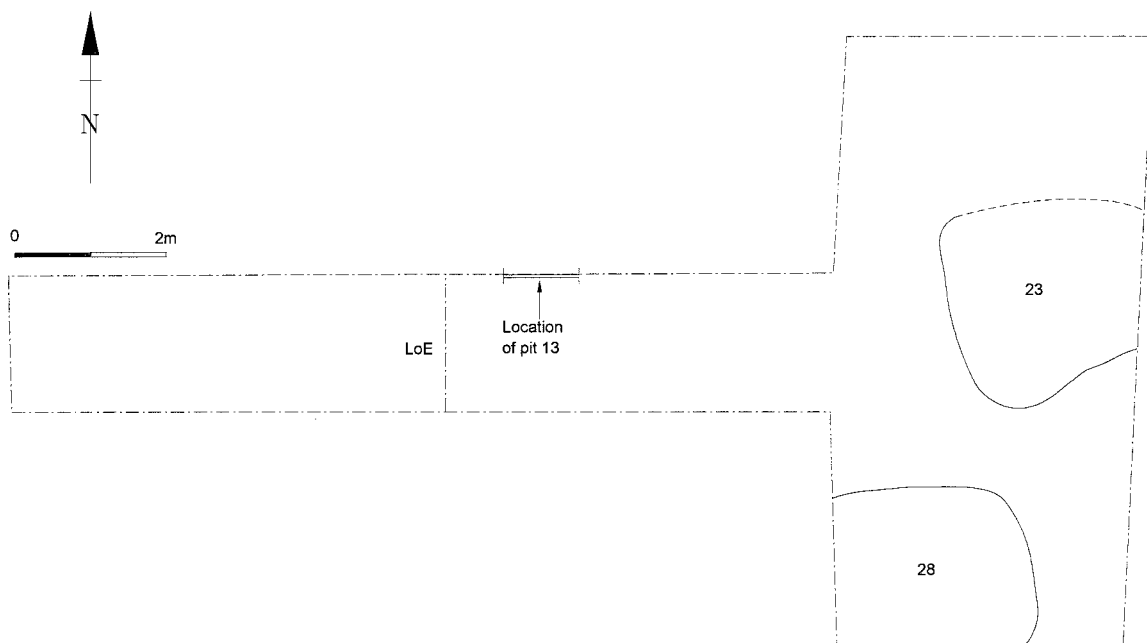


Fig 10.9 Open ground with pits: **LUB 7**

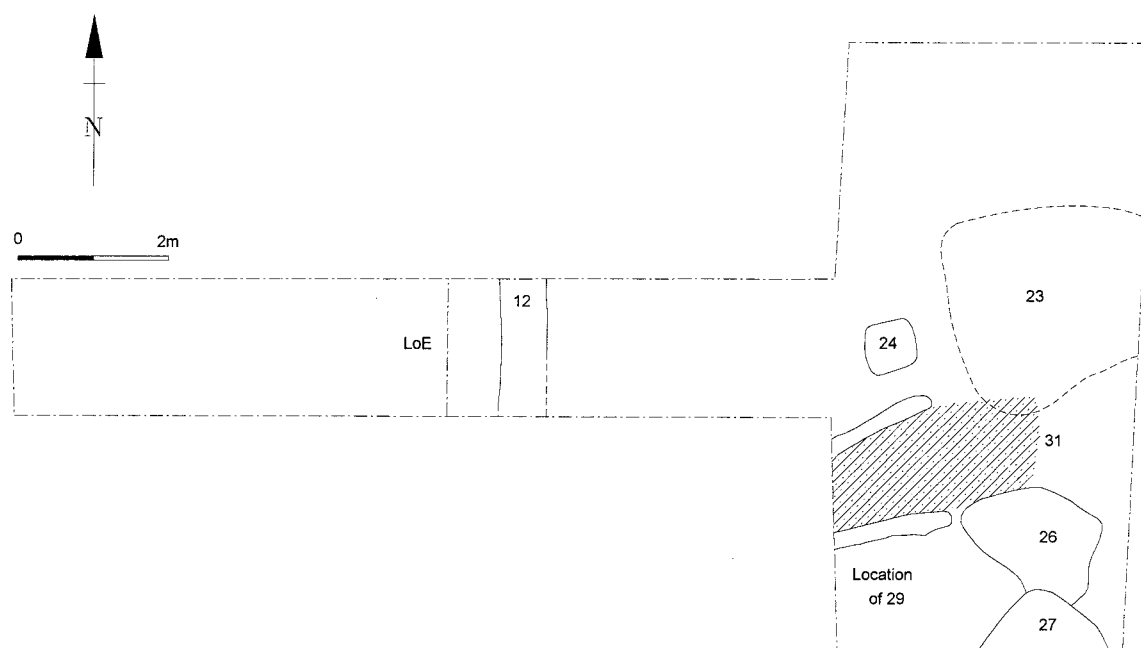


Fig 10.10 Wall, kiln and pits: LUBs 8, 9 and 10

be earlier. It could be interpreted as a post-Roman feature, perhaps a field or property boundary, but certainty is impossible.

### Early Medieval

There was a possible lime kiln **LUB 9** and quarry pits **LUB 10** in Area 5. The kiln was backfilled **LUB 11** and the boundary wall collapsed, and was sealed by a dump **LUB 12**. Pottery from the kiln and pits suggest that there was activity on the site between the mid 12th and 13th centuries.

#### *LUB 9 Possible kiln? (Figs 10.10, 10.16 and 10.23)*

Cutting pit cg28 (LUB 7) in Area 5 was the fill of a cut feature supporting a stony surface and two walls cg31, on either side of the surface, revetting the sides of the feature. The surface extended further east beyond the eastern ends of the walls. These remains appeared to represent the opening for a kiln, possibly a lime or malting kiln; the surface would be the flue of this kiln, with the rest of the kiln, including the chamber, lying unexcavated to the west. From the surface cg31 came four sherds of post-Roman pottery, dating to between the mid 12th and early 13th centuries.

#### *LUB 10 Pits (Figs 10.10 and 10.16)*

To the south of the possible kiln (LUB 9) in Area 5 were three pits; cutting down into natural brash (LUB 0) was pit cg26, and this had been cut by pit cg27; cutting pit cg28 (LUB 7) was pit cg29

(unplanned: but observed in section Fig 10.16) and sealing pit cg29 was a stony layer with loam cg30. Pits cg26 and cg29 contained a few sherds of pottery dating to between the mid 12th and early 13th centuries (10 post-Roman sherds). Pit cg27 contained a very small group of mixed pottery (27 post-Roman sherds), together with a quantity of animal bone. The stony loam layer cg30 contained 12th- and 13th-century pottery (5 post-Roman sherds). To the north of the kiln was a substantial posthole cg24.

The pits might represent quarries for stone, perhaps partly to construct and supply the kiln; the pits were later backfilled or reused for refuse, possibly before the end of the 13th century.

#### *LUB 11 Backfill of possible kiln (Fig 10.16)*

Sealing the surface between the walls cg31 were layers of limestone rubble in crumbly 'light clay' cg20, which possibly originated as lime. It was this deposit above all which would support the interpretation of the surface as being the flue to a kiln. This possible kiln may have been abandoned from the 13th century: the pits in the trench contained pottery of this date, but it may have served later quarry pits nearby (cf LUB 13). It was sealed by LUB 16 which contained late 14th- to 15th-century pottery. There was no direct dating evidence.

#### *LUB 12 Robbing of wall and dump*

Wall cg12 (LUB 8) was dismantled and robbed, and its remains sealed by a dump of clean black loamy material cg14. There was no dating evidence,



but the dump postdated LUB 8 and was deposited before LUB 13.

### *High to Late Medieval*

Quarrying and backfill **LUB 13** in Areas 3, 4 and 6 dated, on pottery evidence, to the 13th and 14th centuries. The Roman pit (LUB 7) was backfilled **LUB 14**. In Areas 3 and 4 the possible quarry pits LUB 13 were cut by more pits **LUB 15**, possibly dating to the 14th-early 15th centuries, as indicated by the pottery and stratigraphy. Probably contemporary with LUB 15 was a rubble spread with indications of ruts or tracks through it **LUB 16**; the latest pottery here dated to between the late 14th and 15th centuries. Either contemporary with or post-dating the wheel-ruts were traces of a bonfire **LUB 17**; this was undated.

#### *LUB 13 Quarrying (Figs 10.11, 10.16 and 10.17)*

Cutting through loam cg14 (LUB 12), in Area 3, was a large quarry cg17 which lay mainly to the north of the site. Quarry cg17 was partially filled with dark silt/loam layers cg18, which contained twenty post-Roman sherds, the latest of which dated to the 13th or 14th century. The silt layers cg18 in quarry pit cg17 were sealed by tips of stone and mortar cg19 which included a small group of pottery (10 post-Roman sherds), the latest sherds dating to between the mid 13th and early 14th century.

Cutting through loam cg14 (LUB 12), in Area 4, was a quarry pit cg64. The pit cg64 had a stony green fill cg15 which contained a small group of late 13th- to early 14th-century pottery (24 post-Roman sherds); there was a joining sherd with the backfill cg25 (LUB 14) of the Roman quarry pit cg23 (LUB 7). Possibly part of the same area as cg64 was opened out in Area 6 – here described as pit cg32. The sides of pit cg32 were lined with mortar, and a layer of limestone rubble was found at the bottom, suggesting another re-use of the pit. The backfill of quarry cg32 was formed of mortar, limestone, clay and gravel cg33; this produced a small assemblage (5 post-Roman sherds) dating to the 14th century.

Quarrying seems to have continued after the lime kiln (LUB 9) went out of use. Backfilling the pits was rubbish brought on to the site; the pottery from the fills probably dated the quarrying to no earlier than the 13th–14th centuries.

#### *LUB 14 Backfill of Roman quarry pit*

Just to the north-east of the kiln (LUB 9) the fill of the Roman (quarry-) pit cg23 (LUB 7) was further consolidated with dumps of building debris including stone, mortar and tile cg25, together with a range of Roman pottery and other finds, and post-Roman pottery (62 sherds); the latest sherds date to the 14th or 15th century. The backfilling may have predated the tracks (LUB 16).

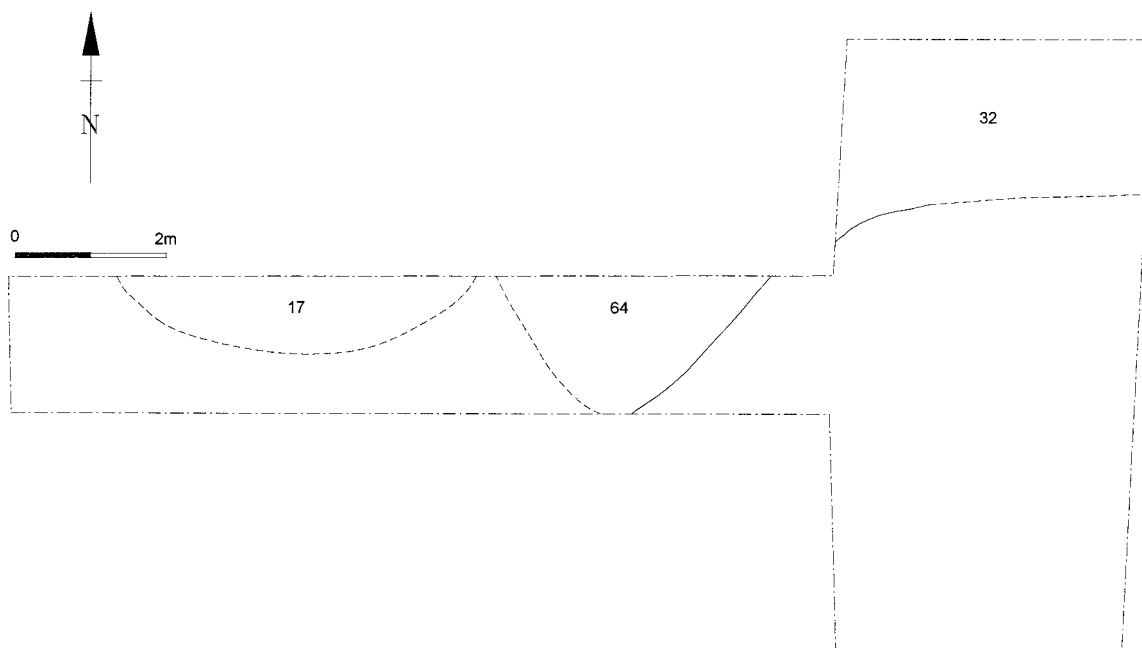


Fig 10.11 Quarrying: LUB 13

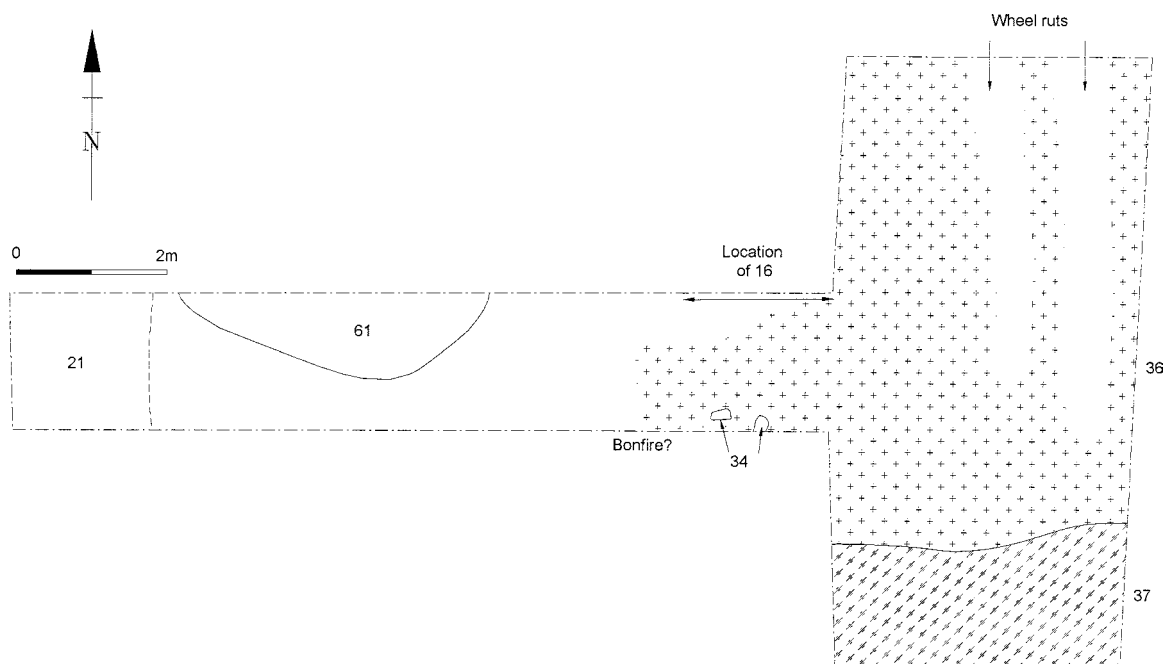


Fig 10.12 Pits and stony layer with wheel ruts, bonfire(?) and dump of stone: LUBs 15, 16, 17 and 18

*LUB 15 (Quarry) Pits (Figs 10.12 and 10.17)*

Quarry-fill tips cg19 (LUB 13) in Area 3 were cut by pit cg61 with a fill of 'dark purple brown crumbly loam' which contained a small assemblage of mid 13th- to early 14th-century wares (26 post-Roman sherds). To the east, in Area 4, cutting pit fill cg15 (LUB 13) was another pit cg16 which contained 10 post-Roman sherds, including a few of 14th- to 15th-century pottery.

Cutting through the edge of backfill cg19 (LUB 13) was a quarry cg21 (partially excavated) which had cut through the natural limestone brash, down to the bedrock. At the lowest excavated level of cg21 was a deposit of 'mortar and limestone lumps and dark loam soil' sealed by a very thick layer of black earth sealed by dark loam with stones cg22. Layers cg22 contained six post-Roman sherds, the latest of which dated to the 14th or 15th century.

*LUB 16 Stony layer with wheel tracks (Figs 10.12, 10.16 and 10.24)*

Sealing posthole cg24 (LUB 10) in Areas 5 and 6 was a stony layer cg35, over which was a spread of stony rubble cg36, also extending into Area 4. It contained a small assemblage of pottery (48 post-Roman sherds), including mainly 13th-century material but also with a few sherds dating to the late 14th or 15th century. Discernible in this material from north to south were wheel tracks.

*LUB 17 Bonfire? (Fig 10.12)*

Sealing rubble cg36 in Area 4 was a burnt patch with burnt stones cg34. It lay to the west of the cart tracks themselves, but sealed the rubble in which the tracks had been and so may have been contemporary.

*Post-medieval*

In the south part of Area 5, was a dump of stone LUB 18; pottery from this dates to the early 16th century, but may have been thrown on to the dump at a later date. A loam dump in Areas 3, 4, 5 and 6 was sealed by a north-south boundary wall LUB 19 in Area 3; this was associated with 17th- to 18th-century pottery. The wall collapsed and Areas 3, 4, 5 and 6 were sealed by loam dumps LUB 20.

*LUB 18 Dump of stone (Figs 10.12 and 10.16)*

In the south part of Area 5, apparently sealing cg30 (LUB 10) and cg20 (LUB 11), and possibly sealing cg36 (LUB 16), was a bank of limestone as well as some ironstone cg37. Material from the dump (7 post-Roman sherds) included several sherds of pottery from one vessel; they probably dated to the first half of the 16th century.

*LUB 19 Levelling and dumping, sealed by wall (Figs 10.13, 10.16 and 10.17 and 10.25)*

Over much of Areas 3, 4, 5 and 6, rubble cg36 was

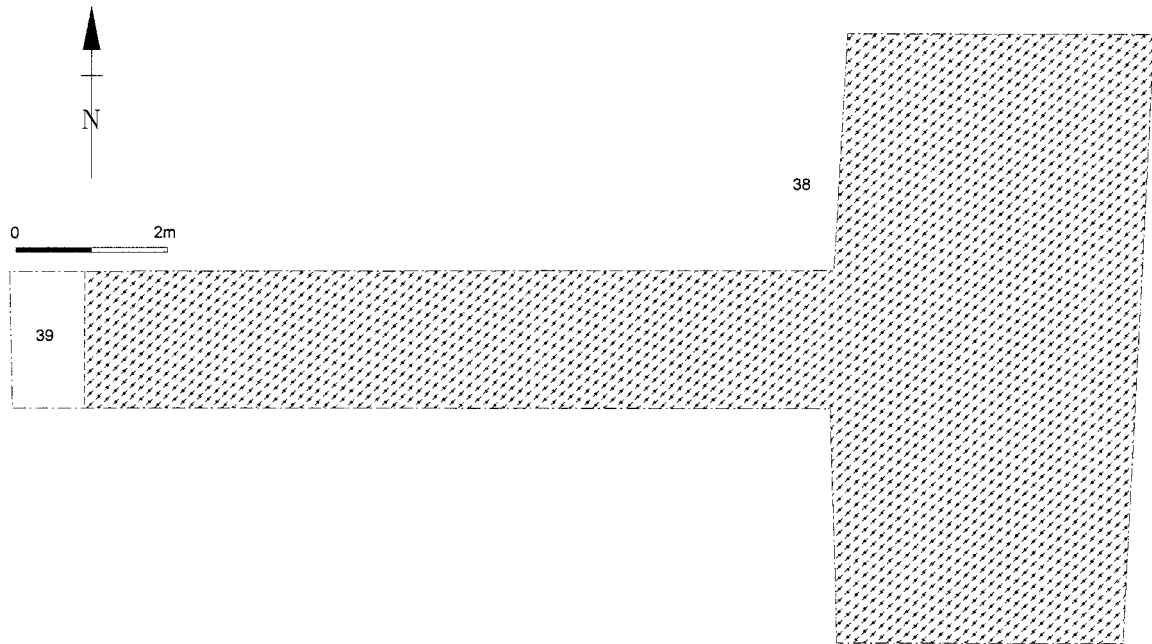


Fig 10.13 Dump and wall: LUB 19

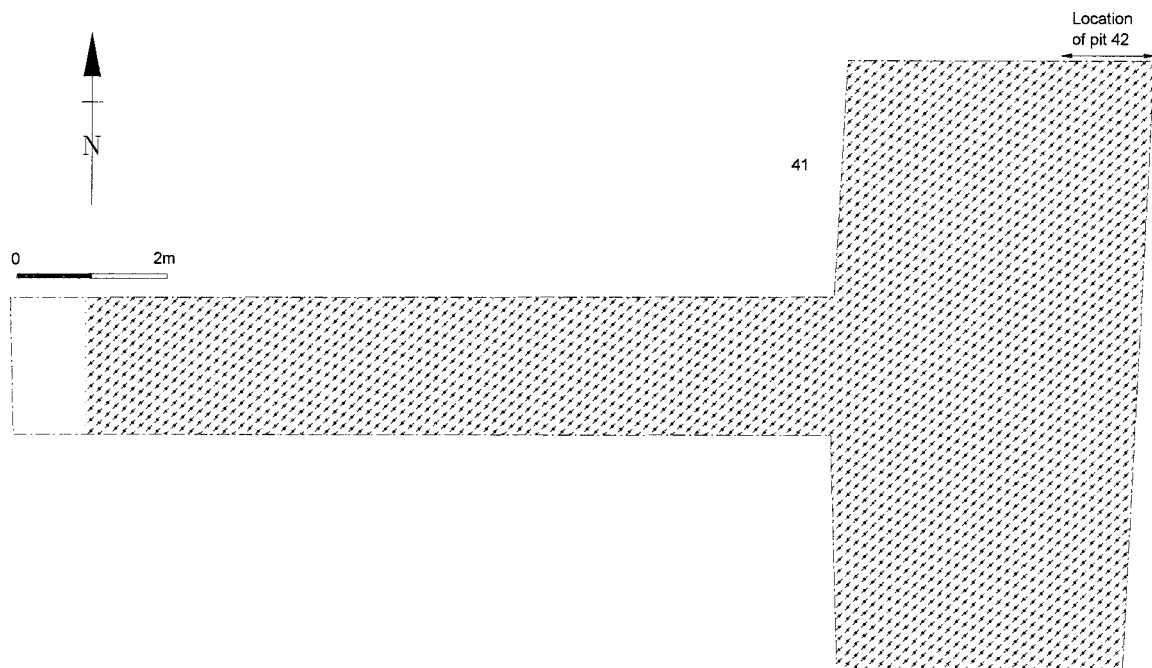


Fig 10.14 Dump and pit: LUBs 20 and 21

sealed by a loam dump cg38 (about 0.40m thick) which contained 110 post-Roman sherds including 17th- to 18th-century pottery. The loam may have been associated, as preparatory work, with the construction of a north-south wall cg39 in Area 3; it was unmortared and roughly built without foundations, but sealed dump cg38. It had a possible east-west return on its west side (Fig 10.25), and

there was an offset on its east face. The wall possibly represented a boundary.

*LUB 20 Dumps (Figs 10.14 and 10.17)*

The wall cg39 (LUB 19) collapsed or was demolished, and sealing its remains in Area 3 was the resultant rubble cg40, over which were dump layers of loam and clay cg41 covering Areas 3, 4, 5 and 6;

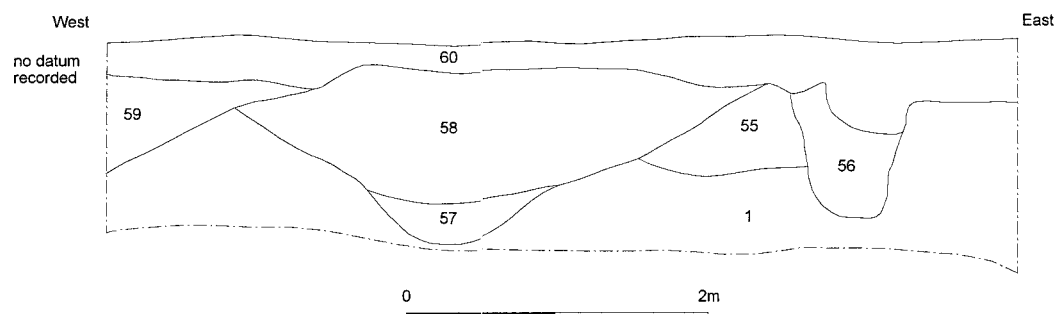


Fig 10.15 Section from west to east along part of the north side of area 1, Trench II, showing legionary and colonia defensive features (cf. Figs 10.4, 10.7)

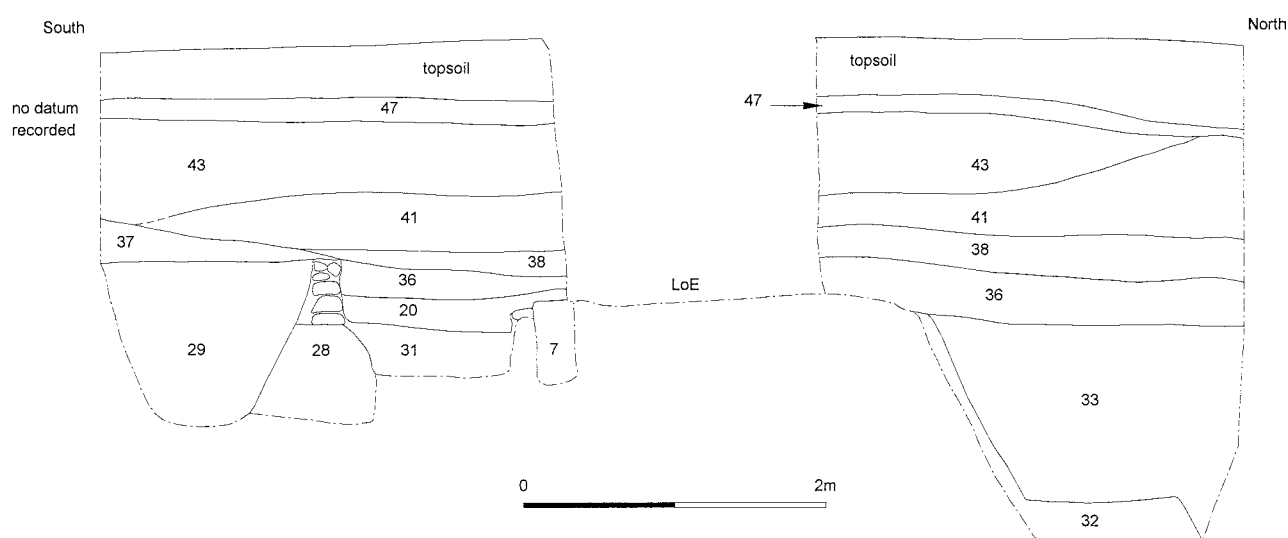


Fig 10.16 Section from south to north along the west of areas 5 and 6, Trench I

17th- to 18th-century pottery was included in the 21 post-Roman sherds recovered from cg41.

### Modern

Areas 3, 4, 5 and 6 had been disturbed by the construction of, and alterations to, the school LUB 21. Areas 1 and 2 had been truncated down to the Roman deposits and sealed by rubble dumps LUB 22.

### LUB 21 The school (Figs 10.16 and 10.17)

Dump layers cg41 (LUB 20) were cut by pit cg42 to the north of Area 6. In Areas 3, 4, 5 and 6, layers cg41 (LUB 20) were sealed by a dump of loam and limestone chippings cg43 and loose rubble set in mortar cg44, which was cut by a soakaway cg45 (unplanned) for the school. Although dump cg43 contained 17th- to 18th-century sherds, these were probably residual. Sealing the soakaway was a dump

of dark brown sandy loam with rough limestone rubble cg46; sealing pit cg42 and cg46 was dark brown loam cg47; over cg47 was modern topsoil.

### LUB 22 Dumps (Fig 10.15)

In Areas 1 and 2 the features including the revetment wall cg50 were levelled and sealed by brick, mortar and black earth cg60.

## Discussion

### Legionary occupation

Although Areas 1 and 2 had been severely truncated, evidence remained for the early ditch and palisade trench of the rampart front (LUB 1) of the legionary fortress, lying to the north of the site where they were first discovered (Webster 1949). Traces of a possible timber Structure 1.1 (LUB 2) in Areas 5 and

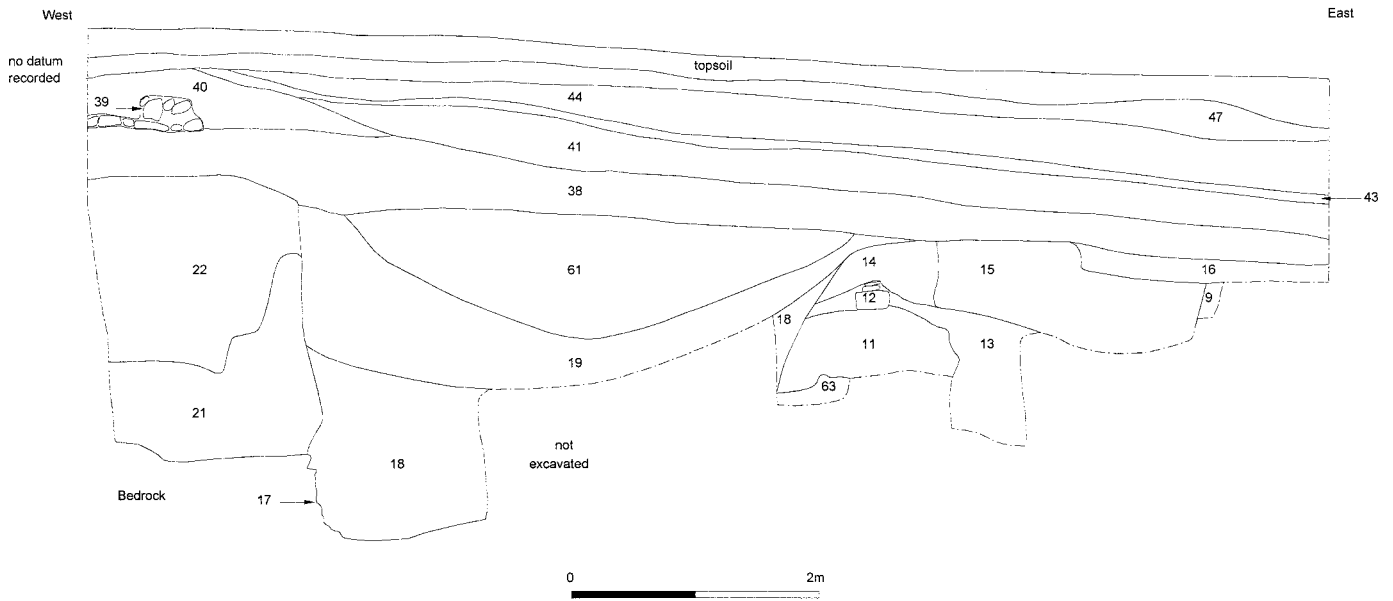


Fig 10.17 Section from west to east along the north side of areas 3 and 4, Trench I



Fig 10.18 Looking west along Trench 2 showing the section of palisade trench cg56 and legionary ditch cg57: LUB 1



Fig 10.19 Looking west along slot cg7 with posthole cg8: LUB 3



Fig 10.20 Looking west at the wall cg50: LUB 5



Fig 10.21 Looking north-west at pit cg11/13 containing (centre left) unidentified copper alloy object: LUBs 6 and 7



Fig 10.22 Looking north at wall cg12: LUB 8

6 could belong to an initial construction phase. Subsequently in Areas 4, 5 and 6, a more definite timber building, **LUB 3** (Structure 1.2) associated with mid 1st-century pottery, probably indicates the centurion's end of a barrack block. One room of Structure 1.2 was about 5m east-west (but may have been divided into two) and at least 3m north-south.

### *The early colonia*

It is clear from earlier work that the ditch and palisade trench were deliberately backfilled and replaced by a ditch (LUB 4) over 3m further to the west of the legionary ditch. The substantial stone feature (LUB 5) may represent the foundations of an *ascensus*, or stairway, to the walkway of the *colonia* wall, or an internal thickening of the wall (Jones, M J 1980, 30).



Fig 10.23 Looking west at the entrance of kiln cg31: LUB 9

Following the demolition of the barrack block, the site was not developed for structures in the area of the trench at least.

### *Roman finds*

The vessel glass was preponderantly of mid- to late 1st-century date, largely (high-quality) tableware, with a notable group from pits cg11 (LUB 6) and cg13 (LUB 7, which represented material disturbed from cg11). Fragments of two 1st-century glass vessels came from different fills within the pit cg11: an unusual jar (CO, CV) <G14-5> with short funnel mouth and acutely carinated body, and another vessel (CV, CW) <G16-7> which is of unknown form, but whose deep blue colour suggests it to be of 1st-century (pre-Flavian) date (Cool and Price 1987). Pit cg11 was itself cut by a later pit cg13 (LUB 8), which also contained fragments of the same unusual jar noted here, together with part of a cylindrical bottle (CT) <G22>, a vessel form which generally appears to have gone out of use in the early 2nd century (Cool and Price 1987).

Later levels also produced finds which may be derived from the 1st-century occupation, eg the base fragment from a deep blue glass vessel with white trailed decoration (AW) <G4>, almost certainly of mid 1st-century date, from the backfill of a medieval quarry pit cg19 (LUB 13) which has a sherd-link back to pit cg13 (LUB 7).



Fig 10.24 Looking north at stony spread cg36 with wheel ruts: LUB 16



Fig 10.25 Looking north-west at wall cg39: LUB 19

### *The mid Roman period*

It would appear that in Areas 4, 5 and 6 the ground was open, and there was evidence for pitting, including stone quarrying (LUB 7) for the building of the city wall and various internal buildings of the *colonia*. Areas 1 and 2 were severely truncated, possibly as late as the late 19th century, with this area of the city being opened up for development, but the reason for the survival of the Early Roman levels so close to the modern surface has not been satisfactorily explained (but see below, under 'Waste land and rubbish disposal'). The Roman ground surface had been entirely removed and there was no trace at all of ramparts associated with ditches and wall foundations LUBs 1, 4 and 5.

### *From the mid Roman period to the early medieval period*

There were no traces of activity between these periods. It is possible that later quarrying removed evidence of late Roman activity, or perhaps this part of the enclosed city was open ground. Pottery dating to the 2nd, 3rd and 4th centuries was recovered residually from LUB 10, suggesting the latter interpretation, but very late 4th-century sherds were recovered from LUBs 13 and 14, perhaps suggesting some evidence for the alternative interpretation, that there was some activity in the late Roman period on or nearby the site, perhaps related to the re-fortification of the *colonia*. From evidence elsewhere in the city, this seems more likely.

It is not so surprising that there was no indication of occupation here during the immediate post-Roman period, in view of the general lack of evidence for this period throughout the city.

### *Agricultural activity between the Late Saxon and Early Medieval periods*

Two very worn and abraded sherds of 10th-century pottery from pit cg11 (LUB 6) seem likely to have been introduced into the pit as a result of agricultural activity. They are the only sherds from the whole of Lincoln so far examined to exhibit signs of plough damage. As these Late Saxon sherds were recovered from LUB 6, it appears likely that the area was ploughed before the early medieval activity, when the pit cg11 (LUB 6) was sealed by dry-stone wall cg12 (LUB 8).

### *Limestone quarrying in the Early Medieval period*

This part of the city provided easy access to stone building material during the Early and High Medieval periods. Pits were dug to remove stone from within and beneath the limestone brash (LUBs 10 and 13). The possible traces of an Early Medieval lime kiln (LUB 9) were recovered; the area of this kiln may have been divided from other activity to the west (agricultural?) by a dry-stone boundary wall cg12 (LUB 8).

In the Late Medieval period there were tracks through a rubble spread (LUB 16), which might have been related to the removal of stone. The bonfire (LUB 17) may have provided stone-diggers with access to warmth. The limestone dump (LUB 18) may have represented discarded stone.

cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB
1/0	14/12	27/10	40/20	53/5
2/0	15/13	28/7	41/20	54/5
3/2	16/15	29/10	42/21	55/0
4/2	17/13	30/10	43/21	56/1
5/2	18/13	31/9	44/21	57/1
6/2	19/13	32/13	45/21	58/4
7/3	20/11	33/13	46/21	59/4
8/3	21/15	34/17	47/21	60/22
9/3	22/15	35/16	48/0	61/15
10/2	23/7	36/16	49/0	62/-
11/6	24/10	37/18	50/5	63/3
12/8	25/14	38/19	51/0	64/13
13/7	26/10	39/19	52/5	

Fig 10.26 Concordance of cg numbers with LUB numbers for w73

### *Waste land and rubbish disposal*

Rubbish was used to backfill quarry pits from the Early Medieval period (LUBs 10 and 13). One of the Roman pits may have remained partially open, to have its fill consolidated during the late medieval period (LUB 14), probably to level up the area for the tracks (LUB 16). During this period the traces of wheeled carts may have been associated with the need to facilitate the process of rubbish disposal. The indications of a bonfire (LUB 17) might also relate to disposal of rubbish.

The backfills of the quarry pits contained earlier material, including late to very late 4th-century material which must have been derived from rubbish deposits elsewhere – including the area by the fortifications where the truncation took place? The backfill cg25 (LUB 14) of the Roman pit cg23 (LUB 7)

contained not only 14th- to 15th-century pottery, but also 4th-century coins and window glass, together with sherds of late/very late 4th-century pottery. Pit cg61 (LUB 15) also included 4th-century material as well as mid 13th- to early 14th-century pottery. It is apparent that secondary rubbish was being brought on to the site from the medieval period onwards (approximately 40% of the registered finds from medieval and later contexts are of Roman date).

The majority of the medieval pottery was of 13th-century date and from jugs of Lincoln or local manufacture. A large number of these jugs are decorated including one sherd that must come from an elaborate knight jug.

### *Horticultural activity from the post-medieval period*

In the post-medieval period, dumps of soil were laid down (LUBs 19 and 20), probably for horticultural purposes. Associated with the earlier dump, which contained 17th- to 18th-century pottery, was a dry-stone north-south boundary wall, about 6m to the west of the earlier boundary wall (LUB 8). Dumps (LUB 20) completely sealed the robbed remains of this wall.

### *The School*

Westgate School was constructed in the late 19th century in an open plot of land. This area of town had remained free of urban development up to the mid 19th century (Marrat's revised map of 1848), but by the early 20th century the whole area around Westgate and Burton Road had been built up, mainly with terrace housing.



# 11. West Bight 1976 (wb76)

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## Introduction

In November 1976 foundation trenches for a new house on Westgate, to the rear of 2, West Bight, were cut by machine to a depth of about one metre (Fig 11.1). With the co-operation of Lincoln City Council, permission had been given to observe these trenches. A late change in the design of the foundations involved the digging of deeper foundation trenches than expected (1.2m and 1.3m deep) in order to reach a firm subsoil. Through the kindness of the owner, Mr G Silverthorne, several days were made available during which the features uncovered were recorded and the trenches deepened in places. The site was directed by Brian Gilmour for Lincoln Archaeological Trust. The excavation was unfunded. An interim report was written (Jones *et al* 1977).

A total of 32 contexts was identified on site; these have been interpreted as 19 context groups (cg1–20; cg17 was unused). The context groups were seen as part of 7 LUBs (LUBs 1–7; Figs 11.2 and 11.9); LUBS 1–5 were assigned to the Roman period, LUB 6 to Early–Late Medieval, and LUB 7 to the Post-Medieval period. The three areas used in the LUB diagram indicate the west (Area 1), north (Area 2) and east (Area 3) trenches of the site (Figs 11.1 and 11.2). The LUB sequence for all three areas includes the core LUBs 4, 5 and 6; in addition Area 1 has LUBs 1 and 3; Area 2 contains LUB 2 and Area 3 adds to the sequence with LUB 7.

There were few Roman (99 sherds) and post-Roman (18 sherds) pottery sherds recovered from the site, and only 16 registered finds. The registered finds were of iron (mostly nails), glass, and copper alloy, the last including three modern coins; all metalwork was extremely corroded. The Roman glass has been examined (Price and Cottam 1995h). No organic finds were recovered. There were 56 fragments of building material, mostly non-ceramic

(burnt daub, plaster and mortar). A small animal bone assemblage (30 fragments) was recovered, and no human bone.

Post-excavation stratigraphic analysis was undertaken by Prince Chitwood, and later by Kate Steane. Margaret J Darling worked on the Roman pottery; Jane Young examined the post-Roman pottery. Jen Mann analysed the registered finds and, with Rick Kemp, the building materials. Helen Palmer Brown and Zoe Rawlings digitized the plans.

## The Excavation

### *Early Roman*

Possibly contemporary were part of an east–west foundation LUB 1 in Area 1 and what may have been a north–south ditch LUB 2 in Area 2. There was no dating evidence for these features as such, but the destruction debris LUB 3 which sealed them in Areas 1 and 2, contained pottery dating mostly to the mid–late 1st century, with sherds which extended into the 2nd century.

### *LUB 1 Foundations (Fig 11.3)*

At the limit of excavation, at the south end of Area 1, foundations or sill cg3 were recorded; they consisted of stone, bonded with pebbly mortar. However, only the northern part lay within the excavations, so that their full width could not be determined. They extended into both west and east sections of the trench, over 1m wide, running roughly east–west. There was no dating evidence.

### *LUB 2 Ditch (Figs 11.3 and 11.6)*

At the limit of excavation, towards the west end of Area 2, was a substantial linear ditch cg1; it ran

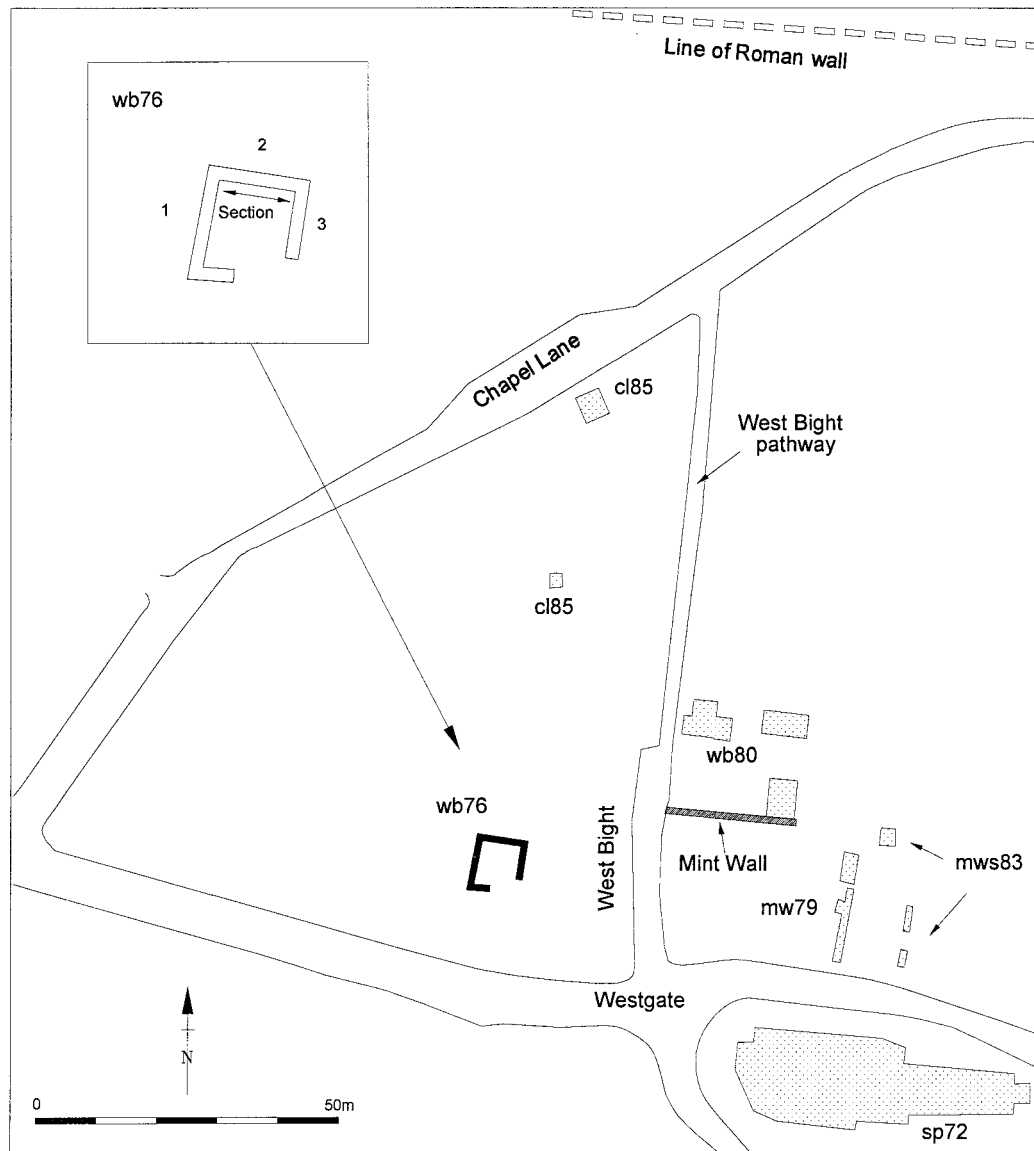


Fig 11.1 Site location plan for wb76

north–south, was 0.85m deep and over 2m in width. Only part of the east side of the ditch was excavated. The smoothness of the one scarp suggests that it might have been connected with drainage. There was no dating evidence.

*LUB 3 Dumps of demolition material (Fig 11.6)*

Filling the ditch cg1 (LUB 2) in Area 2 were layers of silty clay cg11 with burnt daub; many of the pottery sherds from cg11 were also burnt.

In Areas 1 and 2, at the limit of excavation, were dump layers cg2 containing burnt daub, burnt loam and charcoal, with several pieces of plaster and tile. Sealing both foundations cg3 (LUB 1) and dump layers cg2 were further dumps cg12, also containing burnt daub and a few pieces of plaster

and tile. There were pottery sherd links between cg2 and cg12; pottery from both dumps was burnt.

There were 82 sherds of pottery from this LUB. Pottery from cg11 (31 sherds) included 5 SAMSG vessels, including a form 15/17 or 18 stamped by Felix I, dated *c* AD 55–70, and closing with a form 37 dated *c* AD 70–85; all the other sherds were of fabrics and types seen in mid to late 1st-century contexts. Pottery from cg2 (34 sherds) included a single SAMSG form 30 or 37, dated to the Flavian or Flavian-Trajanic period, indicating a later 1st- to early 2nd-century date. Pottery from cg12 (17 sherds) included a GREY rim from a plate form derived from the Camulodunum 16 type, which appear in the later 1st- or more commonly in early 2nd-century deposits.

wb76	1	2	3	Plan
Post-Medieval	truncation			3
	7 Burnt pit			
Early Medieval	truncation			
Mid-Late Roman	6 Pits & loam			2
Early-Mid Roman	5 Slate floor			
	4 Structure 1			
Early Roman	3 Demolition dumps			1
	LoE			
	1 Foundations	2 Ditch	LoE	

Fig 11.2 LUB diagram for wb76

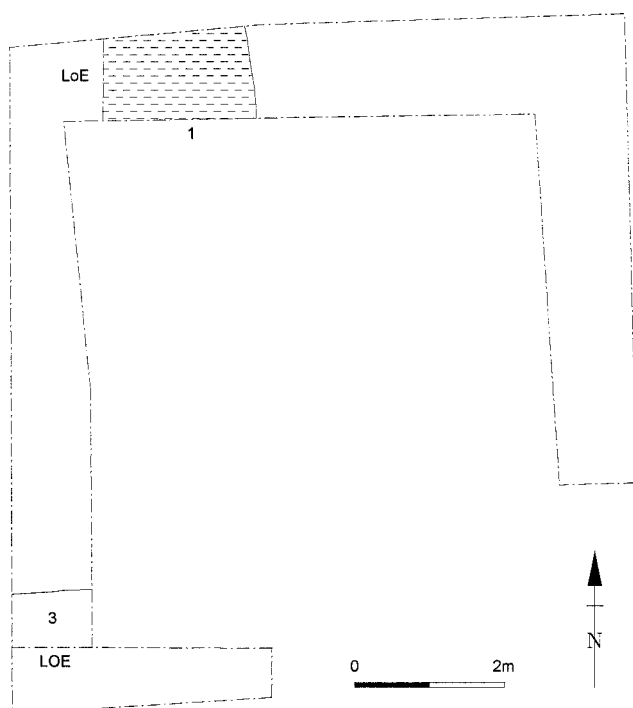


Fig 11.3 Foundations cg3 and ditch cg1: LUBs 1 and 2

The dumps appear to represent the demolition debris of earlier buildings on the site (see Discussion), possibly associated with foundations cg3 (LUB 1) and ditch cg1 (LUB 2).

### Early-Mid Roman

Over the debris of LUB 3, a substantial Roman building was constructed **LUB 4**, probably part of a building which extended over Areas 1, 2, 3 and beyond in all directions. Associated pottery was residual. It is likely that this structure was a civic building of the *colonia*.

#### LUB 4 Structure 1 (Figs 11.4, 11.6, 11.7 and 11.8)

Sealing the demolition layers cg11 and cg12 (both LUB 3) was a compact layer of yellow mortar and limestone chips cg5 which covered most of the area; it was approximately 0.05m deep to the west and slightly shallower to the east (65.96m OD on the top of the layer). It formed a hard-packed level surface within the area of the building, probably the surface from which construction began.

A north-south linear feature cg6 in layer cg5 may have formed a stylobate for an internal colonnade or similar feature, or merely a temporary base for, say, scaffolding during construction work. On either side of the linear feature cg6 was a build-up of silty loam cg14 with charcoal, mortar, ironstone and limestone chippings, together with several fragments of daub and painted plaster similar to that from cg2, cg11 and cg12 (all LUB 3); there was also a small group of residual mid 1st-century pottery from cg14, perhaps suggesting the trample of earlier material into the new building. Whatever had filled the feature cg6 had either rotted away or had been removed.

Along the east side of Area 3, at the limit of

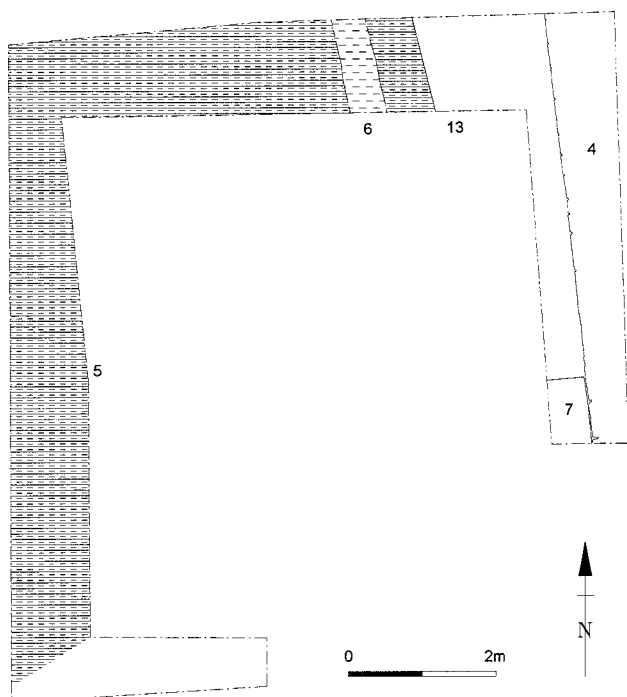


Fig 11.4 Structure 1, with wall cg4 against east section and parallel feature cg6: LUB 4

excavation, was the western edge of a substantial north-south wall cg4 of mortared limestone with tile bonding courses. It was at least 1m wide (Fig 11.7). The cut of the construction trench for the wall cg4 had been sealed within the building by very hard pinkish-brown mortar – perhaps a floor? – with some tiles set within it cg13 (Fig 11.8); the mortar was about 0.10m thick and butted up against the lowermost tile course of the wall cg4. This layer, which appeared to relate to the construction of the wall cg4, overlapped earlier mortar cg5, and underlay cg14 as far as the feature cg6.

Sealing both cg6 and cg14 and raised above them by about 0.75m was a substantial layer of make-up and floor cg8; a layer of clean yellow-fawn-coloured sand was spread evenly over the whole area; on top of this layer a deposit of mixed grey-brown silty loam was evidently dumped and spread out so as to form a 'bedding' layer for limestone footings. These footings varied to some extent in the way they were laid: to the west were two layers of roughly-pitched limestone slabs, whereas further east was a lower layer of rather larger, rough limestone slabs with a layer of loose rubble 'spread' on top. From this make-up, residual 1st-century sherds were recovered, many of which were burnt, suggesting that they had originated from LUB 3. Over the make-up was a 0.15m thick layer of

'pebbly' concrete forming a good quality, solid floor at 66.81m OD.

A mortared stone wall 'thickening' about 0.40m thick cg20 was added to the west face of the existing wall cg4; it had been set into the concrete floor. Immediately to the west of this wall widening and on top of the concrete floor were found the remains of what appeared to have been part of a quarter round moulding in the junction between the wall and floor.

At the south end of Area 3 an east-west wall cg7 was identified as butting against cg4. It was constructed of roughly-laid limestone and was at least 0.45m long and at least 1m thick.

These remains of a substantial building were associated with 11 sherds of residual pottery; it is LUB 3 which provides a *terminus post quem* for the date of construction for this building. There is a possibility that it was burnt later than AD 150, and as such might be mid Roman in date.

#### Mid-late Roman

Slate LUB 5 over the floor of Structure 1 (LUB 4) was probably a later addition. There was no secure dating evidence for this; the stratigraphic sequence only shows that it fits somewhere between the mid Roman and Early Medieval period, but it belonged to the Roman structure and was of Roman type, so clearly dates to the mid-late Roman period.

#### LUB 5 Slate spread (Fig 11.6)

Part of the mortar floor cg8 was sealed by slate cg19. On site this had been interpreted as 'crazy paving'. It appears to have been laid rather than being the result of roof collapse. A sample of the mortar floor was taken; one large fragment bears the remains of a grey, laminating layer of clay-like material on its surface, perhaps to serve as a bedding for the slate.

#### Early Medieval

Pits cut the floor LUB 5 and there was a dump of soil LUB 6; one pit contained pottery dating between the mid/late 12th to early 13th centuries.

#### LUB 6 Pits and loam (Fig 11.6)

A pit cg9 (unplanned) probably cut floor cg19 (LUB 5). It was itself cut by pit cg18 (unplanned). Robbing cg16 (unplanned) removed stone from the foundations of wall cg7. Dark greyish-brown loam cg10 covered the site (at least 0.5m thick and probably sealing cg18 and cg16 although this was unclear from the record); from the section drawing (Fig 11.6) it is clear that there were more cuts through floor cg19 which were difficult to identify as

individual features and therefore not allotted context numbers.

No pottery was recovered from layer cg10; it was removed mechanically. However, it would seem that this layer was deposited or accumulated after the surface cg19 had been cut into but before much of the building had been robbed. Pit cg9 contained a few sherds (17) of pottery dating to between the mid/late 12th and early 13th centuries. Perhaps the thick layer of loam had been dumped to create a garden.

### Post-Medieval

Cutting LUB 6 was a possible lime kiln LUB 7.

#### LUB 7 Burnt pit (Fig 11.5)

Black layer cg10 (LUB 6) was cut by pit cg15, which was lined by burnt material with a layer of ash at the bottom, including remains of a small brick flue. The pit revealed evidence of intense burning; it was possibly a lime kiln. One post-medieval sherd dated the pit to between the 16th and 18th centuries.

## Discussion

### Legionary buildings

During the legionary period and into the early *colonia* period the site is likely to have contained buildings of timber-framed construction. Remains of these lay below the limit of excavation; only the demolition debris (LUB 3) was reached. Impressions on some of the burnt daub from LUB 3 suggest that it originated from a timber building (or buildings). Several pieces of daub with the remains of a gritty surface coat indicate that the walls were rendered, probably prior

to the application of a surface coat of plaster (several pieces of gritty, white-painted plaster were associated with the daub from cg11 and cg12). Most of the pottery from dump cg2 and cg11 was of fabrics and forms normally seen in legionary period deposits (mid to late 1st century), but it also contained types commonly found in the early 2nd century.

The site is located immediately to the north-west of the centre of the fortress, and the site of the *principia*. The pottery from the site was predominantly from the 1st century.

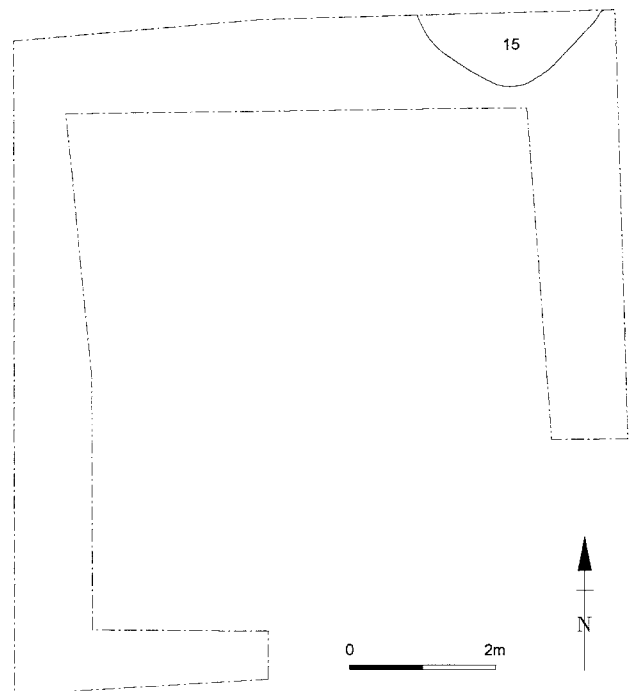


Fig 11.5 Lime-kiln(?) cg15: LUB 7

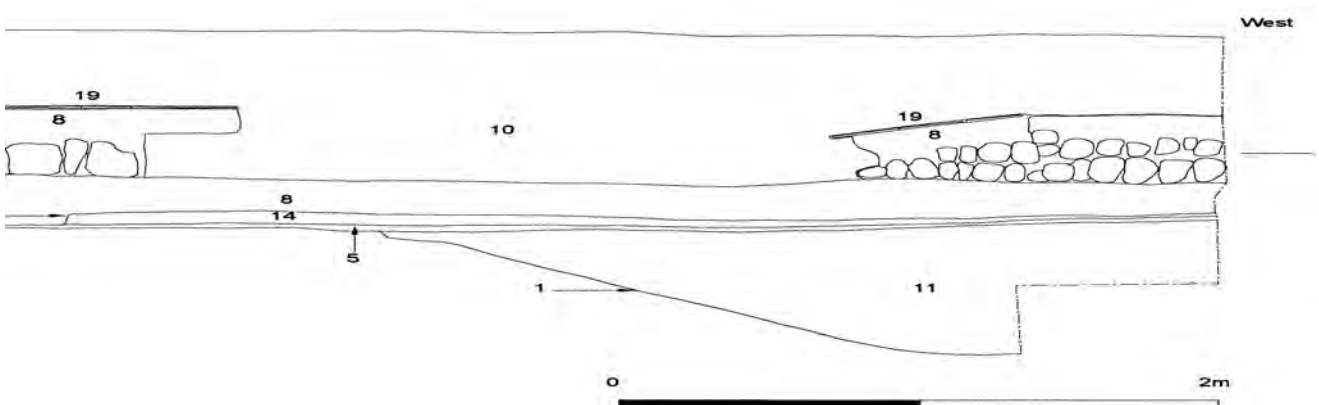


Fig 11.6 Section from west to east along the south side of Area 2



Fig 11.7 Looking north showing the eastern trench with the Roman wall cg4: LUB 4

**Colonia buildings**

The foundations or sill (LUB 1) represent an east-west wall, possibly a sill for a timber-framed building if not entirely of stone, belonging to the early *colonia* period.

It is likely that north-south ditch (LUB 2) was associated in some way with this building, possibly as a drain between buildings.

Replacing earlier traces of activity (LUBs 1, 2 and 3) was evidence for a very important, possibly civic, building (LUB 4). The construction technique of floor cg8 on top of dumps which were deliberately deposited to raise the ground level is paralleled by the raised floor at mw79 (cg5, LUB 2) and the late 3rd-century floor at sp72 (cg92, LUB 14). The level of the floor cg8 (LUB 4, 66.81m OD) is higher than that at St Paul-in-the-Bail (sp72 cg92: between 65.92 and 66.14m OD), but on a similar level to the raised floor at Mint Wall thought to be that of the civic basilica (mw79 cg5: 66.71-66.80 OD).

The building at wb76 is likely to represent the next structure west of the forum-basilica (LUB 3 mw79, LUB 4 wb80 and LUB 2 mws83), beyond a north-south street.



Fig 11.8 Looking south-west, at the junction of the east and north trenches, with mortar surface visible, and make-up for later floor cg13 in section, showing the Roman wall cg4: LUB 4

**Mid or late Roman activity**

Although there was no direct stratigraphic evidence for the collapse or demolition of this building, sherds from the 2nd century were recovered from pit cg9 (LUB 6) suggesting perhaps that the life of the building was limited to the early Roman period. But the lack of dating evidence may reflect the general sparsity of pottery associated with Roman civic buildings, and it may be that this building continued in use later. The slates cg19 (LUB 5) which had been laid on the floor cg8 formed an unusual, rather enigmatic, surface.

**Post-Roman activity**

The remains of the Roman building were sealed with debris by the Early-High Medieval period, as indicated by medieval pottery from later pitting (LUB 6). The easy availability of stone through the robbing of the Roman building foundations is possibly reflected by the construction of a what might have been a post-medieval lime kiln (LUB 7).

cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB
1/2	5/4	9/6	13/4	17/-
2/3	6/4	10/6	14/4	18/6
3/1	7/4	11/3	15/7	19/5
4/4	8/4	12/3	16/6	20/4

Fig 11.9 Concordance of cg numbers with LUB numbers for wb76

## 12. West Bight 1980 (wb80)

### Introduction

Excavations took place to the east of West Bight between May and August 1980, in advance of housing development (Fig 12.1). The work was supervised by John Clipson for the Lincoln Archaeological Trust and funded by the Department of the Environment.

Owing to limitations on resources, investigations were confined to three small trenches (Figs 12.1–2). These were positioned to answer specific questions: evidence for the origins of West Bight were sought from Trench 1; exploration was to take place in Trench 2 to discover whether the eastern boundary of the present property went back in time; in Trench 3, to the north of the Mint Wall, it was hoped to establish the presence or absence of a Roman street, adding further confirmation or not to the hypothesis regarding the forum-basilica complex postulated in the St Paul-in-the-Bail (sp72) excavations. The sections for Trench 3 revealed a much more complex sequence than was appreciated during the excavation, although this sequence has only been fully interpreted following subsequent analysis. An interim report was published (Clipson *et al* 1980).

Of the 160 contexts recorded on the site, two were unstratified and the rest were grouped into 101 context groups (Fig 12.25; cg1–115, but not using cg16–18, cg21, cg23, cg26, cg36, cg39, cg57, cg69, cg75–76, cg78 and cg80). These context groups were interpreted as 25 land use blocks (LUBs 1–25; Figs 12.3 and 12.25). The areas used in the LUB diagram correspond to the trenches on the site (Figs 12.2). In Trench 1, there was a sequence of LUBs from the early Roman period through to the post-medieval period (LUBs 3–5; 8, 11–13 and 19) followed by truncation in the sequence before the late modern period (LUB 25). In Trench 2 the sequence began in the very late Roman period, due to limits of excavation, and continued through to the modern period,

possibly with a gap between the post-medieval and modern periods (LUBs 9, 10, 14, 16, 18, 24 and 25). In Trench 3 there was a more interrupted sequence: a gap between the early (LUBs 1–2) and mid Roman stratigraphy (LUBs 6–7); no evidence of late or very late Roman activity, perhaps suggesting medieval truncation; renewed occupation in the early medieval period (LUB 15) and again in the late

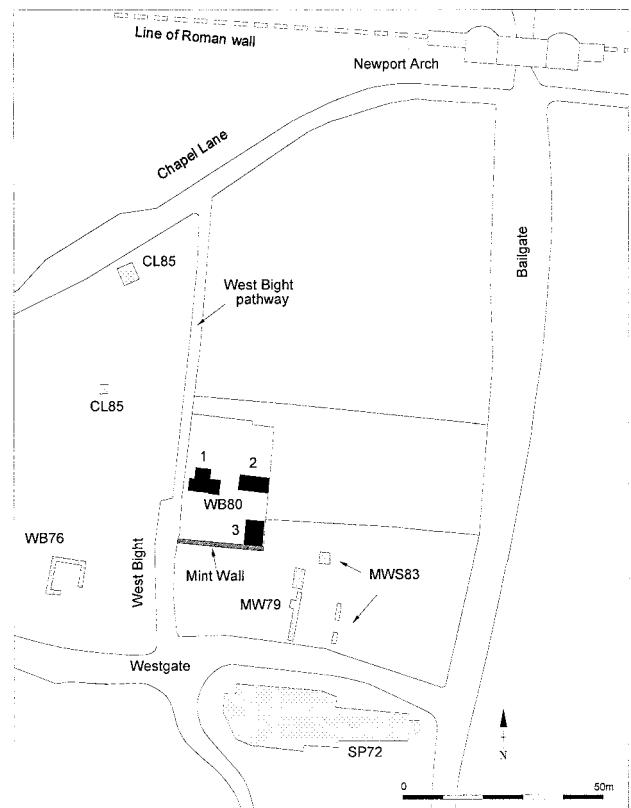


Fig 12.1 Site location plan for wb80

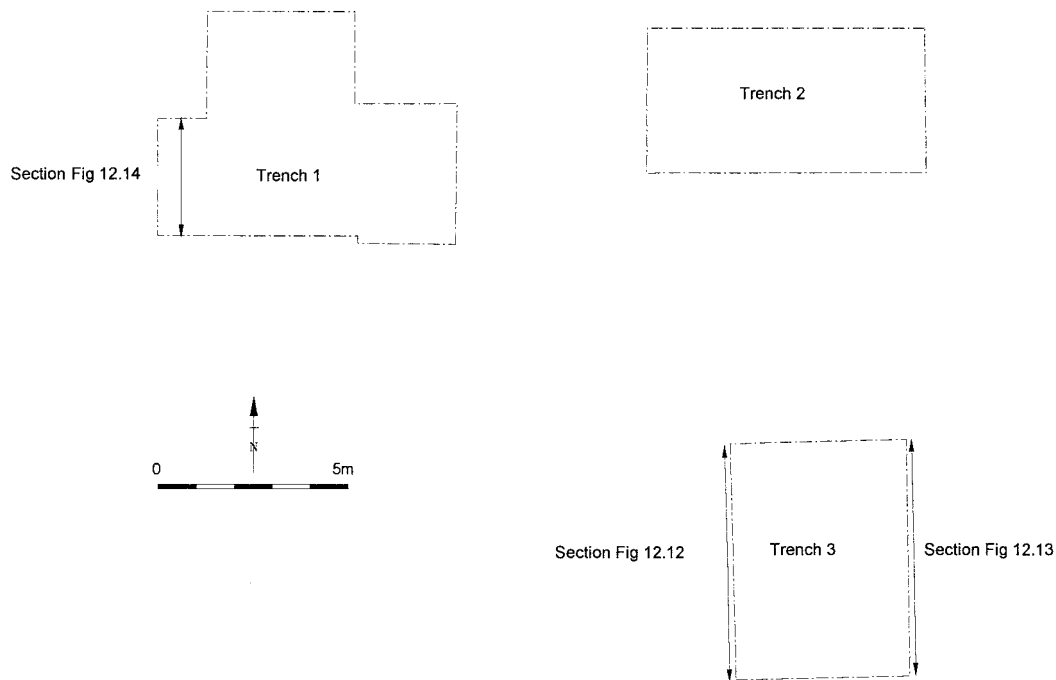


Fig 12.2 Plan showing areas and sections for wb80

medieval period (LUB 17), and then no evidence until the modern period (LUBs 20–23; 25).

A large assemblage of Roman pottery (2,310 sherds) and a moderate group of post-Roman pottery (520 sherds), together with 127 registered finds, were recovered from this site. An unusually high proportion (42.5%) of the registered finds were of vessel glass, mainly Roman in date (although some may represent parts of the same vessels). Unusually, copper alloy (almost half of it comprising coins) occurred in greater quantity (21.3%) than ironwork (16.5%); all the metal was heavily corroded. Only a small quantity of bone artefacts and a single ivory piece were found, together with several objects of shale, stone, and a single fragment of jet. A number of specialists have written reports on material from this site: Roman coins (Davies 1987; Davies 1993); marble (Peacock and Williams 1992); building stone (Roe 1995); Roman glass (Price and Cottam 1995h), and bone and ivory species identification (Rackham 1994). No organic materials were recovered. A large number (1,011) of building material fragments were recovered from the site, mostly of plaster. The animal bone (122 fragments) from the site was not considered significant enough for further study. There was no human bone.

Post-excavation stratigraphic analysis was undertaken by Prince Chitwood, and later by Kate Steane. Margaret J Darling worked on the Roman pottery; Jane Young examined the post-Roman pottery. Jen Mann analysed the registered finds and, with Rick

Kemp, the building materials. Helen Palmer-Brown and Zoe Rawlings digitized the plans.

## The Excavations

### Early Roman

Curving foundations for a semicircular pier **LUB 1** (Structure 1) were revealed in Trench 3; tile in the demolition debris **LUB 2** suggested that the construction of the building may have dated to the late 1st–early 2nd centuries. There were traces of a less substantial stone-founded structure **LUB 3** (Structure 2) in Trench 1; this was dated by pottery to no earlier than the early 2nd century.

### *LUB 1 Structure 1 Construction (Figs 12.4 and 12.16)*

At the limit of excavation in Trench 3 were foundations for a structure which had a curved face and a core of mortared rubble cg64 (Fig 12.16). To its east was a mortared surface cg65, possibly external and linked to the building; it lay at about 66.55m OD, sloping very slightly from north to south. There was no direct dating evidence for its construction and use.

Pottery from the demolition material cg71 and cg72 (LUB 2) dated up to the mid 2nd century: it is more likely to have been derived from its use than from its demolition phase.





Fig 12.3 LUB diagram for wb80

*LUB 2 Demolition of Structure 1 (Fig 12.12)*

The structure in Trench 3 (LUB 1) was demolished and the foundations partially robbed cg71. The robbing contained a small quantity of building material (tile, mortar, and a single fragment of window glass). Among the tile fragments were two basically triangular antefixes, moulded with the face and head-dress of a female personification. These antefixes, which were normally attached to the

lowest course of *imbrices*, or (more likely here) set at the end of the ridge, can probably be associated with Structure 1, or a nearby contemporary building.

Robbing cg71 was sealed by clayey ash with shells cg72. A small quantity of domestic refuse recovered from both cg71 and cg72 largely comprised vessel glass, mainly fragments of prismatic bottles.

Pottery from cg71 (88 sherds) included sherds from bowls of the type B333, B334 and a platter

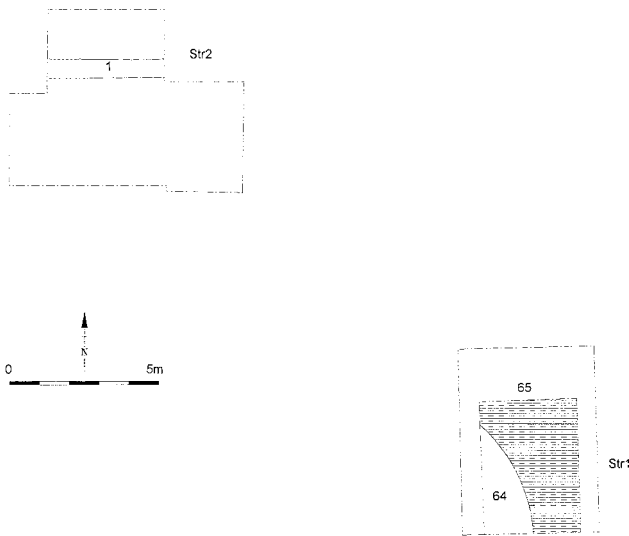


Fig 12.4 Structures 1 and 2: LUBs 1 and 3

derived from the Camulodunum 16 type in GREY; these indicate an early to mid 2nd-century date. Pottery from cg72 (10 sherds) included a stamped SAMCG sherd of the potter Malliacus, dated *c* AD135–160, and a basal sherd from a chamfered BB1 bowl, indicating an early to mid 2nd-century date. As noted above, the date of this material may reflect the use of the building, whose demolition took place later in the 2nd century, before LUB 6.

#### LUB 3 Structure 2 (Figs 12.4 and 12.17)

In Trench 1, at the limit of excavation, was an east–west wall cg1; butting up against its south side was a loam dump cg2 with notably fragmented pottery. A small patch of plaster *in situ* on the northern face of the wall was noticed during excavation, although no details were recorded. The bottom of the plaster revealed during excavation was at 66.56m OD.

Pottery from cg2 (50 sherds) included three sherds which indicate an early 2nd-century or later date, one possibly from a beaker of poppy head type, another in a fabric very close to PART, and one GREY sherd similar to BB1 with burnished vertical line decoration.

Although wall cg1, together with dump cg2, have been interpreted as being earlier than Structure 3 because the wall cg1 had been truncated to the construction level of Structure 3 (LUB 4), and dump cg2 had been cut by drain cg91 (LUB 4), another interpretation is possible: wall cg1 may have been integral with an earlier phase of Structure 3 (LUB 4); the walls cg1 and cg3 (LUB 4) were on the same alignment and it is possible that cg1 was only truncated just before the drain was diverted north along channel cg4 (LUB 8) which cut across the

remains of wall cg1. This latter interpretation would mean that the drain cg91 in Structures 3.1 and 3.2 (LUBs 4 and 5) would have been channelled discreetly between the two east–west walls.

#### Mid Roman

Structure 2 in Trench 1 was possibly replaced by stone-founded Structure 3.1 LUB 4 from the mid 2nd century (based on its position in the stratigraphic sequence). There were alterations to the building Structure 3.2 LUB 5; pottery indicates that this took place between the mid 2nd and early 3rd centuries.

In Trench 3, Structure 4 (the Mint Wall) was being constructed LUB 6; pottery dates this activity to between the late 2nd and early 3rd centuries. There was evidence for two metallised surfaces LUB 7 to the north of the Mint Wall, the pottery from make-up for the first indicating an early or mid 3rd-century date, and for the second, a mid 3rd-century or later date.

#### LUB 4 Structure 3.1 (Figs 12.5, 12.14 and 12.18)

Two structural walls cg3 were uncovered at the limit of the excavation in Trench 1; one running east–west, which bonded together with that which ran north–south, perhaps parallel with a possible Roman road predating, but running along the line of, the present West Bight. The internal spaces have been termed room A to the north and rooms B/C to the south. The walls cg3 were mortar bonded, above a double offset course which stood on pitched foundations (the lower offset at 66.90m OD and the upper offset at 67.10m OD). A patch of (probably monochrome) wall plaster was found *in situ* at the junction of the east face of the west wall and the north face of the south wall, in Room A (Fig 12.18). Several loose fragments from this wall were mainly red; one piece had formed part of a convex-curved moulding, possibly from a door surround or window recess.

The area to the south of wall cg3 may originally have been one single room B/C, later subdivided into two rooms (B and C) by stone wall cg7, which abutted cg3, rather than being integral with it. Wall cg7 may have been an internal partition, rather than a major load-bearing wall. The absence of building material, such as tile, from any associated deposits may imply that the roof was unaffected by its insertion – and perhaps that it was a partition. The construction of wall cg7 may have been associated with loam dump cg6 found at the limit of excavation in room B; dump cg6 only appeared as a very small patch in the south-east corner of the trench (with a top surface height OD of 66.72m). To the south-west of the excavated area of room B was a doorway through wall cg3 (Fig 12.14); this

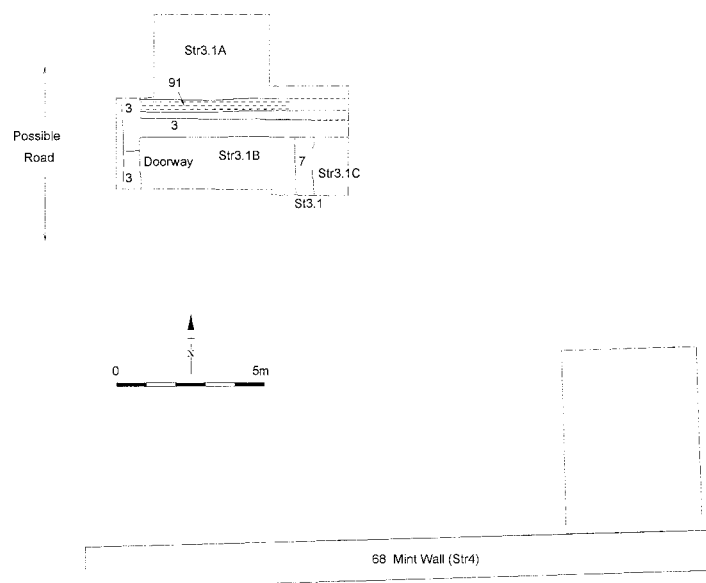


Fig 12.5 Structure 3.1 and Structure 4: LUBs 4 and 6

may have been a door on to the postulated Roman road to the west, or to another room or portico. The door's threshold was about 67.40m OD, suggesting that the occupants had to step up to walk through. There were a number of shallow deposits cg115 on the threshold, indicating some continuity of use.

In Room A, cutting dump cg2 (LUB 3) was a stone-lined drain cg91 which was contemporary with east-west and north-south walls cg3; the drain cg91 dropped towards the west and under a lintel (whose top lay at 67.00m OD) within the west wall cg3 of room A (Fig 12.14). The stones of the drain only survived along the northern edge of an unrobbed section of it. The flow to the west supports the idea of a nearby north-south street in this direction.

The heights of the offsets of walls cg3 (first offset at 66.90 OD; top offset at 67.10m OD) give an indication of possible floor levels in rooms B and C; this would imply that cg6 was part of a make-up deposit. The floor in room A was probably around the same level as the top of drain cg91 (67.00m OD).

Pottery from dump cg6 (18 sherds) included an unusual GREY dish, an everted rim jar rim and a latticed sherd which suggests a 2nd-century date, although it cannot be closely defined; there was no BB1. As LUB 3 contained pottery dating to the early 2nd century and LUB 5 (below) material dating to the mid 2nd century, it seems likely that the construction of Structure 3.1 dated to the early-mid 2nd century, possibly a little later.

#### LUB 5 Structure 3.2 (Figs 12.6, 12.14 and 12.19)

In Trench 1, wall cg7 (LUB 4) was replaced by stone wall cg5, making room B smaller. The wall cg5 was of similar thickness to walls cg3 (LUB 4), suggesting it to be a load-bearing wall, and perhaps implying a re-roofing of the structure at this point, although no roofing materials were recovered from any of the associated levels.

To the east of wall cg5 in room C, there was a sequence of layers which sealed truncated wall cg7 and dump cg6 (both LUB 4). The first of these was a layer of yellow-brown clay cg10, at 66.73m OD, suggesting that the internal level of at least room C had been lowered. Pottery from clay cg10 was significantly fragmented, possibly indicating floor trample. Sealing clay cg10 was a thick layer of ash, charcoal and loam cg11 (0.42m thick), probably dumped there to make up the floor level before being sealed by mortar layer cg12 at 67.25m OD. Over the mortar cg12 was a layer of clayey loam cg27. The doorway in the west wall of room B was now blocked cg92 (Fig 12.14).

A north-south wall cg9 abutted the east-west wall cg3 (LUB 4) reducing room A in size; the wall cg9 was built around drain cg91, so that it continued to flow through the wall (Fig 12.19). Wall cg9 was narrower than the others, suggesting that it was not load-bearing.

In room A, silt cg109 was found in the east-west drain cg91; from the finds, it seems that this silt had accumulated during the use of the drain. Two distinct fills within drain cg91 were both originally assigned the same context code; the site records

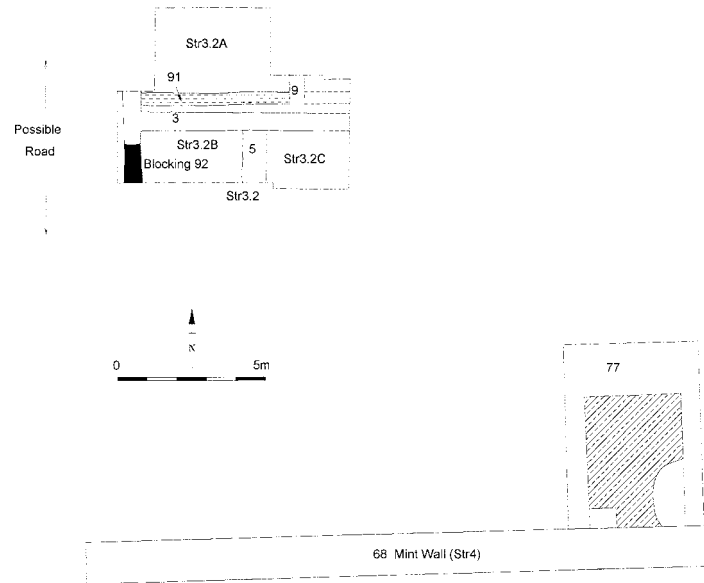


Fig 12.6 Structure 3.2 and Structure 4 with metallised surface cg77: LUBs 5, 6 and 7

noted that the finds came mostly from the lower fill, composed of silt, sand and charcoal, whereas the upper fill was composed of mortar, stones and plaster. These two groups appear to represent two discrete phases, the lower silty fill almost certainly accumulating during the use of the drain, but the rubbly upper fill representing debris from the demolition and/or robbing of the building, collapsed over the drain after it was no longer used. The primary silty fill is discussed here as cg109 and, in accordance with the original record, all pottery and registered finds are regarded as having come from this silt, whereas the upper fill cg113 (LUB 8) is discussed below. The possibility that some of the pottery and other finds may have come from this later fill cannot, however, be discounted, and there is a consequent risk that this may affect the dating (see next paragraph). A small assemblage of domestic refuse was also recovered from cg109 (see Discussion).

Pottery from this LUB (130 sherds) came from cg10, cg11, cg27 and cg109; the dating of the LUB's sequence began in the mid 2nd century and finished in the mid 3rd century or later. Pottery from cg10 (30 sherds) included a BB1 grooved rim bowl with lattice decoration verging on the later arc style and a GREY bowl of type B334 which could be of similar date; a mid 2nd-century date is probable, but it could be later. Pottery from cg11 (20 sherds) included 9 BB1 sherds, among which was a flanged bowl with lattice decoration, and a beaker rim possibly of mid or late 2nd-century date; a mid 2nd-century or later date is indicated. Pottery from

cg27 (6 sherds) included BB1 among which was a plain rimmed dish with flattened arc decoration, while there was also a fragmentary rim of a GREY bowl, possibly either a segmental bowl or a low bead-and-flange type; these suggest a later 2nd- to early 3rd-century date. Pottery from cg109 (74 sherds) included NVCC sherds in the later fabrics, all from beakers, among which was a body sherd from a folded scale-decorated type; there were also GREY sherds including at least three wide-mouthed bowls, all of the undercut type seen in the Rookery Lane kiln; there was also an OX bowl of B38 samian copy type. These indicate a mid 3rd-century or later date for cg109, but some of the later finds could date to the demolition phase.

#### *LUB 6 Structure 4 Construction and use of the Mint Wall (Figs 12.5–13, 12.26–28)*

Foundations cg68 for Structure 4, in Trench 3, in places rested on and elsewhere cut through the remains of Structure 1 cg71 (LUB 2). The foundations of the north wall cg68 of Structure 4 were at least 1.40m wide (excavation was limited to the north side of the wall) which stepped in 0.45m from its foundations at 66.71m OD. This gave a width of about 0.95m; it was constructed of limestone blocks with triple tile bonding courses at regular intervals up the wall. A subsequent stone by stone survey (1988) highlighted the fact that, at the very east end of the surviving fragment, the tile courses were more frequent, possibly indicating the location of an entrance or *exedra* (Figs 12.26 and 12.27).

Along the offset of the Mint Wall cg68 were several

shallow construction layers cg74 (only observed in the centre of the excavated area where the wall construction was undisturbed by later cuts); white concrete was sealed by ash and clay over which was 'pink concrete' (possibly fine *opus signinum*) sealed by more ash. These layers were found along the wall (their top OD height varied between 66.73m on the east and 66.76m OD on the west), and contained large sherds of pottery.

To the north of the wall cg68, a clay layer with a north-south rubble strip cg66 sealed concrete cg65 (LUB 1). The rubble strip was not planned, merely sketched, and its function was not clear. Although it could be linked to Structure 1, it might also have been related to the construction of the Mint Wall. It was sealed by mortar with pebble layers cg67 (66.70m OD); the height of this layer suggests that it was construction debris related to Structure 4, if not a short-lived street surface, but no direct relationship survived between it and the Mint Wall. Layers cg67 were cut by a posthole cg70, perhaps also linked to construction; the posthole packing included 4 sherds of amphora. Sealing posthole cg70 was a layer of green clay and stones cg73, possibly another construction surface (66.86m OD).

Structure 4 probably stood in its entirety until the end of the Roman period; the fact that it was not robbed for the refurbishment of the fortifications in the 4th century may indicate its continuing significance as a public building. It may, however, have begun to fall into disrepair and partial collapse from the end of the Roman period. It is possible that a much larger proportion of it survived into the Late Saxon and medieval periods than survives today, but these excavations were unable to address that problem. The Mint Wall itself, as it stands today, runs east-west for a distance of *c* 20 m and stands about 6m high, with no definite evidence of windows.

There were 100 sherds of pottery from LUB 6 from cg67, cg70, cg73 and cg74. Pottery from cg74 (39 sherds) contained little firm dating evidence but did include two CR ring-necked flagons with dominant top-ring (both with 100% rims), and a BB1 grooved rim bowl with pointed arc decoration, giving a late 2nd-century date. Pottery from cg67 (35 sherds) included a GREY wide-mouthed bowl similar to the Rookery Lane kiln example No. 35; this indicates a 3rd-century date. Pottery from cg73 (21 sherds) included a fragment of a GREY wide-mouthed bowl rim of the curved Rookery Lane kiln type which gives a 3rd-century date; cg73 was contaminated by fragments of post-medieval and modern glass. From the pottery it would seem that the structure, of which the Mint Wall formed part, may have been built over several years up to the early 3rd century; this date is corroborated by pottery from LUB 7.

LUB 7 External surfaces (Figs 12.6, 12.7 and 12.12–13) Sealing the construction surfaces cg73 and cg74 (both LUB 6) in Trench 3 was a layer of small pieces of rubble and mortar, sealed in turn by metalling cg77 (67.32m OD). This was either an east-west street, although there were no wheel ruts, or it may have formed a courtyard; although it was clearly visible in section (Figs 12.12 and 12.13), only a small patch survived later pitting (LUB 15). There were pottery sherd links with cg67 and cg70 (both LUB 6).

Metalling cg77 was sealed by a dump cg81 which was made up of clay sealed by greyish-brown silt and charcoal and stones. These layers were sealed by further layers of make-up, over which was a worn stony surface cg82, possibly another phase of street.

Pottery from cg77 (152 sherds) was mostly of a later 2nd- to early or mid 3rd-century date, but a NVCC beaker of Gillam 43 and a HADOX sherd should be late 3rd century or later; however there were eight intrusive post-Roman sherds due to disturbance by medieval activity (LUBs 15 and 17), and so the later Roman sherds could also be intrusive into an early to mid 3rd-century context. The earlier pottery from cg77 included BB2, with triangular rimmed bowls of late 2nd- to early 3rd-century type, and two BB1 cooking pots which appear to be of similar date, although one is closer to an early 3rd-century type; there were also NVCC sherds which included a funnel-necked beaker with constricted girth, and a rim and neck from a rouletted beaker similar to Gillam 43 type in a later red-brown fabric; GREY sherds included a low bead-and-flange bowl,

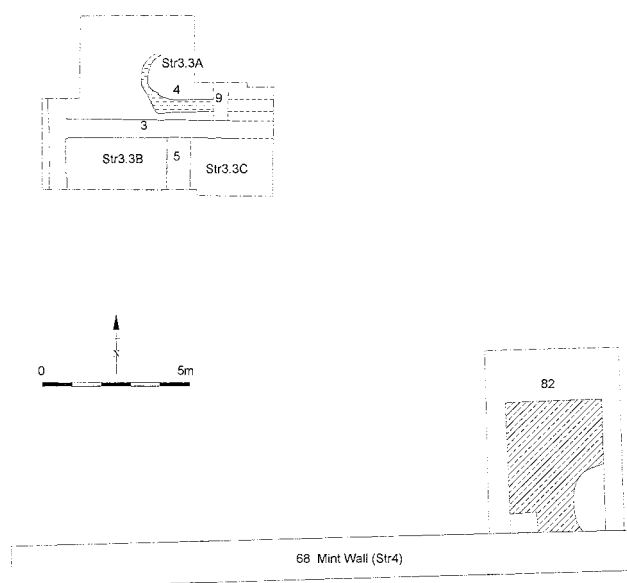


Fig 12.7 Structure 3.3 and Structure with metallated surface: LUBs 6, 7 and 8

a segmental bowl, a plain rimmed undecorated dish with a straight wall, and a lid-seated jar of type J105. The pottery from cg82 (23 sherds) was mostly 2nd century in date, but included a single SAMEG dated to the late 2nd to mid 3rd century, a NVCC funnel-necked beaker with a bead rim, and one SHEL bodysherd which could be from a dales ware jar; these sherds suggest a mid 3rd-century context.

### Late Roman

There was a third phase to Structure 3 (Structure 3.3) LUB 8 in Trench 1; the pottery dated the end of this period to between the early and mid 4th century. There was no evidence of Late Roman activity to the north of the Mint Wall in Trench 3 later than the mid 3rd century (LUB 7), possibly owing to truncation.

#### LUB 8 Structure 3.3 (Figs 12.7–8, 12.14 and 12.20).

In Trench 1, drain fill cg109 (LUB 5) was sealed by rubble cg113; partly cutting through this rubble and also cutting across the truncated remains of wall cg1 (LUB 3) was a recut cg4 of the drain in room A. The directional flow of the drain appears to have changed; it now curved from the north down to the east, as confirmed by the relative OD heights (66.5m in the arc to the north of the wall; 66.35m to the east). It seemed to follow the same gap in wall cg9 (LUB 5) as drain cg91 (LUBs 4 and 5). There was no trace of a pipe but possibly there had not been one; the cut of the drain was 0.20 m wide and a maximum of 0.30m deep. The fill of the drain on the east side was clean brown loam and to the north, sandy brown loam; the backfill of clay and mortar to the north may represent evidence for the construction of the floor above it. The line of the drain had been disturbed by later cuts.

The recutting of the drain possibly indicates that the original (postulated) north–south street drain to the west of the site had gone out of use, or that the drain beneath it was now blocked; the destination of the outflow from this new drain is unknown. The upper fill cg113 of the earlier drain cg91 (LUBs 4–5) contained a small quantity (4.64kg) of painted plaster (see Discussion).

The fill of drain cg4 contained fairly fragmentary sherds of pottery (41 sherds) including GREY sherds, amongst which was a rim fragment of a wide-mouthed bowl closer to the Swanpool kiln types, a bead-and-flange bowl rim fragment, and a probable funnel-necked beaker; DWSH occurred as bodysherds only from jars. An early–mid 4th century date is probable for cg4. There were in addition two intrusive post-Roman sherds (LFS and LSWA).

Also in Trench 1, to the south of the wall cg3 (LUB 4) was a deposit of loam cg14. Pottery from layer cg14 (37 sherds) included a sherd which linked

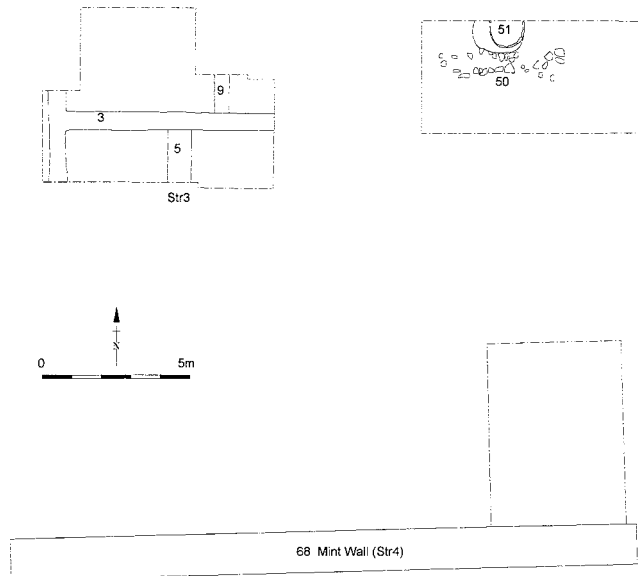


Fig 12.8 Structure 3.3, path with well, and Structure 4: LUBs 6, 8 and 9

to well cg110 (LUB 9). The NVCC sherds included a beaker and a bodysherd from a rouletted closed vessel, both in later fabrics. There was a GREY dimpled bowl of Romano-Saxon type, almost certainly a product of the Swanpool kilns, an almost complete GREY funnel, and a type of rouletted decoration usually only seen in 4th-century contexts. LCOA appears for the first time, as bodysherds from closed forms, and as a bowl with a rounded rim. The Roman pottery dates to the late, possibly very late, 4th century; there were also intrusive post-Roman sherds: two sherds of 12th-century pottery and an early Anglo-Saxon sherd (see Discussion).

### Very Late Roman

In Trench 2, possibly in an open area associated with Structure 3, was an east–west path. To the north of it was a possible well, and to the south was a dump LUB 9; pottery from these deposits dated to between the late and the very late 4th century. In Trench 1, Structure 3 (LUB 8) probably continued in use throughout the 4th century, as indicated by the very late 4th-century pottery. There was no evidence for what was happening on the north side of the Mint Wall (Trench 3) in the very late Roman period.

#### LUB 9 East–west path and stone-lined well (Figs 12.8 and 12.21)

At the limit of excavation in Trench 2 was an irregular area of stones cg50, which appeared to represent a path running east–west about 15m to the north of the Mint Wall. To its north was a stone-lined well cg51 which was not bottomed; it had

fills of loam sealed by ash cg110. There was a sherd link between the fill of the well cg110 and the robbing of Structure 3 (cg14, LUB 11).

At the south-east corner of Trench 2, at the limit of excavation, was a clay layer with large stones cg46 (there was no recorded relationship with stones cg50).

Pottery from cg50 (4 sherds) included a LCOA bodysherd and a SPOX everted rim bowl, giving a late to very late 4th-century date. Pottery from cg110 (51 sherds) included a LCOA bowl and lid, a SPOX bead-and-flange bowl, a GREY bowl of Romano-Saxon type, a rim fragment only of a MHAD necked bowl, and a MOSP hammer-headed mortarium; the NVCC beakers and probable flagon sherds were in late fabrics and there were no bowls or dishes. These pottery sherds from cg110 dated to the late to very late 4th century.

Pottery from cg46 (11 sherds) included a probable LCOA body sherd, and a disc made from a probable SPCC body sherd, both indicating a late to very late 4th-century date. An early Anglo-Saxon sherd and one from the Saxo-Norman period intruded into this layer, possibly from LUB 10 activity.

#### *Late Saxon to Early Medieval*

In Trench 2 there were pits and a dump LUB 10; the only dating evidence was part of a Late Saxon whale-bone casket-mount.

#### *LUB 10 Pits and dump*

Cutting layer cg46 (LUB 9) in Trench 2 was a pit cg47 (unplanned). It was sealed by a dump of sandy mortar with stones cg48, through which cut a further pit cg49 (unplanned). Layer cg48 contained part of a Late Saxon whale-bone casket-mount (see Discussion). There was no other post-Roman dating evidence except for the intrusive sherds in the earlier layer cg46 (LUB 9), an Anglo-Saxon chaff tempered body sherd (see Discussion) and an Saxo-Norman LFS sherd. Pits cg47 and cg49 have been interpreted as Late Saxon–Early Medieval on grounds of probability, and probably represent the rear gardens of houses fronting on to a street to west or east.

#### *Early Medieval*

Structure 3 was not thoroughly robbed LUB 11 until the mid 12th to early 13th centuries. The robbed east–west wall of Structure 3 formed the foundations for Structure 5 LUB 12, built in the Early Medieval period. The sparse pottery dating for Structure 5 would suggest that it was in use from the Early Medieval period into the Late Medieval period, and perhaps as late as the Early Post-Medieval period LUB 13.

In Trench 2 the main features of this period consisted of a dump and a pit LUB 14; in Trench 3 there were layers and a pit LUB 15; both LUBs were associated with mid 12th- to mid 13th-century pottery.

*LUB 11 Robbing of Structure 3 (Figs 12.9 and 12.14)*  
Loam cg14 (LUB 8) was sealed by rubble and loam cg15; this deposit contained Roman pottery sherds of late to very late 4th-century date, as well as pottery (53 sherds) ranging in date from the Middle Saxon period (see Discussion) to the Early Medieval period, and a few sherds of Late Medieval date which were probably intrusive: the emphasis is on material of the mid 12th to the early 13th centuries. Rubble and loam cg15 also contained a Late Saxon whale-bone casket-mount (1017) <B1>, similar to that from cg48 (LUB 10), in Trench 2 (see Discussion).

Sealing the robbed remains of wall cg3 (LUB 4) was rubble cg22 which produced more of the early Saxon vessel and two sherds of a Late Saxon bowl (see Discussion); also sealing the remains of wall cg3 (LUB 4) was collapse/demolition debris cg13. Cutting the robbing layer cg22 was a pit cg24 with a black loam fill; this pit was dug to facilitate robbing of the upper surviving remains of the walls, but it may have had a secondary use, possibly indicated by the nature of the fill.

Cutting the truncated wall cg5 (LUB 5) was a pit cg28, sealed by robbing debris cg29 which contained a Saxo-Norman pottery sherd.

Robbing debris cg8 contained a group of pottery

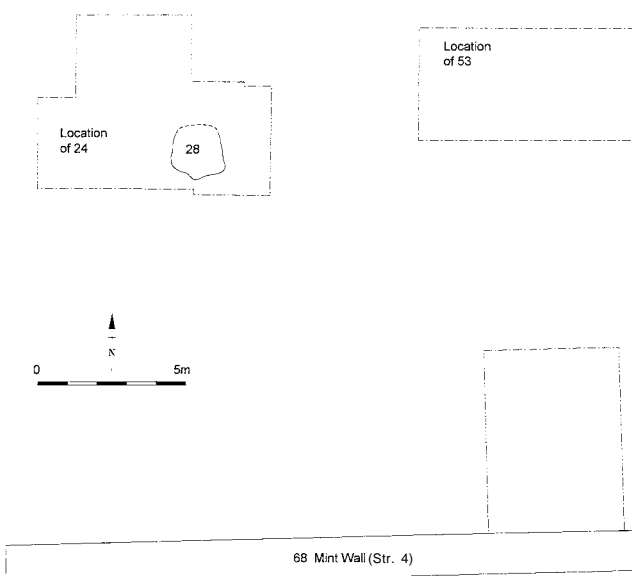


Fig 12.9 Pit, layer and Structure 4: LUBs 6.11 and 14

(12 post-Roman sherds) which dated between the mid 12th and early 13th centuries, as well as more residual Late to Very late Roman sherds (see Discussion). Robbing debris cg33 contained 27 post-Roman sherds dating from the Saxo-Norman to the Late Medieval periods as well as Very Late Roman pottery (see Discussion). Both cg8 and cg33 extended to the limit of excavation at the east end of Trench 1. The robbed wall cg9 was sealed by loam cg31. Over layers cg8 and cg31 was a layer of loam with stones cg32.

The dating evidence suggests that a period of intensive robbing occurred between the mid 12th and early 13th centuries, a time when rebuilding in stone might be expected.

*LUB 12 Levelling and construction of Structure 5 (Figs 12.10 and 12.14)*

In Trench 1, the robbing layers were levelled on the north cg19, on the west cg25 and on the east cg30. Possibly cutting levelling cg19 was a pit cg20 with a loam and stone fill. A building cg35 was then constructed which made use of the robbed remains of the Roman east–west wall cg3 (LUB 4) as the foundation for a mortar-bonded wall wider than the underlying Roman wall; the top of the east–west wall cg3 (LUB 4) had been levelled off at 67.95m OD and the medieval wall constructed over it. The rest of the building, including north–south walls to the east and west (the latter observed in the side of the trench; Fig 12.14), and a dividing wall running south, appeared to be of integral build. They had foundations of stones set in clay and a mortared stone superstructure.

The full extent of the building was not determined. Rooms 5B and 5C with walls on three sides were definitely internal, but ‘rooms’ 5A and 5D may represent external areas, although this was not clear. There was a butt joint in the foundations of the east–west wall suggesting a doorway between rooms 5A and 5B.

Levelling layers cg19, cg25 and cg30, pit cg20 and building cg35 produced a small number of post-Roman sherds (44) dating to between the Mid Saxon and Early Post-Medieval periods. Apart from the residual material, there were intrusive Late Medieval to Early Post-Medieval sherds, probably from the demolition phase of Structure 5. A construction date of about the mid 13th century seems most likely. All other evidence of robbing had been truncated by a modern surface (LUB 25).

*LUB 13 Use of Structure 5 (Figs 12.10 and 12.22)*

In Trench 1, room 5B was floored with a patchy white mortar layer cg37; over this was a layer of loam with stones cg40, possibly a make-up dump. This was cut by a slot cg41 which was rectangular in section (Fig 12.22), and may have held a partition wall or carried either a drain or a culvert. Room 5C only contained the construction levelling.

Room/area 5A had a clay and stone surface cg38 within it, possibly an external surface. Area 5D displayed a similar surface cg34.

There was a small amount of mixed pottery (23 post-Roman sherds) from cg38, cg40 and cg41 ranging in date from the Saxo-Norman to the Early Post Medieval periods. These suggest that the use of the building possibly continued that late.

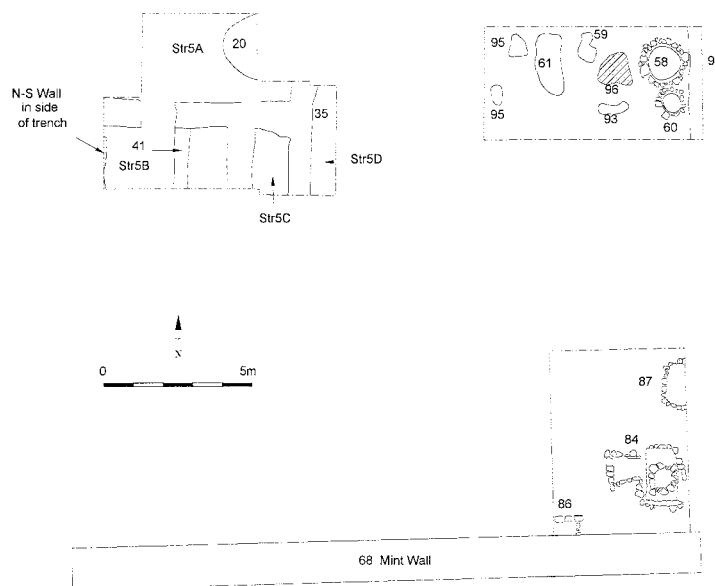


Fig 12.10 Structure 5 and pit to the rear; Mint Wall with pits and kiln to the north: LUBs 6, 12, 13, 16 and 17



*LUB 14 Loam dump and pit*

In Trench 2, sealing well fill cg110 and path cg50 (both LUB 9), and pit cg49 (LUB 10) was a dump of loam cg52, cut by a pit cg53 (unplanned). Seven sherds of mid 12th- to mid 13th-century pottery were recovered from loam cg52.

*LUB 15 Layers and pit (Fig 12.13)*

In Trench 3 the Roman metallised surface cg82 (LUB 7) was sealed by layers cg111 (0.50m thick), (not recorded in detail). They were in turn cut by a large medieval pit cg79 (unplanned). A layer of loam cg83 also belonged to this LUB.

There was little Late Roman pottery from this LUB, suggesting either truncation of Late Roman stratigraphy or the lack of it. Pit cg79 contained five sherds of pottery dated to between the mid 12th and mid 13th centuries. Loam cg83 produced a sherd of Early Medieval date.

*High Medieval*

Structure 5 (LUB 13) continued in use through this period. To its rear was an area of dumps and pits, some of interesting construction, **LUB 16** and containing pottery dating to between the late 13th and 14th centuries.

*LUB 16 Dumps and pits (Figs 12.10 and 12.23)*

Sealing pit cg53 (LUB 14) in Trench 2 were loam layers cg54 with late 13th- to 14th-century pottery (19 post-Roman sherds). Over them was a layer of clay cg55 with similar pottery (37 post-Roman sherds). Against the east section of the trench, clay cg55 was cut by the foundations for a north-south wall cg94, possibly a boundary wall. Over clay cg55 there was a patch of burnt clay cg93 which may represent the site of a temporary hearth; nearby limestone fragments cg96 may have formed part of a surface. To the west of wall cg94, pits cg58 and cg60 (Fig 12.23) cut cg55. Each contained two courses of stonework around its rim, and below this a wooden lining over clay with lime and mortar. They differed in size: pit cg58 was 1.10m in diameter while cg60 was 0.60m. The wooden linings were described as half-barrels with wooden hoops in the preliminary report (Clipson *et al* 1980, 14). Also cutting the clay cg55 were pits cg61 containing late 13th- to mid 14th-century pottery (13 sherds) and cg59 and other features cg95.

*Late Medieval*

Structure 5 (LUB 14) continued in use throughout this period.

In Trench 3 there were pits and a kiln **LUB 17**; the pottery from these features belonged to the Late Medieval period.

*LUB 17 Pits and kiln (Figs 12.10, 12.12–13 and 12.24)*

In Trench 3, cutting cg111 (LUB 15) was a sub-rectangular stone-lined pit cg87 with a fill cg100. Sealing the construction cut for pit cg87 was layer cg114. Cutting cg114 was the construction pit for a stone-lined kiln cg84; the floor of the kiln showed signs of burning with much charcoal, but there was no evidence for its function. The tile recovered from its construction fill dated to between the early/mid 14th and late 14th/early 15th centuries. The kiln fill cg85 was of clay with stones, containing a single 14th- or 15th-century pottery sherd. Stone-lined square pit cg86 cut directly into the metallised surface cg82 (LUB 7); it had a fill of loam with stones cg99.

*Post-medieval*

Towards the east end of Trench 2, stone-lined pits (LUB 16) continued in use, one being backfilled with fresh early to mid 16th-century pottery **LUB 18**.

The eastern part of Structure 5 was demolished and the remains sealed by clay. This was subsequently cut by a pit or well **LUB 19**, pottery from whose fill dated to the 17th and 18th centuries, although documentary evidence indicates that it was still open in the late 19th century. The rest of the building may have continued in use during much of the Post-Medieval period.

*LUB 18 Pit and wall (Fig 12.11)*

To the west of wall cg94 in Trench 2, pit cg60 (LUB 16), at least, was still in use; in the bottom was a hard deposit with white/yellow lime and numerous snail shells. It was sealed by a sandy loam fill cg98 containing a small group of large, fresh sherds dating to the early to mid 16th century, including two MP cisterns and a fragment of a KOLS drinking jug. Pit cg58 may also have continued in use; it was backfilled, after use, with sandy loam cg97 but there was no dating evidence from it.

*LUB 19 Clay dump with well (Fig 12.11)*

At a date no earlier than the end of the 15th century, the eastern part of Structure 5 was levelled. Over the levelling in Trench 1 was a layer of yellow-brown clay cg42 (0.15m thick); the clay may represent a floor or surface or have been part of a make-up dump. It was cut by a feature cg43, possibly a well, in the north-east corner of the trench. There were six sherds of pottery from its fill cg43, dating to the 17th or 18th centuries, but these may be residual. A well is recorded in the same location on a sale plan of 24th June 1875, nos. 31–34 Bailgate (Jones *et al* 1996, 108). It records a well, 10 feet deep, apparently still open at that date.

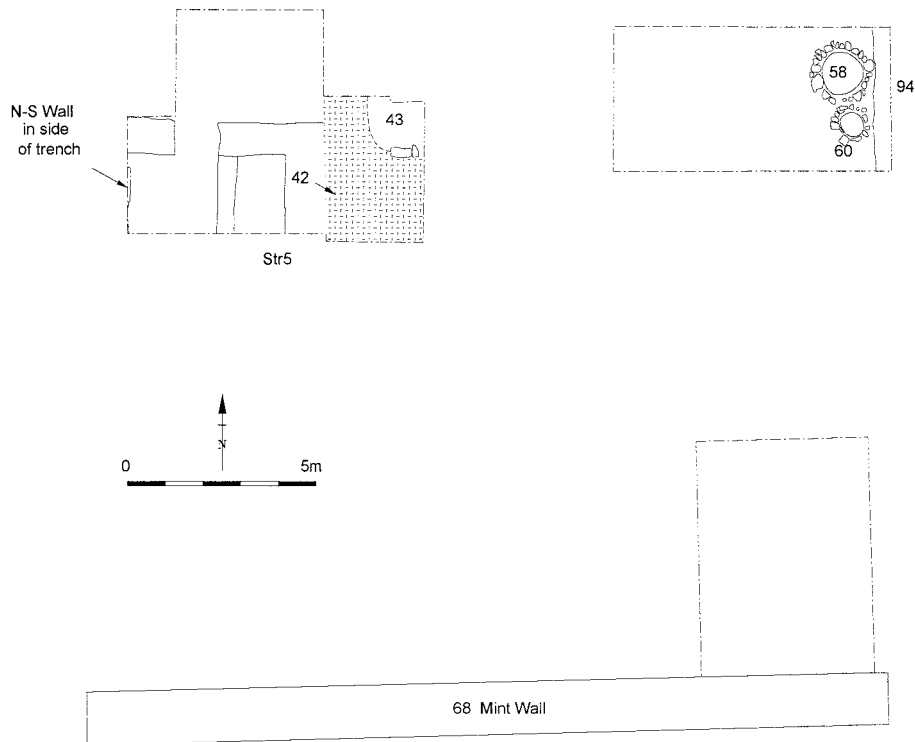


Fig 12.11 Structure 5 and pit to the rear; Mint Wall: LUBs 6, 13, 18 and 19

### Modern

In Trench 3 there was a loam dump **LUB 20**; partly overlying it was a dump **LUB 21**, cut by a shed, Structure 6 **LUB 22**, probably a lean-to against the Mint Wall. Over LUBs 21 and 22 was evidence of another building (Structure 7) **LUB 23**, another lean-to against the Mint Wall.

In Trench 2 there was evidence of a loam layer, probably trampled into position **LUB 24**.

Sealing all three trenches was make-up and a concrete surface **LUB 25**.

#### *LUB 20 Loam dump (Figs 12.12–13)*

Levelling and sealing kiln fill cg85, stone-lined pit fills cg99 and cg100, and pit cg79 (all LUB 17) in Trench 3 was a layer of loam cg88. Two features cg101 and cg102, both possibly pits, cut this dump.

#### *LUB 21 External Area (Fig 12.12)*

To the north of Trench 3 was a dump of loam cg106, possibly for a garden.

#### *LUB 22 Structure 6 (Figs 12.12 and 12.27)*

Sealing dump cg88 (LUB 20), in Trench 3, was a series of floor and occupation layers cg103, located between the Mint Wall and what might have been a robber trench cg104 cutting cg103 and cg106 (LUB 21). This suggests a lean-to structure against the

Mint Wall; the Mint Wall itself shows signs of being used in this way (Fig 12.27). There was no dating evidence, but a structure up against the Mint Wall was recorded on a sale plan of 24th June 1875, nos. 31–34 Bailgate (Jones *et al* 1996, 108)

#### *LUB 23 Structure 7 (Figs 12.12 and 12.27)*

Cutting into loam cg106 (LUB 21) was an east–west, stone-founded wall cg107. The stone foundations cg107 were sealed by bricks cg108, possibly part of the same build. To the south of wall cg107, sealing cg104 (LUB 22), were dumps of building debris – rubble, tile and mortar, sealed by sandy mortar cg105. This too might represent a lean-to structure against the Mint Wall (Fig 12.27). Structures lying up against the Mint Wall (different from those noted in LUB 24) are visible on the 1912, OS 1:2500 map of Lincoln.

#### *LUB 24 Trample*

In Trench 2, sealing part of surface cg96 and burnt clay cg93 (both LUB 16), was an extensive area of trampled loam cg56. This shallow layer appears to indicate that the area had remained open; by this time, pits cg58 and cg60 were out of use and had been backfilled (LUB 18), although the backfill was not sealed by trample cg56.

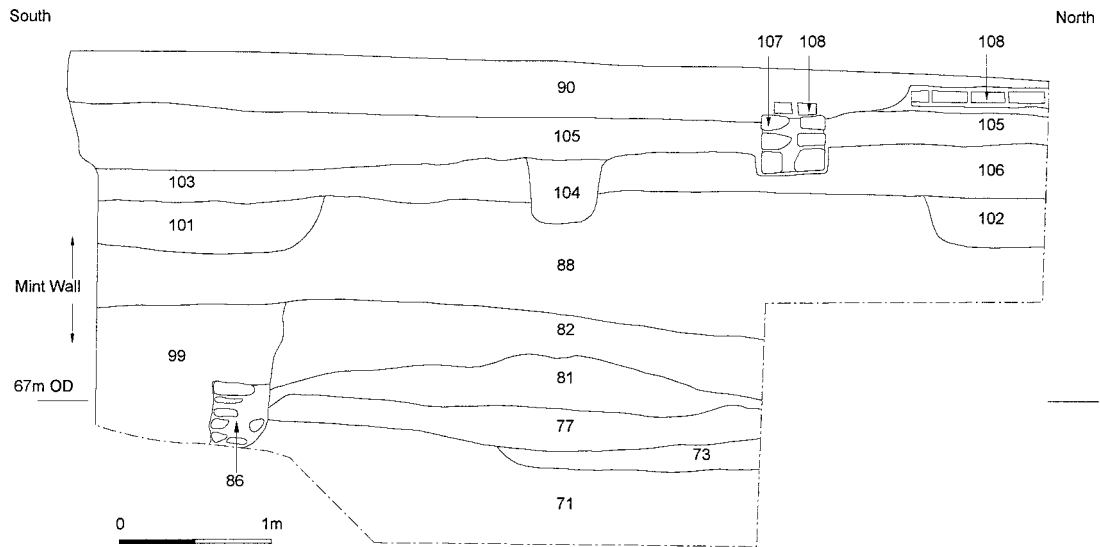


Fig 12.12 Section south to north, along the west side of Trench 3

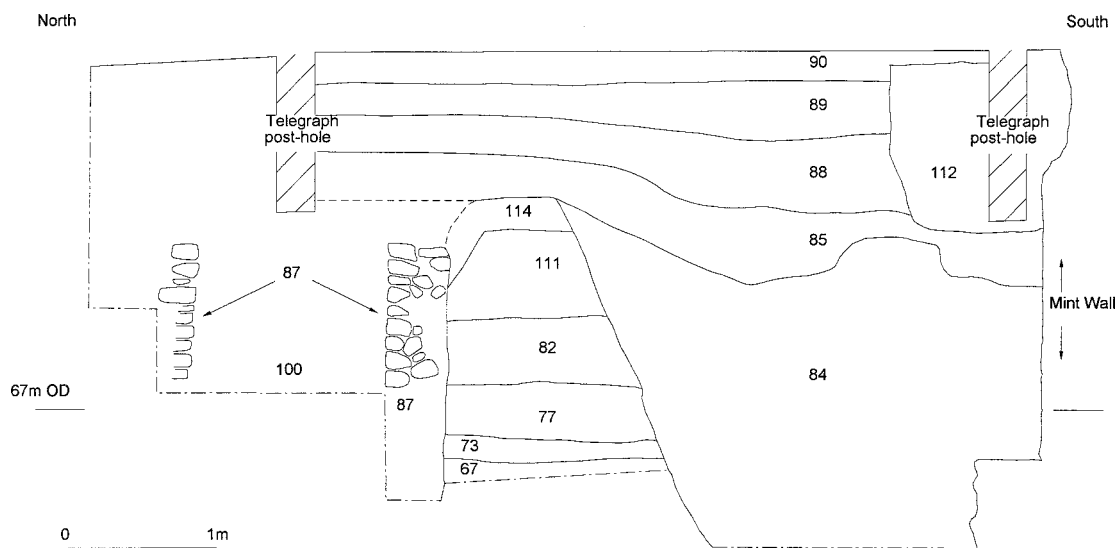


Fig 12.13 Section north to south, along the east side of Trench 3

*LUB 25 Make-up and concrete surface (Figs 12.12–14)*

The whole of Trench 1 was levelled, truncating cg35 (LUB 12), cg38 (LUB 13), cg41 (LUB 13) and cg43 (LUB 19); these were sealed by a levelling dump of loam, stone, brick and tile cg44 over which was concrete cg45.

In Trench 2, backfilled pits (LUB 18) and trample cg56 (LUB 24) were sealed by a dump of building debris cg62 over which was concrete cg63.

In Trench 3, wall cg108 and dumps cg105 (both LUB 23) were sealed by a sequence of dumps cg89; over this was a make-up dump for a concrete

surface cg90, which was cut by a pit for a telegraph pole cg112 adjacent to the Mint Wall.

## Discussion

### *Early Colonia*

It is perhaps not surprising that at this fairly central position within the Upper City, remains emerged of a monumental, probably civic, building. Foundations of what was probably part of a semi-circular pier, possibly an *exedra* (LUB 1) for Structure 1 were noted

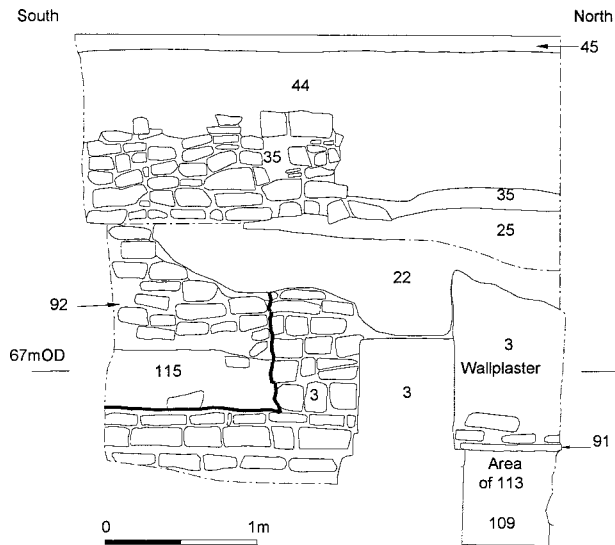


Fig 12.14 Section south to north, along the west side of the southern part of Trench 1



Fig 12.15 Looking south-east during the clearance of the site and location (foreground) of Trench 1, with Mint Wall in the background

in Trench 3; they dated to between the late 1st and early 2nd centuries. The building extended to the south of the site. It is probable that the gable end of its roof displayed triangular antefixes moulded with the face and head-dress of a female personification (recovered from the demolition LUB 2). The single fragment of window glass, for what it is worth, would also be suggestive of civic building in this period.

Possibly contemporary were traces of a very much less substantial stone-founded building, Structure 2 (LUB 3), presumed to be of domestic function. However, it is possible that the east-west wall cg1 of Structure 2 was actually an integral part of Structure 3, rooms 3A.1 and 3A.2; it may have acted as a wall to the north of drain cg91 (LUB 4), demolished before the insertion of drain cg4 (LUB 8), rather than before the construction of Structure 3.

#### *Mid Roman period; Structure 3 and street?*

Early in the Mid Roman period, Structure 2, in Trench 1 in the north-west part of the site, was replaced by stone-founded Structure 3.1, LUB 4. It was modified by the early 3rd century (LUB 5). On the evidence of its foundations, this building was more substantial than a trader's house, but the fragment explored displayed only a few refinements in contrast to those in later Roman town houses. The building appears to have been constructed entirely in stone, possibly with a new floor; its roof was probably tiled, as there was a quantity of tile in the robbing deposits (LUB 11).



Fig 12.16 Looking south at the base of the Mint Wall cg68 sealing curved foundations cg64: LUB 1

At least Room A in Structure 3 was plastered; some plaster remained on the walls (Fig 12.14); it is possible that the other rooms, B and C, were also plastered: a small quantity (4.64kg) of painted plaster was recovered from the upper fill of the drain cg113 (LUB 8) as well as from the destruction and robbing debris of the building (LUB 11: 13.7kg). The plaster from both groups was generally of crude appearance

and carelessly applied: broad, regular striations were clearly visible on the painted surface, and no attempt had been made to achieve a careful finish by burnishing. The borders between different areas of paint were clearly delineated by score-marks across the surface of the plaster. Little can be said of the decorative ornament employed except that this may represent parts of a panelled scheme; a few pieces bore what appears to be crude foliage, while others showed half-medallions, and a small section was probably part of a figural motif. Recurrent angular motifs on some of the fragments almost certainly represented some form of geometric ornament (just possibly a crude and almost abstract form of architectural framework).

The stone-lined drain cg91 (LUB 4) running through room A was of interest, not only for its careful construction, but also its significance in suggesting the location of a north–south street to the west. This might indicate that West Bight had a Roman origin.

The silted fill of the drain cg109 (LUB 5) can perhaps tell us something of the function of the building. A small assemblage of finds was recovered from the lower silt fill of the drain; it included principally pottery beakers and bowls of mixed dates – both residual 1st to 2nd-century material and a significant 3rd-century presence. There was also more glass (although, as mentioned above (LUB 5), some may have come from the later fill cg113 (LUB 8)). It was composed largely of domestic refuse, which had probably settled in the silts during the use of the structure during phases 3.1 (LUB 4) and 3.2 (LUB 5). The refuse included fragments of vessel glass (mainly tableware), a complete but broken shale bracelet (1060) <Sh1> and a complete bone globular-headed pin (1060) <B8> of a type which dates from the mid 2nd or early 3rd century onwards (Crummy 1983, 21–2, type 3; Greep 1986, 197–8, type B1). Most significant from cg109 was a decorated copper-alloy stud (1060) <Ae1>; the circular head of this stud was ornamented with three concentric zones of ornament separated by raised mouldings; within each zone were irregular chequered panels of blue and white millefiori, alternating with similar but more finely chequered panels against a red ?enamel ground. The decoration suggests this to be of 2nd-century date, and probably the first half of the century; the chequered millefiori panels are strikingly similar to those on the central roundel of a rectangular belt plate from York (found in a medieval context, but see Cool *et al* 1995, 1535, for discussion). The finds from the drain seem to confirm a domestic function and a measure of affluence.

#### *Mid Roman period: before Structure 4*

Although the demolition of the early civic building



*Fig 12.17 Looking west; wall cg2 on right and walls cg3 on left and ahead, with drain cg91 immediately to its right: LUB 3*



*Fig 12.18 Looking west at Structure 3.1; the lintel for drain cg91 is shown beneath the plastered wall cg3: LUB 4*

Structure 1 was associated with early 2nd-century pottery, it would seem that this was residual from its use; being a civic building replaced by another, its demolition deposits would not be expected to contain much pottery. Structure 4 was constructed



Fig 12.19 Looking east at Structure 3.3; wall cg9 with hole for drain cg91: LUB 5



Fig 12.20 Looking south at curving drain cg4 and backfill of drain cg92 this side of wall cg3: LUB 8

between the late 2nd and early 3rd centuries. It seems likely that Structure 1 continued in use until its replacement.

*Mid Roman period: Structure 4 and adjacent streets*  
The Mint Wall (LUB 6) was part of the north wall of a substantial civic building (Structure 4)

constructed between the late 2nd and early 3rd centuries. If continued to the east, it would line up with the northernmost of the line of Roman columns beneath Bailgate. This, and its position with relation to the excavations of sp72, have led to its being interpreted as the civic basilica, located to the north of the forum; the Mint Wall is interpreted as forming part of its north wall (Fig 14.2; Jones M.J., 1999)

To the north of Structure 4, there was evidence for two metallised surfaces LUB 7, the first dating to the early or mid 3rd century and the second to the mid 3rd century. It would be expected that there should be a street to the north of the forum complex. Structure 3 would have found itself situated not only to the east of a north-south street but also immediately north of this east-west road, possibly at the cross-roads.

Although two fragments of marble inlay were found in later levels (cg15, LUB 11 and cg30, LUB 12) above the area of Structure 3, these are more likely to have come from the early forum-basilica structures, and therefore probably represent rubbish brought to the site from elsewhere in the post-Roman period.

#### *Late Roman occupation*

Structure 3 continued in use, but possibly a bit run down; plaster was falling off the walls, the drain was back-filled, and then replaced or re-directed. The only stratified 4th-century pottery in this trench came from the back-fill of the new drain cg4 (LUB 8), dating between the early and mid 4th century. But a quantity of residual late to very late 4th-century pottery was recovered from later robbing (LUB 11), perhaps suggesting there had been continued occupation and possibly demolition before the end of the Roman period (the stratigraphic evidence for both having been truncated by robbing, LUB 11). The probability of continued occupation is reinforced by activity to the rear (Trench 2), a path, and a well (LUB 9), associated with very late 4th-century pottery; there was a sherd join between the well fill and the robbing (LUB 11).

What was happening on the north side of the Mint Wall is impossible to reconstruct: it is possible that the stratigraphic sequence was truncated in the Early Medieval period, as there was little residual late Roman pottery from deposits above LUB 7.

#### *Early and Middle Saxon occupation?*

Early Anglo-Saxon chaff-tempered body sherds (EChAF) from a single vessel (4 sherds) were recovered from cg46 (LUB 9) in Trench 2, cg14 (LUB 8) and cg22 (LUB 11) in Trench 1, and cg79 (LUB





Fig 12.21 Looking east along wall/path cg50 with pit cg51 to north: LUB 9



Fig 12.22 Looking south at building cg35 and slot cg41: LUB 13

15) in Trench 3. Other possible Early or Middle Saxon sherds occur in cg79 (LUB 15) and cg100 (LUB 17) in Trench 3. Two Middle Saxon vessels were found residually in Trench 1, in cg15 (LUB 11 – a sherd from a lugged Middle Saxon MAX vessel) and cg19 (LUB 12 – an ELFS jar).

Two whale-bone casket-mounts were recovered, (2023) <B6> from cg48 (LUB 10) in Trench 2 and (1017) <B1> from cg15 (LUB 11) in Trench 1, almost certainly from the same set of mounts. Both pieces were rectangular strips, differing slightly in width, ornamented with incised double ring-and-dot; the centre of each motif was cut away. Traces of iron remained within the rivet-holes, within four of which the remains of the rivets survived. The cut away central portions of the ornament were almost certainly intended to reveal a thin sheet-metal backing-plate (possibly gilt or silvered copper alloy), although no trace of this survived, either as staining or as corrosion products. The mounts are closely paralleled by one of the bone mounts from an oak casket found at Coppergate, York (Waterman 1959, 86–7 and pl XVII, 4), and on a number of combs in both England and Scandinavia, all probably of 11th-century date.

In Trench 1, the ruins of the Roman house, Structure 3, may have remained visible, and may even have been reused, throughout the Early Saxon period: pottery from a single Early Saxon vessel was found in three trenches, and fragments of Late



Fig 12.23 Looking north at stone-lined pits cg60 in the foreground and cg58 to the rear: LUB 16

Saxon mounts came from two different areas. This idea might be reinforced by the fact that sherds from the single Early Saxon vessel were apparently found intrusively in Very Late Roman LUBs (LUBs 8 and 9), and by association those from the same vessel in later LUBs. So although the earliest well-stratified pottery sherds dated to the 12th or early 13th centuries, the presence of disturbed Early–Late Saxon material may indicate earlier activity.



Fig 12.24 Looking south at kiln cg84; bottom of Mint Wall behind: LUB 17

cg/LUB	cg/LUB	cg/LUB	cg/LUB	cg/LUB
1/3	24/11	47/10	70/6	93/16
2/3	25/12	48/10	71/2	94/16
3/4	26/-	49/10	72/2	95/16
4/8	27/5	50/9	73/6	96/16
5/5	28/11	51/9	74/6	97/18
6/4	29/11	52/14	75/-	98/18
7/4	30/12	53/14	76/-	99/17
8/11	31/11	54/16	77/7	100/17
9/5	32/11	55/16	78/-	101/20
10/5	33/11	56/24	79/15	102/20
11/5	34/13	57/-	80/-	103/22
12/5	35/12	58/16	81/7	104/22
13/11	36/-	59/16	82/7	105/23
14/8	37/13	60/18	83/17	106/21
15/11	38/13	61/16	84/17	107/23
16/-	39/-	62/25	85/17	108/23
17/-	40/13	63/25	86/17	109/5
18/-	41/13	64/1	87/17	110/9
19/12	42/19	65/1	88/20	111/15
20/12	43/19	66/6	89/25	112/25
21/-	44/25	67/6	90/25	113/8
22/11	45/25	68/6	91/4	114/17
23/-	46/9	69/-	92/5	115/4

Fig 12.25 Concordance of cg numbers with LUB numbers for wb80

An alternative interpretation is that there may have been dumping of material from elsewhere, including Roman, Early, Middle and Late Saxon finds. This would take account of the Roman marble fragments from LUBs 11 and 12 (see above), one of which came from the same dump cg15 (LUB 11) as both a Middle Saxon sherd and one of the casket

fragments, which might suggest that perhaps all the material in this dump was being brought on to the site from elsewhere. This explanation, however, is far from conclusive and although the marble might have been brought on to the site, the post-Roman material may represent stray losses over time. The interpretation of the Early and Middle Saxon material cannot in any case be divorced from the nearby discoveries at St Paul-in-the-Bail (q.v.; see also General Discussion).

#### *Early Medieval building: Structure 5*

The remaining fabric of Structure 3 was extensively robbed between the mid 12th and mid 13th centuries, and soon afterwards the robber trenches were backfilled with material brought on to the site from elsewhere (LUB 11), before Structure 5 was constructed (LUB 12). The imported material was also spread over the area to the rear of the site (LUB 10). (It was from this material that the Saxon pottery and Late Saxon mounts were recovered.) There were only two sherd links between the Roman pottery recovered from the dumps and earlier stratified deposits. It is possible that the Roman pottery was also part of dumped material brought on to the site, but the date of the pottery would fit neatly into the site stratigraphic sequence and it is tempting to interpret it as such.

On the basis of the pottery dating, Structure 5 was built at any date from the Early Medieval to the Post-Medieval periods. The general site stratigraphic sequence would, however, suggest that it was in fact built very soon after the robbing of the underlying Roman structure, in the Early Medieval period – the Roman building seems to have been robbed, partly with an eye to acquiring building material, and partly to re-use the east–west wall cg3 (LUB 4) as the foundations for the new east–west wall cg35 (LUB 12) of Structure 5. The robbing operations might accordingly be seen as preparatory work for its construction.

It is unclear how much of Structure 3 survived upstanding through to the medieval period, but it seems likely that Roman fabric did survive extensively and was incorporated into several new structures. The line of the possible street to the west of Structure 3 may have still been evident, and just as the foundations of Structure 3 were reused in the Early Medieval period, so too the line of the road might have been renewed at this time.

To the rear of Structure 5, in the Early Medieval period were a few dumped layers and pits (LUBs 10 and 14). Subsequently, by the High Medieval period this area contained a yard with organised pitting, and a north–south wall perhaps demarcating the eastern limit of the property (LUBs 16 and 18). The



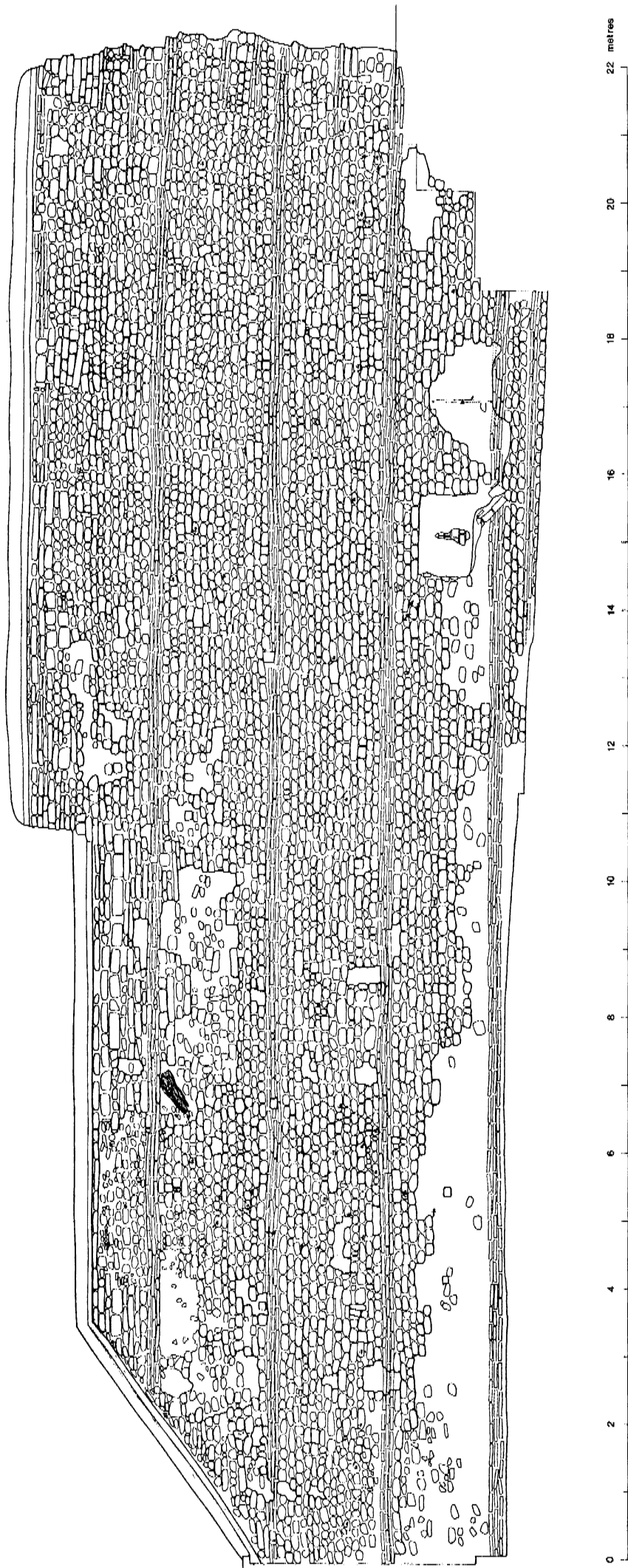
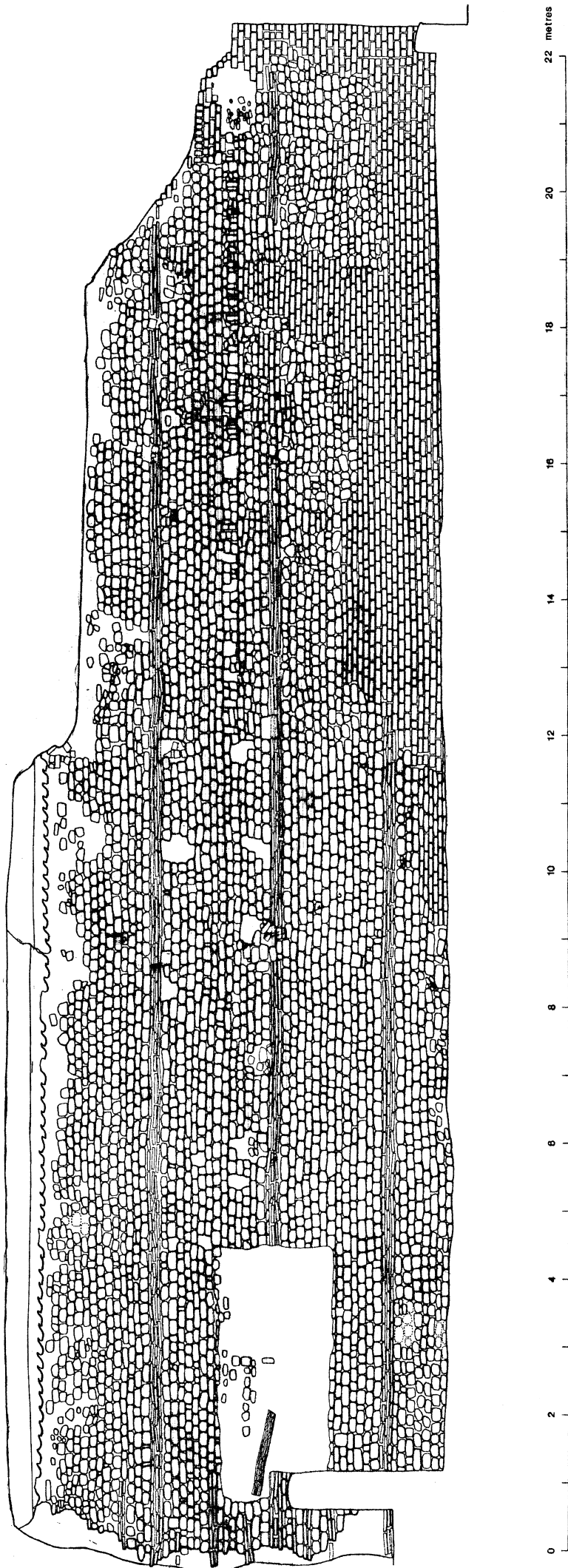


Fig 12.26 South elevation of the Mint Wall from modern ground surface



*Fig 12.27 North elevation of the Mint Wall from modern ground surface*

same line is now echoed in the modern property boundary. Although no good groups of medieval date were recovered, the associated pottery consisted mainly of high quality, locally made jugs, mostly of 13th-century date.

The east wall, and the east end of the east–west wall of Structure 5 were probably demolished in the late 15th to mid 16th century on the basis of the pottery from LUB 12 (although there no archaeological contexts had been recognised on site as relating to this activity). A well (LUB 19) was inserted immediately to the east of the remaining building.

Sometime before the mid 19th century, according to Marrat's map (1848) the rest of Structure 5 must have been demolished. This map also indicates that, for a period during the 19th century, there were no structures fronting on to West Bight, although the well (LUB 19) continued in use at least into the 19th century. By the beginning of the 20th century, another building was erected, and demolished only recently; there was no archaeological trace of this building, due to truncation prior to laying of the modern surface (LUB 25).

#### *Structure 4 (Mint Wall) in the Post-Roman period*

The civic basilica would probably have dominated the centre of the Roman city from its construction for at least two centuries or more. How far Structure 4 survived intact into the post-Roman period is uncertain. The evidence from this site suggests that the stratigraphic sequence adjacent to it was truncated, possibly in the Early Medieval period



*Fig 12.28 North face of Mint Wall as excavated, built over Structure 1. Compare small stone blockwork to Figs 12.26–27.*

(removing all the Roman stratigraphy from the mid 3rd century). There was evidence of occupation deposits and pits from the mid–late 12th century (LUB 15) echoing the activity to the north, and roughly contemporary with the construction of Structure 5. In the Late Medieval period there were types of activity (LUB 17) – possibly industrial as the remains included a kiln and stone-lined pits, but there was no evidence concerning the exact nature of the processes. There was a gap in the sequence in the Post-Medieval period. In the modern period, lean-to structures against the wall (LUBs 22 and 23) have left their mark on the Mint Wall (Fig 12.27).

## 13. Winnowsty Cottages 1987 (wc87)

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### Introduction

Over a two week period during April 1987, prior to redevelopment, excavations were carried out in the area between Greetwellgate, Winnowsty Lane and Wragby Road. Kevin Camidge directed the excavations on behalf of the Trust for Lincolnshire Archaeology. The excavations were funded by English Heritage, and the developers, S & M Developments, with a team sponsored by the Manpower Services Commission. Further work was undertaken on the site in 1988 and 1989 but this produced little new information and has not been included in this report.

There were two excavation trenches some distance from each other (Fig 13.1). Greetwellgate lies on the course of the Roman road issuing from the east gate of the upper Roman city; it was expected in view of previous finds (mainly of burials) in this general area, that there would be some evidence of Roman occupation. The medieval church of St Leonard lay to the east of the site; documentary sources suggest there was also medieval occupation hereabouts.

The east-west arm of Trench 1 was excavated before the north-south trench. This meant that stratigraphical links between the two parts have been made as part of the post-excavation process. Besides, the north-south arm of the trench had been stepped in during excavation to accelerate investigation of the earlier deposits, thereby losing some of the relationships. An interim report has been published (Camidge 1987a).

As part of the post-excavation process, the 93 contexts recorded on site were divided into 56 grouped contexts (cg1-56); these in turn were interpreted as 20 land use blocks (Fig 13.2 and 13.25). Only one LUB sequence has been used for both trenches to reflect the patchy, semi-rural nature of the occupation in this marginal part of the town.

Trench 1 included Roman (LUBs 1-11), post-medieval (LUB 16) and modern stratigraphy (LUB 19); Trench 2 included late Roman (LUB 12), medieval (LUBs 13-14) and modern stratigraphy (LUBs 17 and 18).

The site produced a large assemblage of Roman pottery (2,037 sherds), and a group of post-Roman pottery (230 sherds), together with a modest quantity (164) of registered finds. The majority of the registered finds (54.9%) consisted of ironwork (largely nails), with an unusually low proportion (7.9%) of copper alloy – including five coins (Davies, J A 1992) – and very little (1.8%) lead; all metalwork was heavily corroded and much of it was fragmentary (eg the Roman brooch – Mackreth 1993). The only other material occurring in any appreciable quantity was glass (17.1%); almost all of this was Roman vessel glass (Price and Cottam 1995i) with a single fragment of decorated medieval window (King 1995b) and parts of a decorated medieval vessel (Adams and Henderson 1995). Only very small quantities of worked bone (6.1%: Rackham 1994), stone (5.5%; Roe 1995; hones: Moore 1991) and ceramic artefacts (5.5%) were recovered, and no organic materials survived. There was a moderate group of building material fragments (455 fragments). The animal bone assemblage (927 fragments) from the site was not considered significant enough for further analysis. There was no human bone.

Post-excavation stratigraphic analysis was undertaken by Prince Chitwood and Kate Steane. Margaret J Darling worked on the Roman pottery; Jane Young examined the post-Roman pottery. Jen Mann analysed the registered finds and, with Rick Kemp, the building materials. Helen Palmer-Brown and Zoe Rawlings digitized the plans.

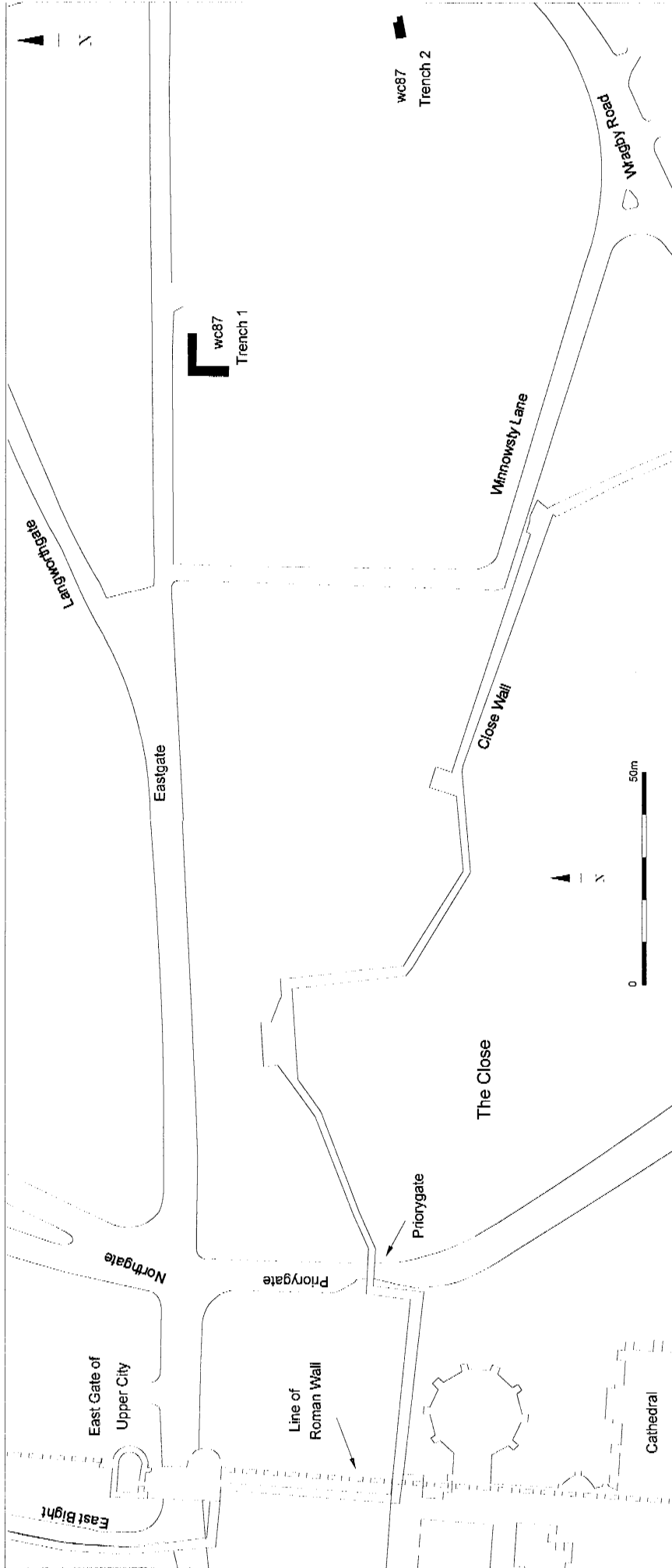


Fig 13.1 Site location plan for wc87

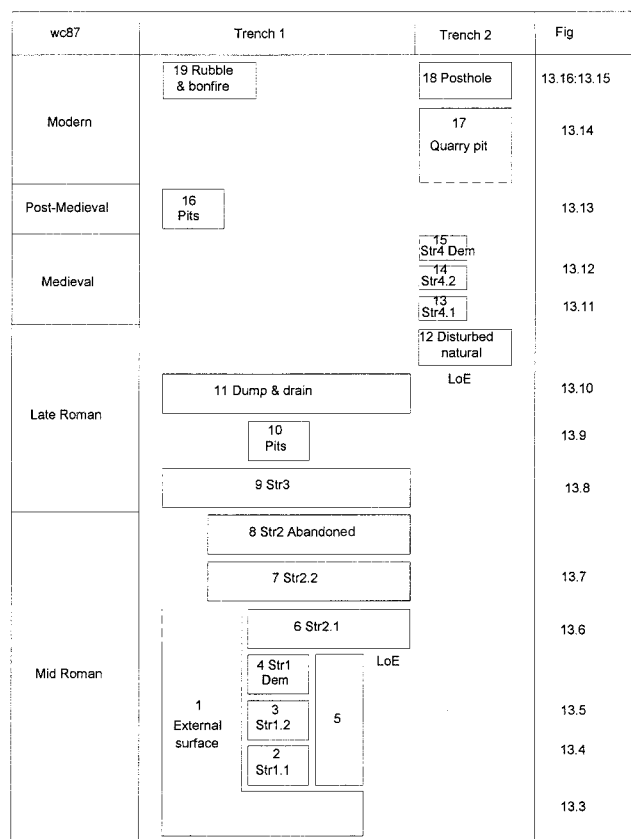


Fig 13.2 LUB diagram for wc87

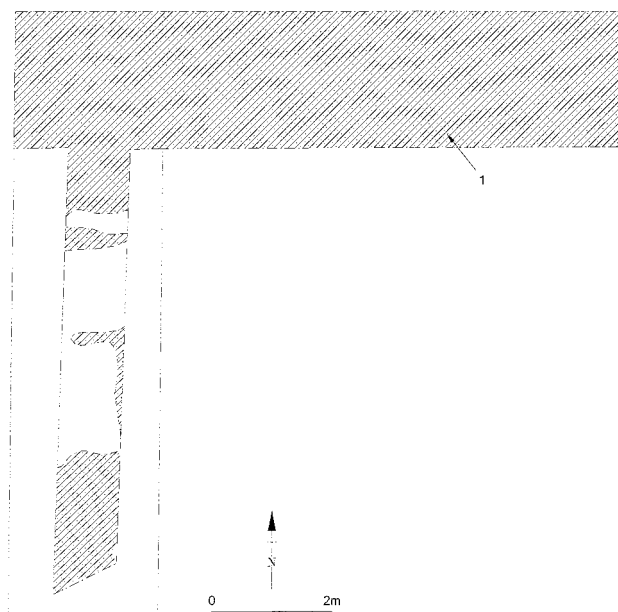


Fig 13.3 External surface: LUB 1

## The Excavation

### (Early-?) Mid Roman

An external surface **LUB 1** in Trench 1 cannot be precisely dated, but was encroached on and partially built over by a timber building, Structure 1.1 **LUB 2** between the mid and late 2nd century. The building was subsequently modified **LUB 3** (Structure 1.2); a few sherds of early 3rd-century pottery were found in association. Structure 1 was finally demolished **LUB 4**; demolition deposits yielded pottery dating to between the early and mid 3rd century.

The surface **LUB 1**, in the south part of Trench 1, was repaired **LUB 5** at some time during the life of Structure 1; there was no dating evidence for this operation.

Several events took place in Trench 1 during the 3rd century. Stone-founded Structure 2.1 was built **LUB 6**; it was associated with mid 3rd-century pottery. There were later alterations to the building, Structure 2.2 **LUB 7**. Structure 2 was then abandoned **LUB 8**; pottery from this **LUB** dated to the mid 3rd century, but could be residual.

### LUB 1 External surface (Figs 13.3–5 and 13.17)

In Trench 1, at the limit of excavation, was a level surface of compact sand with silt, pebbles, a few tile fragments, and smooth flat small pieces of limestone cg1, at 61.93m OD. It covered the whole area excavated and may have represented part of a courtyard. There was no dating evidence associated with this surface, which suggests that it was kept clean, and/or that activities were not carried out here which allowed the deposition of any material.

### LUB 2 Structure 1.1 (Figs 13.4 and 13.18)

Possibly sealing part of the surface cg1 (**LUB 1**) in Trench 1 was a spread of clay cg2, possibly the remains of a floor for a timber structure. It was overlain by a patch of burnt sand, possibly a hearth cg3, around which were patches of burnt clay floor cg4. Sealing these patches were charcoal and ash cg5, probably debris from the hearth cg3. Another clay floor cg6 sealed cg5.

A little to the north, cutting cg1 (**LUB 1**) and probably part of the same structural sequence as cg2–cg6, was gully cg7, measuring 0.80m deep (Fig 13.18). It had been backfilled with sand and clay.

Pottery from cg2 (2 sherds) came from SAMCG, from a single form 18/31, dated to the Hadrianic to early Antonine period (early to mid 2nd century). Two sherds of pottery came from cg6, both GREY, and one from a curved jar rim, are datable only as possibly mid to late 2nd century.

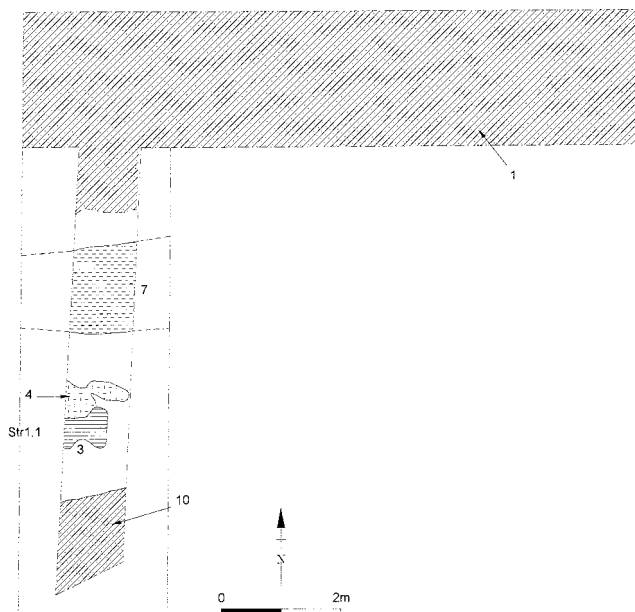


Fig 13.4 Structure 1.1 and surface with repair to south: LUBs 1, 2 and 5

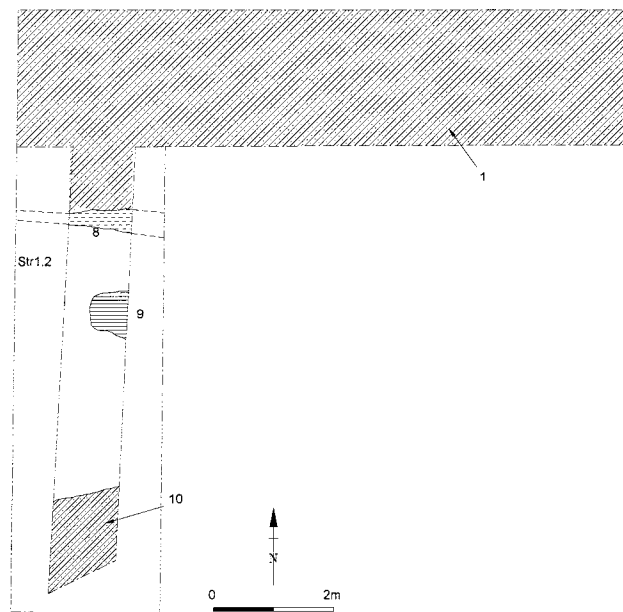


Fig 13.5 Structure 1.2 and surface with repair: LUBs 1, 3 and 5

#### LUB 3 Structure 1.2 (Figs 13.5 and 13.18)

In Trench 1, over the filled gully cg7 (LUB 2) and clay floor cg6 (LUB 2), was a patch of burnt clay with charcoal cg9, possibly a hearth. This suggests that occupation continued after the gully had been backfilled. Shallow gully cg8 (0.18m deep; Fig 13.18) cut cg1 (LUB 1); it was possibly a beam-slot for a timber building.

Pottery from cg9 (17 sherds) included 4 further sherds from the SAMCG already described from cg2 (LUB 2), as well as ten sherds from a single NVCC cornice-rimmed, plain beaker of the Gillam 86 type, and a further similar beaker, giving an early 3rd-century date.

#### LUB 4 Demolition of Structure 1

Gully cg8 and burnt clay cg9 (both LUB 3) were sealed by a layer of dark sand cg11 with limestone and charcoal flecks, a few pieces of tile and possibly decayed daub in Trench 1. This was probably a layer of demolition debris.

Pottery from cg11 (173 sherds) included much which, including BB1 sherds, would fit a mid to late 2nd-century date, and there were no NVCC sherds. Other later pottery included a shell-tempered sherd which is possibly DWSH, and a GREY rim sherd, possibly from a wide-mouthed bowl or a large jar. The main context contained notably uncrushed sherds, several vessels being represented by joining sherds, particularly a single bowl of B334 type in the form of 23 sherds. The dating evidence is equivocal but conservatively was probably late

2nd century, with the possibility of early to mid 3rd century.

#### LUB 5 Repair to external surface? (Fig 13.4–5)

Sealing surface cg1 (LUB 1), at the south end of Trench 1, were the remains of a surface of limestone chippings cg10. This may have been a repair to surface cg1, and contemporary with Structure 1.1 or later. There was no dating evidence.

#### LUB 6 Structure 2.1 (Figs 13.6 and 13.19–20)

Cutting cg11 (LUB 4) was a curving wall cg12 (Fig 13.19), which appeared to form the remains of the north-east corner of a building. It was built of limestone and bonded with sand in a trench 0.60m wide and 0.20m deep. At the limit of excavations, rough limestone footings cg38 ran diagonally across the south of Trench 1. These may have represented the south-east corner of the building.

Butting up to the wall in the north-east corner of the structure was rubble make-up cg14. Cutting cg10 (LUB 5) at the south end, apparently at the change of alignment of the wall cg38, was a posthole cg22. Sealing the rubble cg14 and surface repair cg10 (LUB 5) in the south part of the trench was a sand floor with ash and charcoal flecks cg15; within it was found the blade of an iron trowel (52) <150>, of common Roman type, for general purpose use (Manning 1976, 27, type I). The sand floor cg15 was cut by postholes cg21 and cg47; it was also sealed by a patch of clay floor cg17. Posthole cg21 contained the remains of a crushed dish. Cutting clay floor cg17 was an irregular cut

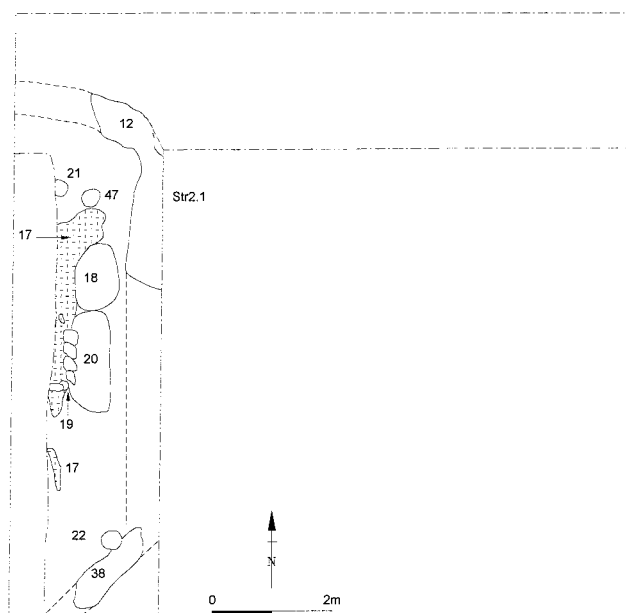


Fig 13.6 Structure 2.1: LUB 6

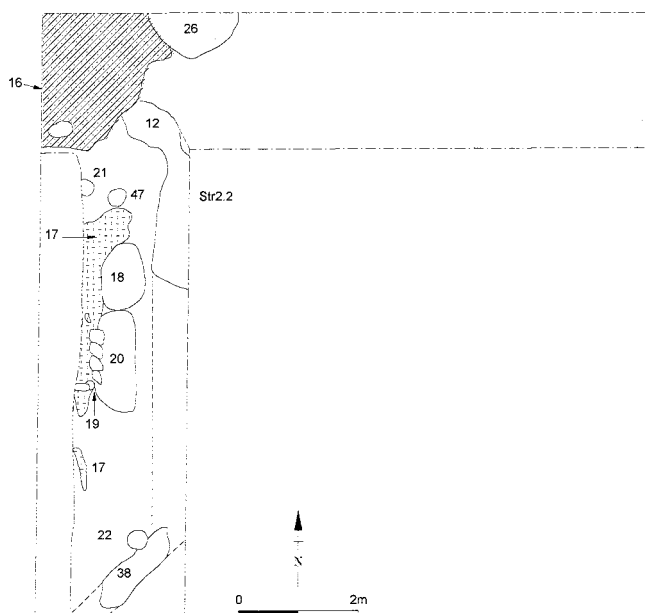


Fig 13.7 Structure 2.2: LUB 7

cg20 (0.15m deep) with a flat bottom and a fill of dark grey sandy clay with limestone, possibly the foundations of an oven, alongside and sealing which was a hearth cg19 (Fig 13.20); the hearth was built at ground level of clay edged by rough limestone pieces. Clay floor cg17 was also cut by an oval pit cg18 (0.30m deep); it contained two near-complete beakers together with other domestic debris including the crushed remains of an egg. This pit might be interpreted as a ritual deposit, possibly associated with the foundation of the building (cf *The Park: Colyer et al 1999, 10–13*); however, being located just north of the hearth, it may have represented a food-storage pit. The pit had been subsequently backfilled with sand, ash and oyster shell.

These features suggest the (north-)east part of a stone-founded building with a hearth placed near the middle of the east wall.

Pottery from this LUB (138 sherds) came from cg12, cg14, cg15, cg18 and cg21; pottery from cg15 and cg21 was residual. Pottery from cg12 consisted of a single NVCC body sherd from a folded beaker in a light brown fabric that would suggest a date around the mid 3rd century. Pottery from cg14 (15 sherds) included two NVCC cornice rimmed beakers, both with later red-brown and grey fabrics, and these, together with a GREY plain rimmed straight-sided dish, suggest a mid 3rd-century or later date. Pottery from cg18 (27 sherds) included a BB1 cooking pot of a mid 3rd-century type, a probable DWSH body sherd, and a GREY beaker with a curved rim as seen on folded beakers, one

of which occurs in NVCC; a mid 3rd-century date is most likely.

#### *LUB 7 Alterations to building: Structure 2.2 (Fig 13.7)*

The wall cg12 was partially demolished and robbed cg13 along its north frontage. Sealing robbing cg13 was a rough surface of limestone and pebbles set in sand cg16, which was cut by a posthole set in a pit cg46. These features suggest the insertion of a doorway giving access from the north.

Cutting cg16 was a shallow-bottomed pit with a rubble fill cg26. This too may have been associated with a new doorway, or represent activity just to the north-east of the entranceway.

Pottery (57 sherds) from cg13 and cg16 was residual.

#### *LUB 8 Abandonment of Structure 2*

Charcoal and ash cg23 sealed pit cg18, hearth cg19, irregular cut feature cg20 and posthole cg21 (all LUB 6); it contained some domestic refuse.

Sealing surface cg16 (LUB 7) was dump of rubble and clay cg27 which may be related to the abandonment and demolition of Structure 2.

The pottery from this LUB (141 sherds) came from cg23 and cg27 and dated to the mid 3rd century. Pottery from cg23 (140 sherds), including NVCC sherds, amongst which is a folded beaker, and GREY sherds gives a mid 3rd-century date. There was a single sherd from a GREY cooking pot from cg27 of a similar date.





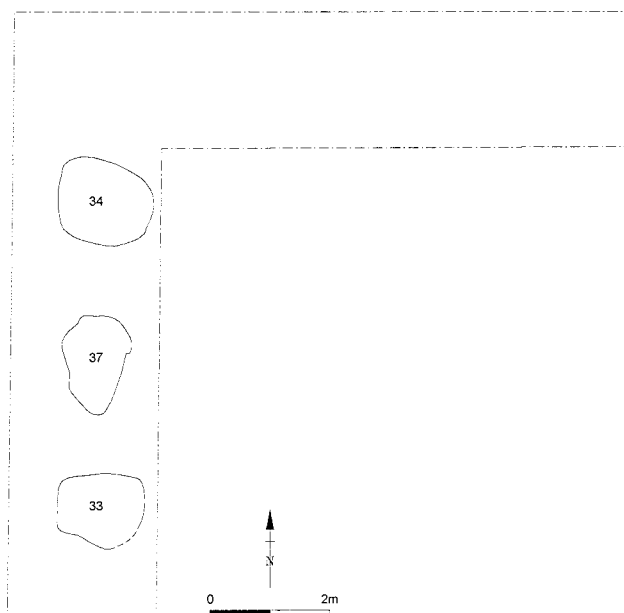


Fig 13.9 Line of pits: LUB 10

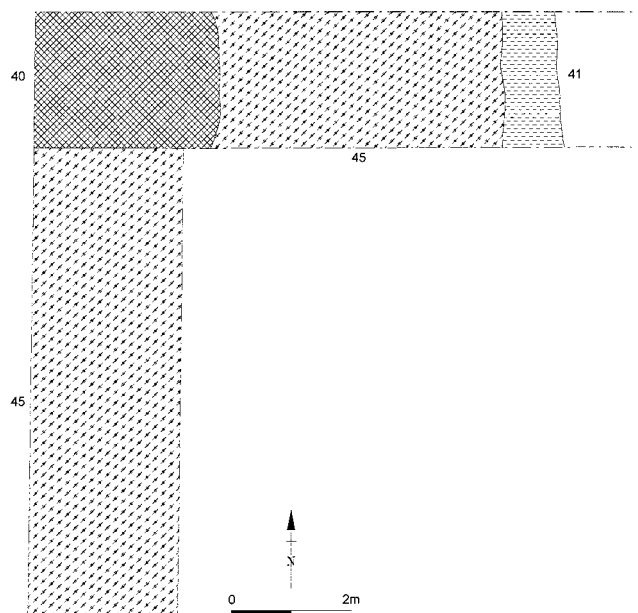


Fig 13.10 Dump and drain?: LUB 11

Cutting into the levelling cg45 was a north-south trench cg41 (0.38m deep; 0.90m wide) with vertical sides and a fairly flat bottom, and a fill of brown clay sand with some limestone chips and silty sand. It seems likely from its shape and fill that this feature functioned as a drain (Fig 13.23). In the north-west corner of the trench was a layer of organic material cg40, described in the site records as 'cess-like'. Both cg40 and cg41 contained a notable proportion of tile.

There were 558 sherds from this LUB, from cg40, cg41 and cg45, the main group being cg45 (347 sherds). There were sherd links between cg40 and cg45, and between cg31 and cg32 (both LUB 9) with both cg40 and cg45. The coarse wares can be summarised thus: the NVCC included a variety of beakers and decoration, some in late fabrics, including folded, scale-decorated, funnel neck, and plain rim types, flagon sherds and a disc-necked flask, a lid of the coffee-pot type, and a bowl with a triangular rim. A face-neck flagon in PARC and a closed vessel in MHAD also occurred. Several dales ware jars in DWSH and GREY, a SHEL curved rim jar, a BB1 late cooking pot with obtuse lattice and internal fettling were found. GREY included at least 12 wide-mouthed bowls, one of which verges on the Swanpool kiln type, alongside an abraded bead-and-flange bowl, a funnel-necked beaker and a large jar with flat wide cordons only seen in late Roman contexts. The mortaria included a MOMH hammer-head, and a MONV reeded-flanged type. Notable inclusions were 31 amphora sherds, all apparently in an Italian black-sand

fabric, not necessarily from an early amphora (Bidwell & Speak 1994). There were also three body sherds from a later ribbed amphora, in a greyish sandy fabric. Much of this would fit the later 3rd century, but some vessels indicate a probable 4th-century date.

#### *LUB 12 Disturbed natural*

In Trench 2 at the bottom of the sequence was something interpreted on site as natural cg48, but not described. However, redeposition seems highly probable as the deposits contained four sherds of pottery which indicate a mid 4th-century date and a coin dated to within the period AD 341-402 (Davies, J A 1992).

#### *Medieval*

In Trench 1 there was no evidence of medieval activity, probably owing to truncation.

In Trench 2, cutting LUB 12 was a foundation trench, possibly part of a building Structure 4.1, associated with a limestone surface LUB 13; sealing this surface was a wall, indicating alterations LUB 14, Structure 4.2. The building was demolished and its destruction debris LUB 15 contained 13th-century pottery.

#### *LUB 13 Structure 4.1 (Figs 13.11 and 13.24)*

In the north-west corner of Trench 2, cutting cg48 (LUB 12), there was a robbed foundation trench cg52 with the remains of a stone foundation. Sealing sand cg48 (LUB 12) was a layer of sand and silt

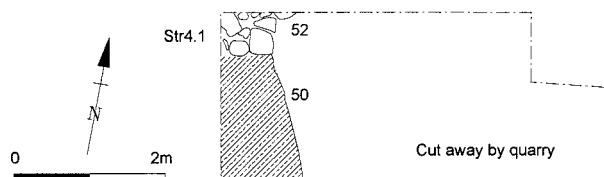


Fig 13.11 Structure 4.1: LUB 13

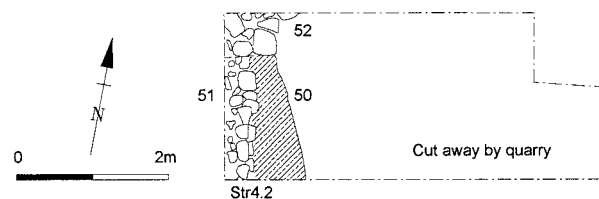


Fig 13.12 Structure 4.2: LUB 14

cg49 which contained 2 sherds of medieval pottery. It was sealed by a limestone surface cg50 containing fragments of Roman tile. The interpretation of this foundation as part of a structure was suggested by the amount of tile in the overlying demolition layer cg53 and rubble cg54 (both LUB 15) – best interpreted as roofing material.

As most of Trench 2 was later cut away by quarrying (LUB 17) these traces of building are difficult to interpret. The limestone surface might have formed part of an internal or external feature.

#### LUB 14 Structure 4.2 (Figs 13.12 and 13.24)

A rough limestone wall cg51 was constructed over the surface cg50 (LUB 13), butting up to foundation trench cg52 (LUB 13). Again, the interpretation of this wall as part of a structure was due to the amount of tile in the demolition layer cg53 and rubble cg54 (LUB 15), and the limited area investigated restricts interpretation.

#### LUB 15 Demolition of Structure 4

Wall cg51 (LUB 14) was robbed cg53 and the area sealed by silty sand with limestone rubble cg54. Layer cg53 produced a single sherd of copper glazed BEVO dating to the mid/late 12th to 13th centuries; two fragments of tile from the robbing cg53 dated to between the early/mid 13th and the late 14th centuries, and two others, to the early to mid/late 15th century. Rubble cg54 contained eight sherds of 13th-century pottery, an early modern sherd (intrusive?), and early/mid 13th- to late 14th-century tile.

#### Post-Medieval

In Trench 1, cutting LUB 11 were pits LUB 16 containing late 15th- to 16th-century pottery.

In Trench 2 there was no evidence for post-medieval activity.

#### LUB 16 Pits (Figs 13.13 and 13.23)

A pit cg39 with a rubble and sand fill was not clearly stratified (there was no record of what it cut although it was sealed by LUB 19). However, it contained a small group of late 15th-century LLSW jugs (11 sherds), together with pieces of a Purbeck marble

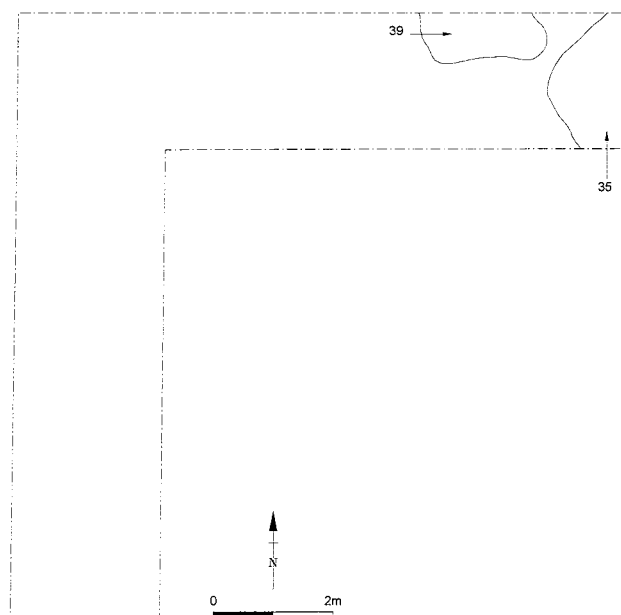


Fig 13.13 Pits: LUB 16

architectural fragment (4) <65>, possibly from a column capital.

Cutting into the levelling cg45 (LUB 11) was a pit cg35 (Fig 13.23). The pit cg35 was sealed by yellowish-brown silt cg43. Pit cg35 and silt cg43 produced a small but contemporary group (111 post-Roman sherds) of mid 16th-century pottery with a cross joining vessel between the deposits. The group consists of TB, LHUM, MP, BOU and BERTH jugs and cisterns and CIST cups, several of which displayed reversed decoration. There were also two LANG and two RAER imported German stoneware drinking jugs. Pit cg35 also contained a single fragment of late 13th- to mid 14th-century decorated window glass (18) <64> (King 1995b). There was a (probably intrusive) 17th/18th-century clay tobacco pipe stem from cg43.

#### Modern

In Trench 2 a quarry pit LUB 17 cut into the demolition deposits of Structure 4 (LUB 15); it was

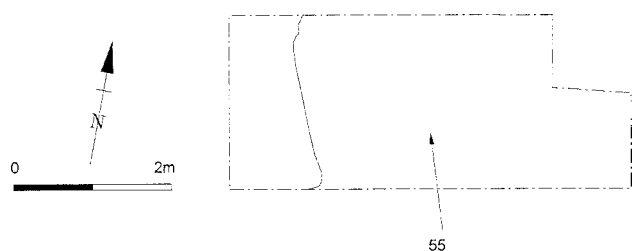


Fig 13.14 Quarry pit: LUB 17

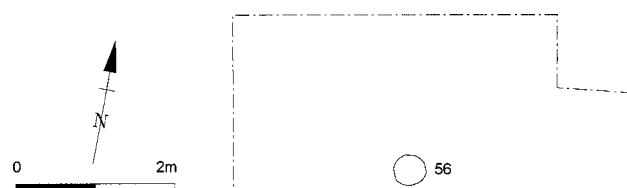


Fig 13.15 Posthole: LUB 18

dated to the mid 19th century by a clay tobacco pipe bowl. It was later cut by a modern fence posthole **LUB 18**.

In Trench 1, sealing LUB 16 was a spread of rubble over which were the remains of a bonfire **LUB 19**; this was dated both by a single sherd of modern pottery, as well as its place at the top of the stratigraphic sequence.

#### LUB 17 Quarry pit (Fig 13.14)

In Trench 2, a massive quarry pit cg55 cut layer cg54 (LUB 15). The fill of the quarry pit cg55 produced seven sherds of pottery including early modern material and a clay tobacco pipe bowl of mid 19th-century date.

#### LUB 18 Posthole (Fig 13.15)

Cut into the fill of the quarry (LUB 17) in Trench 2 was a posthole cg56, perhaps part of a fence.

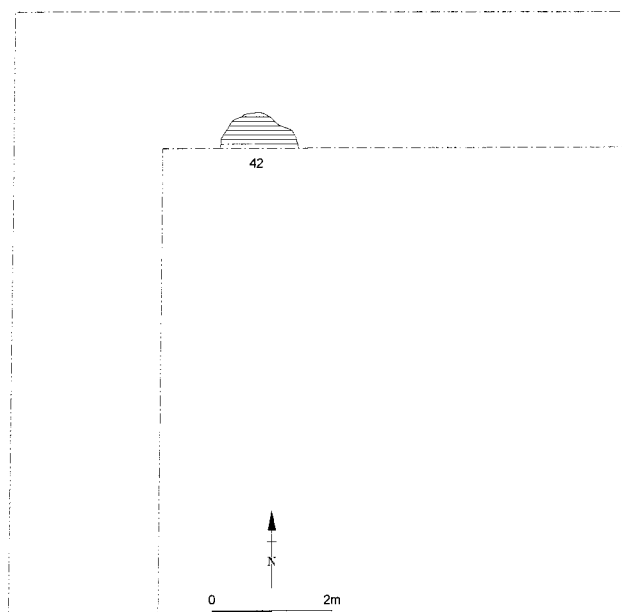


Fig 13.16 Rubble and bonfire: LUB 19

#### LUB 19 Rubble and bonfire (Fig 13.16)

Sealing layer cg43 (LUB 16) and pit cg39 (LUB 16) in the north-west part of Trench 1 was a spread of limestone rubble and tile cg44; a single early modern sherd was recovered from this deposit. The spread appears to have included a quantity of Roman tile, together with a significant group of Roman pottery with sherds which linked to LUB 9 and LUB 11, indicating disturbance, (by a quarry pit?) of the Roman stratigraphy in the immediate vicinity. Rubble cg44 was subsequently cut by a possible hearth or bonfire cg42 containing grey sand, charcoal and burnt clay.

## Discussion

### Roman occupation

Only Trench 1 was excavated down to the earliest surviving Roman levels; it seems possible that further excavation in Trench 2 might have revealed Roman stratigraphy of this period but excavations here were limited in depth.

The resulting scarcity of dating material (as would



Fig 13.17 Looking west over surface cg1: LUB 1



Fig 13.18 Looking west along gullies cg7 and cg8: LUBs 2 and 3



Fig 13.19 Looking south at partially excavated wall cg12 (the north-south arm of the trench has yet to be excavated): LUB 6



Fig 13.20 Looking west at hearth cg19 partially sealed by later wall cg25: LUB 6



Fig 13.21 Looking north at the foundations of north-south wall cg30: LUB 9

be expected) has meant that any interpretation has had to be tentative. Suggested interpretations concerning the undated external surface (LUB 1) have included a legionary parade ground (Camidge 1987a). The location would be acceptable, and it appears to lie on the natural limestone; there was no 1st-century pottery, but this might not be expected.

Greetwellgate lies on the course of the Roman road leading to the east gate of the Upper Roman City. The Roman structural sequence suggests that there had been occupation in Trench 1 from at least as early as the late 2nd century. The traces of buildings recovered were not substantial, but suggestive of commercial strip buildings fronting the

Roman road. Timber buildings (Structure 1; LUBs 2 and 3) were replaced by a stone-founded one by the mid 3rd century (Structure 2; LUBs 6-7). This was abandoned (LUB 8) and later replaced by



Fig 13.22 Looking north along wall cg25: LUB 9

another stone building between the mid and late 3rd century (Structure 3; LUB 9). Structure 3 was succeeded by a north–south fence, or a line of pits (LUB 10) which were at right-angles to the road.

It appears that Trench 1 went through a change of use in the late 3rd and into the 4th century; rubbish dumping took place, cut by a possible drain (LUB 11). There was no later Roman stratigraphy than LUB 11. In Trench 2, while there was evidence for activity in the mid 4th century, there was no clue as to the nature of the occupation (LUB 12).

#### **Roman finds, and function and status of the buildings**

Even though some of the artefacts from the site may have occurred in secondary contexts, it is interesting to note the type of material present. The general date range of the Roman registered finds was between the 2nd and 3rd centuries, while a peak in the pottery in the 2nd century was caused by the presence of samian ware. The glassware largely comprised household vessels (bottles, flasks). The finds appear to be domestic in general, reflect a higher than average proportion of ceramic discs in particular (cg16 LUB 7, cg31 LUB 9, cg32 LUB 9 and cg45 LUB 11), but also of needles (cg14 LUB 6, cg23 LUB 8, cg28 LUB 9), hones (cg18 LUB 6, cg45 LUB 11), and tools (cg15 LUB 6, cg45 LUB



Fig 13.23 Looking north at empty drain cg41 and pit cg35: LUBs 11 and 16



Fig 13.24 Looking west at wall cg51, over surface cg50; the robbed foundations cg52 are located at the north-west corner of the trench; the sequence was cut by quarry cg55 in the foreground (cf. Fig 13.12). LUBs 13 and 14

11). There were very few structural items (apart from nails). There is an absence of non-ceramic building materials such as wall plaster and window glass which might reflect the lowly status of the inhabitants, and this is echoed by the poor quality of the building construction, and the relatively late onset of the occupation and early end. It may be misleading to draw too many conclusions, but the general effect is of a marginal part of the city.

*Post-Roman activity*

The earliest post-Roman activity in Trench 2 was not before the medieval period, and the post-medieval period in Trench 1.

The traces of a 13th-century building in Trench 2, Structure 4 (LUBs 13–14) may relate to medieval occupation to the west of St Leonard's church. A fragment of decorated window glass, and an unusual glass vessel decorated with opaque red glass (Adams and Henderson 1995), are notable finds. There were also five sherds from an imported PING beaker or jar probably belonging to the 12th century.

Both post-medieval pits (LUB 16) in Trench 1 contained finds likely to represent refuse from a house of reasonably affluent status; one also produced imported pottery vessels associated with drinking. There was no evidence of contemporary occupation in Trench 2.

The stratigraphy during the medieval and post-medieval periods had a semi-rural flavour to it. There was little of it, and it only occurred intermittently across the site.

cg/LUB	cg/LUB	cg/LUB	cg/LUB
1/1	15/6	29/9	43/16
2/2	16/7	30/9	44/19
3/2	17/6	31/9	45/11
4/2	18/6	32/9	46/7
5/2	19/6	33/10	47/6
6/2	20/6	34/10	48/12
7/2	21/6	35/16	49/13
8/3	22/6	36/10	50/13
9/3	23/8	37/10	51/14
10/5	24/9	38/7	52/13
11/4	25/9	39/16	53/15
12/6	26/7	40/11	54/15
13/7	27/8	41/11	55/17
14/6	28/9	42/19	56/18

Fig 13.25 Concordance of cg numbers with LUB numbers for wc87

## 14. Discussion

*Kate Steane, Michael J Jones and Alan Vince,  
with contributions by Margaret J Darling and Jane Young*

The 1972–87 excavations cluster in the north-western and the south-eastern quadrants of the Upper City, with one (eb80) inside the north wall (Fig 1.2). None of the Castle excavations (cwg82 and later work) is here included since that project continued on site until 1992 and post-excavation work is only now (1999) commencing. Nor are the excavations in the north-east quadrant analysed here: the work in 1956–8 at Cottesford Place (cp56) – the Roman public baths – remains as yet unpublished, but the Roman pottery has been examined and efforts are being made to

produce a structural report. Investigations of the water-tank (*castellum aquae*) by the local society during the 1970s also await detailed analysis. Two extramural excavations have been included in this volume: the Lawn excavations to the west of the castle, and a small site (wc87) to the east of the Upper City. Much of the discussion from the prehistoric period onwards has been facilitated by comparing the land use diagrams (LUB diagrams) of each site; a composite diagram gives an idea of the dated stratigraphy recovered across the Upper City (Fig 14.1).

Periods	cats	ce75	cl85	eb80	l86	mw79	mws83	sp72	w73	wb76	wb80	wc87
Mod	////			////				////	////		////	////
P-Med	////							////	////		////	////
L-Med	////		////					////	////		////	////
H-Med	////			////				////	////		////	////
E-Med	////		////	////				////	////		////	////
SN	////		////					////	////		////	////
Late Saxon			////					////	////		////	////
Ultimate R to L-Sax								////	////		////	////
Very late Roman											////	////
Late Roman	////		////	////				////	////		////	////
Mid Roman				////				////	////	////	////	////
Early Roman	////	////	////	////				////	////	////	////	////
Pre-hist					////							
Natural		////	////	////	////			////				

----- Likely Activity      ////////////// Dated Stratified Deposits

Fig 14.1 Period by period site diagram of dated stratigraphy across the Upper City



## Hill top location

The Upper City of Lincoln stands on an exposure of Lincolnshire limestone of Jurassic age. Although this is a massive limestone at depth, the upper parts are invariably disturbed, presumably by cryoturbation, to form the brash, in which fragments of limestone up to 0.3m across are to be found lying at an angle to their original bedding. In places, this brash is overlain by windblown sand and the two deposits are sometimes to be found intermixed, perhaps through the actions of tree roots, animal burrows or solution holes (Lawn LUB 0, sp72 LUB 0 and w73 LUB 0). Details of the underlying geology could be observed in digging the well at sp72 in 1984. At one site, 186 LUB 0, a natural fissure had formed in the limestone, due to cambering along the scarp, and the top fills of this gully were filled with deposits, the latest of which contained Roman finds.

## Prehistoric or military period activity

Although little undisturbed pre-Roman ground surface in the Upper City has been excavated, there is nevertheless a striking absence of pre-Roman artefacts as residual finds and it is likely that the area was little used until the foundation of the fortress. However, of the two sites which have produced Late Iron Age pottery in Lincoln, one of them, the Lawn, lies just to the west of the Upper City (the other site is hg72, in Wigford).

The evidence suggests the possibility of mid 1st-century activity at the Lawn. The presence of pottery of Late Iron Age type, together with features (Lawn LUB 1), perhaps indicates occupation, but it could rather be contemporary with the fortress (Darling and Jones 1988, 45–50). The holes in Area II, which suggest timber posthole structures (Lawn LUB 1) could represent buildings about 5m or 6m across, aligned with a possible road system (Lawn LUBs 8 and 9), running at a diagonal to the north–south alignment of the fortress. It is even possible that this system predated the fortress. The interpretation of such an occupation here is unclear – it might have represented an early military fort or labour camp, an official enclosure or annexe or even a traders' camp.

## Early Roman Activity

The broad outline of the legionary fortress, founded in the mid 1st century, has governed subsequent developments in the Upper City area up to and including the present day. The defences of the fortress have been examined on all four sides; excavations on the north and west sides of the fortress defences are included in this volume (ce75 LUB 1, w73 LUB 1).

Four excavations in this volume revealed clear evidence of legionary occupation (sp72 LUBs 1–4; cl85 LUBs 1–5; eb80 LUBs 1–9; w73 LUBs 2–3) whilst there were probable traces of activity from this period at wb76 (LUBs 1–3) and mw79 (LUB 1).

## Foundation and functioning of the fortress

Although traces of the later ramparts were revealed, little of the legionary rampart was exposed in these excavations (except for possible spoil or trample from the construction phase of the first defences in the mid 1st century; eb80 LUB 1). The legionary rampart of the Upper City has already been extensively explored and discussed (Jones, M J 1980). A stretch of the V-shaped ditch in front of the rampart was revealed at Cecil Street (ce75 LUB 1) and its profile, together with that of a palisade trench, was recovered at Westgate School (w73 LUB 1).

The rampart, gates, and cardinal streets were known before these excavations took place although the internal features of the fortress were hardly explored. As a result of excavations at St Paul-in-the-Bail, the west and north ranges of the massive timber *principia* (headquarters building) were revealed (sp72 LUBs 1–3). Remains of other military activity, including timber buildings, were found at Chapel Lane, East Bight and Westgate School (cl85 LUBs 1–5; eb80 LUBs 1–9; w73 LUBs 2–3).

The size and the spacing of the *principia* post-pits (sp72 LUB 1) indicated an aisled hall of considerable size, so centrally placed within the fortress that it can only be seen as the cross-hall (basilica). To the east there was a verandah around a courtyard with a further range to the north. The aisled hall to the west was at least 11m wide and 14m long; the buildings along the north extended at least another 14m and probably more like 35m to the east; the courtyard verandah enclosed a courtyard at least 8m by 23m.

The *principia* structure was subsequently demolished, the timbers removed and any holes or slots backfilled; at least the west part of the site was levelled at this time and possibly the whole area. Then the *principia* structure appears to have been extensively rebuilt. There was a second aisled hall (at least 13m east–west and 14m long); the positioning of the post-pits might indicate a hall which measured c10m between the aisles, with an aisle c5m wide on each side – overall c20m wide (sp72 LUB 3). The north range extended at least 14m to the east of the hall. The hall and the northern range enclosed a courtyard (at least 8m by 32m) within which was an enigmatic feature, possibly at first representing a ground-level water-channel (traces of silt and the slight slope), perhaps superseded by a channel on stilts leading to a tank; this feature may have been associated with the well.

The evidence from the trenches at Chapel Lane (cl85) and elsewhere confirms the extensive area of occupation covered by the fortress. The structural alignments for the early buildings were east–west or north–south – clearly related to a street pattern which has only survived in this area of the Upper City as the narrow (medieval) lane of West Bight. It seems possible that the timber buildings at cl85 faced on to a precursor of West Bight, some 20m to the east of Trench 1, and 15m to the east of Trench 2. One timber building (Structure 1, cl85 LUB 1) seems to have been dismantled and replaced by another (Structure 2, cl85 LUB 2) which then burnt down (cl85 LUB 3). Then the area (cl85 Trench 2) was sealed by a gravel and pebble surface (cl85 LUB 4) dating to the mid 1st or later 1st century. Succeeding the surface in Trench 2 was a building (Structure 3, cl85 LUB 5), possibly of timber frame construction, with earth-fast elements, also of the mid or later 1st century. The intensive use of these three basic buildings together with their short-lived use from the mid 1st century indicates that at least two phases probably belonged to the army's occupation. Military use of these buildings seems to be supported by the finds.

At East Bight (eb80) there were other timber buildings. To the south of the site, one structure (Structure 1, eb80 LUB 7) was demolished (eb80 LUB 8) and replaced by another timber building (Structure 2, eb80 LUB 9) and to the north of the site, contemporary with Structure 2, was another timber building (Structure 4, eb80 LUB 5). All these buildings were aligned with legionary defences to the north and it is possible that they all either represented barrack blocks, or associated buildings.

At the west side of the fortress (w73), possibly housing the soldiers who had taken part in the building of the Upper City defences, were possible traces of another timber building, Structure 1.1 (w73 LUB 2), and subsequently a more probable timber structure, Structure 1.2 (w73 LUB 3).

The first trace of Roman occupation on the site of mw79 was represented by burnt daub and charcoal (mw79 LUB 1), possible remains of burnt timber buildings from the legionary period.

It is noteworthy that all sites where legionary period stratigraphy has been thoroughly examined have shown evidence for at least two phases of activity; whilst it is possible that this represents local rebuilding, a refurbishment of the entire fortress together with other local alterations is also a possibility. Our knowledge of the fortress is limited to detailed keyhole views (cl85, eb80, sp72 and w73) which would lead us to suspect that other areas of the Upper City may well hold more evidence of the period; limits of excavation or truncation of deposits meant that some sites never fully explored these levels (the cathedral sites, mw79, mws83, wb76 and

wb80). From the evidence it seems possible that the whole of the fortress area was built up, with the administrative core in the centre (sp72) surrounded by barrack blocks and structures required for other military functions (cl85, eb80 and w73).

#### *Extramural activity to the east of the fortress*

To the east of the fortress at wc87 were the remains of an extensive external surface (wc87 LUB 1); suggested interpretations have included a legionary parade ground (Camidge 1987a). The limited extent of excavation and lack of dating material (as would be expected) has meant that any interpretation has had to be tentative.

#### *Change of use from fortress to colonia*

In the centre of the Upper City, *principia* 1.2 seems to have been dismantled and the area apparently levelled (sp72 LUB 4). In the west part of sp72, a courtyard (sp72 LUB 5) with a number of statues (sp72 LUB 6) located towards its eastern side sealed the *principia* buildings. In the early *colonia* period this was a place of considerable activity – there were pits, areas of burnt clay, patches of pitched limestones and various slots (LUB 5), and an infant burial suggests the presence of nearby buildings.

The site saw further developments – the statues were cleared except for the largest, whose base, at least, was left *in situ* (it measured c.1.95m by 1.80m). The wall (sp72 LUB 7) of a large building, Structure 10, deliberately respected this feature. It was a monumental building, perhaps contemporary with a substantial building to the north-west (wb80 LUB 1).

There is some evidence for the deliberate backfill of legionary features (for example, the ditch at ce75 LUB 2).

Although no large clearance pits filled with unwanted legionary equipment or refuse have been found within the walls, there were late 1st- to early 2nd-century dumps within the walls, in the north-east part of the fortress/upper *colonia*, which included quantities of military equipment (eb80 LUBs 10 and 11). To the west of the fortress a number of possible quarry pits (Lawn LUB 2) were backfilled with domestic rubbish. A possible natural fissure reused as a ditch contained discarded military trappings (Lawn LUB 3). Both the pit fills and the fissure/ditch fill date to between the mid and late 1st century.

The evidence could be interpreted to suggest that the fortress was handed directly to the new civilian administrators by the army rather than there being a period of total abandonment of the site.

Parts of the northern defences were revealed at ce75 (LUB 2). Here the wall sits on top of the backfilled legionary ditch. There was no dating evidence for this activity.

### *The forum (?-temple) complex*

The initial courtyard was later sealed by a sequence of very clean pebble surfaces with some areas of pitched limestone and limestone slabs (sp72 LUB 5). These surfaces appear to have continued in use throughout the rest of the Roman period.

The sequence presented above proposes that to the east of the courtyard was Structure 10, which extended to the main north–south street c18m to the east of its western wall; a width of 9m lay within the excavation limits (sp72 LUB 7). The internal area of the building was solidly floored and the well, possibly created in the *principia* period but alternatively later in the 2nd century, may have formed an internal feature of this building. There were fluted columns, and the walls were probably covered with painted plaster. The floor shows little sign of wear; it may have been protected in some way, or have gone out of use soon after its construction. Alternatively, the north–south wall, interpreted as the west wall of the structure, could belong to the later development of the east range.

Possibly contemporary with Structure 10 (sp72 LUB 7) were the curved foundations of another monumental building (Structure 1, wb80 LUB 1), built no earlier than the late 1st/early 2nd century. This building may have extended for a considerable distance to the south of the excavated pier. Associated building material recovered from wb80 indicates a substantial civic building.

### *Other early colonia buildings*

At wb76 there was evidence for another substantial building (wb76 LUB 4), located just west of the forum-basilica.

The dumps at eb80 (LUB 10) were sealed by an east–west road with a central drain (eb80 LUBs 13 and 14), an *intervallum* road, the *via sagularis*. To the south of this road was a stone-founded building (Structure 5, eb80 LUBs 15, 16 and 17).

There were traces of a possible stone-founded building, probably a house, which might date from this period in Trench 1 at wb80 (Structure 2, wb80 LUB 3).

It is assumed that the public baths (cp56) were built during this period.

## **Mid Roman Period**

### *Defences*

At eb80, the northern rampart of the upper *colonia* was extended internally between the mid and late 2nd century (eb80 LUB 20). After the late 2nd century

a stone revetted ramp (eb80 LUB 21) was possibly used to aid the construction of, repairs to, or rebuilding of the defences. There was evidence of substantial foundations, and although these could have represented the *colonia* wall, they were more likely to represent the later internal wall thickening (eb80 LUB 22). Sealing the ramp in the early 3rd century were further rampart dumps (eb80 LUB 23).

The foundations of the east wall of the upper *colonia* were recovered close to the cathedral at cat86 (cathedral LUB 9 and LUB 25).

Other sites on the line of the fortifications have already been extensively reported (Jones, M J 1980).

### *The forum-basilica complex*

The forum courtyard continued in use throughout this period; to its north was a monumental building (Structure 1, wb80 LUB 1) and to the east may have been another monumental building (Structure 10, sp72 LUB 7). The life of Structure 1, at wb80 (LUB 1) may have extended to the late 2nd century (until the construction of the Mint Wall in the early 3rd century). The life of the monumental building at sp72 (Structure 10, LUB 7, sp72) may not have been as long, since the dating evidence for its replacement by the eastern range of the forum courtyard (Structure 2, sp72 LUB 8) only indicates a *terminus post quem* of early–mid 2nd century: but it may in fact have been contemporary with the Mint Wall. It was this building, Structure 2, which survived in use throughout the rest of the Roman period (sp72 LUBs 9–17). The ground level within the structure was raised about a metre above the level of the courtyard to the west; there was a colonnade around the forum courtyard with a portico about 6m wide. The structure also contained a number of rooms to the east of the walkway. Access to the well seems to have been from the portico (room 2C) and through a small room (room 2B); Room 2B may have only functioned as access to the well – it contained water-butts. The room to the east of the well (room 2A) operated at times as a non-ferrous metal workshop. There was also evidence for other rooms (Rooms 2D, 2E and 2F).

The monumental building to the north (Structure 1, wb80 LUB 1) was demolished and replaced with another building of which the Mint Wall was part, constructed by the early 3rd century (Structure 4, wb80 LUB 4). The Mint Wall, if continued to the east, would line up with the northernmost of the line of the row of Roman columns beneath Bailgate. This, and its position in relation to the excavations of sp72, has led to Structure 4 (wb80 LUB 4) being interpreted as the basilica, located to the north of the forum (Jones and Gilmour 1980); the Mint Wall was seen as part of its north wall (with foundations at least 1.40m wide,

and probably wider). Internal floors and walls, possibly from the basilica defined by the Mint Wall, were found at mws83 (mws83 LUB 1) and mw79 (mw79 LUB 2).

A complete plan of the forum-basilica complex has been projected using the evidence discussed here, together with colonnade bases known to exist beneath Bailgate, wall foundations located during watching briefs and a reconstruction drawing by David Vale (Jones 1988, figs 7.10 and 7.11); much of this work depends on an understanding of parallels from elsewhere. An updated version of the plan is presented here (Fig 14.2).

#### *Other occupation in the upper colonia*

To the north of the basilica, Structure 4 (wb80), there was evidence for an east-west street; of the two

metalled surfaces (wb80 LUB 7), the first dated to the early or mid 3rd century and the second to the mid 3rd century.

To the north of this street and to the east of a street which probably originated in the legionary period (the precursor of West Bight) was a stone-founded building (Structure 3, wb80 LUBs 4 and 5) with several rooms.

The stone-founded building at East Bight, Structure 5 (eb80, LUBs 15 and 16), to the rear of the northern defences, continued in use (eb80 LUBs 17, 25 and 26) as did the adjacent *intervallum* road (eb80 LUBs 14, 20 and 24).

In the north-west quarter of the upper *colonia* there has been little investigation to date; at one site, evidence was found of open ground with stone quarrying and refuse pits during the 2nd century (w73 LUB 7).

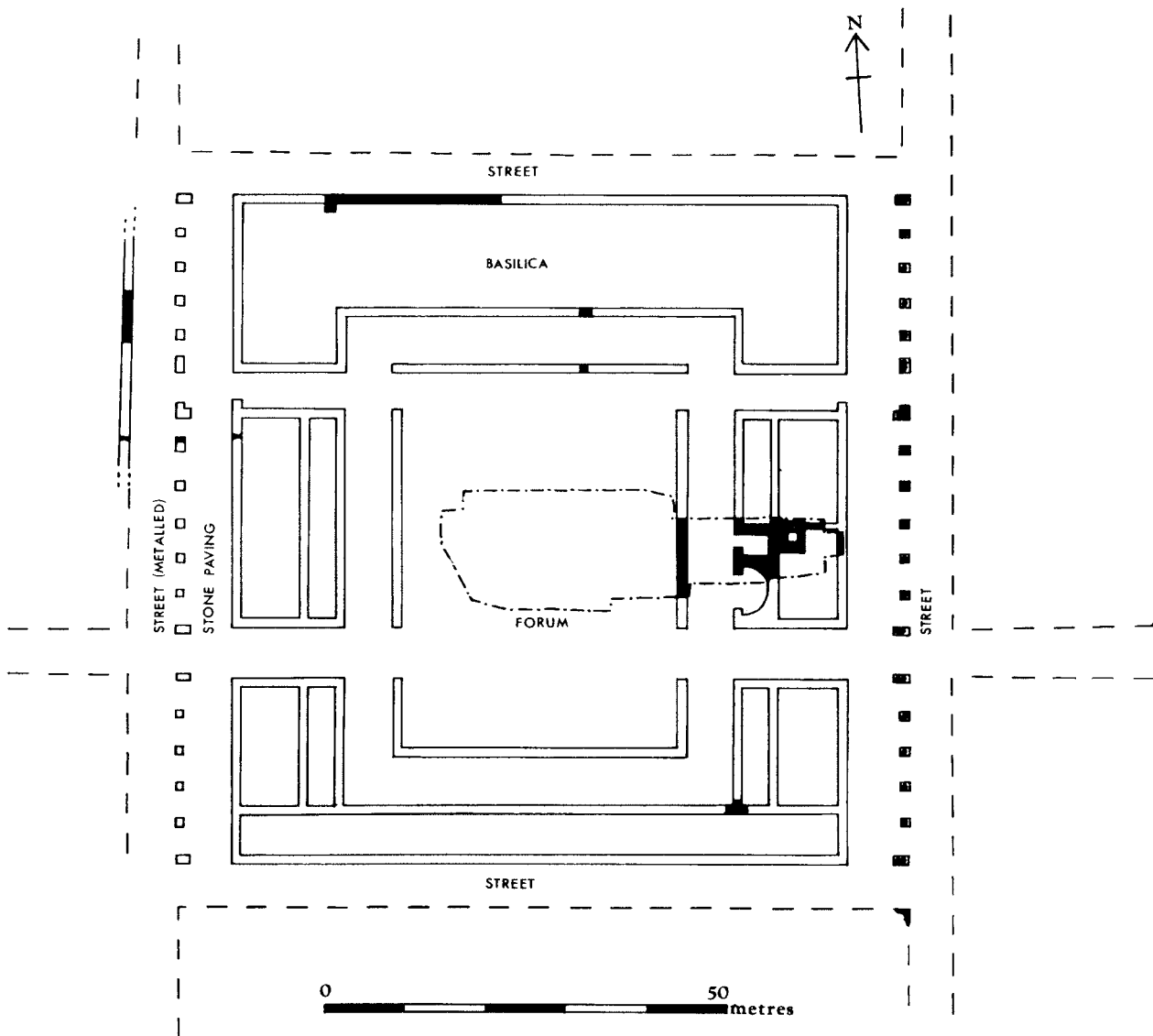


Fig 14.2 Hypothetical plan of the early 3rd-century forum-basilica

### ***Buildings to the west and east of the upper colonia***

To the west of the walls of the upper *colonia* and probably to the south of a road extending west from the west gate, were stone-founded buildings (Structures 1 and 2, Lawn LUBs 10 and 17). To the west of Structure 1 was a possible north–south road (Lawn LUB 13), which probably joined the road issuing from the west gate.

To the south of the course of the Roman road leading to the east gate of the upper *colonia* (the precursor of Greetwellgate), were traces of an insubstantial timber building (Structure 1, wc87 LUBs 1–2) dating from the late 2nd century. It was demolished and replaced by a stone-founded successor by the mid 3rd century (Structure 2, wc87 LUBs 6–7), which was later abandoned (wc87 LUB 8).

The buildings at both the Lawn and wc87 were probably similar in function and plan to the extramural Roman buildings found in Wigford, narrow strip buildings which gable-ended the main road and functioned as workshops and commercial outlets as well as domestic quarters.

## **Late Roman period**

### ***Defences***

Extensive rampart dumping (eb80 LUB 27) took place between the mid 3rd and 4th centuries.

An internal thickening of the east wall of the upper defences (cathedral LUB 25) was found; there was no direct dating evidence. While the foundations recovered at eb80, the northern defences of the *colonia*, might have represented the original *colonia* wall, they might alternatively have been part of an internal thickening (eb80 LUB 22).

The defences of the upper *colonia* have already been extensively discussed (Jones, M J 1980).

### ***The forum-basilica complex***

The forum-basilica continued in the same form as it had reached by the end of the mid Roman period.

The east range of the forum may have been partially demolished by the end of the 4th century; there was pitting, demolition debris and evidence for the robbing of rooms 2A, 2B, 2D and 2E, associated with late to very late 4th-century pottery (Structure 2, sp72 LUB 18). The apse (room 2F) and the well-head itself may have been robbed during this period, but any trace of this had been removed by later activities.

### ***Other activity in the upper colonia***

There was no evidence that the metalled surfaces of the east–west street to the north of the basilica (wb80 LUB 7) continued into the late Roman period, but

Structure 3 (wb80 LUB 8) to the east of the north–south street (the precursor of West Bight) continued in use.

In the north-east part of the upper *colonia*, both the east–west *intervallum* road (eb80 LUB 24) and stone-founded Structure 5 (eb80 LUB 26) appear to have been abandoned and were sealed by dumps (eb80 LUB 27).

### ***Activity to the west and east of the upper colonia***

To the west of the upper *colonia* at the Lawn, although the life of Structure 2 (Lawn LUBs 17 and 18) is unclear, Structure 1, after a period of abandonment followed by fire (Lawn LUB 19), continued in use (Lawn LUBs 20–23). It was eventually demolished sometime in the 4th century, and the area was sealed by dumps (LUBs 25, 26 and 27).

At Greetwellgate to the east of the upper *colonia*, the abandoned Structure 2 (wc87 LUB 8) was replaced with another stone-founded building (Structure 3, wc87 LUB 9), which was demolished and possibly replaced by a north–south fence, or a line of pits (wc87 LUB 10) at right-angles to the road. This was subsequently sealed by rubbish dumping, cut by a possible drain (wc87 LUB 11) in the late 3rd or 4th century.

## **Very late Roman period**

### ***The forum-basilica complex***

The robbing and pitting (sp72 LUB 18) of the east range was dated by the pottery as spanning the late to very late 4th century. It is possible that the earliest timber church structure(s) (sp72, LUBs 19–21) also belong to the very end of the Roman period (see below).

### ***Other activity in the upper colonia***

About 15m to the north of the forum-basilica was an east–west path, to the north of which was a possible well and to the south of which was a dump (wb80 LUB 9). The building to the west, fronting on to the precursor of West Bight, continued in use during this period (Structure 3, wb80 LUB 8). Both LUBs were associated with late to very late 4th-century pottery.

## **Summary of Roman pottery from sites in the Upper City**

### ***Margaret J Darling***

Over 24,000 sherds came from the sites excavated by the Lincoln Unit, ranging from over 6,000 each at St

Paul-in-the-Bail and The Lawn, down to under 100 from some of the small cathedral excavations. The latter sites have been grouped (cat86, lc84, dg83 and ny87) as one assemblage. Three further collections of pottery are included to enable a fuller view of the Upper City: pottery from the East Bight site excavated in 1966 (code eb66; published Jones, MJ 1980; Darling 1984), from excavations on the adjacent site by the local archaeological society from 1970–83 (code ebs; unpublished), and from excavations on the site of the bath-house at Cottesford Place by Mr Dennis F. Petch from 1956–58 (code cp56). These sites produced nearly 25,000 sherds, that from Cottesford Place (12,640 sherds) including the largest assemblage of samian from Lincoln. The East Bight sites are clearly useful in relation to East Bight 1980, and in view of the relatively small quantities of pottery from sites away from the defences, the large Cottesford Place assemblage is also an important one.

Wide variations occur between the sites due to differing chronologies, locations and character. The arrangement of the following charts is based on the samian dating, opening with the sites with the most early samian. All charts are based on percentages from the total site to facilitate comparisons between sites of differing sizes. The measure used is the archive minimum of sherd count.

**Dating (Figs 14.3 and 14.4)**

The chart (Fig 14.3), shows all the pottery from the sites, the dating having been based on fabrics and vessel types, and spread over the period as percentages. Each site's profile is stacked to produce a profile for all Upper City sites. The second chart (Fig 14.4), shows a similarly produced stacked profile excluding samian. The exclusion of samian has less effect on the charts for the Upper City than on those

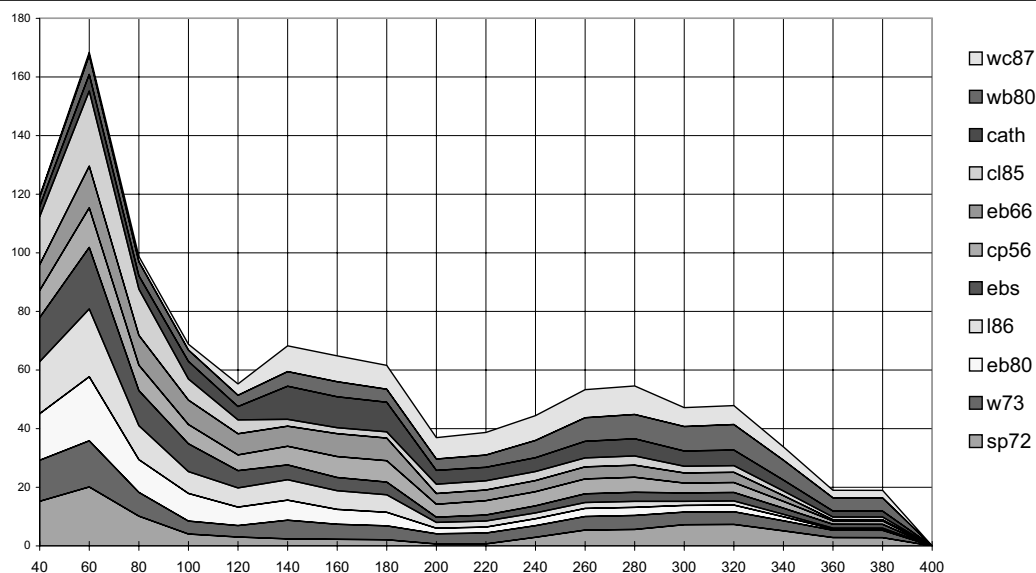


Fig 14.3 Area chart of all Roman pottery by period

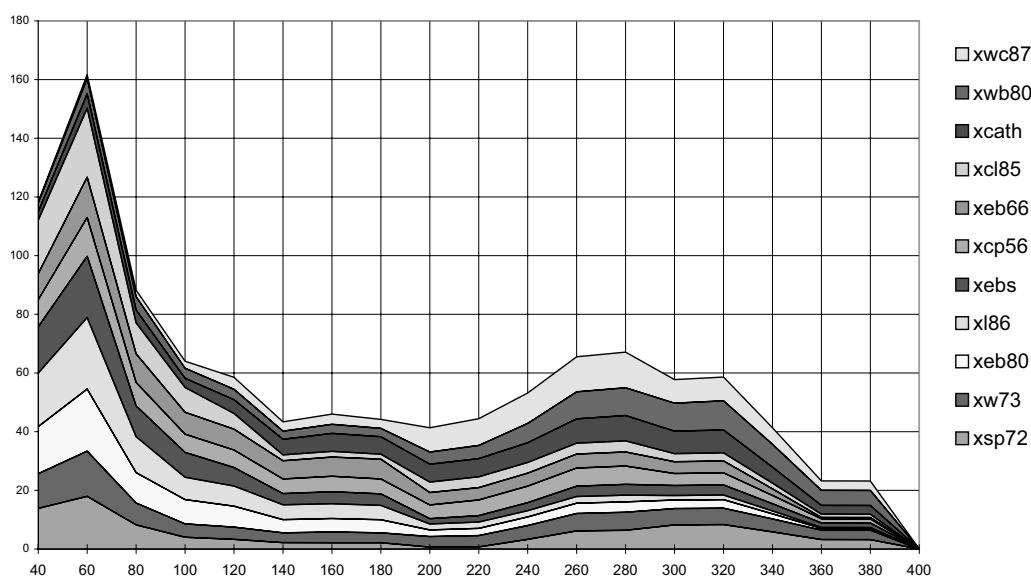


Fig 14.4 Area chart of Roman pot excluding samian by period

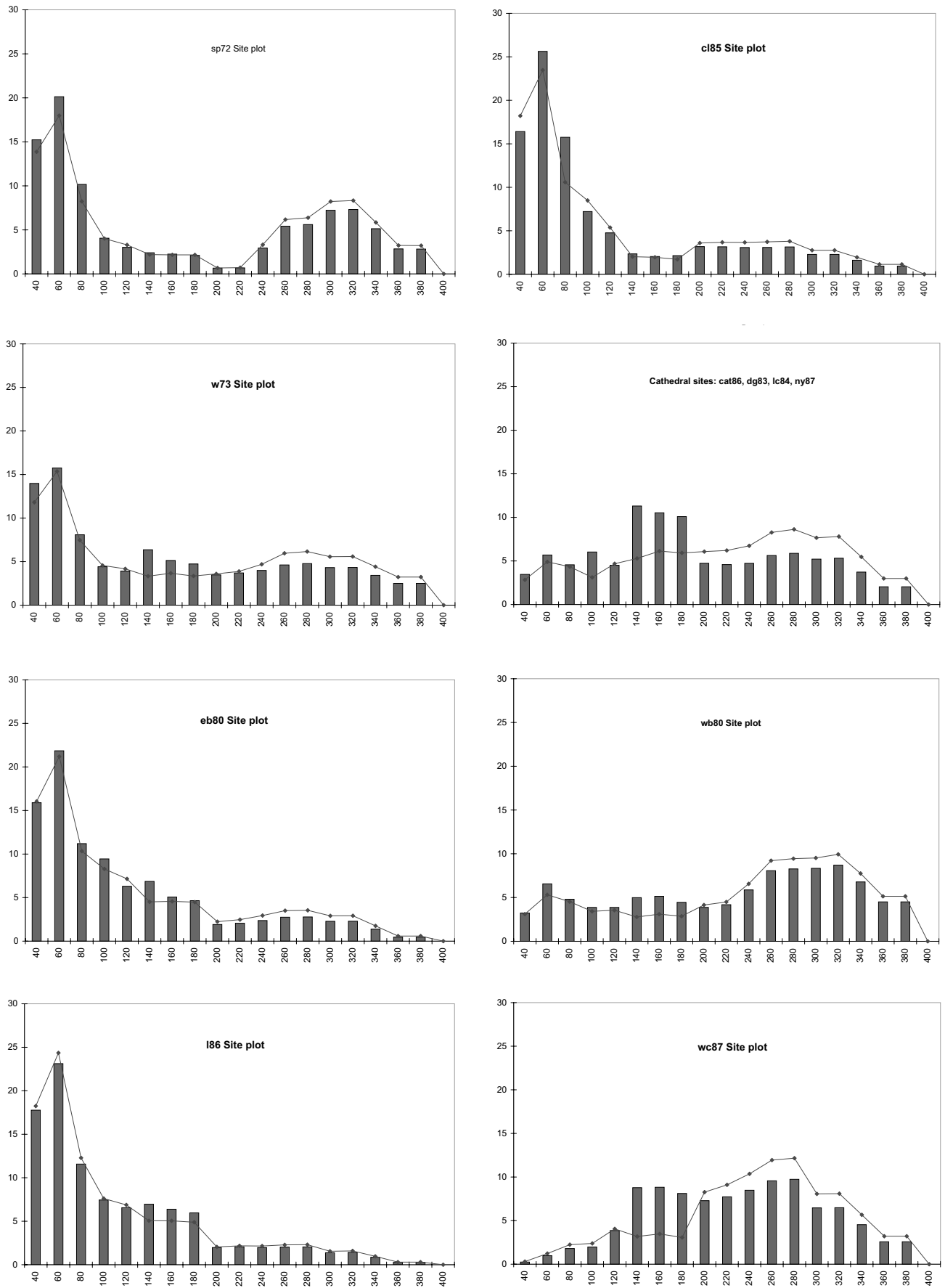


Fig 14.5 Charts of Roman pottery profiles excluding samian by site

for the Wigford suburb. The main impact of the samian lies in the mid to later 2nd century, and it is interesting to note the declining profile from *c* AD140, the opposite of the profile from the Wigford sites. The profiles of the individual sites are shown on Fig 14.5.

Both charts show the character of the Upper City assemblage, opening strongly in the 1st century with the legionary occupation, evident at the site of the *principia* sp72, the defences sites at East Bight, w73 and cl85, and l86 outside the west gate. There is a significant quantity of 1st-century pottery from the bath-house site cp56, and the later pottery, after a rise in the mid to late 2nd century, declines in a similar way to the other earlier sites. The site at sp72 stands alone in that although it starts with similar high percentages for the early 1st century, the percentages during the 2nd century are lower than the other early sites, and then rise above them in the 3rd century. A similar later Roman profile is also seen at the neighbouring site of wb80. The profiles of some of the other sites are very similar, enabling groups to be recognised. The East Bight sites of eb80 and ebs and the Lawn l86 all have closely similar profiles, while the other East Bight site eb66, where more rampart deposits occurred, has a profile close to that of the bath-house cp56. The two small samples from sites w73 and cl85 in the defences area are also similar, both sites having later Roman pottery stratified only in the post-Roman strata.

Very little 1st-century pottery came from wb80 and the grouped sites at the cathedral, and none from the extramural site of wc87. The cathedral sites show a similar increase in the mid to late 2nd century as at cp56 (although declining to the end of the century; this largely derives from the high proportion of samian from those sites), and the later

profile nearly mirrors that of cp56. The site at wb80 has a low profile in the 2nd century, and most of the pottery fits into the 3rd and 4th centuries, this site having the largest proportion of 4th-century pottery (*cf* the later pottery from sp72). The pottery from the extramural site wc87 produces a wide, relatively even span from *c* AD 140 to the end of the 3rd century.

#### Overview of samian dating (Figs 14.6, 14.7 and 14.8)

All samian dates have been converted to numeric dates and quantities by sherd count spread as percentages of the total samian from each site. The resulting profiles are again stacked to give an overall profile for the upper city (Fig 14.6). This is supplemented by individual profiles for each site, Fig 14.7.

The bimodal profile with a strong dip in the early 2nd century is a common profile for samian in Britain (Marsh 1981, 190–3), reflecting the decline in samian importation. This chart shows clearly the almost total absence of 2nd-century samian from sp72, the main sites producing quantities of Central and East Gaulish samian being the cathedral sites, wb80 and both extramural sites, l86 and wc87. Rampart dumps and activity on the defences produce 2nd-century and later samian from the East Bight sites, particularly eb66 where much of the pottery came from rampart heightening, and there is a sizeable group from cp56 bath-house. The profiles of cp56 and eb66 are broadly alike, and it is relevant to note that one of the largest groups from the latter site was from a very ashy deposit, perhaps debris from the bath-house. What is particularly notable about the later samian is the decline of the profile from a peak about AD 140, at a time of

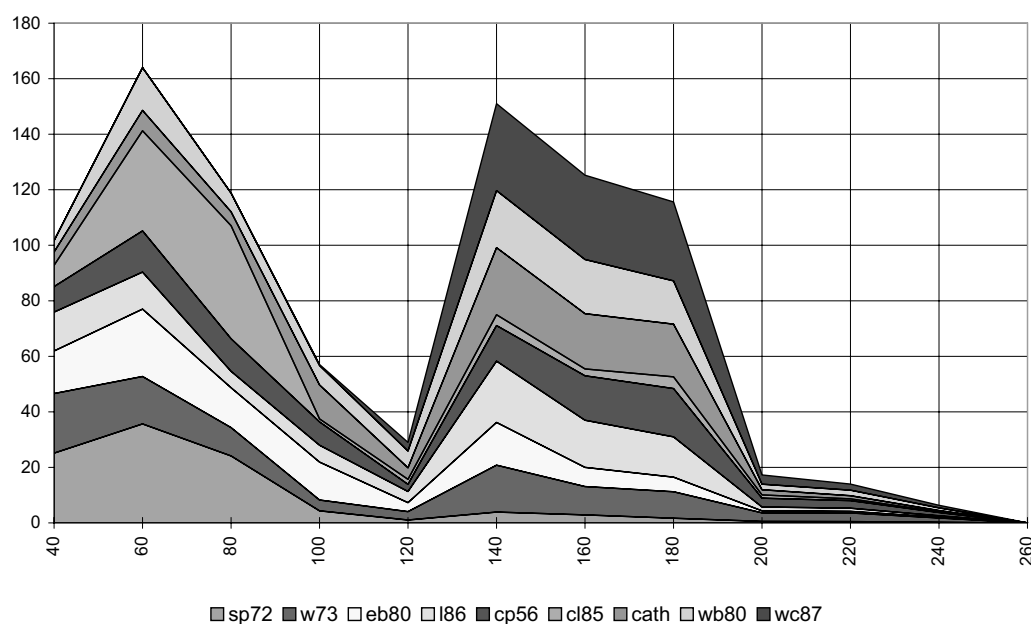


Fig 14.6 Area chart of samian



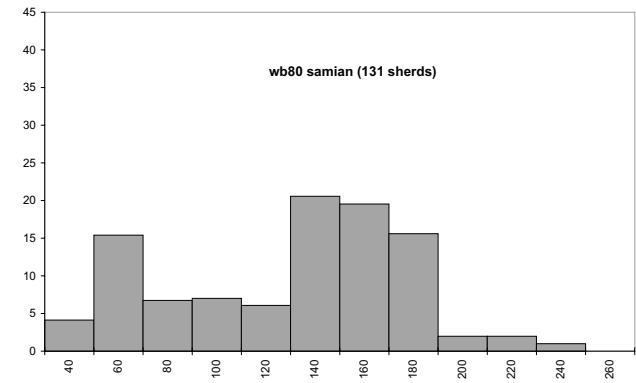
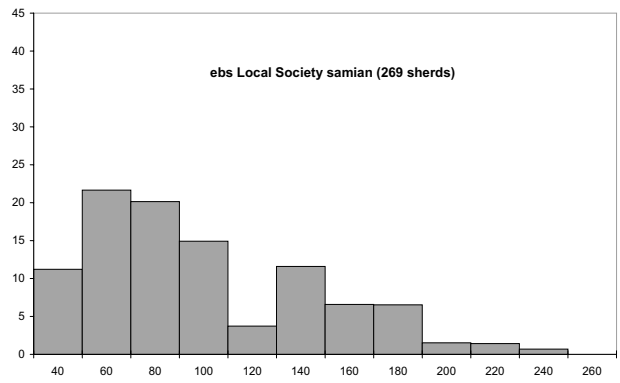
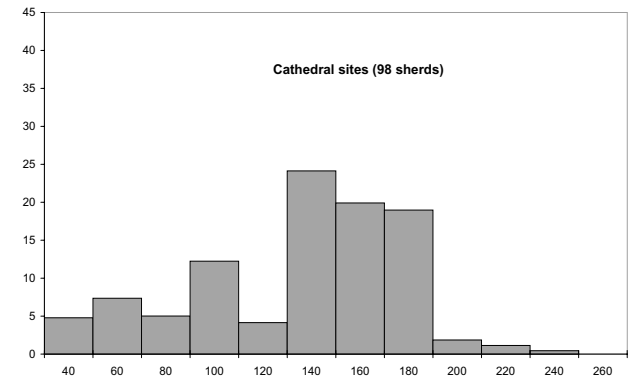
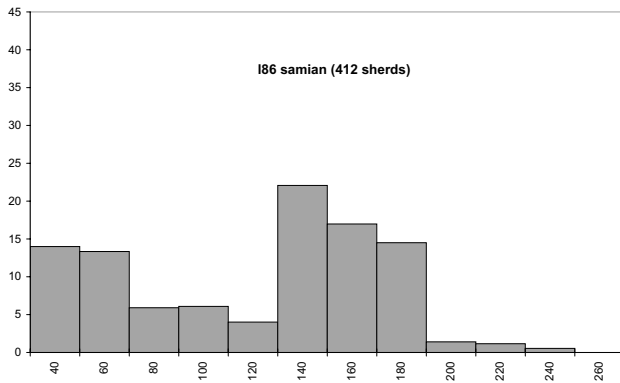
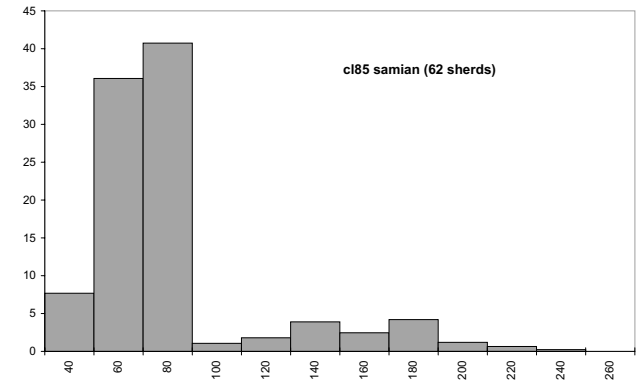
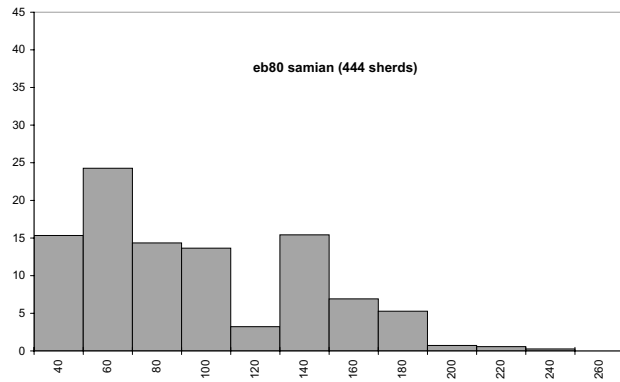
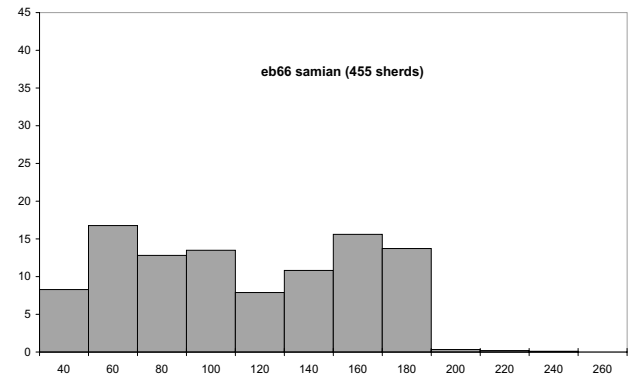
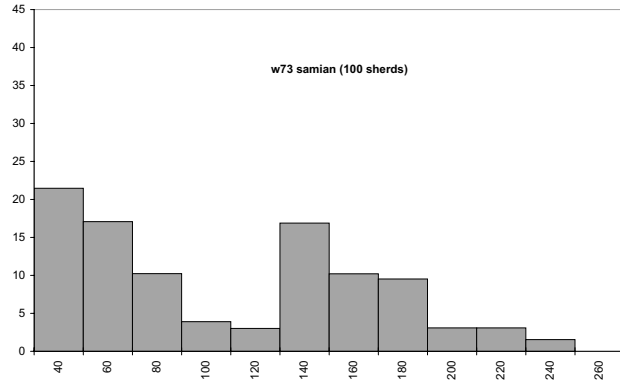
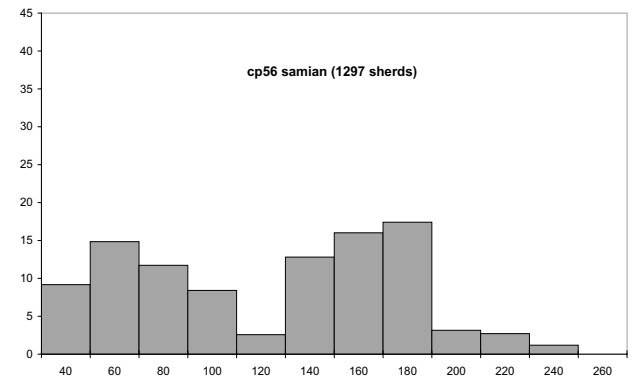
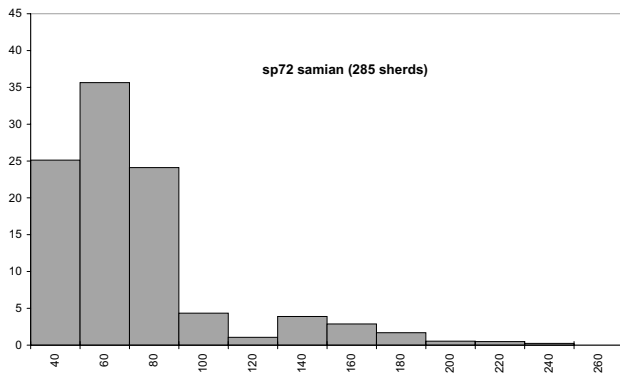


Fig 14.7 Charts of samian dating profiles by site

increasing importation, and the insignificant quantities of East Gaulish samian, extending into the 3rd century. The only site where the trend is reversed is the Cottesford Place bath-house.

The proportions of decorated to plain sherds have been analysed to investigate possible differences between sites which may relate to status. This is made more complex by the apparent decline in the proportion of decorated wares in the later 2nd century (Darling, 1998), and a broad division by source has been used for the chart, Fig 14.8 (East Gaul is excluded due to the small sample size). This shows the decorated sherds as percentages of all samian from each site, and the higher percentages of South Gaulish decorated vessels. Discounting the small assemblage from cl85, the highest proportions of decorated sherds come from sp72, ebs and the adjacent eb80 site. Decorated South Gaulish wares are also well represented at l86 and cp56, but are notably low at eb66 and exceptionally so at w73. The two exceptional sites are eb80 where a high proportion of decorated wares occurs from

both sources, and w73 where the opposite occurs. The average proportion of decorated Central Gaulish sherds is higher than seen from the Wigford sites, but this could be due to the chronological spread, the Upper City sites having less samian for the period when the proportion of decorated sherds declines.

### Overview of fabrics (Fig 14.9)

The histogram (Fig 14.9) shows the broad fabric groupings of Roman pottery from the total site assemblages. This excludes the commonest undifferentiated GREY fabric which accounts for the remaining percentage for each site.

Both samian and BB1 highlight sp72 as an unusual site, and demonstrate the chronological gap in the deposition of pottery there, coinciding with the main period of trading of both wares into Lincoln. The sites divide into two broad groups, the largest composed of those with high proportions of early fabrics, and the smaller group of those without, the cathedral sites, wb80 and wc87.

The fabrics indicative of 1st-century occupation are the Iron Age tradition wares, IASH and IAGR, and the early grey, EGRY (predominantly LEG fabric, with GRSA and IASA). The fine wares can be split between early, middle and late, and although the quantities seldom account for 1% of a site assemblage, about 1.5% early fine wares (continental imports and RDSL) occurs at both East Bight sites on the defences, eb80 and ebs, and show a presence below 1% at all other sites except the cathedral sites, and wc87, with only a tiny quantity at wb80.

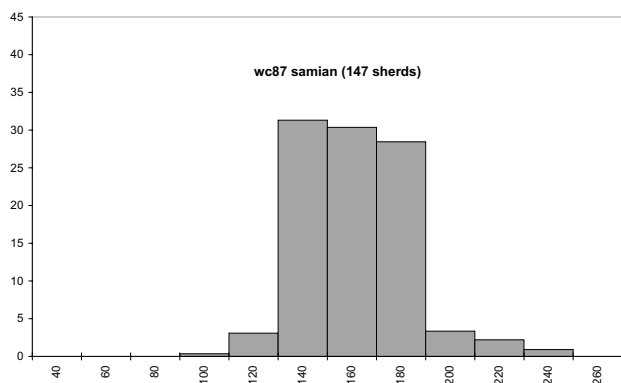


Fig 14.7 Continued.

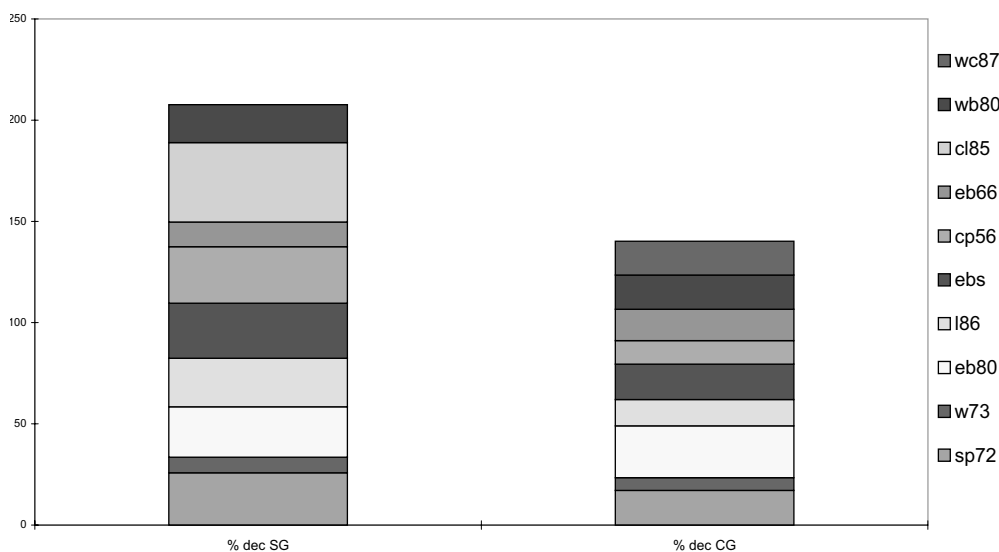


Fig 14.8 Chart of percentages of decorated samian sherds by source

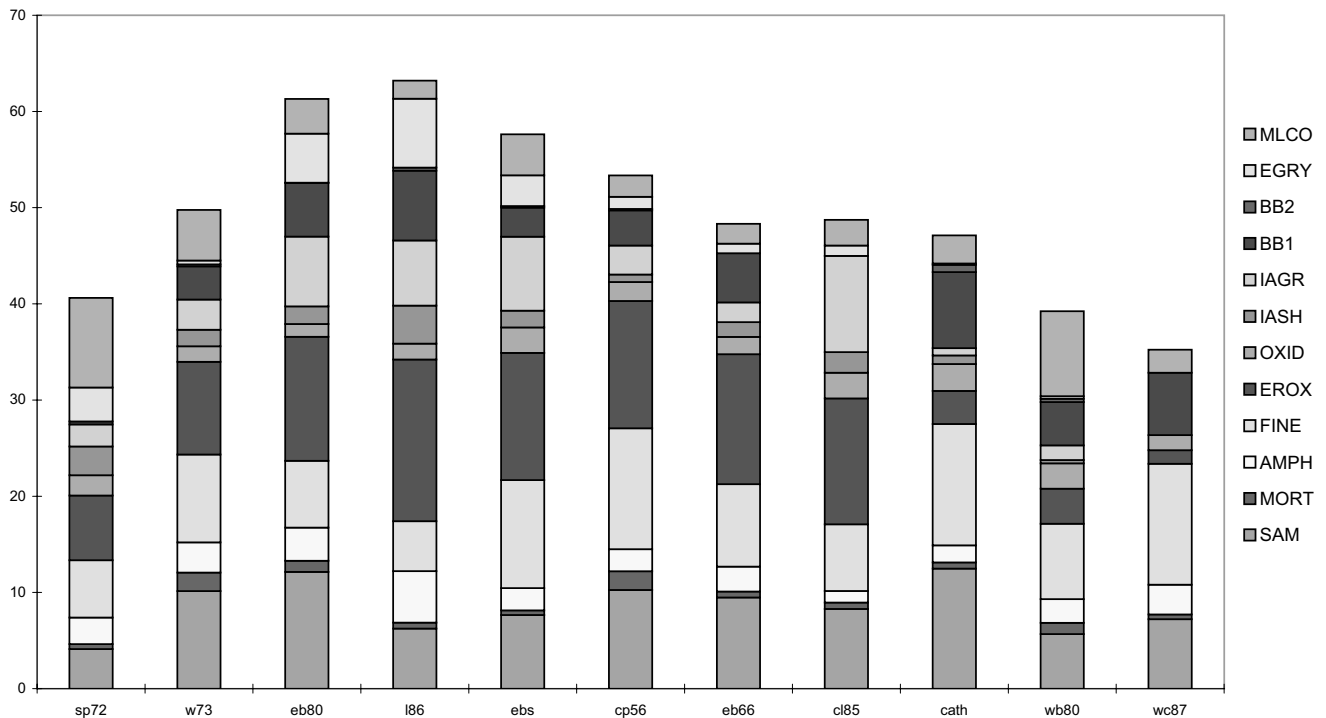


Fig 14.9 Chart of fabrics by site

The occurrence of BB1 is largely 2nd century, continuing into the 3rd century, while EROX (earlier oxidised fabrics, largely flagon-types) effectively spans the 1st and 2nd centuries, so there is no clear indicator for the 2nd century. However, the relative paucity of EROX is notable at the cathedral sites, wb80, wc87 and to a lesser extent at sp72, noted above.

Later Roman content can be measured by the proportions of the main fine wares (NVCC, etc.), concentrated in the 3rd but continuing into the 4th century, later fine wares (OXRC, MHAD, SPCC etc.) and later coarse wares grouped as MLCO, characteristic of the mid 3rd through the 4th century, as DWSH, LCOA, SMSH and various Crambeck fabrics, the last two both rare in Lincoln. All sites have the mainline fine wares, but notably only two have significant quantities of the MLCO group, namely the adjacent sites of sp72 and wb80, while w73 has the next highest percentage. The late Roman pottery at w73 came exclusively from post-Roman dumps, and deposition of a similar date occurs at cl85 and eb80. The later fine wares are consistently below 1% of an assemblage (merged with other fine wares in the chart), but the largest percentages are again at the same two sites, sp72 and wb80. The lowest percentages of later Roman pottery come from l86 and eb80, closely followed by cl85 and eb66.

### Overview of sites by vessel function (Fig 14.10)

All the vessels types in the archive database have been assigned possible functions, according to their fabric and other evidence. The total assemblages from the Upper City sites have been analysed on this basis to examine the functional character of the individual sites.

The functional categories are: LH Liquid Holders; DR Drinking vessels; TW Tableware; TK Table-to-Kitchen wares; K Kitchen wares, cooking or food preparation; S Storage vessels. Other functions are also recorded, as W Writing (inkwells), I Industrial, L Lighting and R Ritual.

The chart (Fig 14.10) shows the functional analysis of the total site assemblages. The remaining percentage consists of sherds which cannot be assigned to function, and the minor categories of writing, ritual etc. Clearly such functions assigned to sherds have chronological complications, not merely from the cessation of samian imports, but also from the fact that NVCC beaker sherds can be securely identified as drinking vessels, whereas bodysherds from LEG fabric closed vessels could be beakers, jars, or flagons. Although the overall pattern follows that of other areas of the city and some sites appear similar, other sites diverge markedly, particularly sp72, eb66 and eb80. The lowest

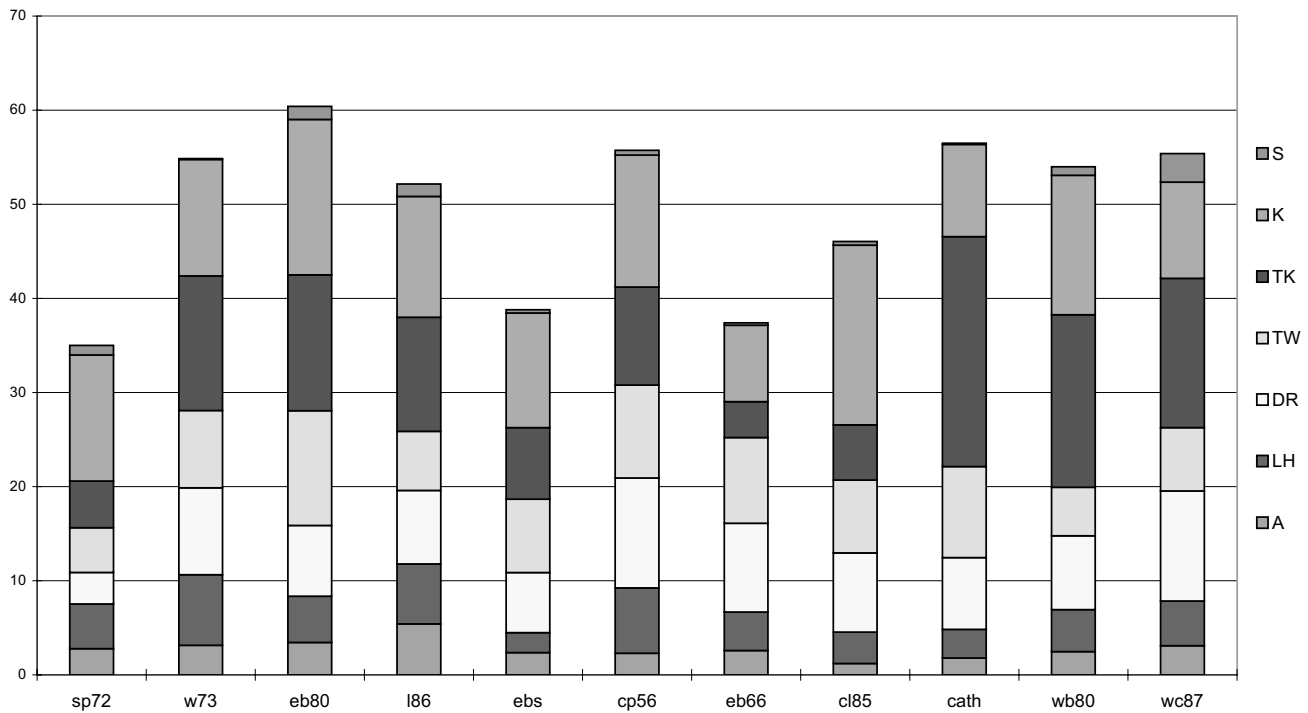


Fig 14.10 Chart of functional analysis by site

percentages for drinking vessels and tableware are from sp72 (almost certainly due to chronological factors), also low on table-to-kitchen, and while eb66 follows the broad pattern for most functions, it has the lowest percentages for both table-to-kitchen and kitchen wares, the main vessels represented being drinking vessels and tableware. Given the chronology of the site, this indicates an abnormality, largely from the rampart dumps. When eb80 is plotted as a graph, the resulting line is an almost straight slope up to a peak of kitchen wares, the main difference from other sites being a high percentage of tablewares, largely but not exclusively due to the high quantity of samian.

Similarities occur between sites. w73 and l86 are alike, although the latter has the highest quantity of amphorae. The two sites representative of later Roman assemblages, wb80 and wc87, have a resemblance, although the more 3rd-century emphasis at wc87 is shown by the higher percentage of drinking vessels, and consequent lower kitchen wares. The East Bight site (ebs), investigated by the local Society in 1970–83, follows a similar pattern to that of cp56, the main differences being fewer liquid holders and drinking vessels at ebs; the paucity of drinking vessels is likely to be linked to chronology, but more liquid holders would normally have been expected from this site with its earlier Roman emphasis.

Of the minor functions, inkwells occur only on sp72

and cp56; industrial evidence in the form of crucibles comes from sp72, cp56, eb80 and eb66. Lighting ceramics were found on eb80, ebs, l86, cp56 and wb80. Ceramics likely to have been used for some ritual purpose, including face and head pots, tazze, etc., occur on most sites, the exceptions being the small sites of w73, cl85, the various cathedral sites, and wc87.

Taken overall, the Upper City sites differ from the Wigford suburb and lower city sites in having higher quantities of amphorae and liquid holders, both largely due to the earlier Roman emphasis for such vessels. There are few differences between the areas of the city for tablewares, kitchen and storage vessels. The Upper City sites produce the lowest percentages of drinking and table-to-kitchen vessels, even if the abnormal site sp72 is excluded. This is probably largely due to chronological changes in the types of pottery in use, and limitations on our ability to assign functions consistently to sherds. As noted above, drinking vessels are more readily identifiable from the 3rd century with the arrival of NVCC beakers. Analysis of the vessels that can be assigned to the table-to-kitchen range shows that the bulk occurred from the early 2nd century onwards, coming largely from the arrival of BB1 and the continued copying of vessels of BB1 types. The reeded rim bowl, a classic of the Neronian-Flavian to Trajanic periods, fits this function, but is rare in Lincoln, an unusual regional trait almost certainly derived from the legionary

period where the pottery of individual legions varied. Ideally, glass vessels should be integrated with pottery in functional studies, but there are problems, particularly due to the recycling of glass.

## Very late Roman to middle Saxon

### *Churches*

Cutting into the forum courtyard were the slots of a timber building (Structure 3, sp72 LUB 19), the undated remains of a possible church. These features were subsequently cut by possible scaffolding postholes (sp72 LUB 20) for a later timber building (Structure 4, sp72 LUB 21), an apsidal-ended church. Structures 3 and 4 could, on stratigraphical grounds, date to any period between the very late Roman period and the Middle Saxon period. It is not known whether either Structure 3 (sp72 LUB 19) or Structure 4 (sp72 LUB 21) was directly associated with inhumations. However, two graves (sp72 LUBs 22–23) may have cut the construction trench of, or preceded Structure 4 (sp72 LUB 21); they were aligned north–south, in the north–south slot which held the posts for the chancel screen dividing the apse from the nave. Precise dating of the burials is impossible; sp72 LUB 23 at least represents reinterred remains and could be interpreted as a foundation deposit.

Within the area of the apsidal church (Structure 4, sp72 LUB 21) was a cist burial (sp72 LUB 24), although no trace of a body was recovered. A 7th-century hanging bowl was recovered from the edge of the grave. The cist burial (sp72 LUB 24) may have been inserted into the apsidal church, but it alternatively could relate to a graveyard or to Structure 5.1 which post-dated that building. Structure 5.1 may have represented the remains of a parish church, or of a pre-existing chapel or mausoleum; it may have been preceded by a timber building on the same plan, of which only hints were found in 1978. A number of other inhumations (sp72 LUBs 26–30) directly cut the underlying Roman stratigraphy; the range of radio-carbon burial dates from some of these suggests that the burial ground was in use for several centuries, certainly during the middle Saxon period and probably earlier. There were inhumations (sp72 LUB 32) which were both later than the apsidal church and earlier than the single-cell church (Structure 5.1, sp72 LUB 43), indicating that there must have been a time when the graveyard was associated with no standing church on the site, but conceivably with a church located beyond the limit of the excavation.

Some of the other sites in the centre of the Upper City produced some Early and Middle Saxon pottery, but what this meant in terms of function or areas occupied is uncertain.

### *Extramural occupation*

Although there are no stratigraphic features definitely dating to the Anglo-Saxon or the middle Saxon period, excavations at the Lawn produced a concentration of Saxon pottery – six sherds of Early Saxon pottery and 64 of Middle Saxon sherds. The Middle Saxon pottery was confined in date to between the late 7th and 8th centuries, suggesting that there was activity nearby during that period.

## Middle/late Saxon period

The single-cell stone-founded building (Structure 5.1, sp72 LUB 43) possibly dated to the late Saxon period although a middle Saxon date is also likely. As the cist burial with the hanging bowl (sp72 LUB 24) was central to this building, it may have been the *raison d'être* of the building – Structure 5.1 may have originally been a mausoleum or chapel; the small size of the building supports this interpretation (internal measurements of 7m by 4.2m). It is possible, however, that the central location of the cist burial (sp72 LUB 24) was fortuitous and that the building was a small late Saxon parish church.

## Late Saxon period

### *Occupation within the walled Upper City*

About 15m to the east of the single-cell building (Structure 5.1, sp72 LUB 43) and possibly encroaching on the graveyard, was a sunken building (Structure 6.1, sp72 LUB 45), built in the late 10th century among the ruins (sp72 LUB 18) of the portico, Structure 2C. This building possibly lay to the rear of a building fronting on to a road to the east; certainly the path from the sunken room opens out towards the east, probably giving access to the well. The road which lies to the east today (Bailgate), was not located directly over a Roman road but had encroached westwards over the sites of the columns associated with the forum-basilica. The Roman street lay a little further east. By the 10th century there might have been a north–south road about 15m to the east of Structure 6. The location of the sunken building, Structure 6.1, may have been influenced by the proximity of the Roman well, just 5m to the north-east; the building was used for metalworking and water was essential to this process. Structure 6.1 remained in use until the 11th century.

Structure 6.1 collapsed (sp72 LUB 47) and was replaced by Structure 6.2, about a metre further west; this building certainly cut through the remains of earlier burials. Structure 6.2 was constructed and in use (sp72 LUB 48) in the 11th century, but was

abandoned by the second half of the 11th century; this building too was probably associated with metalworking.

There was pitting from the late Saxon to Norman periods at Chapel Lane (c185 LUBs 14–15) and this may relate to nearby structures, possibly the re-use of the Roman precursor of West Bight to the east. There were pits and a dump in Trench 2 at the nearby West Bight site (wb80 LUB 10); the only dating evidence was part of a late Saxon whale-bone casket-mount.

## Norman period

### *The Early Norman occupation*

Work on the Synthetic volume for this project (Stocker *et al* 2003) and on the Lincoln Urban Archaeological Database has enabled a radical reinterpretation of the development of the Early Norman establishment to be proposed (Stocker and Vince 1997; Fig 14.11). The area of the castle in the early Norman period (Fig. 14.11b) is

now seen as covering the whole of the former upper Roman city (987,000 sq m), and it is now thought possible that the 166 houses recorded in 1086 in Domesday Book were not destroyed but just no longer paid geld. The motte of the castle is seen to be located in the south-west corner of the Upper City and the bailey the rest of the walled area. Within the bailey the Bishop Remigius built a defensible tower (Gem 1986) similar to other great Norman towers and symbolising the new bishop's secular lordship. Stocker and Vince argue that this tower was constructed at the west end of the Anglo-Saxon church of St Mary of Lincoln, whilst work on the new Norman cathedral began to the east of the existing nave. Possible traces of activity related to the construction of the tower were recovered in dg83 (cathedral LUB 42) and lc84, Area C (cathedral LUB 39).

Immediately to the south of the well-head at sp72, postdating Structure 6, were a number of late 11th-century surfaces associated with non-ferrous metalworking and iron smithing (sp72 LUB 52). The area was cobbled (sp72 LUB 54) at the end of the 11th century, which perhaps indicates Norman influence

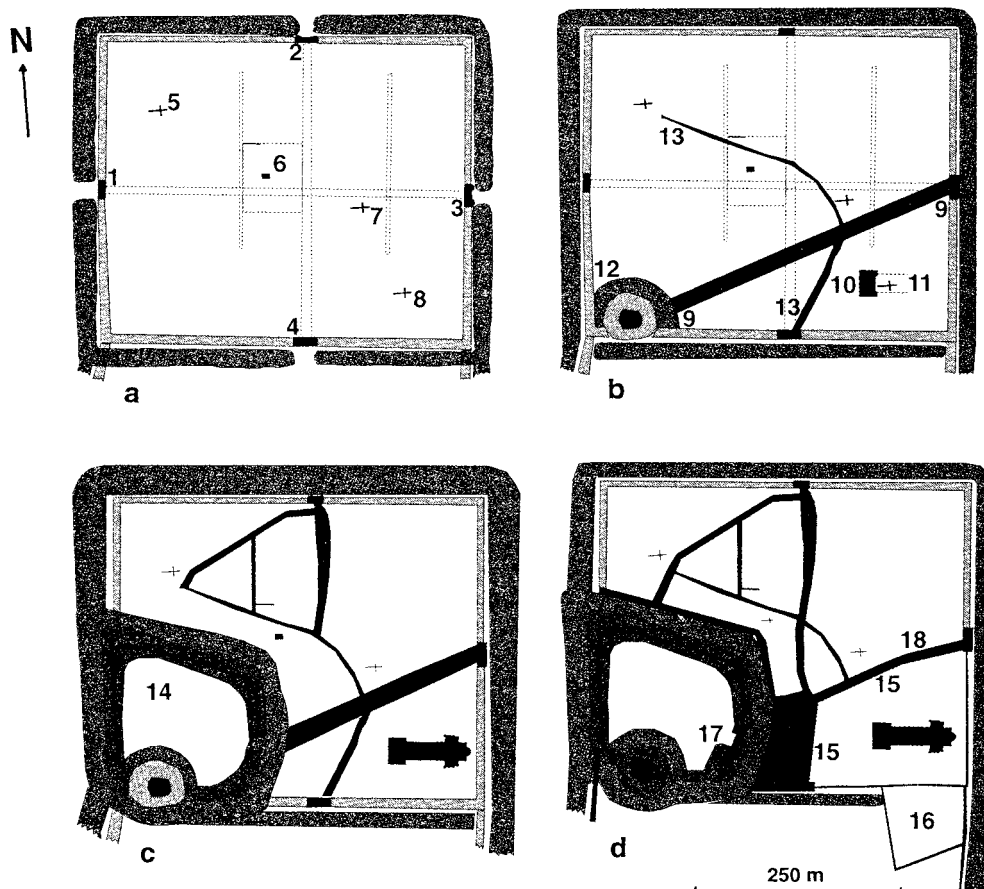


Fig 14.11 Development of the Upper City in the early Norman period c1050–c1140 (source Stocker and Vince 1997)

– the tidying up of the area around the well with a cobbled surface perhaps giving access to it.

Stocker and Vince (1997) suggest that shortly after or even before a road from the motte to a new east Bail gate was laid out, there was a road linking the churches of All Saints, St Paul and St Clement, running diagonally across the Bail and influencing later topography (Fig 14.11b).

## Early medieval

### *Fortifications*

By the early 12th century the motte was being enclosed in the south-west corner of the Upper City by the bank and wall of the inner bailey (Fig. 14.11c), and with this enclosure the defensive importance of the Upper City walls diminished in the mid 12th century (Stocker and Vince 1997). Part of the line of the eastern Roman and Norman wall (lc84 Area B LUB 26) was demolished in advance of the extension of the cathedral at the end of the 12th century/early 13th century.

### *Occupation within the Upper City*

From the excavations in the Upper City (wb80, cl85, mw79 and eb80) it would seem that at least in the central area there was fairly intensive occupation here during the early medieval period associated with West Bight and the putative diagonal lane between the churches. Part of the north-western quarter was used as a source of building stone (w73).

A stone-founded building (Structure 5, wb80 LUBs 12–13) fronted on to West Bight, with a pit and dump to the rear (wb80 LUB 14) in Trench 2. To the south in Trench 3 there was also evidence of occupation including a pit (wb80 LUB 15). Both LUBs 14 and 15 were associated with mid 12th- to mid 13th-century pottery. There was also pitting in the early medieval periods at cl85 (cl85 LUB 16) and this may relate to nearby occupation continuing at West Bight to the east.

Pits behind the northern defences (eb80 LUB 28) were possibly related to nearby properties.

In the north-western quarter of the Upper City was a north-south dry-stone boundary wall (w73 LUB 8), a possible lime- or malting-kiln (w73 LUB 9) and quarry pits (w73 LUB 9). Pottery from the kiln and pits suggests that there was activity on the site between the mid 12th and 13th centuries.

### *St Paul-in-the-Bail*

A chancel (Structure 5.2B, sp72 LUB 70) was added to the single-cell building; the earliest date for this was in the later part of the 12th century, according to worked stone reused in the foundations. Some time after the chancel was added, according to the number of generations of inhumations cut by the foundation trench, the nave was extended (Structure 5.3A, sp72 LUB 71) and against the extension were buttresses (sp72 LUB 72). The chancel was later widened (Structure 5.4B, sp72 LUB 79) and an aisle was added (Structure 5.4C, sp72 LUB 80) in the early 13th century.

### *The cathedral*

At lc84, Area B the truncated Roman wall was used as foundations for St Hugh's choir, and dumps built up the ground over the Roman ditch (cathedral LUB 26). After demolition of the Norman nave, fragments were incorporated into the early 13th-century pier foundations (lc84 Area C, cathedral LUB 40).

### *Activity to the west of the Upper City*

The church of St Bartholomew was built outside the west gate, in the north-west part of the grounds of what is now the Lawn (see Discussion section of Chapter 6), together with its associated graveyard (Lawn LUBs 30–32). A lime-kiln (Lawn LUB 28) was possibly associated with its construction. Both the fill of a bell pit (Lawn LUB 31) and the backfill of the kiln (LUB 29) contained similar pottery dating to between the late 11th and early 12th centuries.

Between this church and the west wall of the castle was domestic occupation, represented by pits and dumps (Lawn LUB 33) and an oven (Lawn LUB 34).

The Lawn excavations cut across the site of a large rectangular earthwork feature shown on William Stukeley's 1722 map of Lincoln; pottery from dumps (Lawn LUB 36) may suggest that it was constructed before the late 12th century. This earthwork may represent the location of trials by battle which took place at least by the 13th century (Hill 1948, 359). Evidence for battle scars was observed on an individual from one of the graves (Lawn LUB 32; Boylston and Roberts 1994, 13–14).

### *Activity to the east of the area of the Upper City*

Traces of a 13th-century building were revealed at wc87 on a plot running from Greetwellgate to Winnowsty Lane in the suburb of Eastgate (Structure 4, wc87 LUBs 13–14).

## High medieval

### *Activity within the Upper City*

Occupation may have been more centrally concentrated during the late 13th and early 14th centuries (mw79 and wb80) with quarrying in the north-west (w73).

In the centre of the Upper City, just north of the postulated diagonal lane, were traces of occupation – one possible building (Structure 3, mw79 LUB 6) followed by a cobbled yard (mw79 LUB 7) and another building (Structure 4, mw79 LUB 8). The yard and Structure 4 were both dated by pottery and finds to between the early 13th and 14th centuries.

To the north, the early medieval building (Structure 5, wb80 LUBs 12–13), associated with West Bight, continued in use throughout this period.

Behind the northern defences, dumping (eb80 LUB 30) was associated with late 13th- to early 14th-century pottery; the dumps were cut by a boundary fence (eb80 LUB 31).

In the north-west quadrant of the Upper City, quarrying was still taking place inside the city walls (w73 LUB 13); the backfill of the quarry pits was dated by the pottery to between the 13th and 14th centuries.

### *The cathedral*

The elucidation of the structural history of the north-east transept chapel was the main purpose of excavations cat86. Pottery evidence suggests it was constructed between the early and early to mid 13th century (cathedral LUB 12), and this date would support the interpretation of the chapel as the original location of the body of St Hugh, before being transferred to the purpose-built Angel Choir (Stocker 1987; Antram and Stocker 1989).

St Hugh's Choir was replaced by the Angel Choir between 1256 and 1280; the foundations of the Angel Choir (cathedral LUB 1) in lc84 Area A were revealed, together with mid to late 13th-century pottery from the construction trench. Architectural fragments from the demolition of St Hugh's Choir were found in a contemporary dump (cathedral LUB 28) lc84 Area B as well as later dumps here and at cat86.

Although the Chapter House was begun before 1220, the flying buttresses appear to have been added somewhat later, in or after the latter part of the 13th century (cathedral LUB 6).

### *St Paul-in-the-Bail*

The church was rebuilt in 1301 (Structure 7, sp72 LUB 91); the tower (Structure 7E, sp72 LUB 92) was

probably constructed at the same time. In the early 14th century there were alterations to the Roman well-head (sp72 LUB 107).

### *Activity to the west of the Upper City*

The graveyard and church of St Bartholomew (Lawn LUBs 30–32) continued in use during this period, although documentary sources indicate that the church was demoted from a parish church to a chapel, and the cemetery became an overflow for the cathedral chapter.

## Late medieval

### *Activity within the Upper City*

The excavations produced less evidence for occupation in the Upper City in the Late Medieval period than in the previous periods, in keeping with the decline in the city's population. Among the discoveries were two kilns (mws83 and wb80). It would seem that quarrying continued close to the western defences (w73).

Fronting West Bight, the earlier medieval building (Structure 5, wb80 LUB 14) continued in use throughout this period.

Dumping took place at two sites, Chapel Lane (cl85 LUB 17) and East Bight (eb80 LUB 32), and pitting was found at the former. There was a malting kiln (mws83 LUB 4), whose backfill included late 15th-century pottery, over the site of the north wall of the Roman basilica, whose remains had been robbed (mw79 LUB 10). Near the north face of the Mint Wall there were pits and a kiln (wb80 LUB 17).

The church of St Paul-in-the-Bail continued in use throughout this period.

In the north-west quadrant were late medieval pits, possibly indicating quarrying (w73 LUB 15) and wheel ruts cutting through rubble (w73 LUB 16).

### *Cathedral*

The foundations of the Fleming Chapel were revealed in lc84 Area A (cathedral LUB 2). The date of this chapel relies on the date of Bishop Fleming's death in 1431 (Antram and Stocker 1989, 473).

### *Activity to the west of the Upper City*

The graveyard and chapel of St Bartholomew (Lawn LUBs 30–32) continued in use.



## Post-medieval

### *Civil War deposits?*

In the 17th century, the well at St Paul-in-the-Bail was partially backfilled (sp72 LUB 109), possibly as part of a clearance operation immediately following the Civil War battles (Mann (ed.) forthcoming).

A pit in the Nettle Yard (cathedral LUB 36) was also backfilled with much architectural stone; the period of deposition of these fragments might suggest that this activity is linked to the Puritan iconoclasm of the 17th century, and in particular, during the summer of 1644, during which the shrine of Little St Hugh was despoiled (Stocker 1986). A small fragment from the shrine was recovered from the backfill of the well at St Paul-in-the-Bail.

### *Activity within the Upper City*

Evidence of occupation was found in the centre of the Upper City (wb80 and mw79); activities included lime burning (mws83 and wb76). Quarrying had ceased near to the western defences (w73).

Fronting on to West Bight, the early medieval building (Structure 5, wb80) continued in use although there were alterations and a well was inserted (LUB 19). Excavations at mw79 located a tile-floored cellar (Structure 5, mw79 LUB 12), of post-medieval date, if not earlier. Clay tobacco pipe stems from the demolition (mw79 LUB 13) suggest that the building continued in use into the post-medieval period. A north-south wall (cl85 LUB 19) was probably post-medieval in date.

A lime-burning pit was excavated to the south of the Mint Wall (mws83 LUB 8); its fill (mws83 LUB 9) contained 18th-century pottery. Another possible lime-kiln was excavated further west (wb76 LUB 7).

In the north-west corner of the Bail a north-south boundary wall (w73 LUB 19) was associated with 17th- to 18th-century pottery. The wall collapsed and was sealed by loam dumps (w73 LUB 20).

### *Activity to the west and east of the Upper City*

Although burials continued during this period (Lawn LUB 32), the chapel of St Bartholomew itself was demolished in the 17th century, according to the documentary evidence (see site discussion). A lime-kiln dated to the 17th century or later (Lawn LUB 38) may have been associated with the demolition of the chapel, with the construction of stone buildings requiring mortar, or used for fertiliser purposes. A glue factory was subsequently built on the same plot, taken over by the House of Industry in the 1780s (Hill 1966, 184).

To the west of the castle ditch was a north-south road, the predecessor of Union Road (Lawn LUB 39), with an east-west road (Lawn LUB 40) running off to the north, the successor of the medieval Cliffgate. There were adjacent buildings (Lawn LUBs 41-42).

To the east of the Upper City, on the south side of Greetwellgate were pits (wc87 LUB 16) with late 15th- to 16th-century pottery, confirming continued occupation along Greetwellgate.

### *Cathedral*

The chapel off the north-east transept was demolished (cathedral LUB 17) and a smaller polygonal chapel created in 1773 (cathedral LUB 20), with some attention to drainage requirements (cathedral LUB 21).

### *St Paul-in-the-Bail*

The late medieval church of St Paul-in-the-Bail continued in use until 1784. Its chancel and chapel had been rebuilt in 1700 (Structure 7.2B, sp72 LUB 110). After its demolition (sp72 LUB 111) it was replaced by a smaller church (Structure 8, sp72 LUB 112) based on the site of its nave, built by 1786.

## Modern

### *Activity within the Upper City*

Some modern deposits were excavated (mw79 LUB 14), (mw79 LUB 15), (mws83 LUB 10), (wb80 LUBs 22, 23 and 25), (eb80 LUB 33), and (w73 LUB 21). At Chapel Lane, the north-south wall was demolished (cl85 LUB 20) and the area sealed by concrete (cl85 LUB 21).

### *Cathedral*

The evidence of 18th-century material suggested repair work or similar activity in the 18th century or later (cathedral LUBs 44-45) in the southern part of the Dean's Green.

### *St Paul-in-the-Bail*

In 1877 the Georgian church was demolished (sp72 LUB 117) and a large Victorian church (Structure 9, sp72 LUB 118) built to replace it. This was in turn demolished (sp72 LUB 119) in 1971.

### *Activity to the west of the Upper City*

A cellar may represent the only surviving part of the Union Workhouse (Structure 4, Lawn LUB 46), which

had replaced the House of Industry. The Lawn was constructed in the early 19th century as a lunatic asylum, to the south of that site. By the middle of the century the workhouse had been demolished and the Lawn grounds extended to the north. There was evidence for landscaping and gardening associated with the asylum (Lawn LUBs 47–55).

### *Activity to the east of the Upper City*

To the south of Greetwellgate was a quarry pit (wc87 LUB 17), documented from the post-medieval period onwards. This quarry gradually encroached on settlement to its west, leading eventually to the excavation of mines adjacent to the excavated site.

## Summary of post-Roman pottery from sites in the Upper City

### *Jane Young*

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 14.12 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. 14.12) 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 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.

	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 14.12 Table showing recovered post-Roman pottery by period as percentages by site

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 (Fig. 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.

## Conclusions

by K Steane

The excavations have provided important new evidence for the legionary fortress, particularly of the *principia* (sp72) and some of the lesser buildings (cl85, eb80 and w73), as well as implications for the street pattern. They have added to our understanding of the development of the defences from the legionary period through to late Roman occupation (previously discussed in detail in Jones, M J 1980). Traces of possible early military activity, to the west of the later fortress at the Lawn, have provided a new perspective on the development of the Roman occupation on top of the ridge but owing to later disturbance this cannot easily be interpreted.

The change from fortress to *colonia* can be recognised, particularly in the centre of the fortified area (sp72), and the evidence here suggests continuity rather than any period of abandonment. The fragments of the forum-basilica complex recovered (sp72, mw79, wb80) do not allow certainty about its changing layout, but are substantial enough to have generated speculation about its form and extent in the mid to late Roman period (since Jones and Gilmour

1980). More extensive evidence than that provided by the small excavations at mw79 and mws83 and by the various watching briefs in the area is needed before we can test these hypotheses. The excavations have provided more evidence of the Roman *colonia* street layout (cl85, wb80 and eb80). We now know that there was some extramural activity both to the west of the Roman *colonia* at the Lawn and to the east (wc87).

The late Roman period was characterised by some physical changes, including decay: the roads at wb80 and eb80 appear to go out of use, and there is evidence for late to very late 4th-century robbing of part of the forum-basilica complex (sp72 LUB 18). It is uncertain whether the upper *colonia* ceased to be intensively occupied during this period, while occupation continued in the lower *colonia* and in the suburbs. The early churches in the forum could even belong to the last few decades of the Roman period.

The apsidal church (sp72) was one of the most exciting discoveries in the city as a whole, let alone the Upper City. However, the date of the timber churches located in the ruins of the forum courtyard remains unclear – they could be as early as Late Roman or as late as middle Saxon. The Middle Saxon burials argue for some occupation at this phase, but they may have been associated with the later single-cell stone-founded building – which may have originated as a mausoleum or chapel (sp72). This religious and ritual activity may have been linked with the probable Middle Saxon occupation to the west of the remains of the upper *colonia* (at the Lawn).

By the late Saxon period there was evidence for secular activity within the upper defences in the form of the sunken-floored building, which possibly encroached onto the graveyard of St Paul-in-the-Bail (sp72). There is some evidence for other late Saxon occupation (cl85 and wb80) but little understanding about how extensive this was, and when exactly it began.

Our understanding of the development of the Upper City during the early Norman period has been radically modified by the new model provided by Stocker and Vince (1997). In most parts of the city there was evidence for Saxo-Norman continuity, as there was at cl85, but at sp72 there is a clearer divide between late Saxon and Norman activity. The sunken building was abandoned and metalworking was carried out to the east of the Roman well. By the end of the 11th century this area was cobbled. Further excavations are required to test the hypotheses of Stocker and Vince.

For several centuries after the Norman period the Upper City was dominated by secular and ecclesiastical power. The castle in the south-west quarter of the enclosure and the Bishop's Palace to the south-east were both complete by the mid-late 12th century.

The development of the Upper City from the early medieval period can be partially traced in the surviving street layout and the buildings (Jones *et al* 1996). It might seem that below-ground archaeology of the excavations examined here has relatively little to add to our understanding of the Upper City from the early medieval period to the present day, compared to the rich resources of the standing buildings and documentary evidence of the Upper City. Excavated deposits can, however, yield important data about social, economic and environmental aspects, as well as serving as a check on dating.

Quarrying in the medieval period in the north-west part of the area (w73) indicates that there may have been intensive occupation of the centre of the Upper City, but that it did not extend to cover the whole of the walled area. The stone may have been intended for the castle, cathedral, city walls, or houses.

The excavation of the well in the churchyard of St Paul-in-the-Bail (sp72 Area A), backfilled during the 17th–18th centuries, has revealed something of life in the post-medieval period; finds from the well are discussed in detail elsewhere (Mann (ed) forthcoming).

### Suggestions for further work in the Upper City

#### *Alan Vince*

Unlike Wigford, where redevelopment can be expected to continue on a large scale, the Upper City, or at least the area within the walls, is afforded considerable protection through its status as a conservation area. It also contains a large number of Scheduled Ancient Monuments and Grade I and II\* listed buildings. This statutory protection is, however, also a barrier to further large-scale archaeological investigation. Furthermore, the remains found at St Paul-in-the-Bail are unique. None of the remaining questions over the date or interpretation of the church sequence could easily be solved by further excavation since the evidence has been almost entirely removed by excavation; only at the west end would further investigation add to our understanding, especially of its relationship to the forum.

To a great extent, therefore, further advances in our understanding of the archaeology of the Upper City

will come from comparative analysis of other fortresses, *coloniae*, and late provincial capitals for the Roman remains, and of other Anglo-Scandinavian and medieval towns in western Europe for the later periods. It may well be that, following such studies, specific questions can be posed of the surviving remains that can be solved by keyhole archaeology. In general, however, the experience of the past two decades has been that the archaeology of the Upper City cannot be understood through keyhole excavation and that even open area excavation such as that at St Paul-in-the-Bail cannot answer simple questions of chronology because of the thin and disjointed nature of the stratigraphy and the very high incidence of residuality in the finds.

To “leave well alone” is not, however, a perfect solution since, despite all its protection, the Upper City’s archaeology is steadily and remorselessly being eaten away through the actions of statutory providers of services, who may in a matter of years have removed much of the archaeology sealed below the Upper City’s streets and pavements, and by the actions of individual tenants who do not require planning permission to dig in the grounds or below the floors of their properties. The best solution is to fully document the archaeological history of the area, to model the below-ground strata as best one can, and to establish, by a cellar survey and a detailed study of levels, which parts of the area have already lost their archaeological potential. This summary of the existing state of affairs can then be compared with the synthesis of the Upper City’s development presented here to arrive at a strategy for the protection and investigation of the Upper City’s archaeology. These objectives have now been partly achieved through the Lincoln City Council/English Heritage Urban Archaeology Initiative.

Whatever the outcome of these initiatives, it remains the case that the largest source of data for the archaeology of the Upper City is the archaeological archive created for the 1972–1987 excavations, and the data from the as yet unpublished Cottesford Place excavations of 1956–8. The best way of ensuring that understanding of the development and function of the Upper City continues is to make sure that this archive, consisting of the totality of paper and graphical records, finds and the computer database which integrates them is maintained, adequately curated and made accessible for research.

# Appendix I

## The Archiving and Analysis Projects

*Alan Vince and Kate Steane*

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A post-excavation team was established within the newly formed City of Lincoln Archaeology Unit in early 1988 dedicated principally to the Lincoln post-excavation project, funded by English Heritage following an assessment of the backlog of work on sites investigated to the end of 1987. Alan Vince was appointed to manage this team, and other key personnel included Mickey Dore as Archives Officer.

### A. The paper archive

The first element of the post excavation project (1988–1991) involved the ordering and listing of the paper archive. The archive was divided into a number of record classes, including context cards, site notebooks, plans, sections, registers and so on. Each class was given a number and each item not physically attached to another within the class was separately numbered within its class. Thus, a three-part code was assigned to every item of which the first part is the site code, the second a class number and the third an individual record number. Where an archive record referred to more than one excavation, for example a finds specialist report, it was sometimes copied, and copies placed in each site archive (for records of two or three pages or so in length); or alternatively, the record was either placed in the main site archive or in the archive of the first site mentioned in the report and cross-referenced in the index to the other archives.

#### *Site Codes*

All excavations carried out by the Lincoln Archaeological Trust and its successors employed a system of site codes to distinguish excavations. Each code consists of two parts, the first being a one-, two- or three-letter (mnemonic) code based on the common

name of the site (e.g., wb = West Bight) and the second a year code. The site code is used to identify site records, finds and environmental samples. The only parts of the site archive not marked in this way are letters and administrative files (which have now been systematically sorted and catalogued by the team's record officer). Some confusion arose, however, from the practice on long-term projects of assigning a new site code at the start of each year's excavation. By and large, the system of context numbering was carried over from year to year but in some cases a new series of finds register numbers was started at the beginning of a new season. This led to a situation in which the year code is irrelevant to the management of the site stratigraphic data but crucial for registered finds. This problem has been dealt with by amalgamating multi-year excavation records under the code of the first year in which the site started.

A further problem, which only became evident as post-excavation analysis got underway, occurred where two sites excavated in different seasons and with different site codes were so closely related in terms of their results that they could only sensibly be analysed together. In the Upper City this is particularly the case with the excavations in the grounds of the Lawn carried out over the period 1984–7.

#### *Categories used in the archive*

Below (Table 1) is a conspectus of the archive system showing the number of categorized items and what each category represents.

Each item to be archived was given the site code, the category number and an item number. Thus sp72/5/10 would indicate a plan from St Paul-in-the-Bail and that it is the tenth plan in the archive sequence.

no. item	no. item
1 index	16 Roman pottery data
2 context sheets	17 Post Roman pottery data
3 context cards	18 Other finds data
4 matrices	19 interim reports
5 plans	20 specialist reports
6 phase plans	21 documentary material /comparanda
7 sections	22 draft reports/final typescript
8 elevations	23 miscellaneous
9 dye-lines and publication plans	24 publication/public relations
10 sketches (plans and sections)	25 correspondence
11 black and white photographic prints	26 archive reports
12 colour slides and colour prints	27 environmental records
13 notes	28 animal bone – boxes
14 tabulated data/lists	29 human bone – records
15 survey/levels notebooks	30 administrative records

Table 1: Categories used in the archive

### Stratigraphic Records

All early 1970s excavations in the City were recorded in site notebooks and the nature of the record was left to the discretion of the site staff. Harris/Winchester matrices were not in common use but sketch sections which recorded and explained stratigraphic relationships were often incorporated into the notebooks. Plans were multi-context and multi-phase. Section drawings were usually made of the main sides of the excavation trenches.

Stratigraphic information was often held on index cards but by the late 1970s both notebooks and card indices were superseded by A4 recording sheets modelled ultimately on those used by the Central Excavation Unit (Jefferies 1977). The layout of these sheets went through several modifications, mainly regarding the level of cross-referencing between these records and those kept for photographs, plans, sections, finds and samples but also regarding the extent to which they were intended to be updated during post-excavation work (for example by including boxes for provisional dating, interpretation, location on site matrix and so on). Despite this development in the written record, plans continued to be partly multi-context and multi-phase. Most of the site plans were originally drawn at 1:20 and most elevations and sections at 1:10.

### Monochrome Photographs

In some of the early years of the Lincoln Archaeological Trust site monochrome photographs were taken by a specialist photographer, Nicholas Hawley, who, operating on a self-employed basis, retained ownership and possession of the negatives. Lists describing the subject of the photographs and

sometimes further technical detail were probably made for all films but have often not survived. More recently, monochrome photographs were recorded by a print being attached to A4 pre-printed record cards prior to being annotated by the site staff. These are stored with the site archive while the negatives are kept together.

### Colour Transparencies

In the early years of the Lincoln unit, colour slides were regarded as being an expensive and impermanent medium for an archive record. They were therefore taken with an eye to being used to a certain extent for record purposes, but primarily in publicity and lectures, and they consequently include a high proportion of general views of work in progress which are invaluable for the incidental detail they include. In more recent years, improvements in the archive quality of colour film and a reduction in the cost of colour slides relative to monochrome prints has led to slides being used as an integral part of the site archive, and the resultant production of at least two copies of every slide, one for inclusion in the site archive and the other for day-to-day use. Often, both monochrome and colour photographs were taken of a particular view, and where possible a cross-reference has been provided between the two in the archive.

### Finds Records

A variety of methods was used in the recording of assemblages of bulk finds, animal bone and registered finds. There was, however, no initial index or list of finds from a deposit other than that included in the site record. There is no way to establish that the entire finds archive has been accounted for except to search through all likely repositories carrying out an audit of finds. For many of the older excavations, some categories of finds which would now be regarded as bulk materials, such as clay tobacco pipes or iron nails, were treated as registered finds. Building materials and clay tobacco pipes have been de-accessioned during the course of the project. Another difference between early practice and the present procedure is that artefacts of the same material from the same context were sometimes given a group register number, especially iron objects. These groups have been split where, for example, X-Ray analysis has shown that fragments belonged to clearly distinct objects.

Two categories of material could not easily be treated in the same way as other finds – worked stone and structural timber. The main collection of worked stone from the Upper City excavations, from sp72, is described and analysed in the report. The

Upper City sites were on ground which did not contain anaerobic deposits and consequently no significant remains of structural timber survived.

### *Samples*

Many specialists have worked on aspects of the scientific analysis of material from excavations in Lincoln. Many of these specialists took their own samples from site and kept their own records. Attempts to trace either samples or records from excavations carried out up to 15 years previously in some cases proved to be futile but what documentation exists, either in the form of letters or reports, has been included in the archive.

### *Human Bones*

A preliminary study was made of the human remains from excavations at St Paul-in-the-Bail but the specialist's full report has not been received. All other human bones were studied by A Boylston and C Roberts at the Calvin Wells Laboratory, University of Bradford (Boylston and Roberts 1994).

### *Animal Bones*

The animal bones from some 1972–87 Lincoln excavations were originally studied by T O'Connor and S Scott at the Environmental Archaeology Unit, University of York, and subsequently by K Dobney and other colleagues (see Dobney *et al.* 1996). Original record sheets, draft reports and other records are deposited at the EAU rather than with the site archive.

## **B. Computer Archives**

The computer database was created between 1988 and 1991, although much more work has been undertaken since. It was designed with three main purposes in mind: to aid site interpretation, the study of archaeological data in Lincoln on a city-wide scale, and future research.

In order to enhance analysis and interpretation of the site stratigraphy, it was necessary to allow easy retrieval of the original site records and upgrading and correction of the records without tampering with the archive record itself. Initially, only those sites with large amounts of recorded stratigraphy were fully computerised but it was subsequently recognised that immediate access to the upgraded stratigraphic record was of value even for smaller sites. By ensuring that the same context codes were used in all computer records it has been possible to link together any two (or more) aspects of the computer database. It is worth noting that some

care was needed to make this system work since the paper archive did not need consistency of case when using alphabetical context codes (AA, AAA, etc), nor was it important in the paper record to be consistent in the use of context subdivisions (1a, 1A, 1 A and so on would all have been realised by the users to be the same context whereas the computer system demanded a single, consistent system).

For the second objective, to aid the study of archaeological data in Lincoln on a city-wide scale, one approach might take the form of a search for a particular type or date of artefact or the study of a type of deposit or feature. For example, the entire stratigraphic section of the database has been searched to retrieve deposits in which slag was noted by the site recorder, deposits in which *opus signinum* was said to have been found and for similar purposes.

It was also considered important to lay the foundations for a research archive, in order to enable future researchers to study both finds and stratigraphic data from all excavations in the city.

Four main types of computer record have been created, each with a different type of key field. The three main key fields are the site code, the site context code and the site context group number. The fourth category includes any non-stratigraphic codes.

### *Computer records with the site code as the key field*

Information relating to the whole of an excavation is stored on computer in a directory whose name and path reflect the data type and in a file whose name includes the sitecode. Examples of this type of record are CAD drawings of site matrices and phase plans and text files containing site narratives. These are not interactive, just interpretative files.

### *Computer records with the site context code as the key field*

The majority of data recorded in the CLAU database is stored in comma-separated variable data files, one per site, in which the first field is the site context code.

### *Computer records with the site context group number as the key field*

Separately-recorded stratigraphic contexts have been grouped together, as described below, to create sets or groups of contexts sharing all significant stratigraphic traits. These sets are here termed 'context groups' or cgs but were formerly known internally as 'Text Sections', a jargon term used in the Museum of London archaeological archive in the mid- to late 1980s. These files include both non-interactive, interpretative files and 'csv' data files.

### *Computer records with non-stratigraphic codes as the key field*

There are a number of stratigraphic database tables which relate to the study or classification of finds, principally pottery, in which alphanumeric codes are used. An example would be LKT, a Late Saxon pottery fabric code. These codes are themselves key fields which link to other database tables which normally contain expansions of the code into a full name together with other data, usually relating to source, date or function. As with all aspects of the CLAU database, these tables are themselves being updated and modified in the light of research.

### *The evolving database*

The content of the CLAU database has evolved over the duration of the archive project and new databases were being created as and when specialist studies were carried out. By controlling the structure of all research databases and stipulating and checking their contents once submitted to CLAU it has been possible to ensure automatic interrogation of the data and leaves open the possibility of importing any or all of the CLAU data into other databases and archives.

### **Initial Site Interpretation**

The context records for each site were computerised (csv files). During the time span 1972–1987 there were changes in the type of context sheets used. For ease of input a number of different types of computerised context input files (con74c, con74g, con88, concs73, conhg72, conlin73, conlinsi, conw73 and kevcon1), were created to mirror the different context sheets. All this material was then grouped for easy access into four files (sitecoord, sitedesc, siterel and sitexref) by site.

A stratigraphic matrix was created or, where a matrix already existed, was checked against other stratigraphic data in the archive for consistency. The paper matrix was then digitized as a multi-layer CAD file in which different types of deposit are distinguished by being on separate layers and colours. At this stage the relationships of the deposits was correct but no attempt was made to provide an absolute chronology.

In conjunction with the checking of the matrix, the contexts were grouped together as context groups (abbreviated to cg followed immediately by the number in the published volumes). Grouping contexts was most importantly an interpretative strategy: which contexts represent a single event? This would ultimately lead to a meaningful sequence of events. Context groups may have interpretative

significance with regard to artefacts recovered from them. As a side effect, the reduced number of units making up the site facilitates data manipulation, as well as enhancing inter-site analysis.

### *Reconstruction of the original stratigraphic events*

A considerable amount of interpretation was needed at this stage since the stratigraphic record at most informs us that a series of deposits was laid down in a particular order. Deciding that a number of individually recorded contexts was actually laid down as a single event is a hypothesis which can only be tested if finds or environmental data were recovered and, even then, may well be unprovable. Recognising where the stratigraphic sequence has been truncated is often even more difficult. Often it proved to be impossible to produce single-event groupings, for example, where floor surfaces and make-up deposits could not be separated during excavation or where, as with a soil profile or a long-lived midden, the deposit was created over a period of time, perhaps even as a result of several processes. The classic example of this was the dark earth deposits at certain sites which may incorporate destruction debris from late Roman stone-walled buildings together with deliberately dumped material of late Roman date, and later, late Saxon (Anglo-Scandinavian) material incorporated as a result of soil formation, horticulture or other mechanisms.

### *Facilitating finds and environmental researchers to select or exclude material for further study on taphonomic grounds*

The fillings of a pit, therefore, might be grouped together in a single context group if felt to be a single-period rubbish deposit, but if they were interpreted as being rubbish fills sealed by a contemporary capping then the deposits would be grouped into two groups, since any finds and environmental evidence from the fills would have undergone different taphonomic trajectories. Determining the likely date of an assemblage of industrial waste or animal bone by looking at associated datable artefacts is clearly more likely to be reliable where the deposit is thought to be composed of contemporary refuse than where it is thought to be redeposited.

### *Reducing the number of units making up a site and looking to inter-site comparability*

The precision with which stratigraphy was recorded on site varied from site to site and from the early excavations through to 1987. Excavations in the first five or six years of the Trust's existence used an alphabetical code, starting with AA, for recording,



whereas later ones used Arabic numerals. There was also considerable variation in the degree to which minor variations in a deposit were separately recorded (i.e., in the degree to which interpretation of the stratigraphy took place on site rather than in the post-excavation phase). By introducing another number series the post-excavation team was able to reduce the number of stratigraphic units to be described, phased, interpreted and included in publications.

### *Context group and phasing files*

Once the sequence had been divided up into stratigraphic events the CAD matrix was updated. A series of text files was created for each site, one file for each context group. Each one contained a grouped context number, a list of the contexts included and automatically extracted data from the archive about the plans, sections and photographs on which the relevant contexts are represented; ideally there was also a discussion of the rationale for the contexts forming a single event, and where this grouped context sits in the matrix (its relationships). These text files were initially seen as forming a hierarchical part of the site narrative.

Another set of files, one file for each site, contained a list of context numbers or deposit codes as used on site and the number of the context group to which the deposit had been assigned; internally this computer file was called *phasing*.

### *Relevance of artefacts to the site and the "interp" files*

In parallel with the creation and analysis of the stratigraphic database, work took place on the finds archive. A multi-stage procedure was followed: first the material recovered from each site was assembled and listed. Where existing classifications were available they were used as a basis for the CLAU system but where they were not the listing had to go hand-in-hand with the development of fabric series, form classifications, object name thesauri, standardised notation to express dates and periods and so on. In every case the guiding principles were to allow relationships to be made between data sets and to allow for the expansion of the existing record both by CLAU team members and by external specialists. The question of pottery quantification was addressed (see Appendices 2–3). Work on registered finds proceeded more slowly owing to the greater variety of material present and the need to check all identifications of metal artefacts using X-radiography and, in some cases, investigative conservation.

One result of this series of artefact studies was

the production of information about the absolute and relative date of assemblages and stratigraphic sequences. This information was given back to the stratigraphers who used it to provide provisional dates for the context groups in the form of a broad period (such as Roman, Anglo-Saxon or medieval) and a *terminus post quem*. In the rare cases where it was possible to say that a context group was definitely earlier than a particular date, for example where it was earlier than a well-dated deposit or structure, then a *terminus ante quem* was also given. This provisional dating and phasing was held in the *interp* file; it was used to guide selection of material for further study and was sent to external specialists as a guide. Other information from the artefact specialists was added to the understanding of the depositional history.

### *Pottery quantification and computer files*

The question of quantification was addressed. Many types of analysis require information on the amount of material present in an assemblage or site, or the relative proportion of material. Research into the theoretical basis for such studies with regard to ceramic assembly, by Orton and Tyers (1990), has suggested that the simple approach, counting the number of fragments, is invalid in situations where these fragments originate from the breakage of single artefacts. Their solution, to use Estimated Vessel Equivalents (EVEs), would have involved a very labour-intensive programme of recording and it was decided that two related records would be created (Orton *et al* 1993). The primary record would be created for all excavated material (involving in some cases the transcription of records made on site of material discarded during excavation) and would be based on simple fragment counts. The secondary record would use EVEs and weight counts to provide a more accurate measure of the quantities involved but would only cover a small subset of the total archive, chosen to provide large, well-dated assemblages with simple taphonomic characteristics (i.e., with a high possibility of reconstructing the depositional history of the assemblages).

Data was recorded which would help to assess the likely work involved in further analysis (such as the possibility and desirability of illustration and photography). Any obvious characteristics of the assemblage which might be relevant to its depositional history (abrasion or mineral coating, vivianite, calcium phosphate or mortar) were recorded. Different solutions were adopted as to how this information was stored, in an attempt to make the initial recording as straightforward as possible. The Saxon and later pottery researchers, for example, created a database table called *spotdate* in which the

earliest possible date, the latest possible date and the most likely date of each deposit were recorded together with information in several fields giving the number of sherds which would require drawing for different purposes (either because of their stratigraphic context or because of their intrinsic interest), and information on the degree of difficulty involved in making the drawing. Roman pottery researchers, by contrast, recorded similar decisions in two types of comment field incorporated into their primary record. The date of an assemblage was given in a record with a dummy fabric code ZDATE and other comments were placed in a record with a dummy code of ZZZ. Both types of record are regarded by their creators as being for immediate use as a more accurate and considered date could be given once the pottery had been examined in stratigraphic groups in the order of deposition. All the pottery records generated as part of the process of post excavation analysis are retained within the archive.

#### *Site narratives*

The stratigraphic analysts in the team created archive narratives for the Upper City sites which included every grouped context. It was expected that to maximise the potential for interpretation of the story, it would be necessary to be able to read the *Text sections* (a term also used initially for context groups). Each narrative began at the earliest period excavated and related the sequence of events period by period and phases within period; the dating evidence was given at the end of each phase. Each narrative included an introduction, discussion and paper sketches.

#### **Analysis**

Between 1988 and 1991, the team transformed the archive into what Christopher Evans in his final monitoring report for English Heritage of 3 April 1991 termed 'the most integrated urban archive in the country, one that offers very exciting and contextually innovative publication opportunities'. During 1991 the potential of the Lincoln sites (1972–1987) was assessed and amongst many other publications a site by site presentation of site narratives was proposed. In order to reach this point data needed to be checked and CAD illustrations produced. It was envisaged at this time that very summary site reports would be produced and that these would serve as a vehicle through which the reader could explore the computerised archive via the grouped context numbers. Although the context groups were all to be mentioned in the narrative,

the report was seen at this stage as being skeletal.

The introduction of Land Use Blocks (LUBs) in 1992 had a dramatic effect, not only on the site narrative but also on the understanding of artefacts within the site framework. The Land Use Block (LUB) refers to an excavated area in which a particular land use was practised (for a defined period of time). In 1992 Barbara Precious (then Davies) joined the post-excavation team to work with Margaret Darling on Roman pottery. She had previously worked at the Museum of London on material from the east of Walbrook, where the sites had been divided into such Land Use Blocks (Davies, B 1992, 30–9). It was Barbara, together with the Project Manager Alan Vince, who convinced the rest of the team of the usefulness of their application. A two-dimensional matrix or table presents the LUBs for a site (LUB diagram); the vertical axis represents time and the horizontal axis represents space. The site was divided into areas for the diagram; by and large the columns in a LUB diagram do reflect the dominant spatial arrangement of the site. The periods used for each site were standardised, so that LUB diagrams could be used to compare sites across the city.

All the sites were subjected to LUB analysis between 1993 and 1995. This involved providing LUB numbers in the *interp* files for each site, thereby allowing the in-house artefact specialists to look at material by LUB. The site narratives were broken into LUBs; each LUB description was followed by a section on 'Dating and Interpretation'. The stratigraphic data went through a checking process at the same time, and CAD illustrations were produced for each site.

#### **Production of specialist studies**

Having assessed the initial work on the finds 1988–1991 a programme of specialist studies was proposed and approved by English Heritage in September 1991. Some of these studies were to be carried out by CLAU staff and the remainder by external specialists. In either case the procedure was very similar. Records for all of the relevant material – usually a class of finds – were retrieved from the database and linked with the provisional dating and interpretation data. A process of selection was then carried out based on the stratigraphic context of the material, its interpretation, its dating and the ability of specialists to extract data from unstratified material. At one extreme, animal bone and soil samples for example, material was only studied if it fulfilled rigorous criteria, whereas at the other extreme coins, pottery and Roman glass, and any other artefact classes that could be dated

independently of their archaeological context, were studied even if they were totally without a stratigraphic context.

The reports on these specialist studies were added to the CLAU archive and if a database table was created as part of the study this was added and integrated with the CLAU database. In some cases specialist studies took place on material which had already been provisionally recorded in the first stage of analysis. For example, samian ware was studied first by the CLAU Roman pottery researchers and then by Brenda Dickinson and/or Joanna Bird, and mortarium stamps by Kay Hartley. Similarly, Roman glass was recorded first by CLAU staff and then by Sally Cottam and Jenny Price. In both cases further detail has been added as a result of the specialist analysis, but also corrections made to the initial identifications. Similarly, as internal analysis of pottery and tile has progressed it has been necessary to re-examine and upgrade some primary records. It is important to realise that whereas the computer database of stratigraphic data is stable and has hardly changed, if at all, from the time when it was first added to the database, the primary finds records are constantly being altered, incorporating some of the results of specialist studies. This process will presumably continue long after the post-excavation project funded by English Heritage has finished but the majority of these changes were taking place whilst the site reports were being prepared for publication.

It should be noted, for future reference, that the decision to delay specialist input until after the site narratives had been completed was probably a false economy, since feedback from some specialists has had a considerable impact on our initial interpretations, involving a large amount of alteration to the original framework. Clearly, however, some specialists' results have little impact at an individual site level, and determining which specialists' input should be sought at the site narrative phase and which later is a matter of professional judgement.

#### *Roman pottery: Plotdate analysis*

A new technique for examining Roman pottery was evolved in 1994, based upon a computer program adapted for our use. This was originally designed for plotting the dated output of individual potters or kilns, and uses the same approach as that applied to samian stamps. This extracts two fields giving the earliest and latest date from a data file, and a count field. The resulting 'value' of each record is spread over its range either as the raw 'value' or converted into percentages. For example, the value or percentages for a date of 100–120 is spread over 20 years, with one-half per decade.

Dates can be spread over 10, 20 or 50 year spans. The 20 year span with values converted to percentages to facilitate comparisons between groups of differing size has been used for the pottery analysis.

The pottery data from the archive is first filtered through a dating "lookup file" which covers all the fabrics and vessel types currently in the CLAU database. All have been assigned broad date ranges, the widest at present being 150 years. Dependent upon the individual site, approximately 30–35% of the pottery is used for the plotdate, the remainder being either undatable, or having too wide a date range to be useful. Clearly this leads to a "tail" of dated values beyond the date limits of the group, so that a group known to end in the late 3rd century will still have some values plotted into the 4th century arising from the presence of widely dated types or fabrics.

Effectively this means that every sherd in the database to which a date can be applied is used to define the dating content of a group. Although the technique is experimental and still evolving, the clear benefits already recognised indicate that it is a suitable tool for the examination of Roman pottery. Apart from the obvious indications it provides of residuality and mixed-date groups, it is of particular value in comparisons, whether between total site assemblages or groups within a site (See Darling in Jones M J (ed), 1999).

Plotdate analysis has been used for the Roman pottery at varying levels to examine different aspects: comparisons between total site assemblages, examination of all the pottery from a LUB and, at the most detailed, individual context groups or sets of context groups. As with any analytical technique, its scope is limited by the size of the sample, and groups above 200 sherds have been preferred; the reliable parameters have yet to be clearly defined. In the present volume its appearance is confined to the general discussion of Roman pottery from the whole area, but detailed analyses of each site, carried out after the preliminary attempt at stratigraphic phasing, can be found in the archive.

#### *Dates derived from post-Roman ceramic analysis*

Much of the dating of the sites derives from a study of pottery. However, since the pottery dating itself was being refined and altered throughout the period of post-excavation analysis there is a danger that a date derived from pottery studies and incorporated into the site text at the beginning of the project would be different from the date given from the same evidence towards the end of the project. The precision with which pottery assemblages can be dated also depends on the size of the assemblage and its composition. For long

stretches of time there was little difference in the source or form of the most common pottery types found but larger assemblages can be dated more closely. A system was therefore required which would allow readers (including the authors themselves) to have readily available the basis of any chronological statement, whilst not interrupting the flow of the text. The solution adopted for post Roman pottery has been to use a system of Ceramic Horizon codes in the database but to translate these into absolute dates immediately before publication.

### *Post-Roman ceramic horizons and their suggested absolute dates (Table 2)*

A separate table lists the date of the pottery assemblages from each context group, which is often different from the dates derived from examining individual contexts and from the date of deposition as determined by stratigraphic interpretation.

Where the sequence or deposit might have different dates depending on ones interpretation of the likelihood of intrusion or residuality, or because of uncertainty as to the identification of a potsherd or as to its date, then a discussion has been included in the text. The option of publishing a simplified statement relying on an unpublished or microfiched discussion was considered and rejected because it was suspected that very few users of the volume would actually check the unpublished sources.

Pottery analysis not only has importance for the dating of the site sequences but also for the interpretation of site formation (movement of earth, deposition of rubbish, and so on) and for the activities carried out on the site and, potentially, the status of the original users of the material. Where any statement can be made about these matters it is included in the relevant LUB text or site discussion.

### *Pottery and registered finds in the text*

The texts often have need to refer to specific pottery fabric types or forms. The fabric types both for Roman and post-Roman pottery have been referred to using an internal code (see Appendices 2 and 3), because pottery fabrics quite often have no accepted common name, and would in any case often be very long and cumbersome to use (eg. 'Lincoln Kiln Type Shelly Ware' as opposed to 'LKT'). However, pottery forms have been fully described in the text, although the codes are also used in the Roman pottery archive.

To allow registered finds to be retrieved from the Lincoln City and County Museum, the context and finds number of registered finds is given in the text.

### *Results of environmental analysis*

Apart from the well at St Paul-in-the-Bail, no anaerobic deposits survived on the Upper City sites; study of the few samples processed has added little to the interpretation of the context in which they were found. Reports are available in the site archive (Moffet 1993; 1996).

### *Human bone analyses*

Reference is made in the text to the results of analyses carried out on the human remains (Boylston and Roberts 1994); where the results of study of a specific assemblage added significantly to the site narrative, as at the Lawn, the relevant information has been included in the text. Reference is made in the text to radio-carbon determinations obtained from some of the earlier burials at St Paul-in-the-Bail; a tabulated list appears as Fig 9.105.

Horizons	Dating	Period
ASH1	5th-?E8th	Anglo-Saxon (c.450+)
ASH2	?L7th-?E8th	Middle Saxon (c.650+)
ASH3	?E8th-?M8th	
ASH4	?M8th-?L8th	
ASH5	?E9th-?M9th	
ASH6	?M9th-?L9th	
ASH7	?M/L9th-L9th	
ASH8	L9th-E10th	
ASH9	E/M10th-M10th	
ASH10	M10th-L10th	
ASH11	L10th	
ASH12	E11th-?E/M11th	Saxo-Norman (c.1000+)
ASH13	?E/M11th-M/L11th	
ASH14	L11th-E12th	
MH1	?E/M12th-M12th	Early Medieval (c.1120+)
MH2	M12th-M/L12th	
MH3	M/L12th-E13th	
MH4	E13th-E/M13th	
MH5	E/M13th-?L13th	High Medieval (c.1220+)
MH6	?L13th-?M14th	
MH7	?M14th-?L14th	Late Medieval (c.1350+)
MH8	?L14th-?E15th	
MH9	?E15th-M15th	
MH10	M15th-L15th	
PMH1	E16th-M16th	Early Post-Medieval (c.1500+)
PMH2	M16th-M/L16th	
PMH3	M/L16th-E17th	Post Medieval (c.1560+)
PMH4	E17th-M17th	
PMH5	M17th-M/L17th	
PMH6	M/L17th-L17th	
PMH7	L17th-E18th	
PMH8	E18th-M18th	Late Post-Medieval (c.1720+)
PMH9	M18th-L18th	
PMH10	L18th-E19th	
EMH	L18th-20th	Early Modern (c.1780+)

Table 2: post-Roman ceramic horizons

### *Animal bone analyses*

A table giving fragment counts for all animal bone in a context was created as part of the computer archive and has been used as a broad check on site interpretation to compare with the distribution of other finds. A small sample of the total collection was then assessed by the Environmental Archaeology Unit, University of York, looking at the overall range of species present, the colour of the bones and their preservation.

The criteria for selection were based on both pottery residuality and type of context group, so that only assemblages of bone with low residuality (below 10%), derived from significant contexts (e.g., a pit rather than a robber trench) were fully examined. A full report on the vertebrate remains from Lincoln has been published; details of the approaches to chronology and residuality were discussed therein (Dobney *et al.* 1996, 18–19). The questions posed to the York Environmental Archaeology Unit with regard to these site by site volumes were – how does the animal bone contribute to the understanding of the stratigraphy or the narrative of the site? More particularly, how does the bone add to the interpretation of features and give additional understanding of the nature of the deposit and site formation processes (using preservation, angularity, fragment size and condition of bone)? Significant groups of bone needed to be examined with regard to specialised industrial or economic activity (with details of butchery where appropriate to the understanding of the stratigraphy), and the animal bone needed to be considered as an element in the assemblages (i.e., linked to other finds such as knives, etc.). Sometimes bone itself can provide broad dating evidence (certain species and butchery techniques, for example, give an indication of different periods).

Where the responses from the Environmental Archaeology Unit at York with regard to the selected bone assemblages added significantly to the understanding of the narrative, then relevant information was included in the text. Full notes on each site can be found in the site archives (Dobney *et al.* 1994a–e).

### **Period Interpretative Structure**

Previous excavation reports in Lincoln divided the stratigraphic sequence into Periods. As used in Lincoln a Period was a site-wide phase of activity whose beginning and end were defined by a stratigraphically recognisable event, such as the construction or substantial alteration of a building.

Where such recognisable events occur they provide an extremely convenient means of analysis.

However, the larger the excavation, the less likelihood there is of recognising site-wide stratigraphic events. Moreover, when pottery and other finds are used as a means of correlating isolated blocks of stratigraphy to the main sequence, there is a danger of producing circular arguments and of blurring the distinction between the date when an artefact or assemblage of artefacts was discarded and the date of the stratigraphic deposit in which the artefacts were found.

The city-wide period framework adopted here, introduced into the site narratives in 1994, can be used to analyse the stratigraphic sequence and the finds and environmental data derived from it. This Period framework is based on our ability to recognise and date phases of activity on a regular basis (there is no way that major historical events which affected the city can be used as a framework if they did not leave recognisable stratigraphic traces on a site). The period divisions used are listed in the Introduction; the events in the Upper City are discussed by period (see Discussion).

### **Stratigraphic Interpretative Structure: Land Use Blocks**

#### *LUB diagram Areas*

Firstly, sites were divided into areas. On simple linear excavations or small trenches this presented no problems but some of the Upper City excavations had a complex development with several trenches being excavated and areas of excavation expanding and contracting at different stages. In any case, there is always some ‘strain’ involved in compressing a three-dimensional data set into two dimensions.

Nevertheless, by and large the columns in a LUB diagram do reflect the dominant spatial arrangement of the site. In the present volume the diagrams are organised according to the general configuration of each site.

#### *Changes in Land-use*

In each area the sequence is examined to identify changes in land use. Where a land use in one area can be stratigraphically correlated with that in adjacent areas, then the block is enlarged to encompass both areas. The alternative, to confine each block to the same area, would have had an advantage in that we might then have been able to use this system as a link to GIS, by recording the grid reference of the centroid of each area, but the principal concern at the time was to provide as

simple a structure as possible as an aid to understanding and presenting the site stratigraphy.

Where the stratigraphic sequence is unknown, for example, by the use of machine excavation or modern cellaring, or the sequence not being completely excavated, then this is shown on the LUB diagram as 'truncation of sequence' or 'limit of excavation' respectively.

#### *Integration of data from non-archaeological sources*

It is possible to identify LUBs on a site which have left no stratigraphic traces, for example, phases of abandonment or activity known only from cartographic or documentary sources, or from residual stray finds. This applies particularly to the Early–Mid Saxon periods at several sites close to St Paul-in-the-Bail, where more definite evidence was found. The amount of Mid-Saxon pottery from the Lawn site suggests some sort of occupation in that period, but the finds all came from residual contexts. Where stratified evidence did not occur, it is accordingly not reflected in the LUB sequence, but its significance is referred to in the Discussion sections. The system is therefore closely tied to the stratigraphic data in the archive rather than attempting, within the LUB structure, to reflect the entire history of land use on a site.

This system of analysing the sites has proved to be much more flexible and useful than the system of periods and phases used previously on sites in Lincoln, and commonly used elsewhere.

#### **Text submission and re-working**

A draft of the Upper City text was first submitted to English Heritage in 1995. A copy of this text together with the associated phasing and *interp* files remain in the archive. The Reader chosen by English Heritage for the volumes of site reports was Steve Roskams, an expert in urban archaeology and stratigraphy based at the University of York. He made a number of radical recommendations regarding the presentation of the data, and subsequently English Heritage commissioned a programme of editorial work in line with those recommendations. This work was undertaken in 1998–9, within the format set for the other site volumes on the Wigford suburb and Lower City (LAS 2, 4).

The revisions have involved a more ordered presentation of the stratigraphic sequence, and a rejigging of the LUB framework. The published text is, at the time of writing, the most up to date stratigraphic tool; much of the computerised archive created during analysis is now part of the history of the project, an expression of the processes of analysis. Attention will, however, be given shortly to the digital archive: the only up to date elements are the phasing files and the cg and LUB number fields of the *interp* files. While the basic pottery and finds computer data files are also up to date, where there has been subsequent reflection or reinterpretation, or there is an interface between different sources of material, the changes reflect the analytical process (for example the *zdates* in the Roman pottery files and the *tsdate* files for the post Roman pottery). In due course the fully updated archive will be passed to the Lincoln City and County Museum.

# Appendix II

## Roman Pottery: Vessel Type and Fabric Codes

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### *Roman Vessel Codes*

<b>Code</b>	<b>Vessel Type</b>
B31	Bowl copying the samian form 31
B321	Bowl as Webster 1949, fig 14, no 72
B332	Bowl or lid as Darling 1977, fig 2, no 37
B334	Carinated bowl as Petch 1962, fig 5, nos 8–10
B38	Bowl copying the samian form 38
B393	Bowl as Darling & Jones 1988, fig 5, no 16
B411	Bowl similar to S. Yorks.type (Buckland et al 1980, fig 4, no 31)
BD	Bowl or dish
BFB	Bead-and-flange bowl
BFBH	Bead-and-flange bowl with high bead
BFBL	Bead-and-flange bowl with low bead
BG225	Bowl of the type Gillam 225
BIBF	Bead-and-flange bowl with inturned rim
BK120	Beaker with notched cordon as Darling 1990
BKBARB	Barbotine beaker body sherd/s
BKFB	Beaker with beaded funnel neck
BKFO	Folded beaker body sherd/s
BKFOC	Folded beaker with curved neck
BKFOF	Folded beaker with funnel neck
BKFOFG	Folded beaker with grooved funnel neck
BKFOS	Folded beaker with scale decoration body sherd/s
BKFOSF	Folded beaker with scale decoration and funnel neck
BKG43	Beaker of the type Gillam 43
BKPA	Painted Beaker
BACC	Beaker sherd/s painted or with contrasting colour barbotine
BKROU	Beaker sherd/s with rouletted zone decoration
BKSF	Slit-folded beaker as RPNV 53
BTR	Bowl with triangular rim
BX308	Box of the type 308 (Hull 1958)
BWM	Wide-mouthed bowl
DFL	Flanged dish
DG225	Dish with rounded rim form as Gillam 225
DGR	Dish with grooved rim
DPR	Plain rimmed dish
DPRS	Plain rimmed dish with straight wall
DTR	Dish with triangular rim
F255	Colour-coated flagon as Darling & Gurney 1995, fig 142, no 178
FACE	Face pot sherd/s
FDN	Flagon or flask with disc-neck
G43	Beaker of Gillam 43 type
J105	Lid-seated jar as Coppack 1973, fig 5, no 17
J107	Lid-seated jar as Coppack 1973, fig 7, no 48
J152	Lid-seated jar
JDLS	Jar with double lid-seated rim
JFT	Jar with flat rim-top
JLS	Lid-seated jar
JNN	Narrow-necked jar
PC16	Platter of Camulodunum type 16 (Hawkes & Hull 1947)
RPNV 69–70	Colour-coated jar with moulded rim

### *Roman Fabric Codes*

<b>Code</b>	<b>Category</b>	<b>Detail</b>
ABIV	Amph	Biv amphorae
AMPH	Amph	Miscellaneous amphorae
ARGO	Fine	Argonne ware
BAE24	Amph	Baetican Dr2–4
BAE28	Amph	Baetican Dr 28
BB1	Reduced	Black burnished 1
BB1G	Reduced	Grey sandy BB1
BB2	Reduced	Black burnished 2
BLEG	Import	Black eggshell wares; North Italian or Gallic
C185	Amph	Camulodunum 185 amphorae
C186	Amph	Camulodunum 186 amphorae
C189	Amph	Camulodunum 189 carrot amphorae
CALG	Shell	Calcite tempered
CASH	Shell	Calcite/shell tempered wares
CAT24	Amph	Catalan Dr 2–4
CC	Fine	Other colour-coated wares
CGBL	Import	Rhenish; from Central Gaul
CGCC	Import	Central Gaulish colour-coated; Lezoux etc.
CGGW	Import	Central Gaulish glazed wares
CHALK	Amph	Chalk type
COAR	Reduced	Miscellaneous coarse wares
COLC	Fine	Colchester colour-coated
CR	Oxid	Cream flagon type
CRGR	Reduced	Crambeck grey wares
CRPA	Oxid	Crambeck parchment ware
CRSA	Oxid	Later Roman sandy creamish to light red-brown
DERB	Reduced	Derbyshire ware
DR20	Amph	Dr 20 amphorae
DR28	Amph	Dr 28 amphorae
DWSH	Shell	Late shell-tempered; Dales ware; lid-seated jars etc.
EGGS	Import?	Miscellaneous eggshell wares
EIFL	Reduced	Mayen ware; Eifelkeramik
EMED	Amph	Undifferentiated East Med. amphorae
EMED24	Amph	East Med. Dr 2–4
EPON	Import	à l'éponge ware
F148	Amph	as Fishbourne 148.3
GAU	Amph	Undifferentiated Gaulish amphorae
GAU28	Amph	Gaulish Dr 28
GAU4	Amph	Gauloise 4
GAU6	Amph	Gauloise 6
GBWW	Import	Gallo-Belgic white wares
GFIN	Reduced	Miscellaneous fine grey wares
GLAZ	Import?	Other glazed wares
GMIC	Reduced	Grey fine micaceous wares
GREY	Reduced	Miscellaneous grey wares
GROG	Reduced	Grog-tempered wares
GRSA	Reduced	Reduced version of OXSA
H70	Amph	Haltern 70 amphorae
HADOX	Fine	Red-surfaced Oxfordshire/Hadham variants

Code	Category	Detail	Code	Category	Detail
HUNT	Shell	Huntcliff shell-tempered wares	NA7	Amph	North African fabric 7
IAGR	Reduced	Native tradition grit-tempered wares	NA8	Amph	North African fabric 8
IAGRB	Reduced	Native tradition grit-tempered	NAAM	Amph	North African amphorae
IASA	Reduced	IA type sandy wares	NAT	Reduced	Native miscellaneous
IASH	Shell	Native tradition shell-tempered	NFCC	Fine	New Forest colour-coated
IASHC	Shell	Coarse shell-tempered; IA type	NGCR	Import	North Gaulish cream; butt-beakers etc.
IASHD	Shell	Shell-tempered harder ?Romanised	NGGW	Reduced	North Gaulish grey wares
IASHF	Shell	Fine shell-tempered; IA type	NVCC	Fine	Nene Valley colour-coated
IMMC	Import	Imported mica-dusted; beakers etc.	NVGCC	Fine	Nene Valley grey colour-coated
IT24	Amph	Italian Dr 2-4	NVGW	Reduced	Nene Valley grey ware
ITAMP	Amph	Italian amphorae; undifferentiated	NVGWC	Reduced	Nene Valley grey ware coarse
K117	Amph	Sandy ribbed as Kingsholm 117	NVMIC	Fine	Nene Valley colour-coated with mica overslip
KAP2	Amph	Kapitan II amphorae	NVPA	Oxid	Nene Valley parchment ware
KOAN	Amph	Koan/Dr 2-4 amphorae	OX	Oxid	Miscellaneous oxidized wares
KOLN	Import	Cologne colour-coated wares	OXGR	Reduced	Grog-tempered; La Tène bkr Lawn86 (45)
L555	Amph	London 555 amphorae	OXPA	Oxid	Oxfordshire parchment ware
LCOA	Reduced	Late coarse pebbly fabric	OXRC	Fine	Oxfordshire red colour-coated
LEG	Reduced	'Legionary' cream/light grey	OXSA	Oxid	Early oxidized sandy
LOND	Reduced	London wares	OXWS	Oxid	Oxidized with white slip
LRDM	Amph	Undifferentiated late Roman amphorae	PARC	Oxid	Parchment; cream painted red; unknown source/s
LRRB	Amph	Later Roman red-brown	PART	Reduced	Parisian type wares
LYON	Import	Lyon pre-Flavian colour-coats	PINK	Oxid	Pink micaceous flagons etc.
MARB	Import	Misc. marbled wares	PRW	Import	Pompeian red ware undifferentiated
MHAD	Fine	Much Hadham wares	PRW1	Import	Pompeian red ware Peacock 1
MHADR	Fine	Much Hadham reduced wares	PRW2	Import	Pompeian red ware Peacock 2
MICA	Oxid	Mica-dusted (excluding imported beakers)	PRW3	Import	Pompeian red ware Peacock 3
MLEZ	Import	Micaceous Lezoux ware	R527	Amph	Richborough 527 amphorae
MOCO	Mort	Colchester mortaria	RC	Fine	Miscellaneous rough-cast colour-coated beakers
MOCR	Mort	Crambeck mortaria	RDSL	Oxid	Early red slipped
MOG	Mort	Grey mortaria	RHOD	Amph	Rhodian amphorae
MOGA	Mort	Imported Gallic mortaria	ROSAX	Reduced	Indeterminate Roman or Saxon
MOHA	Mort	Much Hadham mortaria	SACR	Import?	Sandy cream; suspected imported flagon
MOHX	Mort	Hadox mortaria	SAM	Samian	undifferentiated
MOIM	Mort	Imported mortaria; source unknown	SAMCG	Samian	Central Gaulish
MOLO	Mort	Local mortaria	SAMCG-		
MOMD	Mort	Midlands mortaria; precise source unknown	EG	Samian	Central or East Gaulish
MOMH	Mort	Mancetter-Hartshill mortaria	SAMEG	Samian	East Gaulish
MONG	Mort	Gallic mortaria North Gaul	SAMLM	Samian	Les Martres de Veyre
MONV	Mort	Nene Valley mortaria	SAMMT	Samian	Montans ware
MONVC	Mort	Nene Valley colour-coated mortaria	SAMSG	Samian	South Gaulish
MOOX	Mort	Oxfordshire parchment ware mortaria	SC	Oxid	South Carlton cream
MOOXR	Mort	Oxfordshire red-slipped mortaria	SCCC	Fine	South Carlton colour-coated
MOOXW	Mort	Oxfordshire white-slipped mortaria	SEAL	Amph	Amphorae seals
MORH	Mort	Rhenish mortaria	SHEL	Shell	Miscellaneous shell-tempered
MORT	Mort	Mortaria; undifferentiated	SMSH	Shell	South Midlands shell-tempered wares
MORV	Mort	Gallic mortaria Rhone Valley	SPAA	Amph	Spanish amphorae; undifferentiated
MOSC	Mort	South Carlton mortaria	SPCC	Fine	Swanpool colour-coated
MOSL	Import	Rhenish; from Trier	SPIR	Oxid	Grooved jars as Alice Holt/Farnham Class 3C; unknown source
MOSP	Mort	Swanpool mortaria	SPOX	Oxid	Swanpool oxidized wares
MOSPC	Mort	Swanpool colour-coated mortaria	TILE	oxid	Tile fabric vessels
MOTILE	Mort	Tile fabric	TN	Import	Terra nigra
MOVR	Mort	Verulamium region mortaria	TR	Import	Terra rubra
MRRA	Amph	Mid-Roman ribbed amphorae	VESIC	?Shell	Vesicular fabric
NA1	Amph	North African fabric 1	VRW	Oxid	Verulamium region white wares
NA2	Amph	North African fabric 2	WHEG	Import	White eggshell wares
NA3	Amph	North African fabric 3	WSTO	Reduced	West Stow
NA4	Amph	North African fabric 4			
NA5	Amph	North African fabric 5			
NA6	Amph	North African fabric 6			



## Appendix III

### Medieval Pottery Codes

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Ware code	Description	Period	Earliest horizon	Latest horizon
AARD	LOW COUNTRIES HIGHLY DECORATED WARE	MED	MH5	MH7
ANDA	ANDALUSIAN LUSTREWARE	MED	MH5	MH9
ANDE	ANDENNE WARE	SN	ASH11	MH3
ARCH	ARCHAIC MAIOLICA	MED	MH6	MH8?
BA	BRONZE AGE	PREH	0	0
BADO	BADORF-TYPE WARE	MSAX-LSAX	ASH2	ASH8
BALT	BALTIC-TYPE WARES	LSAX-SN	ASH7?	ASH14?
BEAURP	BEAUVAIS-TYPE WARE	LSAX	ASH7?	ASH11?
BEAG	GREEN GLAZE BEAUVAIS-TYPE WARE	LMED-PMED	MH10	PMH3
BERTH	BROWN EARTHENWARES	PMED	PMH2	PMH10
BEVO	BEVERLEY ORANGE WARE	EMED-MED	MH1	MH7
BL	BLACKWARE	PMED	PMH3	EMH
BLBURN	BLACK BURNISHED WARES	MSAX	ASH3	ASH4?
BLGR	PAFFRATH-TYPE OR BLUE-GREY WARE	SN-EMED	ASH12	MH3?
BLSURF	BLACK SURFACED WARES	MSAX	ASH3	ASH4?
BORDB	BROWN GLAZED BORDER WARE	PMED	PMH3	PMH7
BORDY	YELLOW GLAZED BORDER WARE	PMED	PMH3	PMH7
BOU	BOURNE; FABRIC D	PMED	MH10	PMH4
BOUA	BOURNE; FABRICS A-C	MED	MH3	MH7
BRANS	BRANDSBY-TYPE WARE	MED	MH5	MH8
BRBURN	BROWN BURNISHED WARES	MSAX	ASH3	ASH4?
BRILL	BRILL WARES	MED	MH5	MH7
BRUNS	BRUNSUM-TYPE FLASKS	EMED	MH2?	MH3?
BS	BROWN STONEWARE	PMED	PMH7	EMH
CEP	CHINESE EXPORT PORCELAIN	PMED	PMH6	PMH10
CHALK	UNGLAZED SANDY FABRICS WITH CHALK	SN-MED	ASH11	MH7
CHARN	CHARNWOOD FABRICS	ESAX	ASH1	ASH2
CHINS	CHINESE STONEWARE	MED-EMOD	MH4	EMH
CIST	CISTERCIAN-TYPE WARES	PMED	MH10?	PMH5
CITG	CENTRAL ITALIAN TIN-GLAZED WARE	LMED-PMED	MH9	PMH2
CMW	WHITE COAL MEASURE FABRICS	MED-PMED	MH7	PMH3
CRMWARE	CREAMWARE	EMOD	PMH9	EMH
CROW	CROWLAND ABBEY-TYPE WARE	SN	ASH12	ASH14
DERB	DERBY-TYPE WARE	LSAX	ASH10?	ASH13?
DONC	DONCASTER-HALLGATE FABRICS	EMED-MED	MH3	MH4
DST	DEVELOPED STAMFORD WARE	EMED	MH1	MH4
DUTR	LOW COUNTRIES RED EARTHENWARES	LMED-PMED	MH8	PMH5
DUTRT	LOW COUNTRIES RED EARTHENWARE-TYPES	PMED	PMH3	PMH5
EALMT	EAST ANGLIAN LMED/TRANSITIONAL WARE	LMED-PMED	MH9	PMH3

Ware code	Description	Period	Earliest horizon	Latest horizon
ECHAF	CHAFF-TEMPERED FABRICS	ESAX	ASH1	ASH2
EGSW	EARLY GERMAN STONEWARES	MED	MH5	MH6
ELFS	EARLY FINE-SHELLED WARE	MSAX	ASH6	ASH7
ELSW	EARLY GLAZED LINCOLN WARE	LSAX	ASH7	ASH8
EMED	EARLY MEDIEVAL	EMED	MH1	MH4
EMHM	EARLY MEDIEVAL HANDMADE FABRICS	EMED	MH1?	MH3?
EMLOC	EARLY MEDIEVAL LOCAL FABRICS	EMED	MH1	MH4
EMOD	EARLY MODERN	EMOD	PMH10	EMH
EMSAX	ESAX OR MSAX	ESAX-MSAX	ASH1	ASH6
EMX	EARLY MEDIEVAL NON-LOCAL FABRICS	EMED	MH1	MH4
ESAX	EARLY SAXON	ESAX	ASH1	ASH2
ESAXLOC	EARLY SAXON LOCAL FABRICS	ESAX	ASH1	ASH2
ESAXX	EARLY SAXON NON-LOCAL FABRICS	ESAX	ASH1	ASH2
ESG	YORK EARLY GLAZED WARE;TYPE 1	LSAX	ASH8	ASH12
ESGS	GREENSAND FABRICS	ESAX	ASH1	ASH2
EST	EARLY STAMFORD WARE	LSAX	ASH7	ASH11
FE	IRONSTONE ORE-TEMPERED FABRIC	ESAX	ASH1	ASH2
FERTH	FINE EARTHENWARES	PMED	PMH9	EMH
FINSP	FINE SPLASHED WARE	EMED	MH2?	MH4?
FLINT	FLINT TEMPERED FABRICS	PREH-MSAX	0	ASH3
FREC	FRECHEN/COLOGNE STONEWARE	PMED	PMH2	PMH8
FREN	FRENCH WARES (GENERAL)	MED-PMED	MH3	PMH5
GERMS	GERMAN SLIPWARES	PMED	PMH3	PMH8
GERMW	GERMAN WHITE WARES	PMED	PMH3	PMH7
GLGS	GLAZED GREENSAND FABRICS	EMED-LMED	MH2	MH10
GRBURN	GREY BURNISHED WARES	MSAX	ASH3	ASH4?
GRE	GLAZED RED EARTHENWARES	PMED	PMH3	PMH9
GRIM	GRIMSTON-TYPE WARE	MED	MH3	MH8
GS	GREY STONEWARES	EMOD	PMH5	EMH
HLKT	HORNCastle-TYPE LKT WARE	LSAX	ASH9?	ASH11?
HUM	HUMBERWARE	LMED-PMED	MH7	PMH2
HUMB	HUMBER BASIN GLAZED FABRICS	MED	MH1	MH10
HUY	HUY-TYPE LATE SAXON GLAZED	LSAX	ASH6	ASH12
IA	IRON AGE	PREH	0	0
IALSAX	IA OR LSAX	PREH-LSAX	0	0
IMP	UNDATED IMPORTED FABRICS	ND	ASH1	PMH7
INDUS	UNSPECIFIED INDUSTRIAL MATERIAL	ND	ASH1	EMH
IPS	IPSWICH-TYPE WARE	MSAX	ASH2?	ASH6
IS	UNIDENTIFIED IMPORTED STONEWARE	PMED	PMH1	PMH7
ISLG	ISLAMIC GLAZED WARES	SN-MED	ASH11	MH8
ITGE	IMPORTED TIN-GLAZED EARTHENWARES	LMED	MH7	MH10
KEUP	MERCIAN MUDSTONE-TEMPERED WARE	ESAX-MSAX	ASH1	ASH?
KING	KINGSTON-TYPE WARE	MED	MH5	MH6
KOLN	COLOGNE STONEWARE	PMED	PMH1	PMH2
L/LSW4	LLSW OR LSW4	LMED	MH9	PMH1
LANG	LANGERWEHE STONEWARE	LMED	MH7	PMH1
LARA	LANGERWEHE/RAEREN STONEWARE	LMED	MH8	PMH1
LEMS	LOCAL EARLY MEDIEVAL SHELLY WARE	EMED	MH1	MH4
LERTH	LATE EARTHENWARES	EMOD	PMH9	EMH
LEST	LEICESTER-TYPE WARE	LSAX	ASH7?	ASH9?
LFS	LINCOLN FINE-SHELLED WARE	SN	ASH11	MH3?
LFS/ELFS	LFS OR ELFS	MSAX-SN	ASH6	MH3?
LG	LINCOLN GRITTY WARE	LSAX	ASH7	ASH7
LG/LSLS	LG OR LSLS	LSAX	ASH7	ASH8
LHUM	LATE HUMBERWARE	PMED	PMH2	EMH

Ware code	Description	Period	Earliest horizon	Latest horizon
LIGU	LIGURIAN BERRETINO TIN-GLAZED WARE	PMED	PMH2	PMH6
LIM	OOLITE-TEMPERED FABRICS	ESAX-SN	ASH2	ASH13
LKT	LINCOLN KILN-TYPE WARE	LSAX	ASH7	ASH11
LLSW	LATE GLAZED LINCOLN WARE	LMED	MH8	MH10
LMED	LATE MEDIEVAL	LMED	MH7	MH10
LMF	LATE MEDIEVAL FINE WARES	LMED	MH9	PMH1
LMIMP	LATE MEDIEVAL IMPORTED FABRICS	LMED	MH7	MH10
LMLOC	LATE MEDIEVAL LOCAL FABRICS	LMED	MH8	PMH1
LMPM	LMED OR PMED	LMED-PMED	MH7	PMH10
LMX	LATE MEDIEVAL NON-LOCAL FABRICS	LMED	MH7	MH10
LOCC	LOCAL SPLASHED WARE	EMED	MH1	MH3?
LONS	LONDON STONEWARE	PMED	PMH7	EMH
LPM	EARLY MODERN OR MODERN	EMOD	EMH	EMH
LPMDISC	EARLY MODERN OR MODERN (DISCARDED)	EMOD	EMH	EMH
LS/SNLS	LSLS OR SNLS	LSAX-SN	ASH7	ASH13
LSAX	LATE SAXON	LSAX	ASH7	ASH11
LSCRUC	LINCOLN CRUCIBLE FABRICS	LSAX-SN	ASH7	ASH12
LSH	LINCOLN SHELLY WARE	LSAX	ASH7	ASH12?
LSIMP	LATE SAXON IMPORTED FABRICS	LSAX	ASH7	ASH11
LSLOC	LATE SAXON LOCAL FABRICS	LSAX	ASH7	ASH13
LSLS	LATE SAXON LINCOLN SANDY WARE	LSAX	ASH7	ASH8
LSMED	LSAX OR MED	LSAX-MED	ASH7	MH10
LSPLS	LIGHT-BODIED LSLS WARE	LSAX	ASH7	ASH8
LSTON	LATE STONEWARES	EMOD	PMH10	EMH
LSW	UNDATED LINCOLN FABRICS	LSAX-LMED	ASH7	MH10
LSW1	GLAZED LINCOLN WARE	EMED	MH1	MH4
LSW1/2	LSW1 OR LSW2	EMED	MH1	MH6
LSW2	GLAZED LINCOLN WARE	MED	MH4	MH6
LSW2/3	LSW2 OR LSW3	MED	MH4	MH9
LSW3	GLAZED LINCOLN WARE	LMED	MH6	MH9?
LSW4	GLAZED LINCOLN WARE	LMED	MH10	PMH1
LSWA	GLAZED LINCOLN WARE; FABRIC A	EMED-MED	MH1	MH10
LSWE/1	ELSW OR LSW1	LSAX-EMED	ASH7	MH4
LSX	LATE SAXON NON-LOCAL FABRICS	LSAX	ASH7	ASH13
MAGR	MAGREBI WARE	MED	MH5	MH7
MAMPH	ROMAN/MEDIEVAL AMPHORA	ROM-MED	0	0
MARTI	MARTINCAMP WARE;TYPE I	PMED	MH10	PMH2
MARTII	MARTINCAMP WARE;TYPE II	PMED	PMH1	PMH3
MARTIII	MARTINCAMP WARE;TYPE III	PMED	PMH3	PMH7
MAX	NORTHERN MAXEY-TYPE WARE	MSAX	ASH2	ASH6?
MAXQ	SOUTH LINCS MAXEY-TYPE WARE	MSAX	ASH2	ASH5?
MAY	MAYEN-TYPE WARES	MSAX	ASH3	ASH6?
MCRUC	MEDIEVAL CRUCIBLE FABRICS	MED	MH1	MH10
MED	MEDIEVAL	MED	MH4	MH10
MEDIT	UNGLAZED MEDITERRANEAN JARS	ESAX-PMED	ASH1	PMH7
MEDLOC	MEDIEVAL LOCAL FABRICS	MED	MH4	MH10
MEDPM	MED OR PMED	MED-PMED	MH4	PMH10
MEDX	MEDIEVAL NON-LOCAL FABRICS	MED	MH4	MH10
MIMP	MEDIEVAL IMPORTED FABRICS	MED	MH4	MH10
MISC	UNDATED MISCELLANEOUS FABRICS	ND	ASH1	EMH
MLSAX	MSAX OR LSAX	MSAX-LSAX	ASH2	ASH11
MLTG	MONTELUPO POLYCHROME	PMED	MH10	PMH7
MMAX	RMAX WITH QUARTZ	MSAX	ASH2?	ASH6?
MP	MIDLAND PURPLE-TYPE WARE	LMED-PMED	MH8?	PMH3?
MSAX	MID-SAXON	MSAX	ASH2	ASH6

Ware code	Description	Period	Earliest horizon	Latest horizon
MSAXLOC	MID-SAXON LOCAL FABRICS	MSAX	ASH2	ASH6
MSAXX	MID-SAXON NON-LOCAL FABRICS	MSAX	ASH2	ASH6
MVAL	MATURE VALENTIAN LUSTREWARE	LMED	MH7	PMH3
MY	MIDLAND YELLOW-TYPE WARE	PMED	PMH2	PMH8
NCOS	NOTTINGHAM COARSE SANDY	EMED-MED	MH3	MH4
NEWG	NEWARK GLAZED SANDY WARE	MED	MH4	MH6?
NEWS	NEWARK SANDY WARE	SN	ASH11	ASH12
NFM	NORTH FRENCH MONOCHROME	MED	MH4	MH5
NFREM	NORTH FRENCH FABRICS	EMED-MED	MH3?	MH5
NFSVA	NORTH FRENCH SEINE VALLEY FABRIC A	MSAX	ASH2?	ASH4?
NHSLIP	NORTH HOLLAND SLIPWARES	PMED	PMH3	PMH7
NITALS	NORTH ITALIAN SGRAFFITO WARE	PMED	PMH3	PMH4
NLST	NORTH LINCOLNSHIRE SHELLY WARE	EMED-MED	MH1	MH8
NOTG	NOTTINGHAM GREEN-GLAZED WARE	MED	MH4?	MH7
NOTS	NOTTINGHAM WARE	LSAX	ASH9?	ASH12?
NSP	NOTTINGHAM SPLASHED GLAZED WARE	EMED	MH1	MH4?
ORP	OXIDISED RED-PAINTED FABRICS	MSAX	ASH4?	ASH6?
PBIC	LIGHT-BODIED BICHROME FABRICS	PMED	PMH2?	PMH3?
PGE	LIGHT-BODIED GLAZED EARTHENWARES	PMED	PMH3	PMH5
PING	PINGSBORF-TYPE WARE	SN-EMED	ASH7	MH3
PMCRUC	LATE AND POST-MEDIEVAL CRUCIBLE FABRICS	LMED-PMED	MH10	EMH
PMED	POST-MEDIEVAL	PMED	PMH1	PMH10
PMF	POST-MED FINE WARES	PMED	PMH1	PMH7
PMIMP	POST-MED IMPORTED FABRICS	PMED	PMH1	PMH10
PMLOC	POST-MED LOCAL FABRICS	PMED	PMH2	PMH9
PMX	POST-MED NON-LOCAL FABRICS	PMED	PMH1	PMH10
PORC	PORCELAIN (GENERAL)	PMED	PMH8	EMH
PORTF	PORTUGUESE TIN-GLAZED WARES	PMED	PMH3	PMH5
POTT	POTTERHANWORTH WARE	MED	MH4?	MH9?
PREH	PREHISTORIC	PREH	0	0
R	ROMAN	ROM	0	0
RAER	RAEREN STONEWARE	PMED	MH10	PMH2
RESAX	ROMAN OR ESAX	ROM-ESAX	0	0
RGRE	REDUCED GLAZED RED EARTHENWARES	PMED	PMH3	PMH9
RLG	ROMAN OR LG	ROM-LSAX	0	0
RLSAX	ROMAN OR LSAX	ROM-LSAX	0	0
RLSLS	ROMAN OR LSL	ROM-LSAX	0	0
RMAX	SOUTHERN MAXEY-TYPE WARE	MSAX	ASH2	ASH6?
RMED	ROMAN OR MED	ROM-MED	0	0
RMSAX	ROMAN OR MSAX	ROM-MSAX	0	0
ROUEN	ROUEN-TYPE WARES	EMED-MED	MH3	MH5
RSN	ROMAN OR SN	ROM-SN	0	0
RSTON	RED STONEWARES	PMED	PMH8	PMH10
SAIG	SAINTONGE GREEN-GLAZED WARE	MED	MH5	MH6
SAIM	SAINTONGE MOTTLED WARE	MED	MH5	MH7
SAIP	SAINTONGE POLYCHROME WARE	MED	MH5	MH6
SAIPM	POST-MEDIEVAL SAINTONGE	PMED	PMH1	PMH4
SAIU	UNGLAZED SAINTONGE	LMED-PMED	MH10	PMH4
SCAR	SCARBOROUGH WARE	EMED-MED	MH3	MH7
SEVIL	SEVILLE UNATTRIBUTED TYPES	?	?	?
SIEG	SIEGBURG STONEWARE	MED-LMED	MH6	PMH1
SIEB	RED-SLIPPED SIEGBURG STONEWARE	LMED	MH9	PMH1
SLEMO	SOUTH Lincs EARLY MEDIEVAL OOLITIC	EMED	MH2	MH4
SLIP	SLIPWARE (GENERAL)	PMED	PMH4	EMH
SLSOF	SOUTH Lincs SHELL OOLITE AND IRON TEMPERED	EMED	MH2	MH4

Ware code	Description	Period	Earliest horizon	Latest horizon
SLST	SOUTH LINCOLNSHIRE SHELLY WARE	EMED-MED	MH1?	MH7?
SN	SAXO-NORMAN	SN	ASH7	ASH14
SNEMED	SN OR EMED	SN-EMED	ASH11	MH4
SNEOT	ST.NEOTS-TYPE WARE	SN-EMED	ASH11	MH3?
SNIMP	SAXO-NORMAN IMPORTED FABRICS	SN	ASH7	MH3
SNLOC	SAXO-NORMAN LOCAL FABRICS	SN	ASH7	MH3
SNLS	SAXO-NORMAN LINCOLN SANDY WARE	SN	ASH11	ASH13
SNTG	SOUTH NETHERLANDS TIN-GLAZED WARES	PMED	MH10	PMH1
SNX	SAXO-NORMAN NON-LOCAL FABRICS	SN	ASH7	MH3
SPAN	SPANISH UNGLAZED COARSEWARES	PMED	PMH1	EMH
SPARC	SPARRY CALCITE-TEMPERED FABRICS	ESAX-MSAX	ASH1	ASH6?
SPTG	BLUE GLAZED MEDITERRANEAN ALBARELLO	?	?	/
SRCRUC	STAMFORD OR ROMAN CRUCIBLES	ROM-SN	0	0
SST	SANDSTONE-TEMPERED FABRICS	ESAX-MSAX	ASH1	ASH6
ST	STAMFORD WARE	SN	ASH7	MH3
STANLY	STANION/LYVDEN-TYPE WARE	MED	MH5	MH7
STCRUC	STAMFORD WARE CRUCIBLES	SN	ASH7	MH3
STMO	STAFFORDSHIRE MOTTLED WARE	PMED	PMH6	PMH8
STSL	STAFFORDSHIRE SLIPWARE	PMED	PMH5	PMH8
TB	TOYNTON OR BOLINGBROKE-TYPE WARE	PMED	MH10?	PMH8
TGE	TIN-GLAZED EARTHENWARES	PMED	PMH4	PMH10
TGEM	MAIOLICA (ANGLO-NETHERLANDS)	PMED	PMH3	PMH4
THETT	THETFORD OR THETFORD-TYPE WARE	SN	ASH7	MH2
TILE	TILE FABRIC	MED	MH3	MH10
TORK	TORKSEY WARE	SN	ASH7	ASH13
TORKT	TORKSEY-TYPE WARE	SN	ASH7	ASH13
TOY	TOYNTON WARE; KILN 1 (ROSES)	MED	MH5	MH6
TOYII	TOYNTON WARE; KILN 3	LMED	MH10?	PMH1
UNGS	UNGLAZED GREENSAND	SN-MED	ASH11	MH7
VGF	VICTORIAN GARDEN FURNITURE	EMOD	PMH10	EMH
VITR	UNIDENTIFIED VITRIFIED SHERDS	ND	ASH1	EMH
WERRA	WERRA/WANFRIED WARE	PMED	PMH3	PMH4
WESER	WESER WARE	PMED	PMH3	PMH4
WEST	WESTERWALD STONEWARE	PMED	PMH4	EMH
WINC	WINCHESTER-TYPE WARE	SN	ASH10	ASH14
WS	WHITE SALT-GLAZED WARES	PMED	PMH8	PMH9
YG	YORKSHIRE-TYPE GRITTY WARES	SN	ASH13	MH3
YORK	YORK GLAZED WARE	EMED-MED	MH3	MH5?
YORKSPL	YORK-TYPE SPLASHED WARES	EMED	ASH14?	MH4?
YW	YORK WARE	LSAX	ASH6	ASH9

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