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Archaeological Services

An Archaeological Excavation at 9 St. Nicholas Place, Leicester (NGR: SK 5840 0448 centre)

Roger Kipling
With contributions from Siobhan Brocklehurst, Richard Buckley, Nicholas J. Cooper, Paul Courtney, Tony Gnanaratnam, Jules Hagar, David Higgins, Liz Johnson, Angela Monckton, Debbie Sawday

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Edited by Richard Buckley

For: BBC Resources North

Approved by

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An Archaeological Excavation at 9 St. Nicholas Place, Leicester (NGR SK 5840 0448 centre)

Dr. Roger Kipling

Summary

An archaeological excavation was undertaken at 9 St. Nicholas Place, Leicester, between February and May 2003 on behalf of Land Securities Trillium in advance of construction of new premises for BBC Radio Leicester and the Asian Network. The project followed a preliminary evaluation of the cellars and external yard areas of a standing 19th-century warehouse building in 2002, work that revealed extensive and deeply stratified archaeological deposits across the site dating from the early Roman to post-medieval period. Following demolition and clearance of the warehouse building, excavation targeted the yard areas occupying the western part of the development area, with investigation of the undercroft building known to front the present Guildhall Lane, and any possible associated deposits and features, deemed a particular research priority

A well-preserved series of medieval and later walls were revealed traversing the excavation, defining several burgage or tenement plots which were occupied by a complex series of buildings extending back from frontages on High Street, Guildhall Lane and Highcross Street and dating to the 13th to 15th centuries. The northernmost area (1) of the excavation was occupied by three medieval buildings and, to the rear, an open area of cobbled yard surfaces and covered drains, and two substantial masonry features, possibly representing the supports for industrial water tanks linked to cloth production. A substantial post-medieval wall formed the division to this northern zone and the central Area 2, which included a further sequence of medieval and post-medieval hearths overlying Roman stratigraphy, including a probable well. Finally, the undercroft building and a complex sequence of medieval rubbish pits dominated Area 3, which fronted onto Guildhall Lane on its southern side. With the exception of the undercroft, the general area appeared to have been cleared of buildings by the 16th century and the backyard areas used for refuse disposal.

Detailed examination of the rare undercroft building revealed it to have been constructed between the mid-12th and early 13th centuries. Finely constructed from granite and re-used Roman brick and tile, it comprised a partially sunken rectangular cut measuring c.8.5m x 4.5m and around 2.5m deep. Access from within its tenement was via a substantial doorway at its north-east corner, and its interior lit by four splayed, round-headed windows. A row of niches set into the opposing wall are likely to have accommodated candles or lamps. The undercroft is likely to have functioned as a storeroom and, possibly, premises for the trading of goods such as cloth, wool or foodstuffs by its wealthy merchant owner, who is likely to have occupied a timber hall above and in a probable connecting timber wing aligned at right angles along the Guildhall Lane frontage. The likely presence of a corner doorway on the south side of the building would have afforded access for clients from Guildhall Lane. The building appeared to have been remodelled shortly after its construction, involving the removal of its porch and a probable change to a possibly industrial function during the later 13th or 14th century. However, the presence of substantial stone-lined cess or latrine pits containing high-status finds such as fine ceramic ware from Lincoln in the northern part of the property into the 15th century testifies to the continued elite character of this area into the post-medieval period.

Addendum:
In the light of research carried out subsequent to the excavation and to the initial drafting of the resultant report, a number of reinterpretations of the evidence have been made and, as a result, certain amendments have been made to this, the final version.

1: Introduction

1.1: The Site

Proposals submitted by BBC Resources North in 2000 to construct new premises for BBC Radio Leicester and the Asian Network resulted in the undertaking of an archaeological assessment and follow-up excavation at 9 St. Nicholas Place, Leicester, on the site of the former Leicester Antiques Complex, located east of St Nicholas Place and north of Guildhall Lane, Leicester. Fieldwork on the site followed the design brief for an Archaeological Impact Assessment and Building Record prepared by the Archaeology Section of Leicester City Museum Service (Appendix One). An Archaeological Desk-Based Assessment compiled by the University of Leicester Archaeological Services (ULAS Report 2000/88) had previously concluded that the site possessed considerable archaeological potential, based on its known proximity to the historic core of the Roman and medieval town. However, archaeological field evaluation was constrained by the fact that the substantial Victorian buildings occupying the site had yet to be demolished. Hence, trial trenching was undertaken within basements, some 2m below present street level in order to ascertain the character and degree of survival of Roman stratigraphy. The opening of further trenches in the associated external yard areas revealed evidence for medieval and post-medieval backyards and property boundaries.

As a result of the evaluation exercise, it was clear that a deep and complex sequence of archaeological deposits survived in the open area associated with the former Antiques Complex, whilst within the building, results were especially notable, revealing a minimum of two phases of well-preserved Roman building activity surviving at considerable depth. Following consultations between ULAS, the client and the City Archaeologist, plans for the new building were modified in order to ensure preservation of these deposits, whilst those within the backyards were to be affected to a depth of *c.*1.6m below present ground level via the construction of the building on a raft foundation. The 1.6m depth required in order to accommodate the raft would adversely affect the uppermost medieval and post medieval deposits.

The resultant implications for development costs prompted design revisions in order to lessen the impact on these deposits. As a result, the focus of the subsequent excavation phase in 2003 shifted away from the part of the site occupied by warehousing to an the investigation of the medieval phases in the open yard areas, coupled with a re-examination of the undercroft following demolition of its 19th-century additions.

Plate 1: The Norman Undercroft, photographed in 1861 (from the northeast)

1.2: The Undercroft

(Plate 1)

The first documented reference to the undercroft building dates to 1844, when on 28th September the local artist John Flower was informed of its existence by the Sexton of St Martin's, now the cathedral church. The cellar lay beneath the Sexton's house, described as being of Elizabethan date, and with a large projecting gable. Following the demolition of this timber-framed house in 1861, the cellar was completely exposed to view, at which point a photograph was taken, and which shows the largely intact west wall with its four round-headed windows. During the Victorian redevelopment of the site, the cellar was covered with a brick vault which ensured its survival into modern times, and a series of brick piers were inserted into the cellar to support the new building above, although at some cost to the cellar. All the fine arches of the windows visible in the photograph were badly damaged, and the northernmost one was completely obliterated by the construction of a brick staircase, which formed the new point of access. Nevertheless, in 1949 the cellar was described as still 'largely intact' and in 1956 moves were made to have it scheduled. The precise location of the cellar was subsequently lost for over thirty years until its rediscovery and subsequent evaluation by members of Leicestershire Museums Survey Team in 1989, when the standing remains were found to be in a remarkably good state of preservation. The 2003 evaluation represented an opportunity to reassess the undercroft and to place the building in its proper archaeological context.

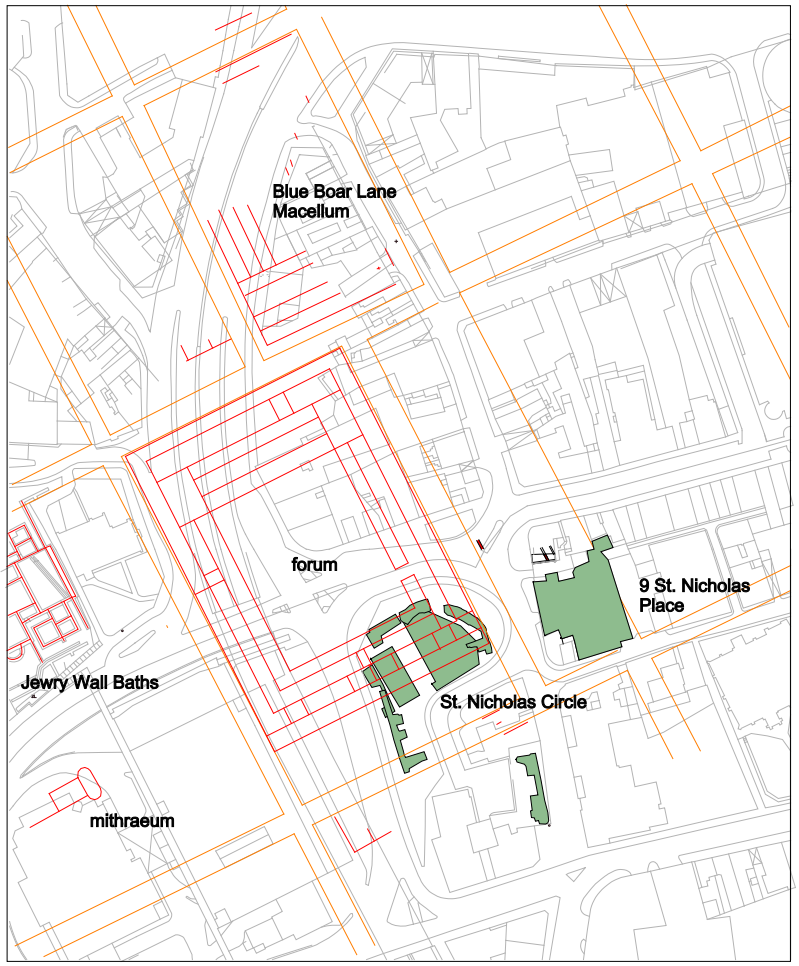

Figure 1: Roman Leicester showing location of excavations (scale 1:1750)

2: Site Location

(Figure 1)

The development site was located at the intersection of Highcross Street/St. Nicholas Place/Applegate and Guildhall Lane at the core of the historic town. During the Roman period, the site occupied the junction of a road approximately aligned with the present Guildhall Lane and representing the route of the Fosse Way, the principal east-west route through the Roman town, and a second, lesser north-south road located on the eastern edge of the development area. This *insula* (XXII) lay directly opposite the south-east corner of the Forum and basilica, the largest Roman municipal building in Leicester. The tracing of major wall lines during excavations of the 1960s and 70s provided the dating and constructional sequence for the south range of the Roman Forum, notably that the south wing contained the principal Forum entrance. Archaeological evidence suggests that both domestic and municipal buildings lay close to the Forum.

During the medieval period, 9 St. Nicholas Place was located at the intersection of High Street (now Highcross Street, St. Nicholas Place and Applegate) and Holyrood Lane (now Guildhall Lane). The southern (Holyrood Lane/Guildhall Lane) street

frontage was known to have been the location of a probable 12th-century undercroft structure, surviving since the mid-19th century as a cellared structure.

3: Aims and Objectives

The completion of an Archaeological Impact Assessment on the site of the proposed development in 2002 had ascertained that well preserved archaeological remains of Roman and medieval date survived across the development area, notably an early medieval undercroft building. It was consequently agreed that a stage of archaeological excavation was necessary prior to construction in mitigation of damage that would be caused to buried archaeological remains.

4: Excavation Methodology

(Plates 1-4)

Following the completion of an Archaeological Impact Assessment of the proposed development of 9 St. Nicholas Place, Leicester into the new home of BBC Radio Leicester and the BBC Asian Network, it was agreed that a stage of archaeological excavation was necessary prior to construction in mitigation of damage which would be caused to buried archaeological remains. The impact assessment included archaeological evaluation by trial trench which demonstrated that well preserved archaeological remains of Roman and medieval date survived across the development area (see Section 6 for details).

Assessment of the proposed groundworks and foundation layout in relation to the results of the evaluation directed that archaeological levels in the backyard areas of the former Antiques Centre warehouse would be adversely affected by the proposals. Archaeology below the basement floors of the building would, however, be unaffected. Consequently, a mitigation strategy of archaeological levels to be affected was implemented. Consultation with the clients, architect and Leicester City Archaeologist resulted in the alteration of design plans of the proposed building such that the impact of construction would be minimised on deeply buried archaeological remains. This proposed the utilization of a piling and raft scheme, involving the excavation of archaeological deposits down to a formation level of 1.6m below present ground level, followed by stoning up to a set level. The undercroft was to remain in situ and be roofed over with a concrete floor slab, but surrounded by concrete foundation piles. The greatest impact from construction works was thought

Plate 2: General view north-east across the excavation with machine clearance in progress

Plate 3: Area 2: machining in progress, viewed northeast

to stem from the reduction of the site level to a height of approximately 63.50m OD or 1.6m below present ground level, a level subsequently revised to 63.30m OD. Where archaeological deposits had survived at a depth above this level, these were to be archaeologically excavated in mitigation. The Norman undercroft was to be preserved beneath the proposed building, with later brick additions and vaulted roof removed. A number of areas of deeper excavations were also to be undertaken where mass concrete foundation bases were deemed necessary, including three areas

Plate 4: Areas 1&2: excavation in progress

Plate 5: Excavation in progress, Area 1, viewed south-east

surrounding the Norman undercroft in order that ground beams could be spanned across the structure, and so minimise damage. The excavation phase, dating between 10th February and 23rd May 2003, targeted the yard areas occupying the western part of the development area, with investigation of the undercroft building known to front the present Guildhall Lane, and any possible associated deposits and features, deemed a particular research priority.

Following demolition and clearance of the warehouse building fronting High Cross Street, a 360º mechanical excavator equipped with a toothless bucket was employed to remove modern overburden down to the top of archaeological stratigraphy. Hand excavation of these deposits proceeded after initial cleaning and planning. The presence of a series of medieval and later walls traversing the development dictated its logical division into three zones, providing a total excavation area of *c.*416m². Work progressed broadly north to south across the development area, beginning with Area One, enabling a phased handover of the site to demolition and construction contractors on completion of archaeological investigation. Hence, Areas One and Two were surrendered to the demolition company, Smiths PLC, on the 17th April 2003, Area Three was delivered on 8th May, and the undercroft building following at the close of the excavation on 23rd May.

5: Geology and Topography

The Ordnance Survey Geological Survey of Great Britain, Sheet 156 (Leicester) indicates that the underlying geology of the study area is likely to consist of Mercia mudstone with overlying river gravels; the area lies on the river gravel terrace above the River Soar flood plain at 64.6m OD.

6: Archaeological and Historical Background

In response to an application by Land Securities Trillium to redevelop the site, the Leicester City Council Planning Archaeologist recommended the implementation of a phased programme of archaeological investigation in order to characterise its potential.

6.1: Previous Archaeological Intervention in the Area

The undercroft had been the subject of a detailed archaeological survey in 1989 by Leicestershire Archaeological Unit under the direction of Richard Buckley and Jules Hagar involving the preparation of drawings of the internal elevations and limited excavation of the flooring (Hagar and Buckley 1990). A number of other archaeological interventions in the immediate vicinity are pertinent to the 2003 excavations, including those undertaken on St. Nicholas Circle in 1971 and 1973 by Jean Mellor (Mellor 1971-2; Mellor 1972-3). More recent work consists of the 1999 excavation by James Meek at the junction of St. Martins Place and Applegate (Meek 2000) and on the site of the former Cameo Cinema on the High Street directed by Lynden Cooper in 1992 (Cooper 1993).

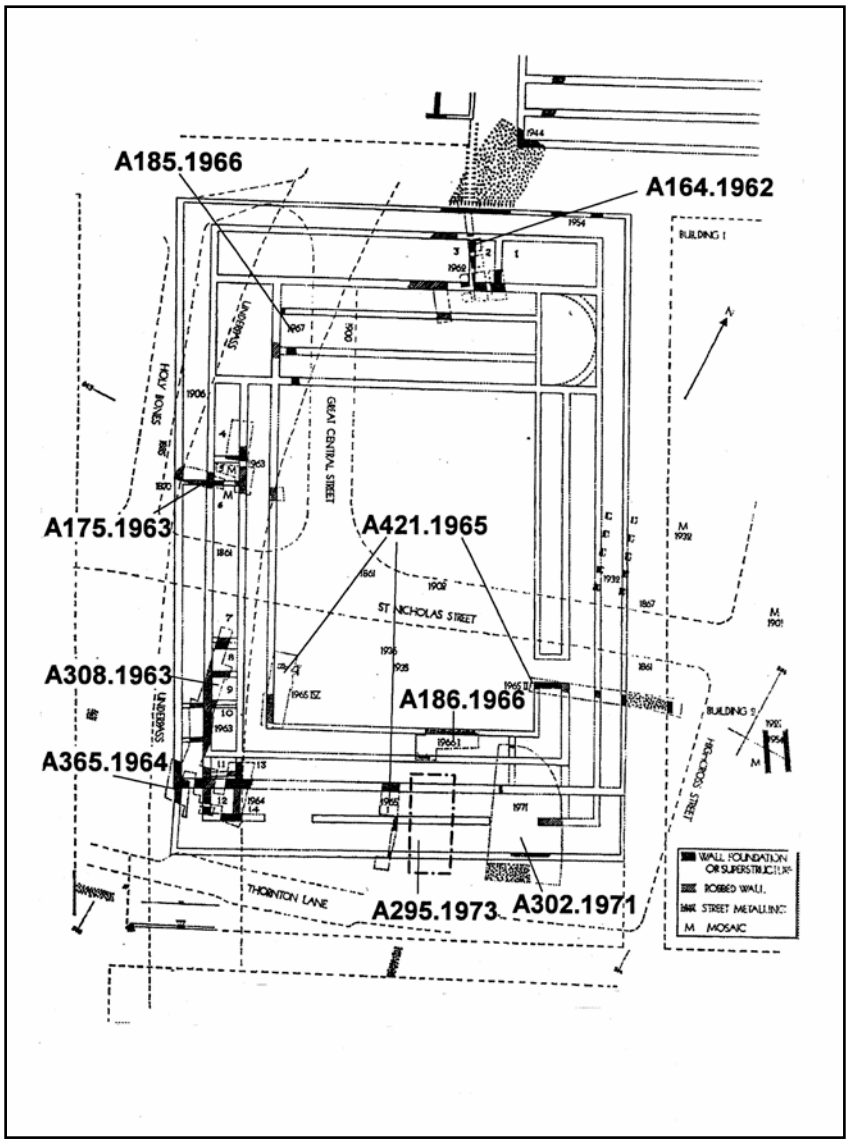

Figure 2: Excavations on the site of the Roman Forum, 1971-3
(after Mellor & Lucas 1976)

6.1.1: The Roman Period

(Figures 1-3)

Roman sites in the vicinity of 9 St. Nicholas Place include the south-eastern corner of the largest Roman municipal building in Leicester, the Forum and Basilica (Hebditch and Mellor 1973). The remains of several other buildings have also been recorded close by, including a number of mosaics and tessellated pavements, whilst a Roman building with mosaic floor and heating flue system was located directly to the north of the site. The archaeological evidence for these buildings suggests that the area contained both domestic and municipal buildings. Mellor's fieldwork in 1971 and 1973 consolidated information first gained during the 1960s regarding the dating and constructional sequence of the south range of the Roman Forum. The tracing of major wall lines suggested that the principal Forum entrance was centrally placed in the south wing.

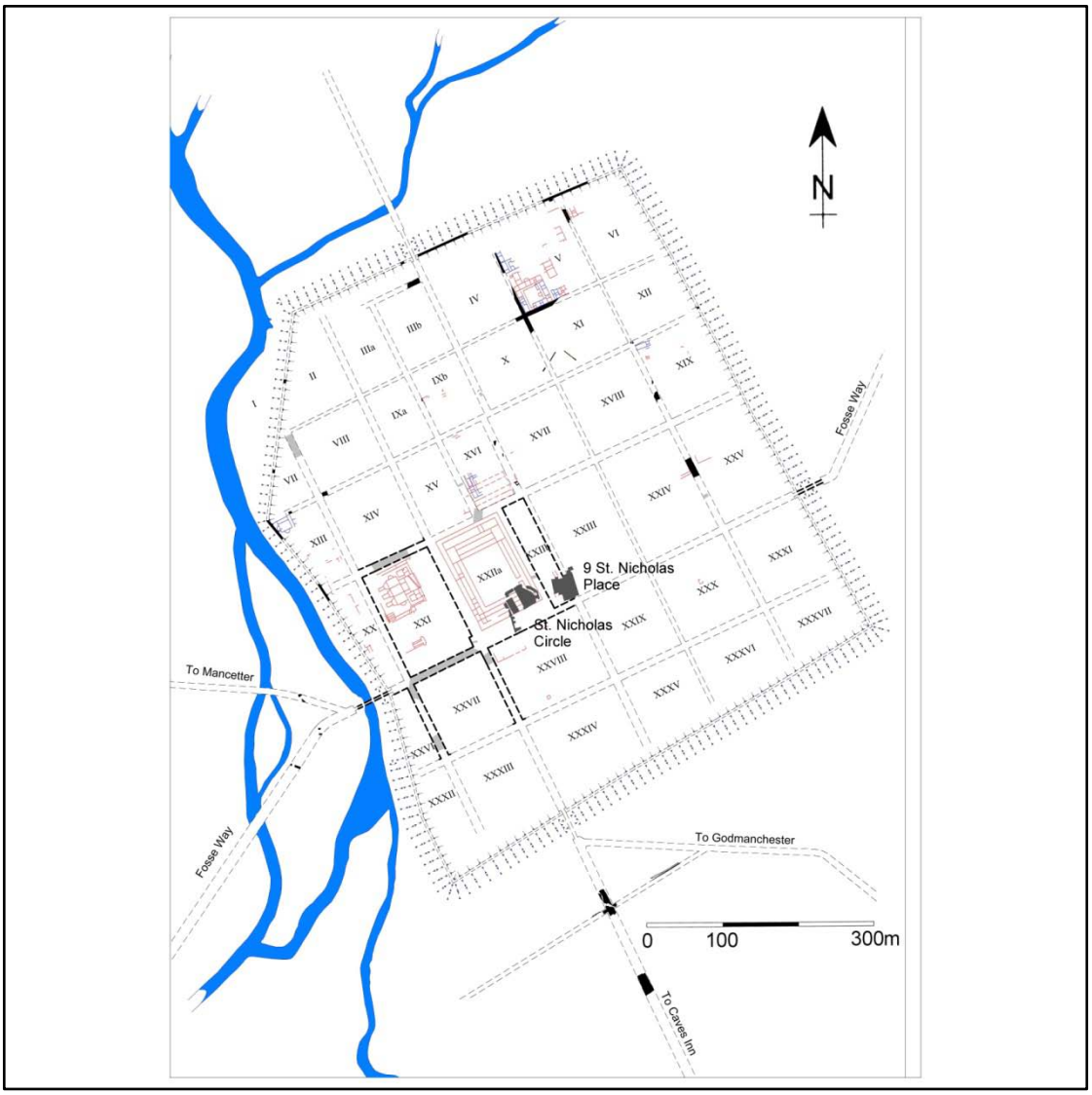

Figure 3: Roman Leicester, showing area of excavation

6.1.2: The Medieval Period

(Figure 4)

The distribution of 12th-century pits on the Forum sites was viewed by Mellor as evidence for deliberate avoidance of surviving Roman buildings and, by implication, that the walls of these were still extant by the medieval period, utilised as property boundaries and/or obstacles. The line of one forum wall identified on the 1971 excavation was subsequently followed by the post-Roman parish boundary, suggesting that it survived into the medieval period. The same wall was re-encountered in a trench fronting Highcross Street during excavations on Applegate and St. Nicholas Place in 2000 where a possible undercroft was also identified (Meek 2000). On the other side of the north-south street on the east side of the forum, the parish boundary continues across the northern part of the 9 St. Nicholas Place excavation. Here also it is possible that the alignment reflects that of an underlying

Roman wall. The 1992 Cameo Cinema excavation on High Street, located directly to the north-west of St. Nicholas Place, produced two 13th- to 15th-century buildings of clay-bonded granite build with internal floors, possible external yard surfaces and pitting. The buildings, fronting High Street, the medieval Swinesmarket, and possibly divided by a narrow alleyway, were subsequently subjected to robbing activity (Cooper 1993: 9). These structures, along with a possible cobbled yard area and attendant stone-lined drain, well and oven features, were directly comparable with those encountered in 2003.

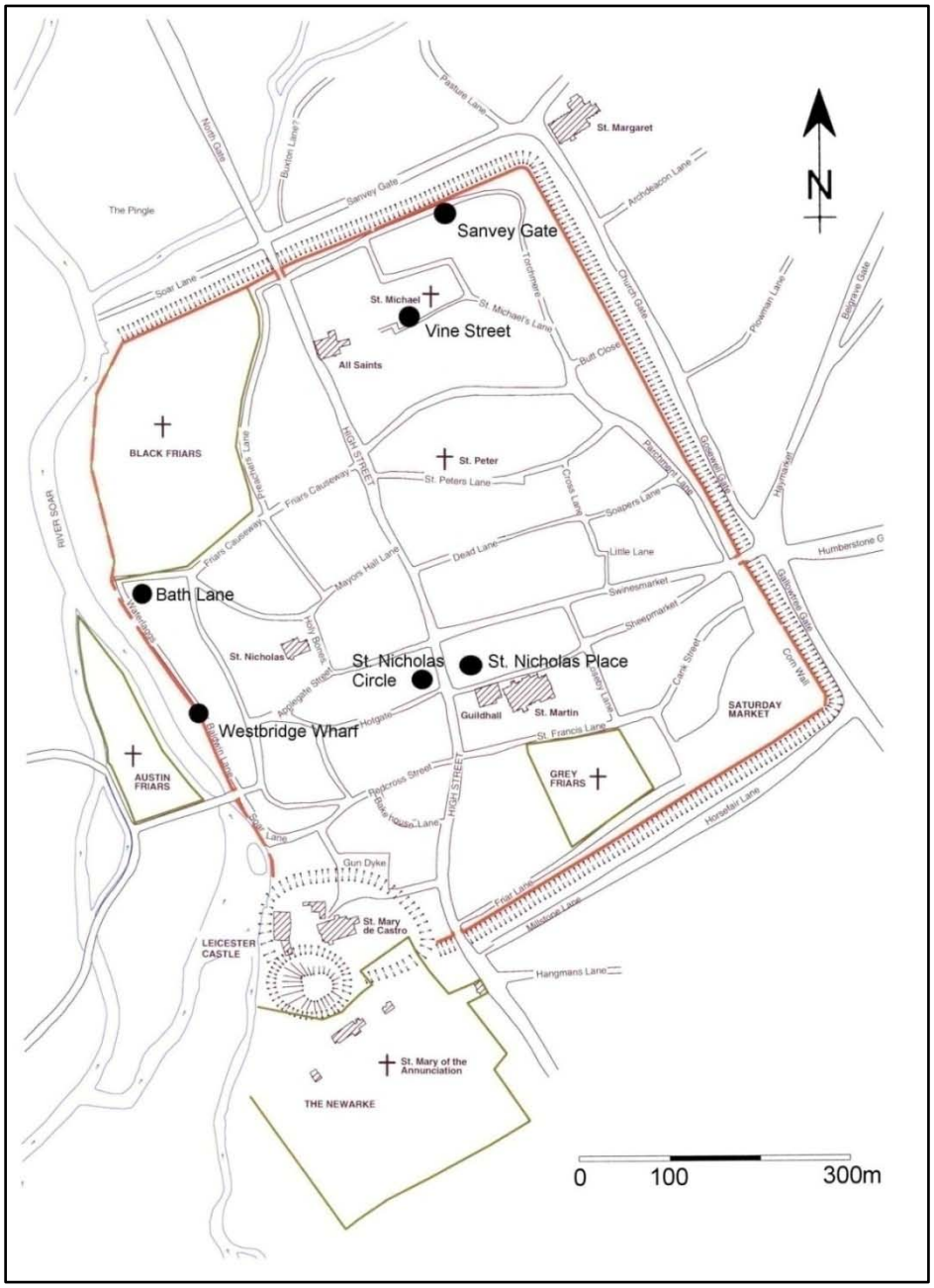

Figure 4: Map of medieval Leicester, showing
St. Nicholas Place and other sites discussed in the text

6.2: The 2002 Archaeological Evaluation

An archaeological evaluation was undertaken at 9 St. Nicholas Place between 2nd January and 20th February 2002, when the opening of a total of eleven trenches confirmed the presence of well preserved and deeply stratified Roman and medieval archaeological deposits (Kipling 2002). Work was conducted in the cellars of the (then standing) Victorian buildings and in the associated external yard area.

Figure 5 Evaluation trenches showing Roman (red) and post-Roman (orange) wall lines identified

6.2.1: The Roman Period

The archaeological evaluation confirmed that the proposed development area lay over important archaeological deposits of Roman date. The evidence would suggest at least two main phases of Roman building on the site, the earliest pre-dating the formation of the Roman street grid. The second phase of building is aligned with the street grid. Evidence was also revealed of the remains of a large cobbled surface pre-dating the second phase of building. This is similar to that seen to have been laid out over the areas of the two major public buildings, the Forum and Jewry Wall Baths.

Phase One

The earliest phase of building on the site was revealed within Trench 7, wall (316), constructed of coursed granite blocks with a beige sandy lime mortar and with *c.*0.6m of superstructure surviving. The wall was significant as it lay on an alignment of almost 30 degrees difference to that of the later Roman street grid. No dating evidence associated with the construction of the wall was recovered, but by association with other dated contexts, the wall is stratigraphically earlier than late 1st

century AD deposits. Within Trench 10 a similarly constructed wall (202), with pale-yellow brown mortar was recorded. The small part of the wall revealed within the evaluation was substantially robbed, and its alignment is far less certain than that of wall (74), but would again be offset from the later Roman street grid alignment by some 20 degrees. It is not inconceivable that this wall may also belong to this first constructional phase of activity. The walls revealed within the evaluation from this early phase could be the earliest evidence for masonry structures within the Roman town of Leicester. The function of this building could not be ascertained from the evaluation; little was revealed of any associated floor levels. It would very likely be of high status, and potentially an early public building within the centre of the town. By the end of the 1st century AD, this structure was demolished, although the walls were partially left standing, to make way for buildings erected on the street grid alignment.

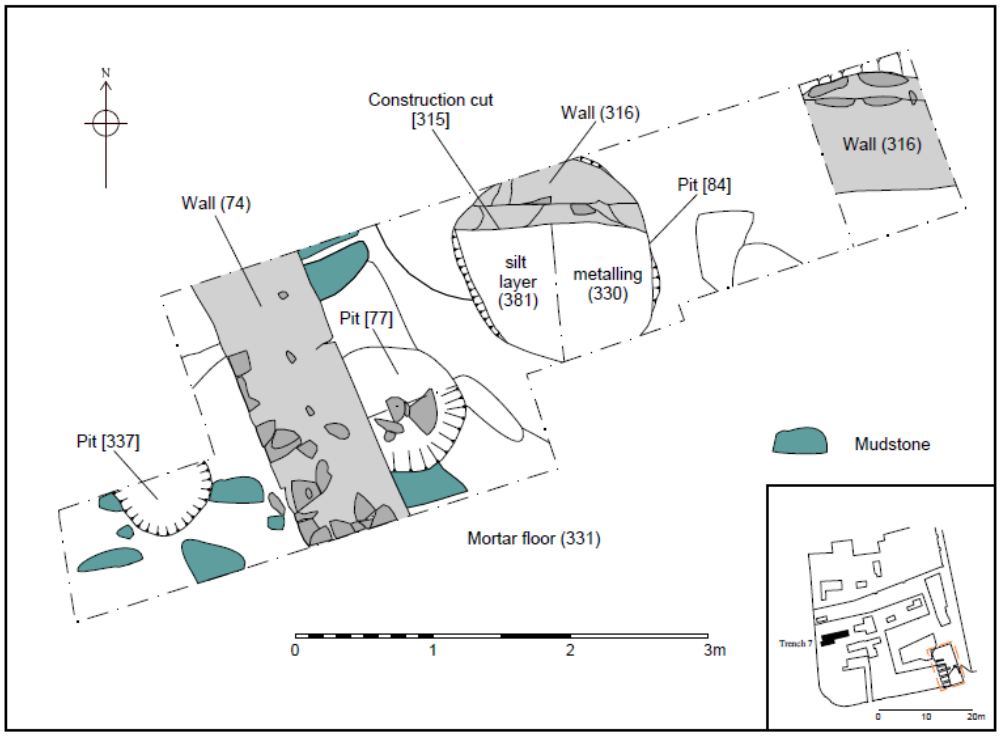

Figure 6 Evaluation Trench 7

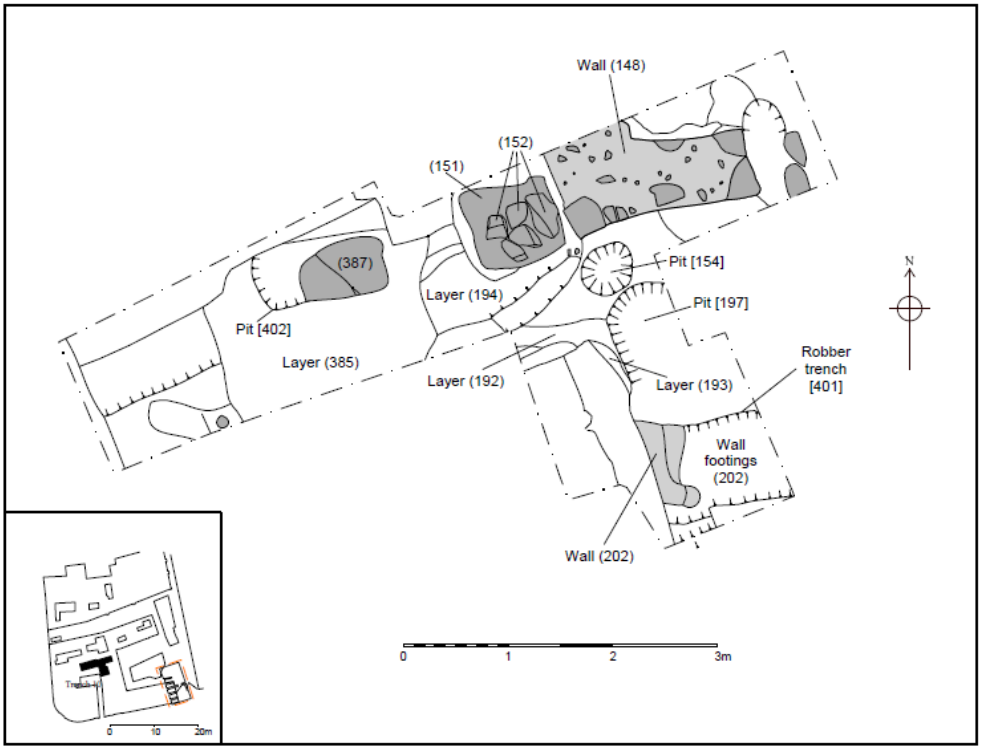

Figure 7 Evaluation Trench 10

Phase Two

The lines of the Roman street grid were initially marked out with ditches, possibly by the end of the 1st century AD, and by the early 2nd century metalled surfaces had been added (Connor and Buckley 1999, 51-2). Evidence has also been revealed for a similar late 1st-century 'setting out' of the *insula* that was to contain the major public buildings. This was in the form of cobbling and has been recognised in the Forum *insula* and those adjacent to it on the north, south and west, and interpreted as an open area for assembly for commerce before the construction of the Forum (Mellor 1976, 14). Within Trench 7, a 0.10m-deep well-compacted gravel surface was revealed (330) butting against the wall (316), but sealing its foundations. The surface is of similar character to the cobbled surface found within the Forum and other *insulae.* Although by no means conclusive, this would suggest that the wall pre-dates the surface, giving credence to the idea that the wall is an earlier pre-street grid phase of activity. Within Trench 3, at least three layers of well-compacted cobbled surfaces were revealed (355, 356, 358). The earliest of these lay directly upon the underlying natural sands and gravels. The nature of these surfaces seems very similar in character to those seen within the Forum *insula*. The foundation for the largely robbed wall recorded within the trench (352), is likely to have cut through these gravel layers. The wall is aligned with the street grid, and thus thought to represent part of the second constructional phase, during the first part of the second century. Other walls were revealed during the evaluation that align fairly closely with the Roman street grid, in as far as can be ascertained from small lengths of wall revealed within the evaluation trenches. Destruction deposits, including fallen wall and roof material were encountered within Trenches 2 and 6. Such deposits are rarely found within Leicester and may contain significant material regarding the nature of the demise of the town at the end of the Roman period.

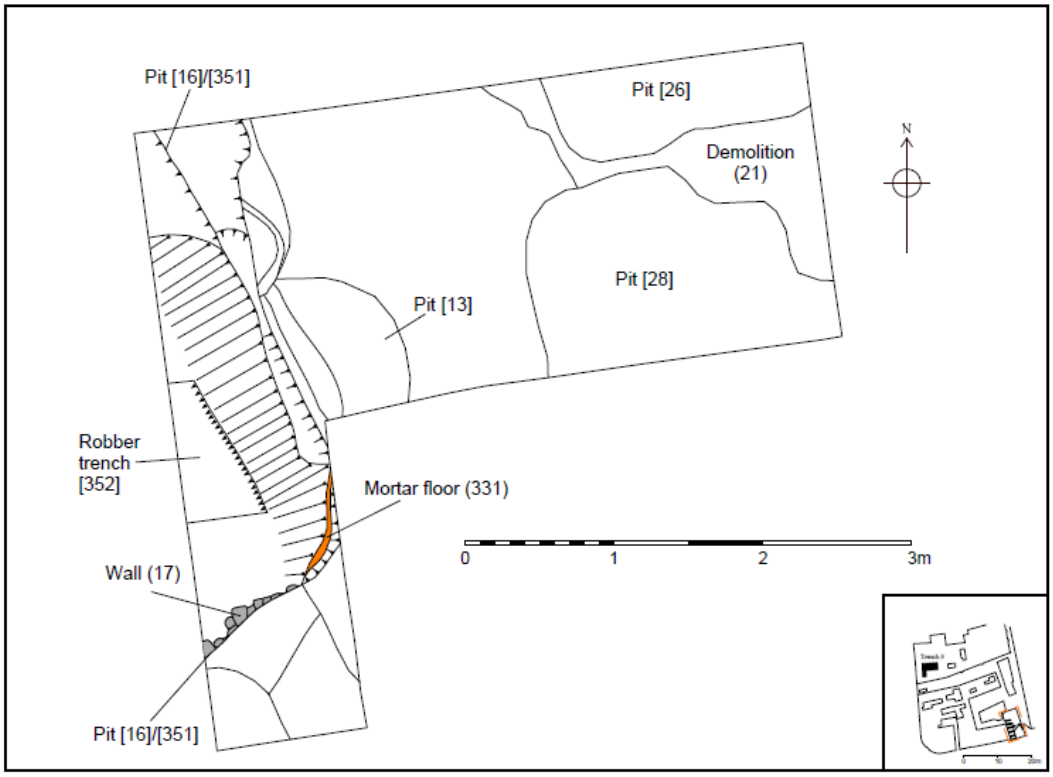

Figure 8 Evaluation Trench 3

The character of the potential structures from the second main construction phase is very difficult to define due to the nature of evaluation. The masonry walls recorded within Trenches 6, 7, 8 and 10 are all of size and constructional nature to be potentially internal walls of a public building. The location of this *insula* adjacent to the Forum would certainly not preclude the existence of public buildings here. The size and substantial nature of the masonry revealed, and the lack of any ornately decorated wall plaster or mosaic flooring, would imply that the buildings were public, rather than domestic. The possible stylobate blocks within Trench 10 could infer the existence of a grandiose structure, possibly even a temple, but this can only be conjecture from the keyhole nature of the evaluation.

6.2.2: The Anglo-Saxon Period

Stray Anglo-Saxon finds have been recovered from several places around the proposed development area, although no structural remains have been identified. The site lies in an area that has good potential for the survival of the important post-Roman 'Dark Earth', a thick accumulation of material that has the potential for improving the understanding of the character of post-Roman Leicester, a period which is, at present, poorly understood. Several Anglo-Scandinavian bone objects were recovered from a pit at the corner of Highcross Street and Guildhall Lane opposite Messrs Swain & Co. – the business operating from the warehouse situated on the site of the present development until its demolition – in 1882 . Notably, these included a bone mount end in the form of a dragon's head in the Danish late Oseberg style and dating to the late 9th century, and a bone girdle with opposing lions and an acanthus motif, dating to the second half of the 9th century (pictured; Clough *et al* 1975, 57-8).

Plate 6: Anglo-Scandinavian finds of mount end (L) and bone girdle (R)

6.2.3: The Medieval Period

The development area covered the frontages of the medieval High Street (now St. Nicholas Place) and Holyrood Lane (now Guildhall Lane), although almost all of these areas were known to have been cellared. The areas to the rear of the frontage were considered to have potential for medieval structures, as seen at sites such as the Castle Car Park evaluation (Meek 2000) and during excavations of the Forum (unpublished report). Buildings away from the main street frontages had been recorded within the building plot directly to the east of the site. Other medieval activity relating to the properties, such as cess pits, rubbish pits or wells, which were usually located in the rear yards of properties, might also have survived. The proposed development area also contained the surviving Norman undercroft, a 12th-century, part-sunken basement, possibly of a merchant's house (L334). The windows in the western wall are likely to have opened out onto a courtyard.

Post-Roman deposits were targeted in the external yard area, with the opening of two trenches revealing medieval clay-bonded masonry walls and mortar floor surfaces surviving at a depth of 0.5m below the present ground surface. These deposits had been damaged by (no longer extant) modern buildings and service trenches.

The site revealed no Anglo-Saxon remains, although a few sherds of later Saxo-Norman pottery were recovered. It is thought that by the early medieval period the medieval street pattern had been established. The frontages of the main north to south route through the town, the former High Street, were rapidly developed during this period, and were possibly the focus for the earliest post-Roman occupation of Leicester (Courtney 1998). As has been seen at archaeological investigations opposite the site in Castle Park Car Park (Meek 2000) and during the Forum excavations of 1971 and 1973 (unpublished), the plot boundaries established at this time became fossilised, and in part were still visible in the 20th century.

Fossilisation of medieval boundaries may be apparent in the overall layout of those buildings on the proposed development site demolished in 2003, especially those in the centre of the area. The building projecting into the rear yard was long and narrow, and of *c*.5m width. The walkway between this building and that to the north was also of similar size and shape. These have the appearance of medieval tenements, and may

well be the fossilisation of such projecting to the east from the former medieval High Street. These boundaries also display a curious kink in their alignment to the east of the street frontage. The reason for the kink in the alignment may even have its origins in the Roman period, as it aligns with the Roman street grid, and may suggest the survival of standing Roman masonry. Walls recorded in Trench 9 continued the alignment of these possible medieval plot boundaries to the east of the existing buildings into the rear yard. The remains of a possible medieval mortar floor was also exposed at the northern end of this trench. The character of the medieval buildings that formerly stood within the proposed development area, excluding the undercroft, could not be ascertained from the evaluation. The existence of walls and the floor layer so far from the street frontage would imply that this area was densely occupied. Trial trenching confirmed the presence of deeply-stratified archaeological Roman and medieval deposits. In the case of the cellared areas these comprised as much as *c*.1.6m of stratified floors and associated walls and, in the external yard areas, an additional overlying deposit of *c*.1.5m of (probably substantially damaged) medieval remains.

6.2.4: The Late- and Post-Medieval Period

Both the street frontages of St. Nicholas Place and Guildhall Lane were occupied with buildings throughout this period. The appearance, construction and use of these buildings prior to the mid-19th century is unclear from the source materials used for this document. After this date, details regarding these buildings are more readily available from such sources as the Goad Fire Insurance Plans and Kelly's Directories. The standing buildings had altered little since the second half of the 19th century, other than the demolition of the buildings that formerly stood in the existing yard area of the proposed development.

2003 Excavation Summary by Phase

Phase 1	Area 3:	Group 14
(Roman)		Group 19
Phase 2		
(c.850-1100)		
(Saxo-Norman)	Area 3:	Group 20 (Dark Earth)
Phase 3.1	Area 2:	Group 15 (well 932 & pit 1005)
(c.1100-1300)	Area 3:	Group 21 (undercroft construction)
(Early Medieval)		Group 23 (pitting west of undercroft)
		Group 24 (pitting north of undercroft)
		Group 25 (pitting east of undercroft)
Phase 3.2	Area 1:	Group 1 (Building 2)
(c.1250-1300/1325)		Group 2 (yard of above)
(Early Medieval)	Area 3:	Group 22 (undercroft alterations, robbing)
Phase 4.1	Area 1:	Group 3 (Building 1)
(c.1275/1300-1500)		Group 5 (Building 2 demolition)
(Medieval-		Group 7 (Building 3)
Later Medieval)		Area 2: Group 16 (pits & hearths)
	Area 3:	Group 26 (pitting north of undercroft)
		Group 27 (pitting west of undercroft)
		Undercroft doorway blocking
Phase 4.2	Area 1:	Group 4 (Building 1 rebuild/extensions)
(c.1400-1550)		
(Post-Medieval)		
Phase 5	Area 1:	Group 6 (Building 1 robbing & demolition)
(c.1550-1775+)		Group 9
(Post-Medieval-		Group 10 (Building 2 further demolition)
Late Post-Medieval)	Area 2:	Group 17
Phase 6	Area 1:	Group 11 (Building 2 zone)
(1750+)		Group 12 (Building 1 further demolition)
(Modern)		

1990 & 2003 Excavations: Summary of Activity by Phase

2003	1990
Phase 1 (Roman) ▪ Roman street(s) ▪ Roadside buildings	
Phase 2 (c.850-1100/1150) ▪ Dark Earth activity (-ies)	
Phase 3.1 (c.1150-1300) ▪ Undercroft constructed; extensive pitting on property of undercroft	
Phase 3.2 (c.1250-1300/1325) ▪ Undercroft altered, doorway robbed, western wall rebuilt ▪ Cess pits F92 & F100 cut inside undercroft ▪ Building 2 & yard constructed	Window rebuild Possible undercroft refurbishment
Phase 4.1 (c.1275/1300-1500) ▪ Building 2 demolished/robbed ▪ Buildings 1 & 3 constructed ▪ Water tank bases constructed ▪ Undercroft doorway partially blocked ▪ Furnaces/ovens	Undercroft disuse? Doorway threshold raising/blocking Stock pens inside undercroft?
Phase 4.2 (c.1400-1550) ▪ Building 1 altered ▪ Stone-lined pits	
Phase 5 (1550-1775+) ▪ Building 1: demolition/robbing ▪ Building 2: further demolition/robbing ▪ Yard, wells	Timber building constructed over undercroft?
Phase 6 (1750+) ▪ Warehouse constructed ▪ Building 1: further demolition/robbing ▪ Upper storey of undercroft constructed and brick superstructure built	

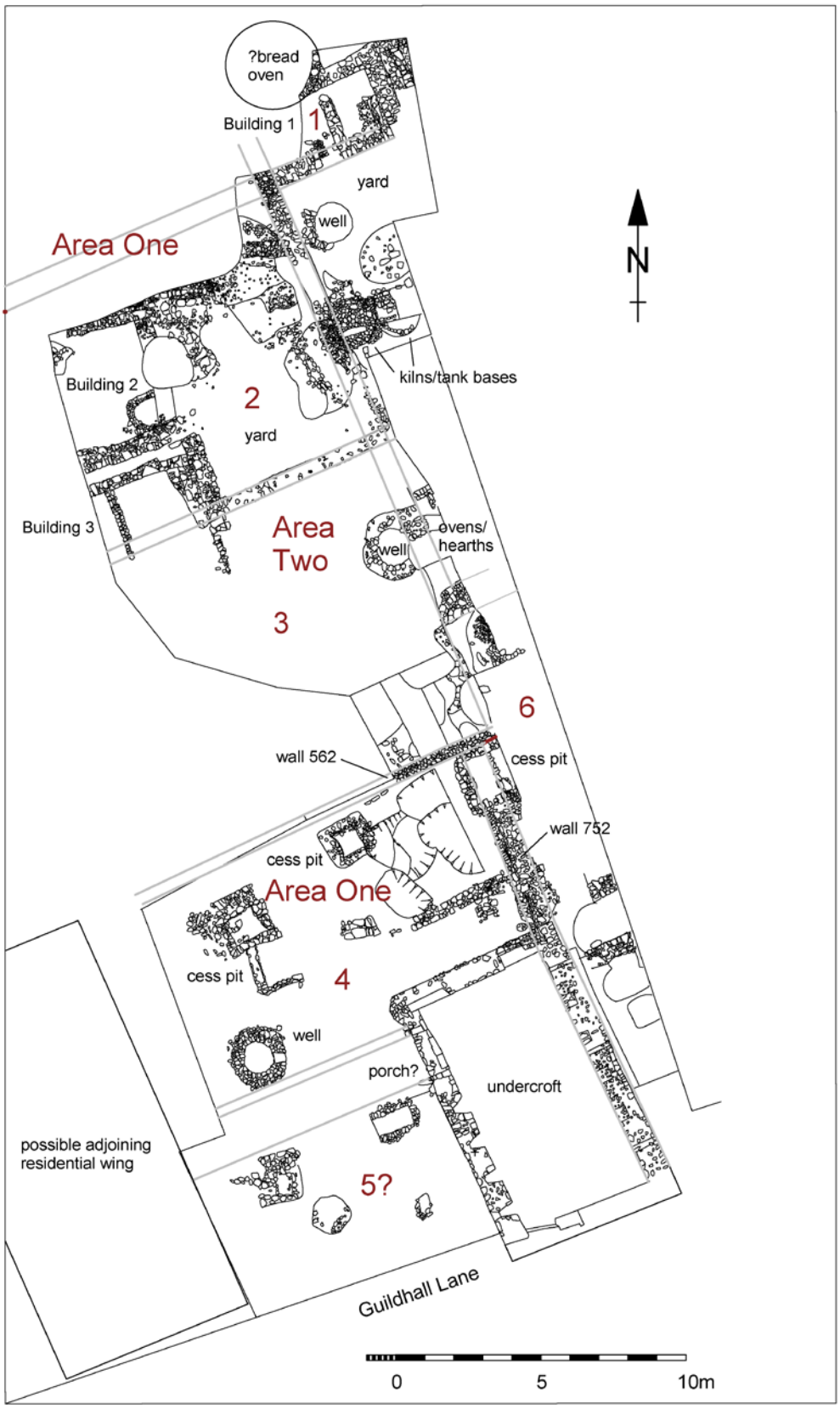

Figure 9: General Plan of 9 St. Nicholas Place with numbered tenement plots and excavation areas

7: Results of the 2003 Excavation

(Figure 5)

The proceeding section details the results of the excavation on a phase and context/feature grouping basis, in tandem with data from the 2002 evaluation phase and the 1990 fieldwork undertaken by Jules Hagar. Assimilation and integration of the two data sets has necessitated a certain degree of simplification of Hagar's phasing combined with its assimilation into the 2003 phasing sequence. A number of medieval plots or tenements, illustrated in Figure 5, are the subject of discussion later in the text.

7.1: Phase 1 (Roman)

Street metalling and silting sequences; associated street frontage buildings.

7.1.1: Area Two

Group 14

Street metallings 1023, 1038-1045
Demolition Deposits 937, 1011-1014, 1034-1037

A 1.4m+ sequence of gravel metalled street surfaces observed in section in the cut of post-medieval well 936 located in the centre of Area Two and overlain by a *c*.0.8m accumulation of probable late Roman demolition spreads containing mortar and ceramic building material. Context 1014 additionally contained quantities of *tesserae* and 1015 Mercian mudstone fragments.

7.1.2: Area Three

(Figure 6)

Group 19

Street metallings and silts 825-827, 828/1095, 829/1080, 861, 862, 1071-1075, 1080/829, 1081, 1095, 1121, 1126, 1176, 1177, 1207, 1208, 1209, 1222, 1223, 1229, 1231, 1232, 1341/1450, 1346-1357, 1364-1375, 1379-1387, 1423, 1448, 1449, 1451- 1461
Demolition deposits 1065, 1066, 1067/854, 1068-1070, 1076, 1079, 1082, 1198, 1199, 1343-1345, 1407, 1443-1446
Occupation deposits 1083, 1085-1087
Street frontage buildings (walls 674, 724/1491, 1424, 1426, 1492, 1493, 1497, 1499)
NB wall 1499 robbed at date unknown (Feature 1396)
Floor 1314
Pits ?863, 1084, 1362, 1378

Sequences of Roman street metallings, silting sequences and demolition spreads were observed directly to the north, west and east of the undercroft building, truncated by its construction cut (1358). A number of heavily truncated associated walls are likely to represent street frontage structures.

The Western Sequence

(demolition layers 1065, 1066, 1067/854, 1068-1070, 1079, 1082, 1198, 1199, 1344, 1345, 1443-1446; metallings and siltings 829/1080, 861, 862, 1071-1075, 1081, 1095, 1121, 1126, 1207-1209, 1223, 1344-1357, 1423; occupation deposits 1083, 1085-1087; walls 1492 & 1499).

A 1.4m+ succession of compacted yet friable sand and gravel metalled surfaces were observed within a metre-wide trench opened parallel to the external face of the western wall of the undercroft. All were truncated by the construction trench of the latter, with its granite rubble wall footings (663/1400) set into street metallings 1075 and 1081. Context 1080 was notable for the discovery of a small group of finds, including a swastika plate brooch of 2nd- or 3rd-century date, three gaming counters and small knife blade which may have been contained within a wooden box bound with leather.

A short (0.9m) length of heavily robbed wall (1499) was observed emerging from beneath the blocked western undercroft doorway and truncated by pit 1410. The wall, of pinkish clay-bonded granite build, was aligned east to west and cut metalled surface 1423. A second short length of granite and sandstone mortar-bonded wall (1492) was situated 5m to the south-west, again heavily truncated by medieval pitting. Its alignment – south-west to north-east – accords with that of the Roman street grid. The wall was associated with a possible floor surface of compacted sand and gravel surface (1314).

The Northern Sequence

(street metallings and siltings 1364-1373,1375, 1380-1387; demolition spreads 1374 & 1379; wall 724/1491).

A small stub of wall (724/1491) was situated *c.*2m from the north-west undercroft corner. The 0.55m-high superstructure comprised two large lime-mortared granite blocks, the eastern face of which appeared faced, set upon substantial footings of reused granite blocks 0.35m in height. One of the latter incorporated a dovetail-shaped slot, a possible housing for a metal cramp.

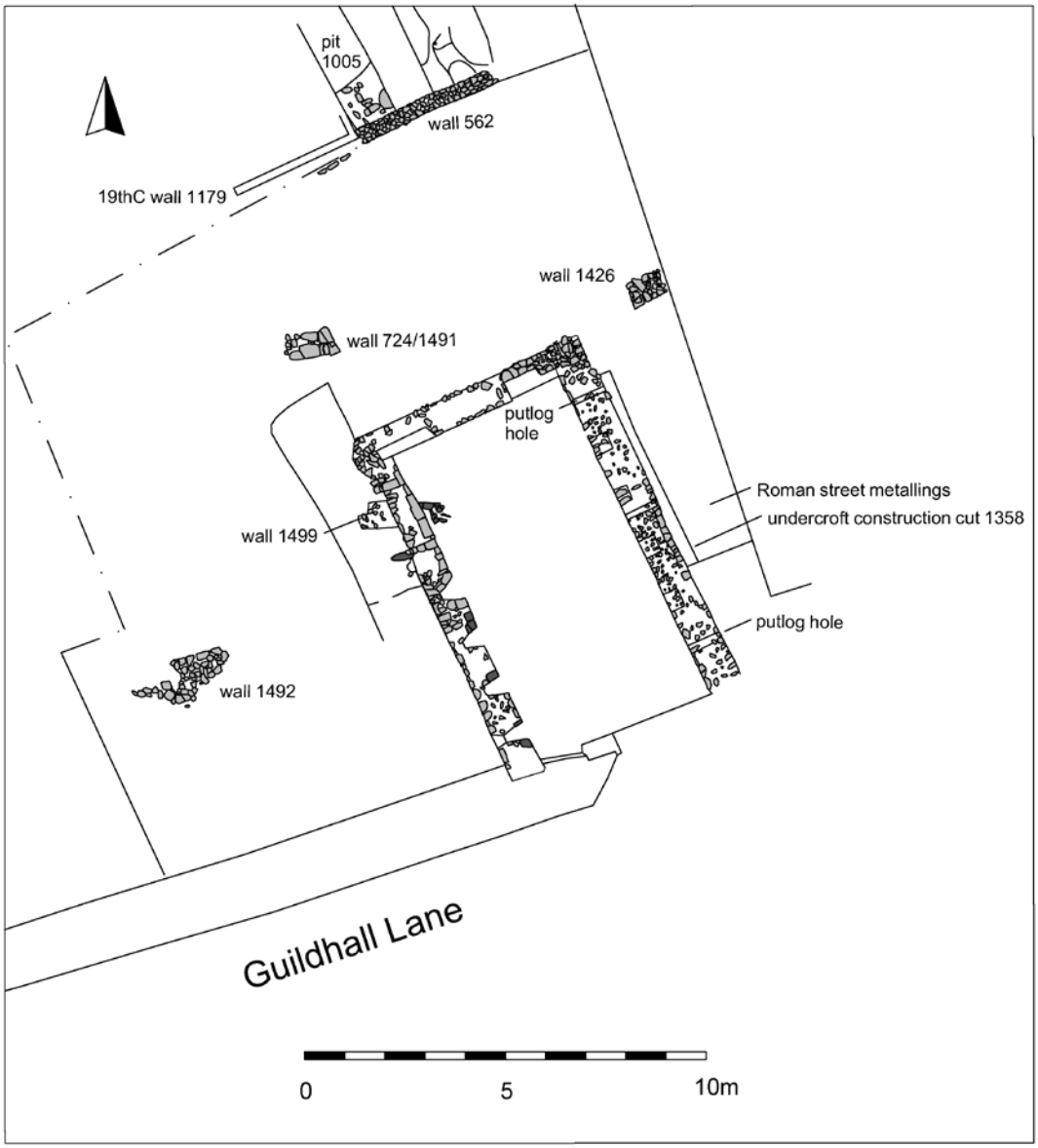

Figure 10: Phase 1 (Area 3)

The Eastern Sequence

(street metallings and siltings 1448, 1449, 1450/1341, 1451-1461; walls 1424, 1426)

Two parallel short lengths of clay-bonded granite wall (1424 & 1426) were observed at the north-east corner of the undercroft. The latter appeared contemporary with associated street metallings, its southern face running parallel to the street, whilst 1424 pre-dated the latest street silting layer (1459). The street sequence on this, the eastern side of the undercroft appeared the lengthiest, with an accumulated metalling depth of *c.*1.5m minimum.

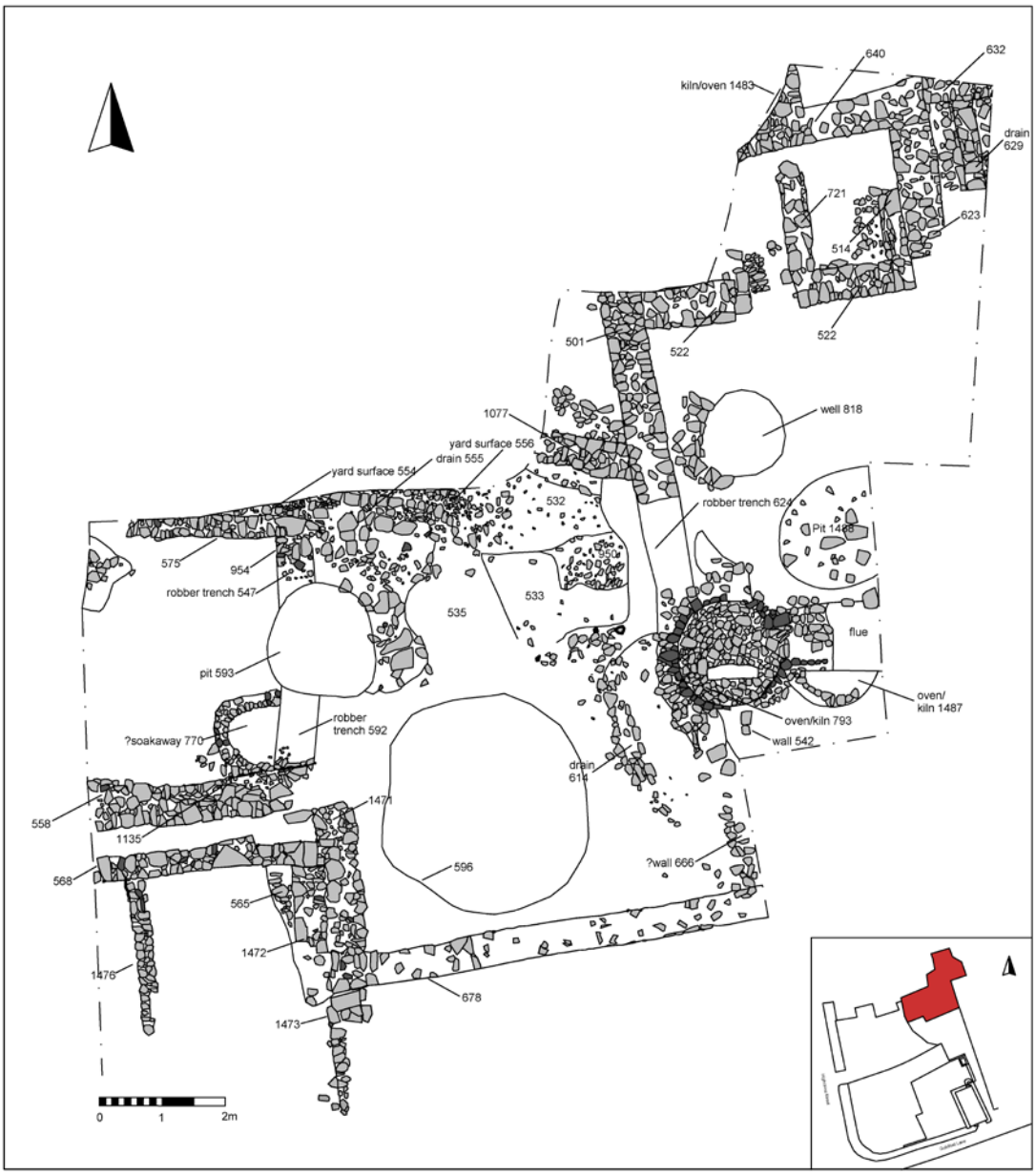

Figure 11: Area 1: All Phases

7.1.3: 1990 Undercroft Excavation

Pit F176
Layers [363], [368], [359], [361], [403]
Channel F177
Postholes? F71, F73, F74-78, F172
Post Pits? F72 & F184
Robber Trench: F182
Spread 209
Roman Street F186 Rut: F185
Walls F181 & F178
Spreads 376, 400, 377
Soakaway/Sump F179
Drain F180

Although investigation of the Roman deposits was extremely limited, full excavation of a substantial medieval pit (F1005) did reveal a sequence of Roman street metallings sealing a number of earlier features. Presumed roadside buildings structures were represented by glimpses of walls such as F181, oriented north to south and of substantial irregular granite block build. Its contemporary, F178, was orientated north-west to south-east, its build (371) consisting of two courses of mortar-bonded well-faced granite stones. A stone-lined drain (F180) ran north-west to south-east and cut the latest street surface (379-205). Substantial unmortared faced granite blocks formed the drainage channel and capping. A series of possible shallow post-holes and post-pits were located towards the southern end of the undercroft. This phase also included a sequence of Roman street surfaces of early 2nd- to late 4th-century date. The absence of camber and the 1.65m depth of recorded street levels implies that this may represent the intersection of the Fosse Way and a principal north-south street.

7.1.4: Discussion of Phase 1

As anticipated, street surfaces and associated structures were revealed during the excavation. The road or street observed in Area Two is likely to represent the north-south aligned street intersecting with the Fosse Way at a point close to or beneath the undercroft building. The two streets defined the south-east corner of the *insula* block directly to the east of the Forum. Whilst the precise point of intersection was uncertain, the position of two walls, 724/1491 to the north and 1426 to the east may indicate a minimum road width of *c.*8m.

A number of walls and fragmentary lengths of masonry observed in association with the street metalling sequences presumably relate to roadside buildings or structures. Unfortunately, only short lengths were observed in small keyholes. Wall 1499 did, however, appear to be that observed within the undercroft in 1990 by Hagar. Both this wall fragment and that to the north, 724/1491, were aligned broadly east to west and, therefore, pre-date the 2nd-century formalisation of the Roman street grid. In this respect they mirror results from the 2002 evaluation, which also produced structural evidence from the earlier phases of Roman occupation.

7.2: Phase 2 (Saxo-Norman; c.850-1100)

7.2.1: Area Three

Group 20
Dark Earth deposits 1271, 1277, 1293, 1294, 1297-1299, 1361/1447
(NB 1271 produced pottery dating to 1050-1199), 1403, 1404-1407

Dark Earths were identified over much of Area Three, heavily truncated by medieval pitting. The apparently homogeneous deposits extended across the general locality of the undercroft, the construction cut for the eastern wall of which revealed a 0.4m accumulation overlying Roman street metallings.

7.2.2: 1990 Undercroft Excavation

Layer 204
Spread 98

Layer 204 was a thin, very dark brown compact gritty clay layer sealing the latest Roman stratigraphy and extended across the majority of the site. It appeared to extend beneath the west, north and south walls of the undercroft and hence to predate its construction. All bone and pottery fragments recovered from 204 were very small and abraded, most of which were retrieved from sieving. This layer also had a high seed content indicative of damp waste ground. It contained Roman pottery and animal bone. It is possible that this constituted the post-Roman Dark Earth.

Spread 98 was an extensive spread of reddish-brown compacted sandy clay observed at the south end of the undercroft and interpreted Hagar as either the remains of an earlier floor to the building or a by-product of its construction. As it was confined to a limited area its purpose must remain speculative.

7.2.3: Discussion of Phase 2

At the time of excavation, St. Nicholas Place represented only the second known instance of the appearance of post-Roman Dark Earth deposits in Leicester, the previous sighting being in the Forum excavations of Jean Mellor in the 1970s. Although unlikely to represent outright abandonment of the town, the Dark Earths do suggest that the intramural area of the town underwent significant changes in terms of the range and scale of activities undertaken in the post-Roman period. It is in any case evident that such deposits do not represent total abandonment or absence of activity, as demonstrated by morphological analysis of such deposits in town such as Gloucester and London and, rather, may represent agricultural activity or low-level domestic occupation. In the case of the St. Nicholas Place deposits, no such analysis has been undertaken on the *c.*0.40m accumulation of Dark Earth identified around the undercroft, as a result of which one can only speculate as to what activity/ies this material may represent. Nor is it possible to provide a secure date beyond the broad indications from the stratigraphic evidence that this material dates from between the abandonment and resultant silting of the Roman street(s) and construction of the undercroft building, probably between the mid-12th and mid-13th centuries.

7.3: Phase 3.1 (Early Medieval; c.1100-1300)

7.3.1: Area Two

(Figure 12)

Group 15
Pits 1005, 1046?
Well 932 (1075-1299)
Robber trench 1009

Well 932 was located in the north-east corner of Area Two. The circular construction cut was approximately 2m in diameter and lined with roughly cut granite masonry bonded with mottled red clay. Pit 1005 was located in the south-east corner of the area and a small length of possible wall robber trench (1009) aligned east to west. Pit 1046 was observed in section in the construction cut of well 934 in the central area. None of these features were excavated.

7.3.2: Area Three

(Figures 12 & 13)

Group 21 (Figures 7 & 8; Plates 7-10)
Undercroft constructed (construction cut 1358; date: c. 1150-1250)

Previously the subject of a detailed internal building survey (in 1990), the following account comprises descriptions of the (previously unseen) external elevations of the undercroft in addition to those structural elements further informed by the recent programme of excavation.

Internal building dimensions:
Length: 8.78m
Width: 4.6m
Internal area: 39.25m²
External building dimensions: width: 6m, length: 9.5m

Ceramic material derived from the construction cut of the undercroft (see below) indicates that the building was built somewhere between the second quarter of the 12th and the mid-13th centuries. Construction involved excavation of a rectangular cut through an accumulation of Roman gravel street metallings and silts and overlying 'Dark Earth' deposits, observed on the northern, western and eastern sides of the building. In the case of the latter, these deposits appeared to be over 2m thick. The heavily compacted gravels also formed the internal floor and provided a sound foundation upon which the footings and foundations of the walls could be built. The footings were observed beneath the western external wall face as a single 0.3m-0.4m thick course of loosely arranged large granite boulders of up to 0.6m in length. The wall footings and superstructure were of the same predominately granite (80%) build, with roughly shaped blocks of varying size and shape, but with additional green sandstone and Roman brick and tile inclusions roughly coursed and bonded with light yellow-orange mortar. The footings were 0.5m-0.6 high and stepped out 0.1m-0.15m from the wall superstructure, which on the west elevation survived to a height of 2.2m. If the footings are taken as indicative of external ground level at the time of construction, the ground surface would be at 62.64m OD, in comparison to the present-day level of 64.86m OD. On the opposing western side, external levels appear to have been somewhat higher, as indicated by the survival of the wall construction cut, suggesting a ground surface at 63.77m OD, or 1.12 m higher than on the western side of the building.

The walls of the building appeared to have been built up from the level of the street surface observed inside the building and against the construction cut up to ground level and above. A line of three putlog holes evenly spaced along the eastern wall

corresponded with a probable beam slot cut into the external wall fabric at ground level, suggesting the use of a form of scaffolding during construction. A small circular posthole (1173), 0.35m in diameter and 0.4m deep, positioned at the north-east corner of the building close to the wall face may also have been linked to this work. The construction cut for the wall was observed as a parallel linear cut (1358) on the western and eastern sides of the building. Partial excavation of this feature on the eastern side of the building produced Potters Marston and Stamford ware pottery, suggesting a construction date for the building between the second quarter of the 12th century and the mid-13th century. The absence of any facing masonry on the eastern wall and indications of bowing suggests its having been the subject of robbing and/or structural collapse.

The external face of the **northern wall** consisted of unfaced and roughly coursed masonry, indicating it was largely below ground level, implying that external ground level was markedly higher at the northern end of the building. The total length of the north wall was 4.55m, survived to a maximum height of 2.01 metres and had suffered serious damage from the refurbishments of 1861 at both its eastern and western ends. A possible door or window, observed in 1844 and 1854, may have been located at the western end, a theory supported by fragments of Danehills Sandstone immediately to the west of the Victorian brickwork. Additionally, the height of the north wall had been reduced due to the insertion of the brick vaulting which sprang from this wall. The heavy bricking at the east and west ends of this wall are more likely to represent extra support for the vaulting. The north wall accommodated two niches, F81 and F82. The latter survived with its brick tiles in situ and intact, forming a neat box internally measuring 0.33m wide, 0.28m high and 0.40m deep. Both niches were contemporary with the construction of the wall and went unnoticed until 1989. Four different types of mortar were noticed in the north wall, probably representing differential mixing episodes.

Plate 7: Undercroft during excavation (view north-west)

Plate 8: Undercroft from blocked doorway (view south-east)

Plate 9: Undercroft doorway with medieval blocking (view northeast)

Plate 10: Recording splayed window in the west wall of the undercroft (view south-west)

The **western wall** measured 8.70 metres in length but prior to the Victorian refurbishment of 1861 was longer by 1.10m. Standing to a maximum height of 2.80m, the wall contained the bulk of the building's architectural detail. The wall further appeared to be the sole elevation with a surviving external façade, carrying a row of four arched and splayed windows, the southern three constructed with Danehills sandstone jambs and Roman brick arches. Only one of these, F87 (the most southerly), survived intact to its full height, measuring internally 1.21m in height and is 0.55m in width. Its windowsill was semicircular and horizontal for 0.25m then sloped up at an angle of approximately 20° for 1.0m to a narrow slit aperture 0.15m wide and 0.40m high. The Danehills sandstone jambs of the window all survived, laid in a side alternate fashion, and its arches composed of brick tile. The form and dimensions of windows F88 and F89 were the same as F87 except that the slit apertures did not survive the 1861 refurbishment. Although of similar form, the fourth window, F90, was markedly cruder in form and appears to date to a later partial rebuild of the west wall (Phase 3.2, Group 22).

The northernmost window of the four, window F90, measuring 1.10m high and 0.58m wide, did not survive the Victorian redevelopment, with only three of it sandstone jambs on its lower southern side remaining. However, it is evident from the photograph of 1861 that this window was of an altogether different construction. Firstly, it had a stone arch, secondly the sandstone jambs were not laid side-alternately, and thirdly the sloping sill was rectangular, not sub-circular as in the three tiled arch windows. Additionally, the wall fabric around this window was of far more random construction utilising smaller masonry. In the 1861 photograph it is evident that there is an area of scored wall plaster below windows F89 and F90 imitating well-dressed stonework. This has not survived.

The plaster-masked stonework of noticeably cruder and irregular build compared to stonework in the remainder of the building, strongly suggestive of a later rebuild of this section of walling. Furthermore, there was a noticeable kink in the wall at this point that further supports the rebuild theory. It is possible that this repair may be linked to refurbishment activity recorded from the excavation in the early decades of the 12th century or in the 13th or early 14th centuries during which period the doorway was partially blocked. The relative distances apart of the four windows are slightly variable when measured from their internal sides. From the northernmost internal side of window F87, F88 is 0.85m distant, while the distance between F88 and F89 is 0.72m. F90 is 0.85m away from F89. The bases of the windowsills are midway up the wall at 1.65m from the mortar floor.

The wall also accommodated a doorway located 0.6m to the north of window F90, dating to the initial building construction phase. The presence of a wide doorway in a building from traditionally associated with mercantile activity suggests a goods access. The subsequently blocked and robbed opening was defined by dressed ashlar Danehills sandstone blocks and survived to a height of 2.1m and 1.56m width. The upper left hand side of the door had been altered or repaired prior to the main Victorian infilling. There was a clear division between the smaller bricks forming the left hand side of the door and the Victorian bricks abutting them. Additionally, below the Victorian brickwork but above the stone blocking a patch of thinner bricks may belong to the same phase as those repairing the left side of the doorway. The doorway appears to have continued in use following its partial masonry blocking (Phase 4.1).

Niche F80 differed from the other niches in the building in that the right hand jambs of the doorway formed its left hand and upper sides, whereas the right side and rear of the niche consisted of reused Roman wall tile. The base of the niche was lower than the other six, the internal dimensions of which were 0.43m in width, 0.35m in height and 0.36m in depth.

The mortar floor of the building [97=318] consisted of a strong brown sandy matrix with frequent small pebbles, in places laying directly over the latest Roman street levels [205, 379] of 1.8 and sealed [98] of 2.2. The mortar floor covered the entire building interior and had a consistent thickness of 0.03m. The floor post-dated the construction of the walls and continued through the blocked doorway at the northern end of the west wall. There was very little evidence of wear patterns around the doorway. [97] contained a crucible fragment and a spindle whorl of uncertain date. The excavation of a narrow trench against the external face of the doorways and its footings revealed stubs of masonry projecting slightly from the doorway jambs (865). These are likely to represent some form of porch and/or building or wing arrangement projecting west from the undercroft that was subsequently robbed out (2003 Excavation Phase 3.2, Group 22). The western doorway appeared to have been accessed via a substantial access ramp or flight of steps, represented by a substantial robber trench. Partially destroyed by 19th-century cellaring, the feature originally extended further west of its surviving 5m length.

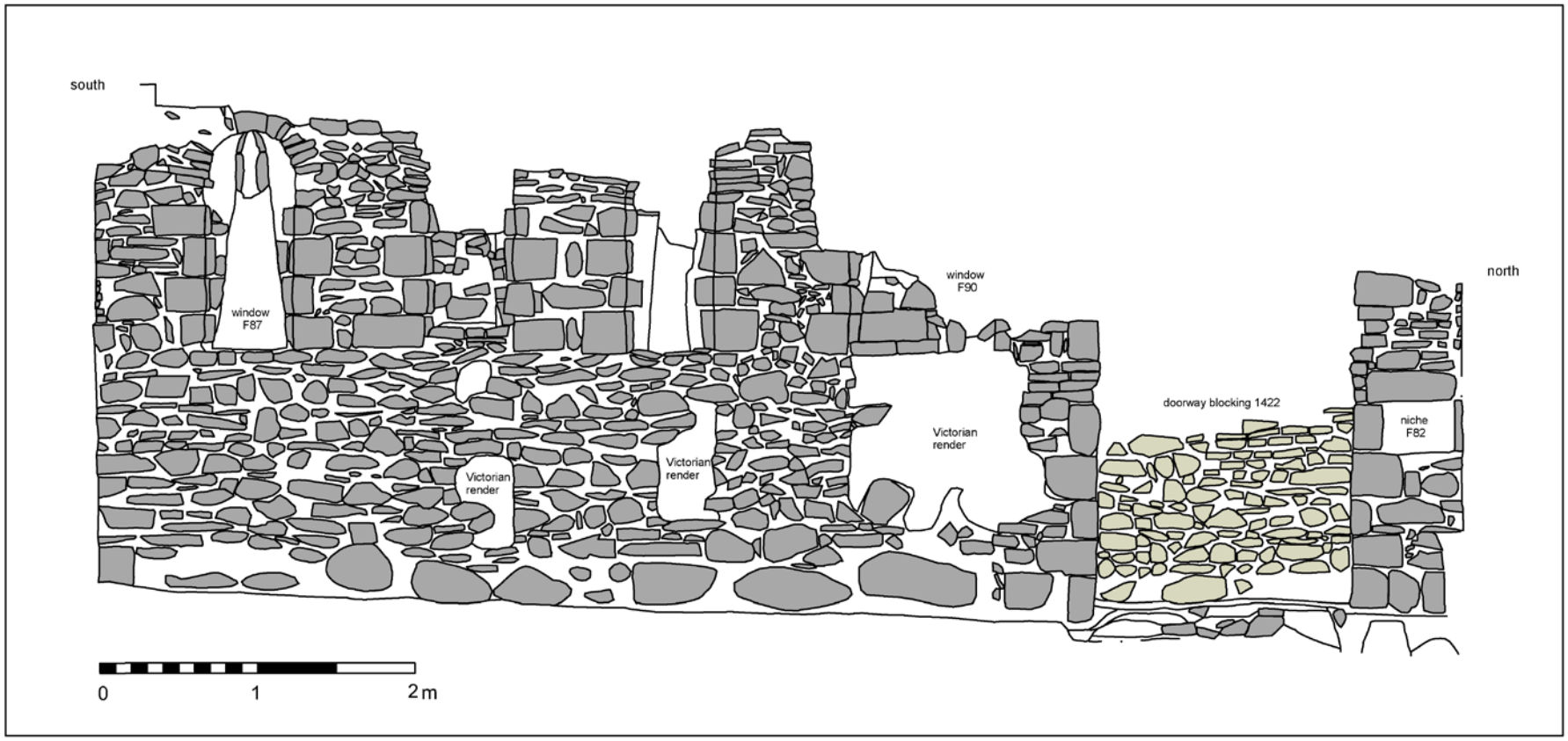

Figure 12: undercroft west wall, internal elevation

The **eastern wall** was 8.7m in length and stood to a maximum height of 2.65m. Its internal face contained four square recesses or niches defined by Roman brick, probably designed to accommodate candles or lamps. The niches were all badly damaged, with their brick tiles either in a highly fragmented state or else completely missing. Niche F83, the northernmost of the four, measured 0.50m wide, 0.40m high and 0.47m deep, whilst niche F84, 1.00m to the south of F83, measured 0.47m wide, 0.55m high and 0.30m deep. There were two surviving small fragments of brick tile at the top on the north and south sides, and a complete tile at the rear. Niche F85 was positioned 0.97m to the south of F84. F85 was very badly damaged, having been bricked up in 1861 and the eastern half of the Victorian partition wall built in front of it. Its surviving measurements were 0.45m in width, 0.51m high and 0.35m in depth. Niche F86, 0.90m to the south of F85, measured 0.45m in height and width and is 0.33m deep. Neither contained surviving fragments of brick tile. Mortars [704, 712] were common to both the east and north walls and are described above. Mortar [705] was a dark yellowish brown slightly clay sandy matrix which formed the bulk of the upper portion of the east wall.

The **southern wall** survived to a height of 1.8m and length of 4.56m. The wall possibly comprised two phases of build, with a 1.76m length at the west end consisting of more regular and apparently stepped stonework. The remainder of the wall was more randomly coursed and with three very substantial granite blocks serving as footings. A single dressed sandstone quoin with diagonal tooling marks was situated in each of the south-east, north-east and north-west corners of the building.

Mortars [712, 713] have been described above. [714] is a yellowish red sandy matrix and forms the main mortar fabric of this wall. [721], however, is located to the western end of the wall near Victorian bricks and may be indicative of an earlier repair. The wall is evidently of different build, with smaller and uncoursed masonry, with three substantial granite blocks forming part of the wall foundations. The presence of a sandstone foundation quoin in the south-east corner of this wall is identical to that noted in the north-east and north-west corners of the building. The difference in construction is probably indicative of a later structural addition.
The 'rough-coursing' was clearly visible but of somewhat cruder construction. It is likely that a doorway was located at the western end of the wall and was extant at the time of the 1861 photograph. Subsequently utilised during the 19th-century as a brick-lined coal chute, the doorway opening, which would have afforded access to Guildhall Lane), was indicated by the survival of a doorway reveal. The slight projection of the west wall beyond its southern counterpart suggested the possibility of a porch arrangement, as at the other door. The remnant of a single 0.5m high dressed sandstone block-built window splay was visible to the east in the same wall at the height of 1.9m above the floor, a level virtually identical to that of the base of the splay of the sole complete window in the west wall.

Figure 13: undercroft west wall, external elevation

Group 23 (Pitting and other Features West of the Undercroft (date: 1075-1299)
Stone-lined pit 1502 (date: 1175-1299) & drain 1496
Pits 703, 863, 900, 1248, 1263, 1268/1304, 1270/1317, 1274, 1291, 1296, 1301, 1309, 1320, 1329, 1336, 1408, 1410, 1502
Features 1148, 1153, 1158, 1159, 1162, 1163, 1419
Walls 1485, 1489
Robber trench 1160
Posthole 1316
Contexts 797, 899, 1015-1019, 1096-1100, 1104-1120, 1137, 1143, 1145, 1147, 1150-1157, 1262, 1264-1266, 1285, 1325-1328, 1330-1334, 1337, 1418, 1430-1432, 1438

This group comprised a single stone-lined rubbish pit (1502) and a further eighteen unlined pits situated to the west of the undercroft cutting the Dark Earths and site layers dating to the late 11th- to late 13th centuries. Pit 1502 consisted of the remaining two sides of a probably once-square feature, its northern half having been destroyed by the robber trench of the undercroft northern doorway 794/870. The near vertical cut measured 1.4m square and 0.4m deep and was lined with unbonded, roughly shaped granite masonry. The flat base was formed by a possible floor surface of compacted sand and gravel (1314) associated with wall 1497 and, therefore, of Roman date. The pit was associated with a drain (1496) that fed into the feature from the north-west, consisting of a shallow, granite-lined feature measuring 0.6m wide and 1.4m in length. The remaining (unlined) rounded or sub-rectangular pits were only partially excavated. The discovery of comparatively unusual pottery, namely a cauldron and/or a tripod pitcher from pit 1291 and 13th-century Saintonge pottery from pit 703, suggests a degree of status in this locality of the undercroft. Additional features (1148, 1153, 1158, 1159, 1162, 1163 & 1419) were observed in plan but not excavated.

A small wall stub (1485) was positioned virtually flush against and parallel to the foot of the western undercroft wall, below the second window from the south. The 0.5m length consisted of five courses of well-constructed shaped granite block superstructure with slate levelling layers and pale yellow-brown sandy mortar bonding (1054) standing to 0.5m, surmounting substantial, similarly bonded granite footings (1055). Although not physically attached to the undercroft, the fact that the footings of the two walls and attendant superstructures were at the same level and of comparable build suggests that they were contemporary with one another. A second small stub of wall (1489) and a robber trench (1160) were observed in the main east-west trench baulk, *c.*6m west of the undercroft. The sandy lime mortar and granite-built wall was cut by robber trench 1160, which measured 1m wide and 0.5m deep. The steep-sided and flat-bottomed cut had been the subject of modern truncation.

The pits heavily disturbed a 1.1m accumulation of site layers and fragmentary possible mortar floor deposits (797, 899, 1015-1019, 1096-1100, 1104-1120, 1137, 1143, 1145, 1147, 1150-1157, 1262, 1264-1266, 1285, 1325-1328, 1330-1334, 1337, 1418, 1430-1432, 1438) overlying the Dark Earth.

Group 24 (Pitting and other Features North of the Undercroft (date: 1075-1299)
Walls 662, 888, 1490, 1494
Pits 732, 736, 737, 749, 833, 836/856, 855, 858, 859, 884 (date uncertain), 885 (date uncertain), 1191, 1339
Pit/Well 1127
Layers 655, 656, 673, 786, 844, 868, 1064, 1194, 1195, 1440

The area immediately north of the undercroft included fourteen inter-cutting (unlined) rubbish pits (667, 732, 736, 737, 749, 833, 836/856, 855, 858, 859, 884 (date uncertain), 885 (date uncertain), 1191, 1339), varying between 2m-3m in diameter and of irregular plan. A small representative number, including pit 736, were fully half-sectioned, revealing an accumulated pitting sequence of over 2m in depth. A possible well or pit (1127) directly abutted the undercroft at its north-east corner. The circular vertical cut measured 2m in diameter and was excavated to a depth of 0.8m, revealing the sequence of Roman street metallings through which the feature had been cut. The feature had been truncated on its northern side by wall 662.

Group 25 (Pitting East of the Undercroft (date: 1075-1299)
1389 (date: 1150-1399), 1391, 1393

A group of three pits cutting the Roman street metallings and silting sequence occupying the 2m-wide strip between the undercroft and the site boundary wall. Pit 1389 measured *c.*1m square and was flanked by the slightly larger (1.6m square) pit 1391. 1391 was only partially observed and, therefore, its plan not recognised. Time limitations and safety consideration prevented total excavation of these features.

7.4: Phase 3.2 (Early Medieval; c.1250-1300/1325)

7.4.1: Area One

(Figure 9; Plate 12)

Located in the central northern sector of Area One, Phase Three features consisted of part of a building (Building Two) flanked directly on the east by a metalled yard area and two associated circular masonry features, possibly representing industrial water tank bases (793 & 1487).

Group One (Building Two)
Walls 575, 954, 1278
Soakaway 770
Floor 550/571/572
Contexts 551/569, 570, 638, 710

Building Two occupied the north-west corner of the excavation and consisted of three walls (575, 632 & 1278) defining a minimum area of 3m east-west and 3.6m north-south, or *c.*11.5m². The eastern wall (954) had subsequently been robbed out during the later medieval period (feature 547). The room interior was occupied by a single dense floor surface of dark reddish-pink clay (550/571/572) that had suffered considerable slumping into underlying earlier features. The clay produced pottery dating to between 1175 and 1299. The south-east corner of the room was occupied by a semi-circular masonry feature measuring 1.4m x 1.0m x 1.1m deep, constructed from randomly coursed unbonded masonry. Robbing of the adjacent wall 632 had caused the feature to fall away to the west. The absence of a base suggests its having functioned as a soakaway feature.

Plate 11: Area 1, Building 1: view north-west

Plate 12: Building 2, Area 1, showing successive wall rebuilds
and clay floor slumping into earlier features (viewed south-east)

Group Two (Associated Yard Area) (Figure 10; Plates 13 & 15)
Yard Surfaces 531, 532, 533, 535, 554, 556, 766, 767, 916/917/918, 950, 1022, 1059
?Floor 947
Drains 555, 614, 1482
Wall 1077/1475
?Water tank bases 793, 1487
Pit 1053
Contexts 504, 920, 951, 955, 978, 979, 1026-1028, 1056-1058, 1060

The area immediately east of Building Two was occupied by a minimum of three successive phases of well-constructed cobbled yard surfaces, traversed by three inset stone-capped and -lined drains (555, 614 & 1482). The former was broadly aligned east-west and the latter two north-west to south-east.

Two circular masonry features (793 & 1487) were positioned at the eastern periphery of the yard area. The larger and better preserved of the two, 793, consisted of a vertical circular cut *c.*2.6m in diameter and 0.9m deep, its sides lined with roughly shaped and coursed clay-bonded granite blocks. The masonry lining included a reused squared sandstone block with a small lewis or cramp hole or similar. The inner face of the lining (537) and its accompanying masonry base (781) were heavily reddened, blackened and crazed from exposure to high temperatures. The base of the structure sloped in a pronounced manner from east to west. This would not appear to have been directly caused by subsidence, as the number of courses of build in the granite lining reflected the varying depth of the cut, but rather by design, possibly in an attempt to cope with construction on uneven ground. Partial removal of the base lining revealed the construction cut to the feature to have been lined with heat-reddened – presumably insulating – sand (781). The clay silt backfill (537) contained substantial granite rubble, presumably collapsed superstructure material. A 0.9m wide break on the eastern side of the feature opened onto a flue channel, the base of which was also paved. Although no remaining superstructure survived, a short adjoining wall stub (542) to the south may have been associated with the feature. The flue cut an earlier circular feature (1487) that, although not excavated, appeared to be of the same type of its successor (793). A single pit (1053) located close to the north-west, measuring *c.*2.1m in diameter was partially excavated to a depth of 0.2m.

The two circular masonry structures may represent base supports for industrial water tanks generally associated with brewing, cloth dyeing or similar processes requiring heated water and likely operating on a domestic scale. However, their location at the centre of the medieval town in a restricted backyard area may indicate activity on a domestic rather than commercial scale. Furthermore, there may have been a communal aspect to such activity, with the yard and attendant tank bases occupying a space shared between a minimum of two tenements prior to the construction of a major wall (subsequently robbed) which bisected the open yard area.

7.4.2: Area Three

Group 22 (Undercroft Alterations, Robbing)
Western wall rebuild 1394/1507
Undercroft doorway robbing (date: 1175-1299); robber feature 794/870
Masonry (plinth?) feature 1501
Demolition layer 905

Discrepancies in build suggest that the section of western wall of the undercroft immediately south of the doorway and including the most northerly window (1394/1507) is of different date to the rest of the structure, and most likely represents a rebuild following structural collapse. Although subsequently heavily damaged by 19th-century alterations, the 1861 photograph of the undercroft shows the window to have been constructed from markedly heavier stonework from its companions, and with a masonry rather than Roman brick arch. The stylistic similarities suggest a rebuild date close to that of the initial building construction. The construction trench (1394) was visible as a 1.5m vertical cut running south of the doorway, parallel to the external wall face.

During the late 12th or 13th centuries the undercroft was heavily robbed of its stonework in the vicinity of the north doorway. This work seemingly targeted an associated external porch and/or ramp or steps projecting from the door opening, as evidenced by a substantial linear robber trench (794/870) with a 50° cut changing to a vertical slope measuring *c.*3m wide and 1.1m deep and extending for a minimum of 5m south-west from the building. Partial excavation of the feature revealed stubs of granite footings at the base of and projecting from those of the west wall; the build of the western wall and that of the possible porch were of the same build. The former was undamaged, indicating that it was the attached structure and not the undercroft itself that was the target of the robbing. The wall footings were set into Roman street silts.

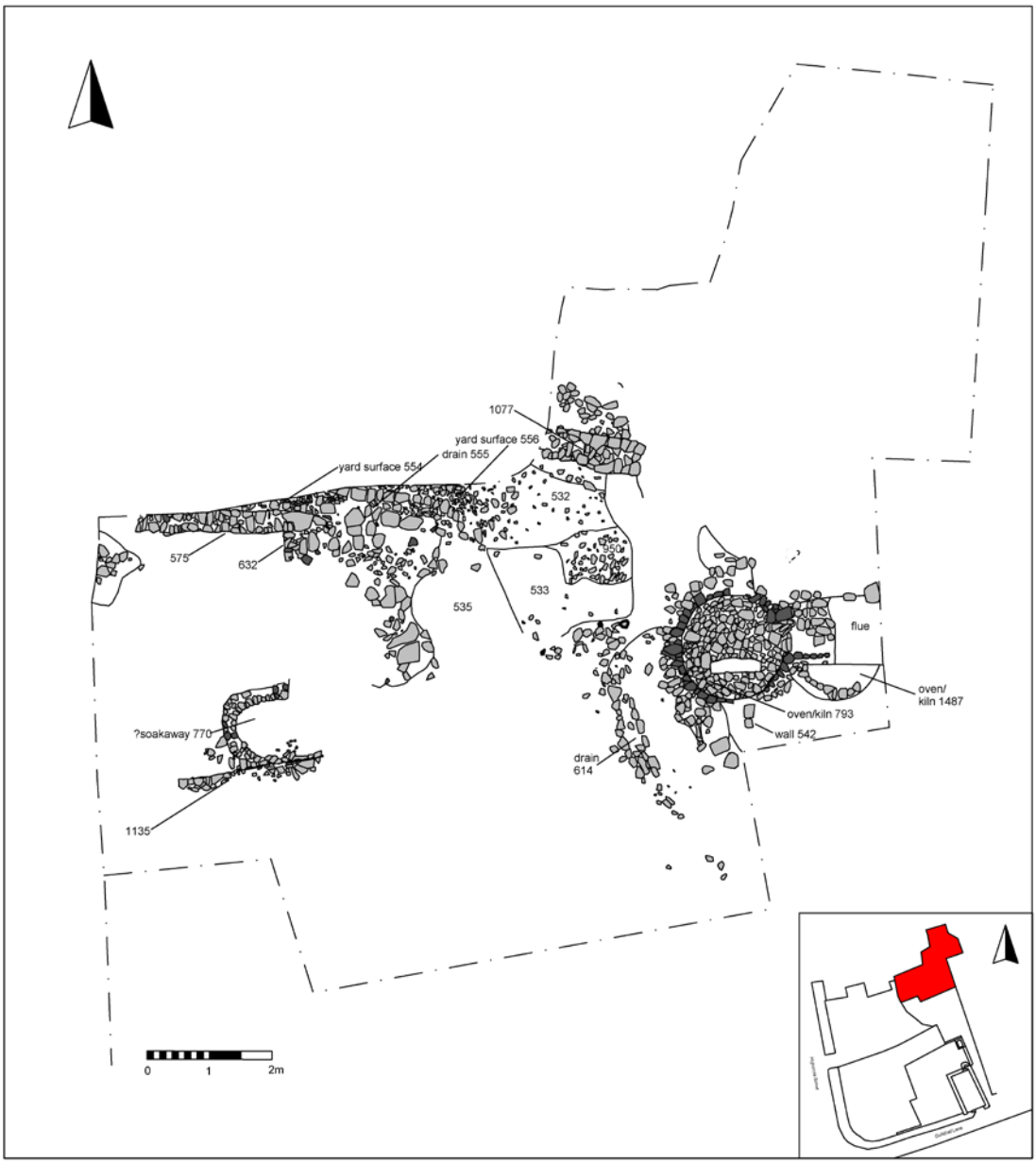

Figure 14: Phase 3.2 (Area 1)

Figure 15: Area 1: water tank base 793

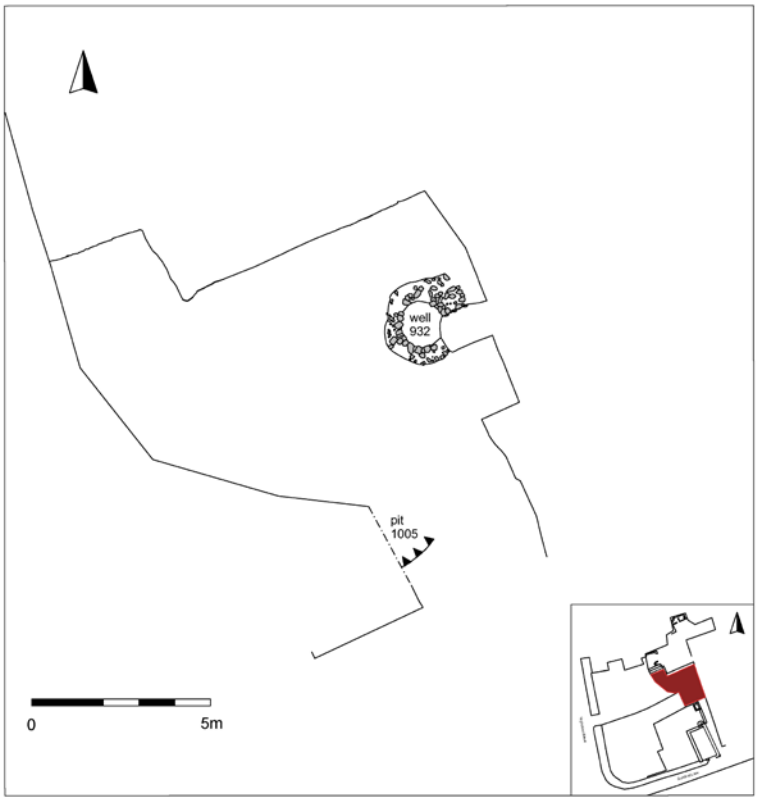

Figure 16: Phase 3.1: (Area 2)

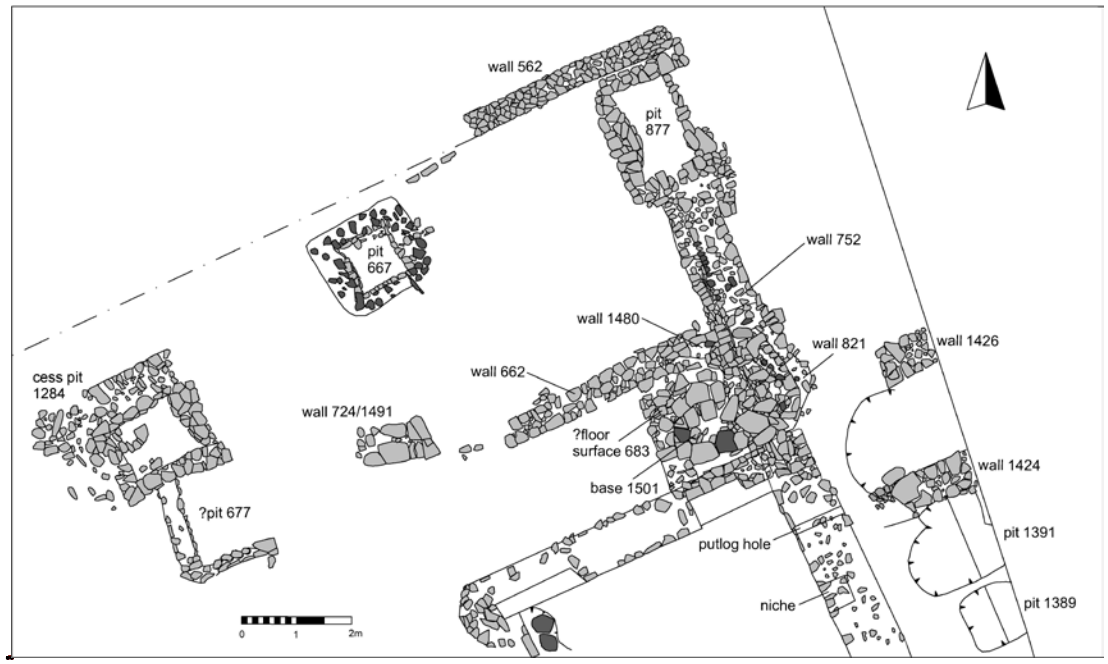

Figure 17: Area 3: NE corner principal features

Plate 13: cobbled yard surface and stone-lined drains, Area 1 (view south-west)

Plate 14: Section through medieval demolition deposits, Area 1; view north-east (2m scale)

Robber trench fill 795 produced substantial quantities of pale yellowish brown sandy mortar fragments matching the main undercroft mortar. Fragmentary traces of heavily pit-disturbed floors and walls in the vicinity observed in both the evaluation and excavation suggest the presence of a building projecting west from the undercroft, fronting onto Guildhall Lane, during the medieval period and not merely an access ramp or staircase. The robber trench was associated with a substantial 1.1m accumulation of possible demolition material 905.

A masonry feature (1501) was positioned at the outer north-east corner of the undercroft, abutting but physically unattached to the building and constructed from mostly substantial roughly shaped granite blocks in a semi-circular or D-shaped arrangement measuring 2.1m wide east-west and 1.5m north-south. The masonry was mostly unbonded, with the exception of its western side, constructed from slightly smaller stonework. The feature comprised three courses or tiers of stonework that may be interpreted as either steps down into its interior or the consequence of structural slumping and collapse. There was no form of base or flooring visible. The function of the structure is unclear, but it may be tentatively interpreted as the foundation for a water butt or a staircase, in either case probably directly linked to the undercroft. The discovery of a single sherd of Chilvers Coton pottery dating from the mid 13th century supports the theory of the plinth being a later addition to the undercroft.

7.4.3: 1990 Undercroft Excavation
(Window rebuild and possible internal undercroft alterations)

Stakeholes F13-F15, F18-F29, F49-F51, F61, F62, F65, F132, F133, F155-F157
Post Holes F9-F11, F16, F34, F35, F46, F54, F64, F66, F67, F128, F134, F174, F175, F122
Post Pads: F163, F55
Post Pits F146-F148, F150
Scoop F145
Feature 70
Spreads 272, 289, 321, 342, 354
Layers 28, 32, 27, 300/317
Stakeholes, , Feature 131
Floors 23/18, 223, 19
Beam Slot: F68
Gully F31
?Hearth F4
Pits: F100, F92

A group of stakeholes, post holes, pits and pads located in the southern half of the building and clustered around the doorways or windows documented in the north and south walls and likely associated with structural alterations to the building interior. The upper section of the northern end of the east wall may have been subject to a rebuild during this period, evidenced by the irregular stonework contained within mortar context (706). The northernmost window, F90, also appears to have been constructed or else rebuilt at this stage and neatly squared scored plaster applied. The presence of a high percentage of sedge and reed seeds from 300/317 suggests the use of these materials as flooring. Further floor levels were laid down or accumulated, containing substantial quantities of animal bone.

This group of features may also represent a partitioning of the southern third of the building, with a line of postholes running from the northern jambs of the doorway possibly indicative of substantial roof supports or else stalling for small domestic animals. There was a marked difference in the animal bone content of the floors in use during this period. 18/23, to the south of the partition, contained no animal bone, whereas 223, to the north, produced 101 fragments, of which 25% were sheep or goat species.

Two cess pits, F92 and F100, were situated inside the building, with F100 positioned directly in front of the doorway that by this stage was unblocked. The pit fills had the appearance of decayed wood, indicative of collapsed covering planking. Significant quantities of bird bone and eggshell were recovered from the pits. The overall percentages of domestic species were strikingly similar from both pits, with large quantities of sheep or goat bone. Both features contained substantial quantities of bird bone, eggshell and sheep or goat bone, along with mineralised human waste and evidence for cereal processing in the form of charred wheat and oats, possibly indicative of brewing waste. As the building is likely to have retained an upper storey throughout its life (N. Finn, pers. comm.), the pits appear to have functioned as cess pits for employed by residents of the structure above the undercroft. Joins between pottery sherds recovered from the pits suggests that they had been in simultaneous use, and that they had been abandoned soon after the mid-13th century prior to backfilling.

7.4.5: Discussion of Phase 3

This phase witnessed the first of a succession of phases of dense, intensive building and craft/industrial activities across the excavation area, equating to significant development across a number of newly-demarcated properties from the late 12th or early 13th centuries onwards. Development was delineated by a series of boundary walls forming properties running back from High Street to the north, St. Nicholas Place to the west and Guildhall Lane to the south. With the significant exception of the undercroft, which fronted Guildhall Lane, buildings consisted of rooms at the rear of properties, in addition to associated open yard areas and attendant craft/industrial features. All demonstrated high-density occupation carried out over a lengthy period, as expected from a location at the centre of the medieval town.

Phase 3.1 was dominated by the construction of the substantial undercroft building, situated at the rear of a property running broadly south-west to northeast. Construction of the undercroft appears to have involved substantial truncation of the late Roman street metallings in order to form a cut against which masonry could be constructed. The scale of the task would appear to have been significant on the north and east sides of the building, where the accumulation of streets was pronounced. The disparity in external ground levels between the east and west of the undercroft is of note, and infers that more material was removed to the west to accommodate stepped or ramped access to the northern doorway and, potentially, an adjoining building or wing.

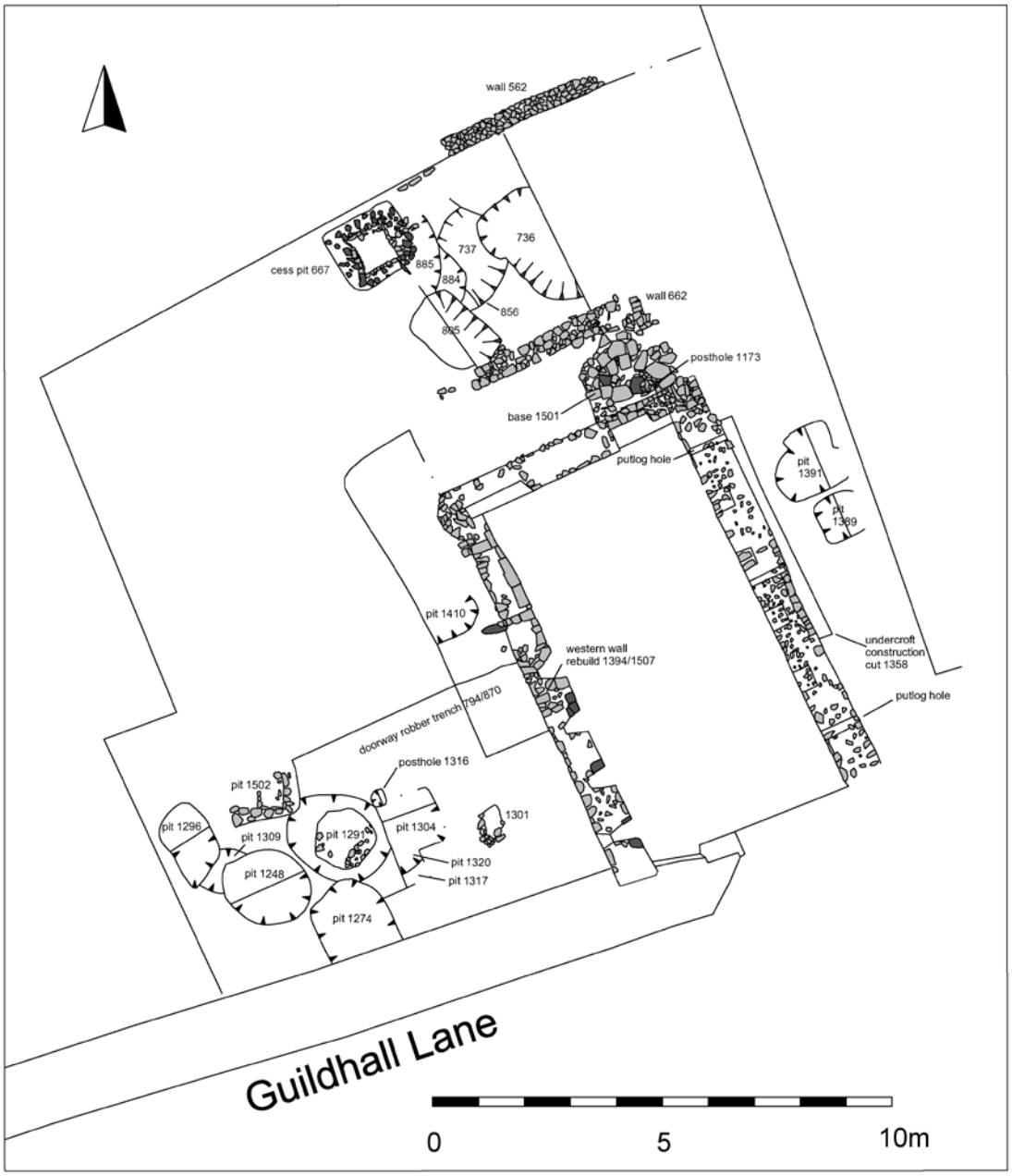

Figure 18: Phases 3.1 & 3.2 (Area 3)

The building appears to have had direct access onto Guildhall Lane, but was likely also indirectly accessible from St. Nicholas Place via a wide doorway at its north-west corner, sheltered by a porch, as evidenced by stubs of projecting masonry. The substantial linear robber trench encountered extending west from the opening implies a stepped or ramped approach to the undercroft. Associations of such structures with high-status mercantile activity suggest that this doorway constituted the principal entrance for goods traded from the premises. The substantial character of the cut, coupled with wall stubs (1485 and 1489) and fragmentary traces of clay and mortar flooring found west of the undercroft are also indicative of the presence of associated structures, possibly a linking wing extending from the undercroft parallel with and fronting onto Guildhall Lane. The undercroft appears to have been the first post-Roman building constructed on the site and, as such, played a role in the laying out of medieval property boundaries. Hence, its eastern wall line was subsequently

projected north in order to form the rear of properties fronting St. Nicholas Place to the west. In addition, the approximate distance between the robber trench and the probable property boundary wall dividing Areas 2 and 3 forms a property width comparable to that of those directly to the north (Areas 2 and 3). By implication, the undercroft originally occupied a parcel of land equivalent to medieval tenements but which was subsequently subdivided.

The external areas to the north and west of the undercroft were characterised by intensive, intercutting pitting, including a line of three well-constructed stone-lined cess pits ranged along the rear northern property line. Finds from their fills, including food remains and pottery reflect the high-status character of occupation in this core area of the medieval town. Evidence of any craft or industrial processes was conspicuous by its absence, and underlines the contrast between this and the other properties.

Phase 3.2 witnessed a continuation of intensive occupation in the southern area (3), coupled with the first indications of building construction at the northern end of the excavation (Area 1). The undercroft does not appear to have remain in its original form for long before being the subject of structural repairs and alterations, probably beginning with a partial rebuild of its western wall, as evidenced by stylistic similarities between the rebuilt window and its accompanying predecessors. The robbing of the porch, potentially as soon as fifty years after its construction, suggests an early and dramatic remodelling of the building. The 1990 excavation within the building indicates that these changes involved some form of internal partitioning, possibly involving the construction of pens for livestock. The presence of two substantial cess pits within the building during this period also suggests functional change. Environmental evidence from the fills of these features indicated open conditions, likely stemming from the raising of the doorway threshold and removal by this period of the associated external porch. However, as the building is likely to have retained an upper storey throughout this period, the cess pits are likely to have been intended for use by residents of the overlying structure. The identification of a possible 13th-century water butt or staircase base adjacent to the building provided further evidence for the continued use of the building.

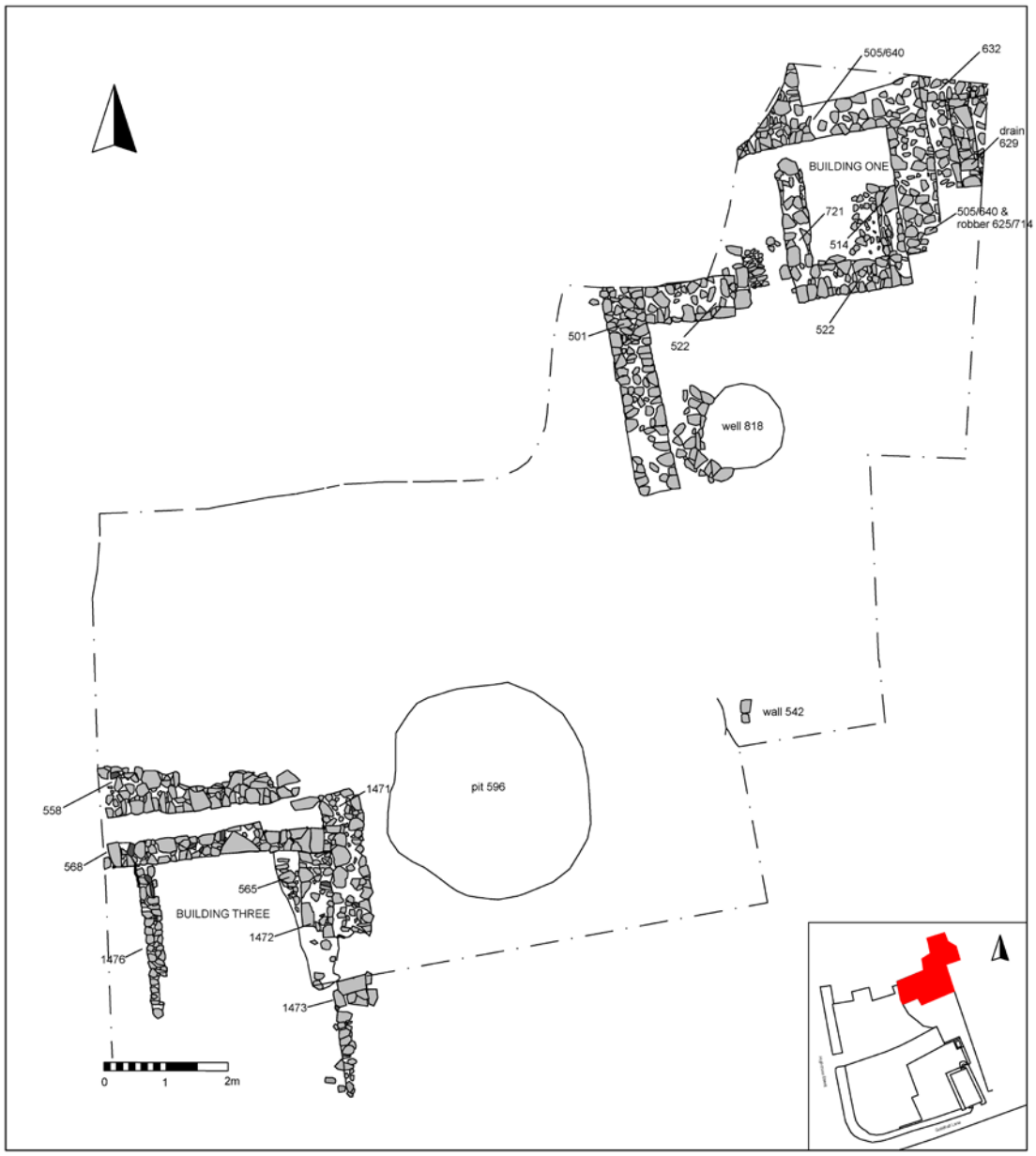

Figure 19: Phase 4 (Area 1)

The phase also witnessed the first significant activity in the northern sector of the excavation, namely construction of Building 2. The presence of a soakaway feature and the associated metalled yard area, crossed by stone-capped drains suggest a service function. The two circular masonry structures (793 and 1487) may represent bases for industrial water tanks associated with brewing or cloth treatment. However, their location at the centre of the medieval town in a restricted backyard area may indicate activity on a domestic rather than commercial scale. Furthermore, there may have been a communal aspect to activity, with the yard and attendant tank bases occupying a space shared between a minimum of two tenements prior to the construction of a major wall (subsequently robbed) which bisected the open yard area.

7.5: Phase 4.1 (Medieval-Later Medieval; c.1275/1300-1500)

7.5.1: Area One

(Figures 15; Plate 11)

Group Three (Building One)

Wall 522
Buttresses 514, 722
Floors 636, 728, 731, 768, 912, 913, 915

Situated in the north-east corner of the excavation, Group Three consisted of a single wall (522) and two supporting internal buttresses (514 & 721), representing the rear of a building (Building 1), its well-preserved walls sealed beneath a 1.5m-1.8m accumulation of 15th- to 16th-century demolition layers. The structure appears to have fronted Swinesmarket (High Street) to the north and backed onto an open area to the south. Subsequently the building appears to have been incorporated into a new structure extending further south (Group Four, Phase 4.2).

Wall 522 was pierced by a doorway midway along its length, its jambs defined by substantial dressed Dane Hills sandstone blocks. The remainder of the wall was crudely coursed granite block build with occasional sandstone and slate used as levelling material and bonded with clay. The original 1.05m-wide opening had been subsequently narrowed to 0.8m via the insertion of two additional chamfered sandstone blocks on the western jamb, possibly as part of efforts to strengthen the wall via buttressing. The wall survived to its greatest height at its east end – 1.15m – the fabric of which included fragmentary traces of a window jamb and sill at a height of 0.8m above (probable) external ground level. The wall construction included an architectural fragment of Dane Hills sandstone with billet moulding, possibly representing a reused block from the St Martin's church.

Two buttresses (514 & 721) supported the southern wall 522 on its internal face in an apparent attempt to counteract subsidence of the structure into earlier pits or wells; slumping was evident in the vicinity of the doorway and, within, an attendant small area of cobble and pitched slate flooring (915). Both buttresses appeared integral with and of the same build as wall 522, although of lesser build quality. Buttress 514 occupied the south-east corner of the room and flush against the (subsequently robbed away) wall 632. Buttress 721 was sufficiently intrusive to have proved a hindrance to free access to the eastern part of the room, possibly implying that the room functioned as a porch or lobby to a building situated to the north. The building interior contained fragmentary traces of clay and mortar floor surfaces (636, 731, 728, 768, 912 & 913). Pottery from the fabric of wall 522, buttress 722 and floors 728 and 731 all dated to the mid to later 14th centuries, suggesting that the buttresses formed part of the original building construction, rather than a later addition.

The wall 522 produced two sherds of late 13th- and 14th-century MS3 and MS7 pottery. Both the buttress 722 and the floor layers (728) and (731) contained abraded sherds in CC2, of similar date to the above. An abraded fragment in NO3, in (728), dated to the later 13th or early 14th century, confirms this date, and the suggestion that this wall predates those in Group 4, and perhaps, originally formed part of a subdivision of an earlier structure on the site. Although the building produced only eleven pottery sherds, it may date to *c*.1275-1400 (the earlier end of Phase 4.1) (DS pers. comm.).

Group Five
Pit 596 (1300/1400-1550)
Wall 1474
Demolition layers associated with Building Two; 623 & 709
Site Layer 506

Pit 596 was a substantial circular feature located in the open yard area at the southern end of Area One into which overlying site layers had slumped. Measuring 3.5m in diameter, the pit was excavated to a depth of 0.5m and produced late 14th-century Surrey White ware and 15th-century Siegburg stoneware pottery. A fragmentary trace of robbed-out wall (1474) was observed in section in the extreme north-east corner of the excavation. Contexts 623 and 709 were situated in the north-west trench corner. Containing abundant mortar and granite fragments, they appear to have been associated with the demolition of Building Two (Phase Three). Substantial quantities of relatively unabraded ceramic material deriving from these layers may be indicative of this area having been utilised for the dumping of refuse as make up layers from primary deposits on or adjacent to the excavation. Layer 506 produced pottery, including Saintonge ware, dating from the later 13th to the later 15th centuries.

Group Seven (Building Three)
Walls ?558, 568, 986, 991, 995, 1135, 1471-1473, 1476, 1479
Contexts 981, 982, 983, 713
Floor 984/985, 989, 992

Situated in the south-east corner of Area One and flanked by Building Two to the north and property boundary wall 678 to the east, a complex sequence of walls and fragmentary associated floor surfaces constituted a building of unknown size and plan, but measuring a minimum of 3m east-west and 3.5m north-south (10.5m^2).

A sequence of at least three probable building sub-phases, involving successive walls constructed on top of or flanking their predecessors in a 0.8m-0.9m accumulation of wall builds, formed the probable northern and eastern sides of the building, the former also providing a shared boundary with the adjoining Building Two. The earliest phase consisted of walls 986 and 995, of mid- orange-brown mortar-bonded granite and slate construction, the former measuring 2.4m long and 0.45m wide, the latter 2m in length and 0.3m wide. Both survived to a height of *c.*1m and appeared to be contemporary with a small patch of pale grey-brown mortar flooring (992). Wall 986 produced pottery of mid-15th- to mid 16th-century date in addition to a medieval octagonal shaft fragment in shelly oolitic stone; this is likely to have been reused from the fabric of St. Martin's church.

These walls appear to have been superseded by a further two walls of granite and sandstone and clay-bonded construction. Wall 1135 (3.5m long, 0.5m wide) flanked the earlier wall 986, whilst wall 991 (3m x 0.4m wide and 0.5m high) abutted wall 995. A sequence of probable floor surfaces and occupation spreads (713, 981, 982, 983, 984, 985, 989 & 992) occupied the small area defined by the walls. Two of these contexts produced pottery of 14th- to mid-16th century (981) and 15th- to mid-16th century date (983). An unbonded granite, sandstone and slate wall (558), was subsequently constructed over walls 991 and 1135. Measuring 3m by 0.5m and 0.65m high, the wall appears to have been contemporary with a complex of other fragmentary builds defining three sides of an approximate square, of which 1476

defined the western arm, 558 and 568 the northern side and 1471 and 1473 the eastern side. The latter two builds were divided by the substantial possible property boundary wall 678, which ended at this point. It was not, however, possible to ascertain whether this wall was contemporary with or predated the abutting walls 1471 and 1473, and whether or not it had originally extended further west. The stratigraphically latest wall in the sequence with recorded finds, 1479, produced mid- or later 13th century pottery.

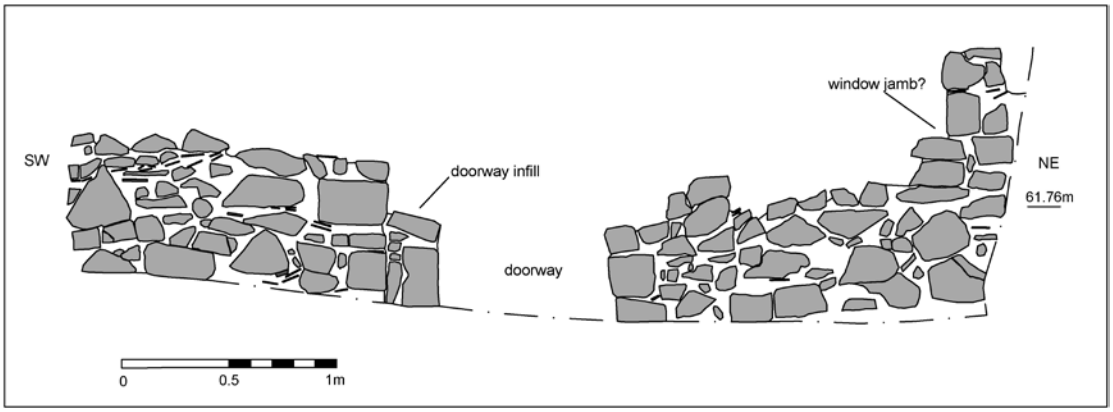

Figure 20: Area 1: Building 1 Wall 522: south-east elevation

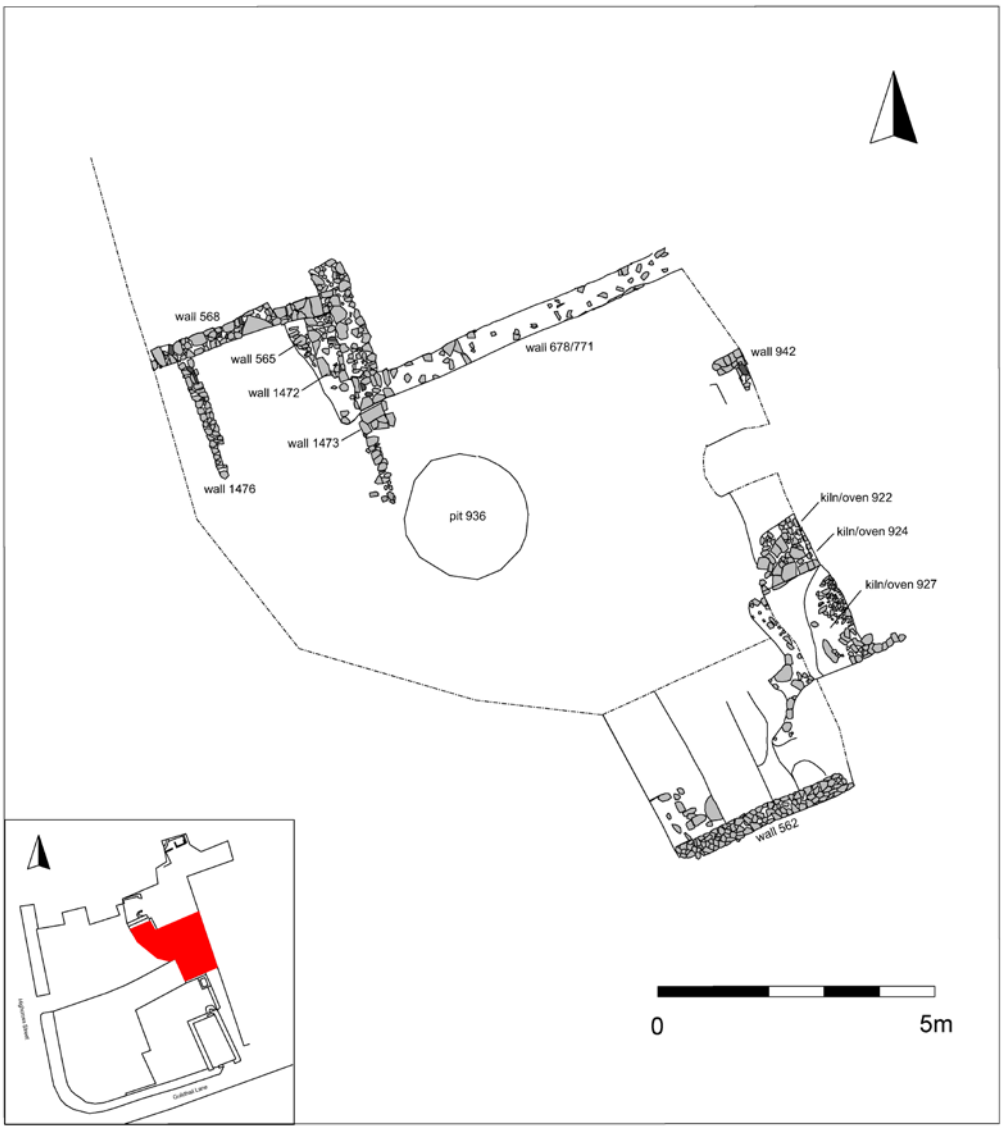

Figure 21: Phase 4.1 (Area 2)

7.5.2: Area Two

(Figure 17)

Group 16

Hearths 922, 924, 927
Pit 936?
Site Layers 938-940, 970-974, 1050, 1051
Walls 562, 942

A small later medieval group of features and site layers dominated by a sequence of small intercutting masonry hearths (922, 924 & 927) ranged along the eastern edge of the excavation. Located at the southern end of Area Two, the probable property boundary wall 562, 3.6m in length and surviving to a height of 1m, formed the demarcation between Areas Two and Three. Aligned broadly north-east – south-west, the wall was of randomly coursed, irregular, roughly shaped granite block construction with extremely rare ceramic building material and off-white friable

sandy mortar bonding. A friable off-white mortar render survived on much of the wall's northern elevation. The wall delineated the southern boundary of a yard area occupied by a sequence of distinctive circular masonry features (922, 924 & 927) likely representing small hearths. The predominately *c.*1m diameter heat-reddened clay-bonded granite bases contained high ash and charcoal content fills. No flues or stoke holes were observed, and there were no clear indications of function, but these may represent water-heating hearths, or else were intended for another purpose that has left no archaeological trace. The central feature in the sequence, 924, produced pottery dating to between 1300 and 1550. The intercutting sequence of the features suggests intensive and prolonged use. The undertaking of such activity in a remote location at the rear of and physically separate from heavily occupied properties appears to represent an attempt on the part of the authorities to zone domestic and industrial functions.

7.5.3: Area Three

(Figure 17)
North west undercroft doorway blocking/infill 1422 (Plate 8)
(Same as F79, 1990 excavation: see below)

The doorway blocking or infill 1422 consisted of a block measuring 1.6m wide and 1m to 1.1m in height. The door opening actually survived to a full height of 2.1m on its south side and 1.8m on the north. The blocking (1422) was formed from roughly shaped and roughly coursed clay-bonded granite blocks, keyed into the doorjamb stonework by the cutting and infilling of slots in the masonry. This work was only visible from the outside of the building. The original height of this (possibly medieval) infilling is uncertain due to its having been surmounted with modern brickwork, but may represent a raising of the threshold rather than an outright blocking of the doorway. Hagar suggested that this may represent either a response to raised external ground levels or to a functional change, perhaps with the doorway becoming a shop counter. This blocking episode appears to date to the 12th or 13th centuries (Hagar, unpublished).

Group 26 (Pitting & Other Features North of the Undercroft)

Stone-lined pits 667, 677, 877 & 1284 (date: 1450-1550)
Pits 646, 664/735
Hearth 669
Walls 752, 821, 1179, 1241, 1243, 1480
Metalled Surfaces 760/1186, 1168
Demolition Layers 641, 645/654/683/823, 649, 650, 652, 653, 745, 747
Contexts 642, 651, 657-660, 741-744, 746, 785, 786, 824, 841-843, 845, 848, 878-881, 1167, 1170-1172, 1178, 1180, 1181, 1183-1185, 1187-1190, 1196, 1205, 1213-1220, 1233

Several pits and other features occupied an area of at least 340m², defined on three sides by walls 562 and 1179 to the north, 752 and 821 to the east and to the south by the undercroft building. The substantial wall 752 appeared to represent a continuation north of the property boundary line defined by the principal east wall of the undercroft. Measuring *c.*4.3m long and 0.6m wide, the wall consisted of two builds; the southern of which (680) was constructed from randomly coursed, unbonded and unshaped granite blocks with slate used as levelling. This section of the wall showed indications of slumping, presumably into earlier pits, and was accompanied at its

junction with the undercroft with a 1.4m long, 0.4m wide length of mortar-bonded granite walling (821). The former produced 15th century pottery. The northern section of the wall (764) was of randomly coursed, largely granite build with some vertical slate infill, bonded with sandy lime mortar. Granite and slate footings (765) projected 0.3m from the western wall face.

The northern end of wall 752 abutted cess pit 877, situated in the corner angle between the former and wall 562 (aforementioned in Group 16). It was, however, unclear as to whether these elements were built contemporaneously or whether construction of the pit had entailed the truncation of wall 752. The pit was of rectangular plan, its long axis aligned north to south, measuring 1.5m x 0.7m-0.9m and 1.8m deep internally. Its inner face was lined with roughly coursed and faced granite masonry bonded with pale brown sandy clay. Walling on the two longer sides showed distinct inward bulging or bowing, the western side markedly so, producing narrow and constricted corners with the north and south wall faces. A slightly flared square opening (1061), presumably some form of drain, measuring 0.25m x 0.2m, pierced the west face (871). The east wall (873) was of distinctly cruder, unbonded build and so may represent a later rebuild. The quality of the stone lining construction and the fact that its base was formed by probable Roman dense demolition rubble meant that the state of preservation of its contents was high, producing a range of usually perishable materials, including cloth fragments and plant and food remains, including fish bone and strawberry, apple, pea and bean remains. The pit contained five sherds of Green Glazed Lincoln ware from St. Marks's kilns, Lincoln, made in imitation of either prunted glass beaker or, possibly, a German flagon, and may represent a link to the nearby Guild of Corpus Christi, built around 1400.

Whilst it is possible that the unusual plan of the feature was the result of slumping rather than deliberate design, it is noteworthy that the two other stone-lined pits in the vicinity (667 and 1284) demonstrated a similar form. The latter was located *c.*4m to the west in the same presumed open area, in close proximity to the projected line of possible property wall 562. The pit measured 0.9m x 1.1m internally and was partially excavated to a depth of 0.95m. Again, the roughly shaped and coursed clay-bonded granite block lining showed marked bulging and slumping. Its southern arm (1239) was of markedly different construction, built from Dane Hills sandstone and granite bonded with orange-brown sandy mortar. The pit contained abundant fig seeds and fish bone.

Pit 667 was situated *c.*4m west of pit 877 on the boundary of Area Three and consisted of a sub-rectangular cut measuring approximately 1.7m east-west and 1.5m north-south. The cut accommodated a stone lining measuring 0.7m east-west and 0.8m north-south, with pronounced bowing on its eastern and, in particular, western, sides. It was unclear as to whether this lozenge-shaped appearance arose from slumping or deliberate design. It is notable, however, that its form closely resembles that of pit 1284 to the west and pit 877 to the east. Partial excavation of the pit to a depth of 0.45m revealed the roughly coursed unbonded granite and slate lining construction (668).

Flanking this to the south, two walls formed an L-shaped arrangement. The north-south wall (1241) was of comparable build to 1239, under which it extended before cornering west and exiting beneath the masonry pit lining. The second wall (1243)

was of poorly constructed unbonded granite build. Both were accommodated in a substantial, approximately circular cut (677) measuring at least 3.5m in diameter. Disturbance from a 19th-century brick drain and time constraints mitigated against full investigation of the feature and determining whether this was an earlier pit or well into which structural remains had subsequently collapsed, or else a masonry-lined feature. A small fragment of wall (1179) at the northern edge limit of the area, largely destroyed by the 19th-century cellar, may represent a survival of wall 562 to the east. Two unlined pits (646 and 664/735) constituted the latest features in a lengthy sequence of inter-cutting pitting situated in the north-east corner of Area Three. Pit 646 measured 1.45m x 1m and 1.8m deep and pit 664 (3.6m x 29m x 0.8m+ deep) produced pottery dating to between 1300 and 1550. A sub-circular hearth (669) measuring *c.*1.5m in diameter defined by wedge-shaped granite blocks and located in the same area, contained pottery of the same date.

Group 27 (West of the Undercroft)
Stone-lined pit or soakaway 695
Context 1398 (1450-1650?)

Pit 695 was a soundly constructed rectangular stone-lined feature just west of the undercroft, immediately south of the doorway, truncated at its west end by a 19th-century concrete pile. Measuring 1.7m x 1.3m wide and 0.9m deep internally, the pit or soakaway was lined with predominately randomly-coursed granite blocks in addition to sandstone, reused Roman tile and slate levelling. It was bonded with yellowish sandy mortar. The base was constructed from unbonded, pitched granite blocks, suggesting that the feature had functioned as a soakaway feature rather than as a cess pit. One of its fills, 697, produced numerous sherds of pottery dating to between the early 14th and mid-16th centuries. The feature appears to have been contemporary with a mid grey-brown sandy loam occupation layer (1398) situated between the pit and undercroft.

7.5.4: 1990 Undercroft Excavation

Post pads F55 and F163
Hearths F4, F43, F126
Floors 18/23 and 223
Layer 254
Door Blocking: F79
?Floors: 256 & 341
Spreads: 15 & 253
Pits: F94, F118
Stake holes F105-F107, F109, F113-F115, F117, F120, F121, F129, F135-F144
Stone Footings F96
Robber Trench: F116

By the late 13th or early 14th centuries the partition and postholes had been removed and the cess pits F100 and F92 backfilled, with only post pads F163 and F55 and floor 18/23 and 223 remaining in use. Three hearths (F48, F4 & F126) were positioned close to the wall, probably to minimize the risk of fire. Layer 254 contained substantial quantities of carbonized seeds. A patchy Mercian Mudstone clay floor layer (256) survived in the northern half of the building. The doorway F79 was partially blocked with clay-bonded granite masonry, which remains in situ. F96

consisted of a discrete semicircular group of pitched, heavily worn granite stones set closely together, giving the effect of cobbling. F96 had a maximum depth of 0.21m and was probably contemporary with pit F94 0.3m to the south-east. F116 was a linear feature running east to west located in the north-east corner of the building.

The phase may be indicative of renewed activity in the north-east corner of the undercroft, possibly associated with a dyeing process or domestic washing. F116 suggests the presence of a low internal masonry structure to which the cobbles of F46 were added. It is possible that F116 once supported a water trough or similar container. F94 was possibly associated with water storage, and was surrounded by a wattle fence.

7.6: Phase 4.2 (Post-Medieval; c.1400-1550)

7.6.1: Area One

(Figure 14)

Group Four (Building One Rebuild/Extension)

Walls 501, 505/640, 632, 1478
Drain 629
Yard Surface 911
Well 503/818

The rebuild of or extension to Building One south towards or into the open yard area was defined to the north by wall 640, to the east by wall 623 and to the south by wall 522. All were of a common build of crudely coursed granite with occasional sandstone and slate used as levelling material and bonded with a pale yellow sandy mortar. Walls 505/640 represented a single L-shaped build, its eastern (505) arm having been completely removed down to footings level by a robber trench (625/714, Group 6, Phase 5), whilst leaving the abutting buttress 514 intact and standing. The walls defined a minimum area of *c.*20.6m², with the original building footprint unknown due to the absence of a southern wall. The resultant structure was built against the eastern face of property wall 501, which continued north beyond the limits of excavation and its junction with wall 522.

A substantial stone-lined and -capped drain (629) lay immediately to the east in the corner of the excavation trench, emerging from an opening in a further E-W wall (632). This was of high-quality granite construction with ceramic roof tile and slate levelling courses. The drain formed a 0.5m wide, 0.2m deep and 2.5m+ long channel running south from wall 632, its clay-bonded granite masonry lining (628) capped with flat, flagstone-like granite slabs (630). The base of the drain was formed by an earlier (yard?) surface of cobbles and pitched slate (911) that fell away to the south and, in particular, the west, where it appeared to extend beneath the flanking wall 505. The doorway in wall 522 opened onto a probable open (unsurfaced) yard area (911), cut by a later well (818) of Group Eight (same phase).

7.6.2: Discussion of Phase 4

Phase 4.1 was characterised by further building construction and remodelling across the site, and a notable intensification of industrial activity in the central and northern areas. The building subsequently incorporated into a larger structure and consisting of a rear wall and a short length of a second forming a corner angle (Building 1), was situated in the north-east corner of the excavation. The narrow single central doorway afforded access to the yard area to the south, presumably intended for pedestrian rather than bulky goods use. The narrowed doorway and buttressed walls highlight attempts to counter the evident heavy slumping and collapse of structures into earlier, presumably Roman, features. A second structure (Building 3) occupied the southern part of Area 1, flanked by Building 2 to the north and the property boundary wall 678/771 to the south. The precise character of the relationship of the latter with the structure was unclear. Whilst the property wall was of a slightly later phase than the building, it was evident that certain of the later structural walls abutted or were truncated by 678/771. It is also evident that the building was subject to numerous rebuilds and/or alterations, with certain wall lines perpetuated by successive rebuilds.

Area 2 was dominated by unknown industrial activity ranged along the property boundary wall 562. The sequence of intercutting hearths indicates prolonged activity, possibly involving the heating of water, such as brewing or cloth processing. The situation of such activity in a remote location at the rear of and physically separate from heavily occupied properties would appear to represent an attempt on the part of the authorities to zone domestic and industrial functions.

The substantial walls defining the northern and eastern sides of the tenement occupied by the undercroft were constructed during this period, and represent the initial establishment of tenement properties. The abutting of the eastern wall with the north-east corner of the undercroft suggests either that the western wall line of the building was projected north as a western boundary, or else that the wall represents a rebuild of an earlier, possibly 12th-century predecessor. The line of three well-constructed stone-lined cess pits ranged along the north boundary wall and another example situated west of the undercroft demonstrate the density of occupation in this tenement, whilst pottery recovered from the pit occupying the north-east corner of the property (877) highlights its elite character.

Phase 4.1 was also notable in terms of its animal bone assemblage in terms of the volume of material and range of species present. The preponderance of cattle bone is indicative of an increasing specialisation in terms of food production during the later post-medieval period and, possibly, of urban dairying, whilst the recovery of neonatal pig bone suggests pig breeding within the town. The high-status character of occupation on the site during this period is also demonstrated by the volume of fish bone, whilst concentrations of cat bone indicate the proximity of a cat fur cottage industry (see animal bone report, this volume).

Phase 4.2 was characterised by the probable partial demolition of Building 1 in the north-east corner of Area 1 and its incorporation into a new or enlarged structure which presumably fronted onto High Street to the north. The building was defined by walls on its eastern, northern and western sides, the latter formed by the property boundary projecting north from the east wall of the undercroft. In this new

arrangement, the new walls and the original building formed a small rectangular room or porch, whose doorway opened onto an enclosed space, probably a yard area, with a well (503/818) occupying its centre. Hence, the rear of the original structure appears to have been retained in order to form a small annex to the new building. The apparent internal buttresses bracing the rear wall would have severely constrained access and egress to this room and it is difficult to envisage the practicalities of its use, bar that of a small store, for example. A stone-lined and -capped drain on the eastern flank provided drainage from the building and implies the presence of a narrow alleyway providing access to the High Street frontage.

Plate 15: oven/kiln 793, Area 1 viewed south-east (1m scale)

Plate 16: property/parish boundary wall 678, Area 2, viewed north-east (2m scale)

7.7: Phase 5 (Post-Medieval –Late Post-Medieval; 1550-1775+)

7.7.1: Area One

(Figures 18 & 19; Plates 14 & 16)

Group Six (Including Building One Robbing & Demolition)
Robber Trenches 510, 624, 625/714, ?1486
Demolition layers associated with Building One
516-518 523, 534, 540, 546, 557, 573, 579, 580, 581, 583, 584, 595, 600-602, 605, 637, 720, 729, 774, 775/1031, 776, 792, 817, 882, 883, 919, 929, 948, 949, 952, 953, 977, 988, 1030-1033, 1063
Hearth? 619
Pit? 604
Pit 508
Drain 629 backfill 819
Contexts 508, 509, 511, 576- 578, 582, 606, 607, 610, 869, 998
819 (backfill of well 503/818)

This group was largely comprised of features and contexts associated with the destruction of Building One, situated in the north-east corner of the excavation. Robber trench 624, broadly aligned north-south, cut wall 501 and produced pottery of mid-15th century to mid-16th-century date. 5m long, 0.6m-0.7m wide and 0.5m deep, with a vertical cut and flattish base. The length of the cut indicates that wall 501 originally projected some distance south of Building One and, therefore, may (additionally?) have formed a property boundary, forming a junction with wall 678. A second robber feature (510) truncated the north and east wall 505/640, whilst to the south, a 1m+ stretch of a possible robber trench (1486) ran parallel to robber cut 624. Robber trench 625/714 was a linear cut running *c.*4m to the east of and parallel to robber trench 624, serving to target the eastern arm (505) of wall 505/640, part of Building 1 (Phase 4.1), having removed the wall to footings level. Residual 13th-century Nottingham ware pottery from its fill joined with sherds recovered from the backfill of the stone-lined and capped drain 629, confirming their contemporaneousness.

The building was overlain by a substantial (1.5m+ thick) sequence of demolition layers containing quantities of ceramic building material, granite and sandstone rubble and slate. Certain layers, notably 637, 774, 776, 792 & 882, contained substantial amounts of charcoal, and appeared to be associated with the nearby industrial features 793 and 1487. The ceramic material also showed indications of industrial activity. Context 637 produced a (presumably residual) find of a bone awl or pin made from a cattle long bone dating to AD 930-975, whilst a bone quill made of goose radius or ulna was found in context 792. A number of sherds had traces of industrial residues attached – possibly copper, whilst a bowl from context 602 with a hole in its base may have been associated with some form of specialist alchemical or industrial use. Finally, two possible features of indeterminate plan and size were identified in the open yard area. A potential pit (604) was observed in section *c.*2m south of the doorway to Building One and, close by, a possible hearth (619) slumping into earlier well 818, the latter containing sizeable later medieval pottery shreds, possibly representing primary refuse. This material was linked to pottery from the demolition layer 602. An additional 0.6m sequence of later medieval demolition layers likely to have been associated with Building One consisted of contexts 509, 511, 606, 610, 869, all producing pottery dating to 1450-1550. A single possible pit feature (508) of indeterminate size and plan was located adjacent to wall 501, the charcoal-rich fill of

which contained pottery dating to 1300-1550. Links were identified between pottery from the pit and demolition layers 576 and 610 of the same group. Much of the ceramic material from the demolition layers appears to represent primary refuse, suggesting that the general area was being used for the dumping of material whilst building demolition was being undertaken.

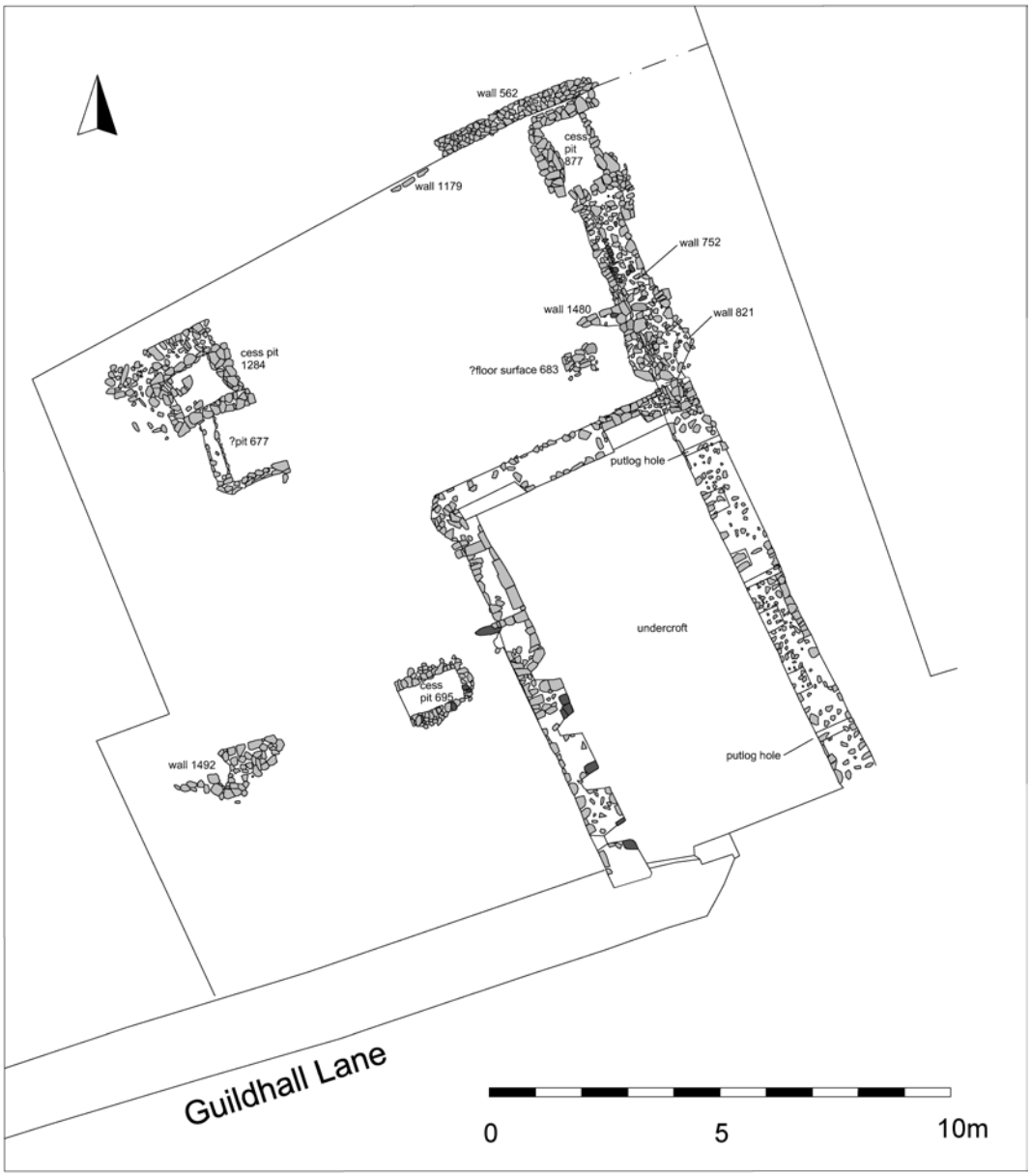

Figure 22: Phase 4.1 (Area 3)

Group Ten

Robber Trench 547/592 (Building 2)
Walls 678 (Areas 1 & 2 dividing wall) & 666

Wall 678 formed the division between Areas One and Two. This was a substantial and extremely solidly constructed structure, standing to a height of 1.2m, width of 0.55m and 7m in length, traversing the trench on a broadly east-west alignment. The

build was of roughly shaped, sized and coursed granite blocks, bonded with an extremely resilient pale grey lime mortar, the latter also forming a render for much of the wall face, notably so on the southern face and so obscuring much of the wall build. A number of severe cracks were visible along the length of the wall, as were possible signs of rebuilds of the fabric. The location of the wall in relation to the surrounding archaeological topography suggests that it formed a division between properties to the north and south. Although the structure could not be dated directly, the character of its build suggests a post-medieval date.

In the north-west corner of the trench, a robber trench (547/592) targeted the east wall of Building Two (wall 954), serving to remove all but a stub of masonry at the northern end of the wall. The feature contained mid- or late 17th or early 18th-century Slipware, pancheon ware and stoneware. Removal of the wall also appears to have resulted in the collapse of the adjoining possible soakaway feature 770. The linear cut measured 0.6m wide, 3.7m in length and 0.5m deep. The trench was itself in turn cut by pit 593 (Phase Seven Group 11). Finally, a 1.4m length of fragmentary unbonded granite wall (666) was located in the south-east corner of Area One on a north-north-west to south-south-east alignment, representing a continuation south of the line of wall 624, the latter associated with Building One and subsequently robbed out in the later medieval period.

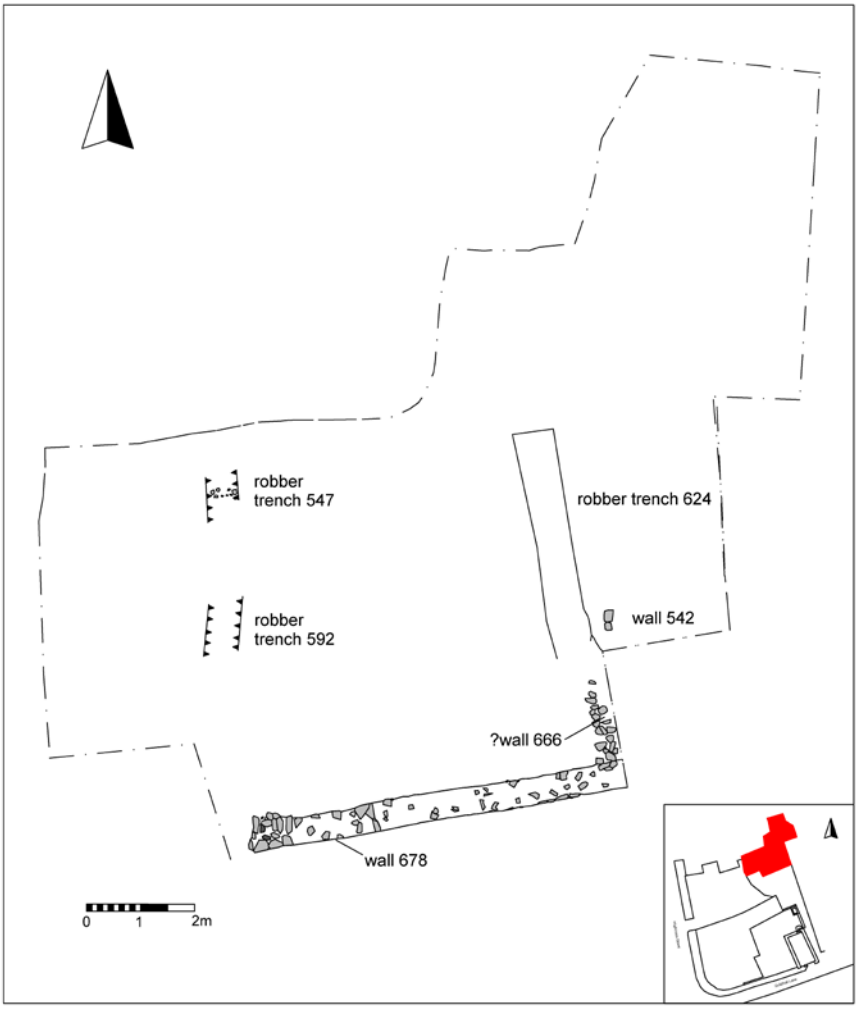

Figure 23: Phase 5 (Area 1)

Group Nine
Feature 544
Wall 1478

A substantial feature of irregular plan centrally placed in the principal yard area of Area One, measuring *c.*3m x 2.2m or, alternatively, merely subsidence of site layers into earlier pits and/or wells, the effects of which were evident in surrounding structures including Building Two. The design specification for the excavation dictated that only partial excavation was possible; the dark grey-brown silty clay fill (545) yielded 16th century or later pottery.

7.7.2: Area Two

(Figure 21)
Group 17
Well(s) 934, 1002?
Pit 958
Wall 787
Site Layers 789- 791, 956, 957, 969

Located in the central southern zone of Area Two, well 934 consisted of a substantial circular cut *c.*1.9m in diameter which was machine-excavated to a depth of 1.6m in order to observe and record a sequence of Roman street metallings and siltings observed in section in the vertical cut of the well (Phase One, Group 14). A second well (1002) was observed in plan following the machine removal of archaeological deposits as a preliminary to shoring of the site property wall and the commencement of construction. Safety and time constraints permitted only partial excavation of the *c.*1.5m diameter feature to a depth of 1m. This work also identified a 1m+ long, 0.3m wide section of clay-bonded granite walling standing to a minimum of four courses in a 1m-wide machine-cut stanchion trench. The wall was on a north-south alignment but appeared unrelated to any other structure. A single pit (958) was observed in the main eastern trench section, measuring *c.*1.4m in diameter and 0.6m deep with 45° sides to a flat base. These features cut a general 0.8m-1m accumulation of site layers located directly beneath the modern tarmac surface. Context 956 produced a pipe clay hair curler in addition to a total of 36 pipe fragments (6 bowl, 27 stem and 3 mouthpiece fragments), dating to *c.*1690-1720.

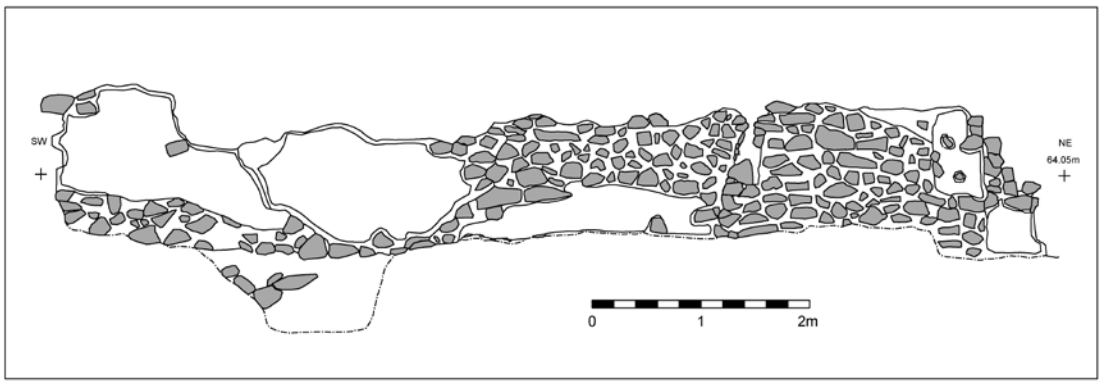

Figure 24: Area 1: wall 678: south-east elevation

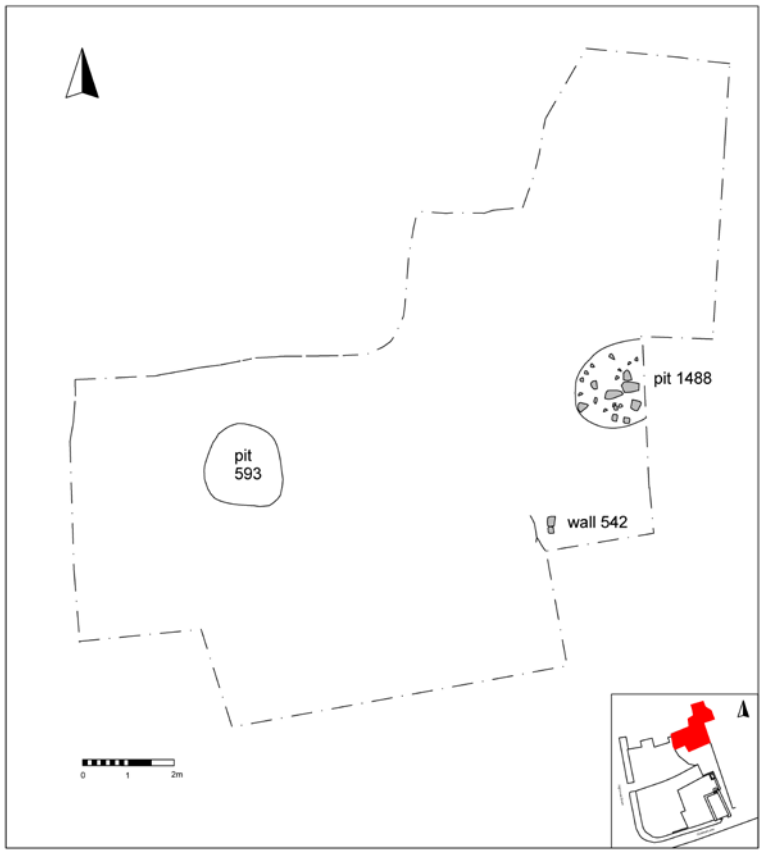

Figure 25: Phases 6 & unphased (Area 1)

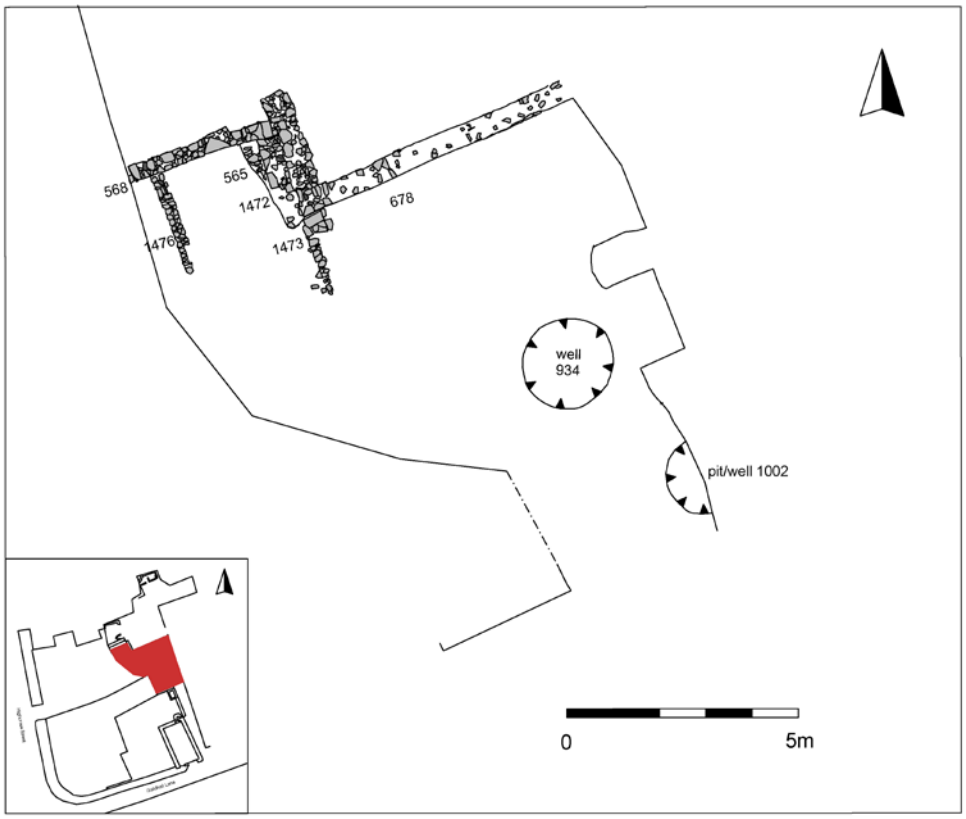

Figure 26: Phase 5 & unphased (Area 2)

7.7.3: 1990 Excavation

Undercroft building upper storey rebuild? (1550-1700)
Post Pits F123-F125, F170, F171, F160
Spreads 40, 58, 233, 268, 269, 275

Three intercutting post pits (F123, F124 and F125) were positioned in a line east of the doorway in the west wall. Another pit group (F170, F171 and F160) was positioned at the near centre of the building. F94 was circular in plan with a noticeable bulge on its north side. The spreads may relate to a general levelling of the undercroft interior following a probable refurbishment or rebuilding of the building above, entailing the removal of earlier features. The high mortar content of fills and spreads supports the theory of refurbishment if not rebuilding of an earlier structure. It is probable that this later 16th- or early 17th-century building was the one demolished in 1861; in certain respects the archaeology supports the documentary evidence describing the building as 'Elizabethan' in 1844 and 17th-century 'post and pan' in 1861.

7.7.4: 1990 Undercroft Excavation

(1650-1850)

Spreads 266 & 278
Floors 217/221/236/242 & 7/17
Pits F162 & F93
Misc. F112
Animal Burial F158
Slots F97, F98, F102-F104
Pit F17
Floor 218

Spreads 266 and 278 represented the 17th- to 19th-century undercroft floor surface; the former contained 16th- or 17th-century earthenware pottery. 7/17 contained post-medieval pottery and 217/221/236/242 a clay pipe dating to 1805-1828. An area of 0.03-0.06m thick clay flooring 218 was confined to the north-west corner of the building where it abutted the north and west walls. The five linear slots represented the imprint of a joisted frame situated in the north-west corner of the building; F98 produced a single sherd of 18th century salt glazed stoneware dating to *c.*1720. F17 may have been associated with the construction of the timber building in the late 16th or early 17th century. F111 was an isolated pit cutting floor 218 and containing post-medieval pottery

This phase followed the probable construction of an overlying timber building during the late 16th or early 17th century, during which period the cellar may have been used for storage. The southern half of the building may not have been so intensively used, although it would appear that by 1861 the only access into the building was at the western end of the south wall.

A number of pits were dug inside the building during the 18th century. Towards the end of the century or in the early decades of the 19th century, floor 218 was laid and possibly some form of racking installed, possibly an explanation for slots F97, F98, F102, F103, F104. The position of the racking alongside the doorway at the northern

end of the west wall further supports the notion of its still being in use during this period, and that the 14th-century blocking was only partial. The racking may have been associated with Swain and Teddy, the cheesemongers who were in occupation of the premises in 1854.

7.7.5: Discussion of Phase Five

Phase 5 in Area 1 witnessed the demolition of Buildings 1 and 2. In the case of the former, this consisted of heavy robbing of the building's substantial west wall and its eastern counterpart. The rear wall (522) however, was left standing to a height of over 1m, buried beneath a 1.5m accumulation of demolition material. The inclusion of large quantities of charcoal in this material is indicative of the continuation of industrial activity in this area, possibly deriving from the furnaces or hearths situated to the south in Area 2. The animal bone evidence also suggests the site having been used a dumping ground during this period, with substantial quantities and a wide range of food and craft waste. The substantial property wall 678 dividing Area 1 and 2 represents a rebuild of an earlier wall, forming as it does the division between two clear properties, land divisions recognised as having been formalised in the earlier medieval period. Area 2 appears to have continued as an open yard area during this period, occupied by one or two wells. The undercroft continued to function as a store through the later stages of its active life, whilst a number of shallow features, possibly post pits, and mortar-rich spreads may relate to the construction of a replacement for the original 12th-century (timber?) superstructure.

7.8: Phase 6 (Modern; 1750+)

7.8.1: Area One

(Figure 20)

Group 11 (Building 2 Zone)

Pits 520, 593

Pit 520 was a small pit, *c.*1m in diameter, observed partially in section in the north-east corner of Area One to the rear of Building One. Located in the north-west part of Area One, pit 593 cut the east wall (954) of Building Two and its associated floors. The pit measured 2m in diameter with near-vertical sides; it was partially excavated to a depth of 0.7m. Fill 590 produced a heart-shaped clay pipe heel fragment dating from *c*1660-80.

Group 12 (Yard Zone)

Demolition layer 524

Pit 585

Pit 585 occupied the north-east corner of the excavation, cutting deposits associated with the demolition of Building One. The shallow, truncated, sub-rectangular feature measured *c.*1.2m x *c.*1.5m and 0.45m deep and included a possible decayed wooden lining (586). Demolition layer 524 was situated to the west of wall 500 and contained quantities of slate, rubble and mortar fragments.

7.8.2: Area Two

(Figure Eight)
Brick cellared warehouse building (1000)

7.8.3: Area Three

Post-medieval upper storey of undercroft demolished in 1861 and replaced with brick superstructure. Drain 1161?

An 1861 photograph of the undercroft, taken following demolition of the probable late 16th or early 17th century timber building, demonstrates that the partition walls, brick piers and stairs were constructed during the same period. It is noteworthy that the Victorian partition is only 0.60m to the north of where the 12th- to early 13th-century partition would have stood.

7.8.4: Discussion of Phase 6

In Phase 6 the site underwent fundamental change with the construction of substantial industrial buildings, firstly the cellared warehouse building which dominated the site until its demolition in 2002. This phase also witnessed the remodelling of the undercroft to its final form following its chance discovery during the demolition of the post-medieval timber-framed superstructure prior to construction of a new building above. The decision to construct a substantial brick-vaulted roof over the undercroft highlights its continued viability as a storage building.

7.9: Unphased Contexts

7.9.1: Area One

(Figure 20)
Group 13 (Yard/Building One Zone)
Wall 1483
Pits 634, 1488
Site layers 525, 527-529, 543, 613, 621, 626, 635, 857, 944, 997, 999, 1092, 1093

A *c*.2.5m length of curving wall, 1483, was observed in the north-east corner of Area One in the main excavation section. The structure survived to a height of c.1m and was constructed from uncoursed Dane Hills sandstone, tile and slate bonded with dense off-white lime mortar. The pronounced convex curve in its plan suggests it to have been the external face of a substantial circular structure measuring *c.*4m in diameter largely located beyond the limits of excavation, subsequently largely destroyed by 19th-century cellarage. Similarities in build to the boundary wall 678 to the south would suggest a post-medieval date, it is possibly represented a commercial bread oven comparable in size to an oven in Church St., Melton Mowbray (Nichols 1795, 249; R. Buckley pers. comm.).

Pit 1488 was revealed in the south-east corner of Area One following the machine removal of archaeological deposits as a preliminary to the shoring up of the site property wall and prior to building construction. The circular pit of *c.*1.8m diameter

was located adjacent to kiln or oven feature 1487, and which it appeared to post-date. The pit was not excavated. Located in the centre of Building One and flanked by buttress 514 to the south and wall 640 to the north, a small, shallow – presumably truncated – oval pit 634 (1.0m x 1.2m x 0.25m) cut through the building's sequence of floors. The absence of stratigraphic or artefactual evidence prevented dating of the feature. The remainder of the group consisted of a number of general site layers and possible occupation spreads ranged across the north-east part of the trench (525, 527, 528, 529, 543, 613, 621, 626, 635, 857, 944, 997, 999, 1092, 1093).

7.9.2: Area Two

(Figure 21)

Group 18
Robber trench 1007
Pit 1003

There were two unexcavated features at the southern end of Area Two, the first a probable wall robber trench (1007) in the form of a linear cut feature measuring 0.9m x 2.6m+ and aligned north-south, cut by a sub-square or rectangular pit (1003) *c.*1.6m x *c.*0.7m+.

7.9.3: Area Three

(East of the Undercroft)
Wall 1498
Pit 1428
(West of the undercroft)
Well 693

Both features were located east of the undercroft in the narrow strip of land between the site boundary wall and the undercroft, adjacent to the north-east corner of the latter. Wall 1498 was a 2m+ length of clay-bonded granite build abutting but not physically bonded to the undercroft and is likely to be part of a building occupying the next property to the east, beyond the limits of the archaeological excavation. Pit 1428, diameter *c.*2m, was partially observed during the machine excavation of foundation trenches for protective concrete block work around the undercroft, between Roman walls 1424 and 1426 (Phase One Group 19). Well 693 was located *c.*4m west of the north-east corner of the undercroft. A circular 2m-diameter cut accommodated an unbonded lining (694) of granite and ceramic building material. The feature was not excavated but appeared likely to be of modern date due to the character of the brick included in its build.

7.9.4: Discussion of Unphased Contexts

The substantial circular masonry structure (1483) may represent a communal bread oven or, conceivably, a kiln or tank structure. In either case it serves to emphasise the industrial/productive character of occupation on this excavation, whilst the undated walls and single well located on the western and eastern sides of the undercroft hint at the presence of buildings within its property and in the adjoining property to the east.

9 St. Nicholas Place: Suggested Hagar 1990 Undercroft Excavation Phasing Revisions

Phase One: Roman **St. Nicholas Place 2003 Area Three Phase One**

- Roman gully and posthole
- street metallings
- soakaway
- drain
- timber structure/potholes

Phase Two: c.AD 410-900 **St. Nicholas Place 2003 Area Three Phase Two**

- Dark Earth

Phase Three: 900-1050 **St. Nicholas Place 2003 Area Three Sub-Phase 3.1**

- undercroft constructed
- floors laid/build up

Phase Four: 1150-1250 **St. Nicholas Place 2003 Area Three Sub-Phase 3.2**

- window rebuild
- undercroft refurbishment
- undercroft partitioned
- pits F92 & F100 dug
- (robbing of porch?)

Phase Five: 1250-1350 **St. Nicholas Place 2003 Area Three Phase Four**

- pits F92 and F100 backfilled
- hearths

Phase Six: (1299) 1350-1600

Sub Phase 6.1: 1350-1500 **St. Nicholas Place 2003 Area Three Phase Four**

- clay floor laid
- washing/dyeing area
- Pit F94
- doorway partially blocked

Sub Phase 6.2: 1500-1550 **St. Nicholas Place 2003 Area Three Phase Four**

- Pit F94 backfilled
- building interior levelled

Sub Phase 6.3: 1550-1600 **St. Nicholas Place 2003 Area Three Phase Five**

- upper storey rebuilt?

Phase Seven: 1600-1860

- floor and levelling
- pitting
- racking
- clay floor

Phase Eight: 1861 onwards **St. Nicholas Place 2003 Area Three Phase Six**

- construction of building above undercroft

8: Discussion and Conclusions

8.1: The Roman and Sub-Roman Periods

8.1.1: The Roman Streets and Frontage Buildings

At least two phases of Roman streets and likely associated structures were revealed during both the evaluation and excavation. The road or street observed in Area Two of the 2003 excavation appears to represent the north-south aligned street postulated as having intersected with the Fosse Way at a point beneath or in close proximity to the undercroft building. The two streets appear to have defined the south-east corner of the *insula* block directly to the east of the Forum. Whilst the precise point of intersection was not certain, the position of two walls, 724/1491 to the north and 1426 to the east may be indicative of a minimum road width of *c.*8m. A number of walls and fragmentary lengths of masonry observed in association with the street metalling sequences presumably relate to roadside buildings or structures. Unfortunately the short lengths observed in small keyholes did not permit speculation as to their dating or further interpretation. There were, however, suggestions from several of the evaluation trenches within the warehouse cellars in the western sector of the site had been occupied by a substantially-built and monumental Roman public building, as suggested by the character of the floor deposits and architectural features. Clay and gravel metalled external surfaces, coupled with the presence of two possible stylobate blocks, suggests the presence of a covered walkway or portico, architectural features generally associated with monumental, possibly public, buildings.

It was also apparent that certain walls pertained to an earlier phase, pre-dating the setting out and formalisation of the street grid during the early 2nd century AD. Both wall 1499 and 724/1491 observed running beneath the western undercroft wall in 2003 appeared to be aligned broadly east to west and, therefore, to pre-date the 2nd-century formalisation of the Roman street grid. In this respect the results appeared to mirror results from the evaluation phase trenches inside the warehouse cellars. Two of the trenches revealed a sequence of thin but densely compacted gravel metalled surfaces directly overlying the natural sand and gravels. These are likely to be the same deposits previously encountered at other excavations in or adjacent to the Forum insula, including the south range of the Forum in 1971 and 1973 (Mellor 1970-1 and 1972-3) and at the recent Freeschool Lane excavation several hundred metres to the north (Coward and Speed 2009) . It has been suggested that this represents an attempt on the part of the authorities to provide public space prior to construction of the Forum (Mellor 1976; Buckley 2000, 14). Moreover, Mellor interprets the comparative absence of features predating this surface in the general area of the Forum as indicative of the land being deliberately set aside for the Forum (Mellor, unpub.).

8.1.2: The 'Dark Earth'

The excavation was significant for the discovery of post-Roman Dark Earth, deposits hitherto only observed over thirty years previously on Jean Mellor's Forum excavations. Dark Earths are regarded as representing any combination of agricultural cultivation, animal husbandry, other land uses or even actual

abandonment. Dark Earths do in any case suggest that intramural areas in towns such as Leicester underwent significant changes in terms of the range and scale of activities being undertaken in the post-Roman period. It is in any case evident that such deposits do not represent total abandonment or absence of activity, but rather, a range of possible activities, including agriculture or middening, as informed by micromorphological analysis (Macphail, Galinie & Verhaeghe 2003). Recently-published results from the Deansway excavation in Gloucester, revealed a thick layer of Dark Earth to represent material stemming from use of land as stockyards, followed by open pasture, the latter probably for a considerable period of time (Dalwood 2004, 52).

In the case of the St. Nicholas Place deposits, no such analysis has been undertaken, as a result of which one can only speculate as to what activity/ies this Dark Earth represents. Nor is it possible to provide a secure date beyond the broad indications from the stratigraphic evidence that this material dates from between the abandonment and resultant silting of the Roman street(s) and construction of the undercroft building, probably between the earlier 12th and mid-13th centuries. However, clear indications of a locus of Anglo Saxon occupation some short distance to the east of the site at Freeschool Lane and St. Peters Lane, demonstrate the possibility of the continuing use of the site beyond the close of the Roman period. Most recently, excavations in Highcross Street in 2005 revealed a sunken-featured Anglo-Saxon structure set into the fabric of the fallen gable wall of the Roman macellum (Coward & Speed 2009.

8.2: The Medieval Period

At the time of excavation in 2002-3, St. Nicholas Place was one of the largest open area excavations within the intramural area of Leicester since work stemming from the urban redevelopment work of the 1970s. Hence it offered a rare opportunity to investigate several medieval tenement plots and attendant domestic, craft and industrial functions.

In general terms of dating and form, the arrangements of clay-bonded granite-built buildings and attendant yards and associated structures revealed at St. Nicholas Place closely parallel those observed elsewhere nearby in the medieval urban core area. Notably, excavations on the site of the Cameo Cinema in 1992 revealed two 13th- to 15th-century buildings of clay-bonded granite build with internal floors, possible external yard surfaces and pitting (Cooper 1993). The circular masonry industrial features encountered at St. Nicholas Place also mirrored structures at the Cameo Cinema, associated with Building 2 (*ibid*), and at St. Nicholas Place/Applegate, in Trench 3 (Meek 2000, 16-17). Medieval undercroft structures were represented at both St. Nicholas Place sites, in the case of Applegate consisting of an example of at least early as 14th century in date (*ibid*). Both were of comparable age, granite and sandstone build, size and with later structures above. All have the continuity of property boundaries, from as early as the Roman period, preserved in the perpetuation of later wall lines. Both St. Nicholas Place sites have property boundaries surviving up to the time of the Goad plans. The St. Nicholas Place/Applegate site had a boundary wall closely paralleled at St. Nicholas Place 2003.

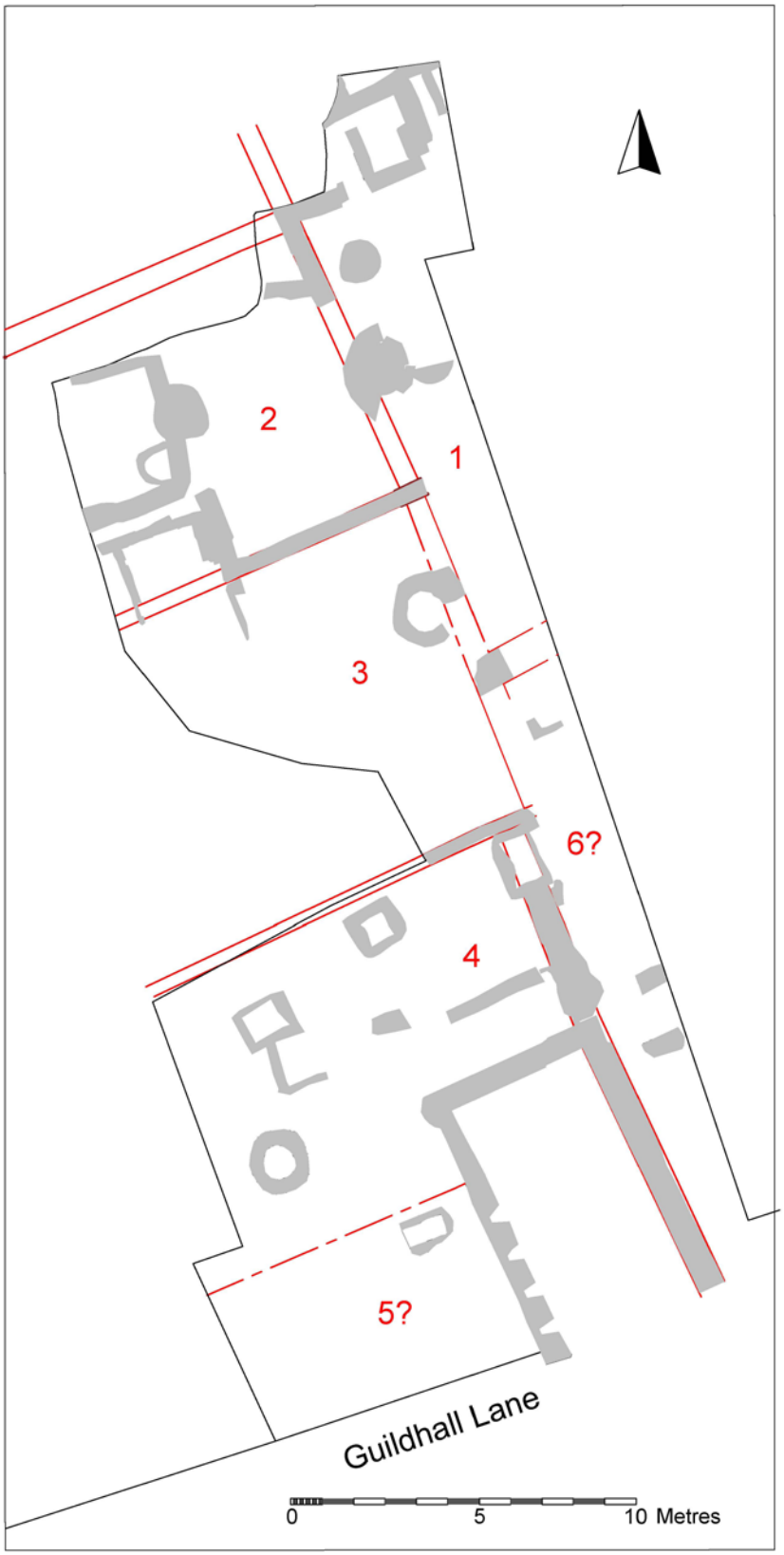

Figure 27: St. Nicholas Place: medieval tenement plots (1-6)

8.2.1: The Location and Evolution of Tenement Plots
(Figure 23)

Plot Descriptions

West Stow (Suffolk), Mucking (Essex), and Raunds (Northamptonshire) demonstrate the use of two pole or rod lengths as standard land measurement units during the early Anglo-Saxon period. Evidence from Leicester appears to accord with this, with the pole (5½ yards or 5.03m) or two poles (11 yards or 10.06m) seemingly used as a standard unit of property measurement within the medieval town (Connor & Buckley 1999, 80). Most recently, excavations in 2006 north of St. Nicholas Place at Freeschool Lane/Highcross Street defined a number of burgage plots extending back from the medieval High Street (Highcross Street) frontage (Coward and Speed 2009). Evidence from 9 St. Nicholas Place appears to reflect the same pattern, where property boundary walls defined a minimum of five and possibly six tenement plots measuring between 9.8m and 12m in width. Most were defined by stone boundary walls (which had been subject to multiple rebuilds) relating to the High Street (medieval Swinesmarket) and Highcross Street (medieval High Street). These plots are described in detail on an individual basis as follows.

Plot 1
The most northerly plot, Plot 1, appears to represent the rear of 100 High Street (starting at a point about 18m to the south of the 1887 street frontage) and containing a late-12th- to late-14th-century structure, Building 1 probably relating to this property. The clay-bonded granite south wall housed a partially-surviving window and door opening, the latter defined by dressed Dane Hills sandstone blocks. Subsequent rebuilds included the insertion of two buttresses against the internal wall face, perhaps to counteract subsidence. The building was subsequently sealed beneath a deep accumulation of 15th- to 16th-century demolition material. To the east, a probable narrow alleyway with drain provided access to the High Street to the north. Immediately to the north, a large circular structure measuring *c.*4m in diameter possibly represented a commercial bread oven comparable to an oven in Church St., Melton Mowbray (Nichols 1795, 249; R. Buckley pers. comm.).

Two circular masonry features occupied a yard south of Building 1, heavy scorching and crazing to the granite lining and base of which indicated prolonged exposure to high temperatures. The features may represent masonry hearths for heating raised water tanks supported on side walls, suggestive of brewing, cloth dyeing or similar processes requiring heated water and likely operating on a domestic scale. A communal aspect to such activity was implied by the yard and attendant tank bases occupying a shared space between a minimum of two tenements prior to the construction of a major boundary wall which bisected the open yard area. It may be significant that further industrial features were identified to the south, again to the east of this boundary wall, and may relate to the tail of Plot 1 rather than to Plot 3 (where they are described) or Plot 6. Certainly, it is not uncommon for plots on both High Street and Highcross Street to be between 40m and 50m in length, and it is perhaps noteworthy that the southern edge of hearth 927 was located 40.2m (8 rods) from the High Street frontage. Hence the hearths may all relate to specialised intensive commercial or industrial activity in the backyard of Plot 1.

The southern area of Plot 1, bounded to the west by Plot 3 and to the south by Plot 6, was occupied by a sequence of small intercutting circular masonry hearths dating from the 14th to 16th centuries. No flues or stoke holes were observed and there were no clear indications of function, but these may represent water-heating hearths – as suggested for Plot 1 – or else were intended for another purpose that has left no trace in the archaeological record.

Plot 2

The tail of Plot 2 backed onto the same yard area, equating very approximately to 5-7 Highcross Street, and possibly constituting two 5m-wide plots (2a/2b) separated by a narrow alley backing on to a yard shared with 100 High Street. A number of rebuilt walls appeared to represent attempts to counteract subsidence. The rear section of a building, Building 2, dated to the mid- to late 13th century, consisted of three walls defining a minimum area of *c.*11.5m², the room floored with a single dense clay surface that had suffered considerable slumping into underlying earlier features. A probable soakaway feature was positioned at the south-east corner of the room. The yard area to the east, perhaps originally shared with Plot 1, had a minimum of three phases of well-constructed cobbled surfaces, traversed by three inset drains, lined and capped with stone. Building 2 was demolished in the 14th-century.

A third structure, Building 3, lay to the south of Building 2 and comprised a complex sequence of walls and fragmentary floor surfaces, representing a building measuring a minimum of 3m east-west and 3.5m north-south. A succession of wall builds formed the probable northern and eastern sides of the building, the former running flush with the southern boundary of the adjoining Building 2. The earliest wall phase produced pottery of mid-15th to mid-16th-century date.

Plot 3

Plot 3 was defined by walls suggesting a double-width property extending west from Highcross Street, although two separate plots are also a possibility, the dividing boundary having been removed at a later date. The southern wall equates to a boundary on the 1887 Ordnance Survey map. This area of the site appeared to represent a further open area unoccupied by structural features, with the exception of its northern and southern boundary walls. An undetected third wall may have formed a division between the plot and its eastern neighbour (1 or 6). Neither the southern or northern walls appeared to have accommodated windows or doors, suggesting their having functioned as secure property boundaries against which buildings could be built. A single 13th-century granite-lined well occupied the eastern plot edge.

Plot 4

Plot 4, defined by walls 562 and 752 to the north and east respectively and dominated by the undercroft building, may have initially represented a single substantial property occupying the corner plot between Highcross Street and Guildhall Lane prior to its suggested later subdivision. The plot appears to have subsequently been divided at an unknown date prior to, or contemporary with, construction of the undercroft. A series of mid-15th to mid-16th century stone-lined cess pits were ranged along the northern plot boundary, one of which produced a range of usually perishable finds, including cloth fragments and food remains including fish bone and strawberry, apple, pea and bean remains. A second contained abundant fig seeds and fish bone. A D-Shaped unbonded masonry feature positioned at the outer north-east corner of the undercroft

may be tentatively interpreted as the foundation for a water butt or a staircase, in either case probably directly linked to the undercroft. Finds dating indicated that the plinth represents a later addition to the undercroft.

Plot 5

Located west of the undercroft, Plot 5 was occupied by a number of rubbish pits including a single stone-lined example cutting the Dark Earths and 11th to 13th century occupation layers. A second granite-lined pit or soakaway feature positioned adjacent to the west door of the undercroft produced substantial quantities of pottery dating to between the early 14th and mid-16th centuries.

The Undercroft

The undercroft measures *c.*8.5 m by 4.5 m internally and 2.5 m deep and is of mostly granite build, but with some green sandstone and reused Roman brick and tile. The remains of four windows with sloping sills and splayed jambs survive in the west wall, whilst the west and north walls contain square niches lined with Roman tile, probably for housing candles or lamps. The partially sunken structure was accessed via a substantial doorway at its north-east corner.

Construction, dated to between the first quarter of the 12th and the mid-13th centuries initially involved the excavation of a rectangular cut through Roman street metallings and silts and overlying 'Dark Earth' deposits, the gravels also forming the internal floor and wall foundation. External ground level appears to have been higher on the eastern side of the building. A line of three putlog holes along the interior face of the eastern wall corresponded with a probable beam slot cut into the external wall fabric at ground level, suggesting the use of scaffolding during construction. The absence of facing masonry on the eastern wall and indications of bowing suggests its having been the subject of robbing and/or structural collapse. The unfaced and roughly-coursed external face of the northern wall suggests its having been below ground level, implying that external ground level was markedly higher at the northern end of the building. A possible door or window may have been located at the western end of the wall, which accommodated two contemporary niches, one of which with its Roman tile edging intact.

As the single surviving external façade of the building, the western wall contained the bulk of the building's architectural detail. A row of four arched and splayed windows with Dane Hills sandstone jambs and Roman brick arches was spaced regularly along the wall, only one of which survived to its full height. The north end of the western wall accommodated a wide doorway defined by dressed ashlar Dane Hills sandstone blocks. Stubs of masonry projecting from the doorway jambs may have formed the remnants of a subsequently robbed porch and/or building or wing projecting west from the undercroft. The western doorway appeared to have been accessed via a substantial access ramp or flight of steps, represented by a substantial robber trench. Partially destroyed by 19th-century cellaring, the feature originally extended further west of its surviving 5m length. A length of the west wall adjacent to the doorway and including the most northerly window appeared to be of a later build, stylistic similarities with the main structure suggesting a rebuild date close to that of the initial building construction, possibly arising from structural collapse. The west door was heavily robbed during the late 12th or late 13th centuries, along with a probable associated external porch and/or access ramp or flight of steps. The internal face of

the eastern wall contained four square recesses or niches defined by Roman tile, probably designed to house candles or lamps. The southern wall appeared to comprise two phases of build. A doorway visible in the 1861 photograph at the western end of the wall providing access to Guildhall Lane survived as a doorway reveal. The slight projection of the west wall beyond its southern counterpart suggested a porch arrangement, as at the other, western door.

Excavation revealed a substantial robbed feature running west from the undercroft and likely representing the remains of a substantial access ramp or flight of steps leading to the wide doorway located at the north-west corner of the building. Partially destroyed by 19th-century cellaring, the feature clearly appeared to have originally continued further west than its surviving 5m length. Potentially, it represents a connecting wing projecting west from the undercroft parallel to Guildhall Lane, and hence a longitudinal subdivision of the tenement in order to create Plots 4 & 5. The undercroft interior appears to have undergone a sequence of alterations and remodelling throughout the 13th and 14th centuries involving the opening of rubbish or cess pits and the possible construction of livestock pens, all suggestive of a pronounced decline in the building's status in its later life. Pits contained substantial quantities of bird bone, eggshell and sheep or goat bone. Mineralised human waste was recovered from the two internal pits along with evidence for cereal processing in the form of charred wheat and oats, possibly indicative of brewing waste. As the building is likely to have retained an upper storey throughout its life (N. Finn, pers. comm.), the pits appear to have functioned as cess pits for use by residents of the structure above the undercroft. The identification of a possible 13th century water butt or staircase base adjacent to the building provided further evidence for the continued use of the building.

The character of the Plots 4 and 5 was strongly domestic, with a preponderance of rubbish or cess pits and an absence of craft- or industrial-related features. A line of three stone-lined pits ranged along the northern wall was presumably associated with the undercroft and its possible adjoining building range fronting Guildhall Lane.

Plot 6

Located between the undercroft and the eastern excavation boundary, Plot 6 represented a property running south from Plot 1 to Guildhall Lane. The 2m-wide strip was occupied by pits ranging in date from the 11th to 13th centuries. .

Plot Development

Plots 4 and 5 were jointly occupied by the undercroft and appeared to have been the result of the subdivision of a single, double-sized tenement with shared frontages on Guildhall Lane to the south and Highcross Street to the west. There were few indications of the plots having undergone alteration subsequent to their presumed late Saxon or early medieval setting out. With very few exceptions, buildings appear to have been constructed, altered and rebuilt within the unchanging confines of boundary walls. This also appears to have been the case to the north at Highcross Street, where the 2006 Freeschool Lane excavation revealed a number of Saxo-Norman timber structures, whose building lines perpetuated into the 20th century in property boundaries (Coward 2007, 185). The impression at this urban core location is of

dense domestic occupation within regularly-maintained buildings despite incidences of subsidence and possible structural collapse.

Certain boundaries were, however, subject to rebuilds and alterations. The dividing wall between Plots 6 and 4 linking the north-east corner of the undercroft with the boundary wall between Plots 3 and 4 was the subject of several rebuilds. In addition, construction of the substantial 15th-century stone-lined pit 877 in Plot 4 involved the removal of a section of the same wall, although without altering the general wall line. Only in the area immediately west of the undercroft were there hints of plot subdivision, as implied by the use of its access steps or ramp as a division between Plots 4 and 5. The positioning of the undercroft at the end of, and aligned with, a major property wall line suggests that the building was influencing the layout of property divisions. In turn, the positioning of the undercroft at the junction of two Roman streets may indicate that its alignment was itself dictated by the configuration of the remnant Roman grid.

The fact that the property boundary wall/parish boundary wall dividing Plots 3 and 4 was of 18th-century build provided further evidence of the longevity of these properties. Coupled with the cartographic evidence, this suggests that properties had been established at an early date, likely explained by their proximity to the principal medieval axial roads of Highcross Street and Swinesmarket in the town's commercial core.

8.2.2: The Structural Evidence

Buildings

All buildings identified at St. Nicholas Place were, with the notable exception of the undercroft, of the same clay-bonded granite construction. Certain survivals, such as the rear wall of Building One, with its partially surviving window, coupled with reasonably substantial wall widths, were indicative of masonry construction as opposed to timber superstructure on a masonry base.

These would also appear to have been domestic in character, notably Building Two, with its probable soakaway. Yards to the rear of street frontage buildings were occupied by a range of features including drains, wells, furnaces or hearths, ovens and possible water tank bases as well as substantial numbers of rubbish and/or cess pits. Access from Swinesmarket and High Street to these yards may have been via alleys, as observed at the 1992 Cameo and 2000 St. Nicholas Place excavations. The clear impression is of dense domestic occupation at the core of the medieval town, with efforts made to maintain structures despite, in certain instances, subsidence and possible collapse of buildings.

The 1992 Cameo Cinema excavation on High Street, located directly to the north-west of 9 St. Nicholas Place, produced two 13th- to 15th-century buildings of clay-bonded granite build with internal floors, possible external yard surfaces and pitting. The buildings, fronting High Street, the medieval Swinesmarket, and possibly divided by a narrow alleyway, were subsequently subjected to robbing activity (Cooper 1993: 9). These structures, along with a possible cobbled yard area and attendant stone-lined

drain, well and oven features, were directly comparable with those encountered in 2003 at 9 St. Nicholas Place.

Deansway Site 5 at Gloucester offers a possible parallel in terms of a similarly high status 12th-century stone building, in this case a hall, in close association with an external latrine pit to the rear of its attendant property (Dalwood *in* Dalwood & Edwards 2004, 64). This and the other Deansway sites also demonstrate clear broad similarities in terms of buildings situated on street frontages with associated yards to the rear, the latter densely occupied by cess pits, bread ovens and iron smithing hearths. However, the substantial circular masonry feature observed in the northern main trench section may represent a communal bread oven feature of the type encountered at Site 2 in Gloucester (*ibid*: 65).

8.2.3: The Undercroft Building: A Re-Assessment of the 1990 Excavation

The Leicester undercroft dominated the southernmost and largest of the identified tenements. The substantial north-west doorway appears to have been associated with an approach ramp or flight of stairs for the probable passage of goods in and out of the building. The location of the building in relation to the distribution of other features, notably pits, suggests that the undercroft initially occupied a single substantial tenement subsequently subdivided into two smaller parcels of land. Dense pitting activity in this area of the site testifies to the intensive character of domestic occupation throughout the medieval period.

The undercroft indicates the presence of a high-status individual, probably a merchant, trading from and likely resident in the urban core. The building appears to have been situated at the rear of a sizeable tenement extending west to Highcross Street, and hence indicative of its separation into domestic residential and commercial zones. Accordingly, domestic accommodation may have fronted Highcross Street, whilst direct access to the commercial premises, namely the undercroft, lay to the rear via the lower-status Guildhall Lane. Alternatively, the owner may have occupied a first floor timber hall over the undercroft and/or in an adjoining wing. Evidence for the latter took the form of insubstantial traces of walling to the west in addition to the robbed remains of an access ramp or flight of steps to the north-west corner doorway. This structure may have formed part of a residential wing extending west of the undercroft or, alternatively, the windows piercing the west wall of the undercroft may have opened onto a private courtyard arrangement. The splayed windows set high in the west wall of the undercroft appeared designed for maximum security whilst permitting as much light as possible, suggestive of the putative courtyard having been open to and accessible from the street.

The building appears initially to have occupied a single large plot of land, possibly one of the late Anglo-Saxon *hagae* identified at the nearby Cameo cinema excavation (Cooper 1993). Subsequently subdivision of the plot produced twin tenements running parallel to Guildhall Lane in a process identified elsewhere in Leicester and in other towns during the medieval period (Courtney 1998). However, as the northern end of the building did not tally with the division between the plots, this may indicate that the building predated subsequent plot subdivision. It is feasible that the line of the

junction of the two Roman streets upon which the building lay may have dictated the alignment of the undercroft.

The undercroft appears to have undergone structural and, possibly, functional change early in its working life, firstly involving the partial infilling of its north-west doorway and robbing of its porch and access ramp or steps during the late 12th or late 13th centuries. The removal of these features suggests that by this period the building was no longer operating as a store for bulky goods requiring a substantial doorway. In addition, the destruction of a possible adjoining wing may imply a certain retrenchment on the part of its owner. A complex sequence of stake and post-holes testify to the subdivision of the building interior for a range of presumably domestic functions, possibly including the stalling of domesticated animals. The presence of internal cess pits, probably linked to chutes or funnels from room(s) above does, however, suggest the continued presence of an occupied superstructure during this period.

The open area west of the undercroft was cut by a sequence of late 11th- to late 13th-century pits and hence broadly contemporaneous with the construction and early use of the undercroft. This would argue against the presence of a contemporary projecting wing or other associated building but rather it having been an open yard or courtyard area. The arrangement of 19th-century industrial buildings that stood on the site prior to its development may indicate the fossilisation of medieval property boundaries, notably those in the centre of the area. The building projecting into the rear yard was long and narrow, and the walkway between this building and that to the north was of similar size and shape, which may represent the preservation of medieval tenements projecting to the east from Highcross Street. The boundaries also display a noticeable kink in their alignment to the east of the street frontage, possibly having its origins in the Roman period, as it aligns with the Roman street grid, and may suggest the survival of standing Roman masonry.

It is possible that entry to the undercroft was from a still-extant street representing a continuation of the line of the Roman Fosse Way, running east-west between the two Roman gates. Furthermore, it appeared to have been placed upon, or cut into the intersection of this and a second (north-south) street, effectively cutting off access along the latter. If the latter had still been functional at this stage, this would constitute a clear appropriation of public space for private use. It also suggests that the east-west Roman street, or a successor thereof, continued as the principal east-west route through the town into the medieval period. Until the replacement of Highcross Street as the principal commercial street in the 16th or 17th century by High Street and the presumed resultant demotion of Guildhall Lane, the proximity of this major, possibly commercial building would have made economic sense.

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The Romano-British Pottery Elizabeth Johnson

Assemblage size and condition

A stratified assemblage of 32 sherds of Roman pottery weighing 0.307kg was retrieved from the excavations, along with a further 10.323kg of re-deposited material from post-Roman layers. The stratified material is fragmentary, reflected by the relatively low average sherd weight of 9.6g.

Methodology

The material was examined in hand specimen using a binocular microscope at x20 magnification and classified using the Leicestershire Fabric Series as detailed below (Pollard 1994).

Fabric Code:	**Description**
Samian	Samian wares
MO4	Mancetter-Hartshill Mortaria
BB1/BB2	Black Burnished wares
GW3	Fine sandy grey wares
GW9	Very coarse sandy grey wares
OW2	Fine sandy oxidised wares
OW3	Coarse sandy oxidised wares
WW2	Fine white wares
WW4	Medium sandy white wares
WW5	Coarse sandy white wares
CG1	Fossil marine shelly ware with low quartz content

Table 1: Summary of Leicestershire Museums Fabric Series (Pollard 1994, 112-114).

Quantification was by sherd count, weight (grams) and estimated vessel equivalents (EVEs) using rims only, though only two rims were present. Vessel forms were assigned where diagnostic sherds allowed, using the Leicestershire Form Series and other published typologies (Holbrook and Bidwell 1991; Tyres 1996; Webster 1996). The complete dataset was recorded and analysed within an Excel workbook, which comprises the archive record.

Pottery Catalogue

Grp	Cont	Fabric	Form	Sherds	Weight (g)	EVEs	Dating
14	1012	WW2	Misc	1	1		2ndC
14	1014	BB2	Bowl or Dish	2	25	0.55	mid-late2ndC
19	862	Samian	Bowl	2	9		c.AD120-150
19	862	Samian	Cup	1	2		early2ndC
19	862	MO4	Mortarium	1	14		early-mid2ndC
19	862	WW5	Flagon or Jar	2	48		late1st-mid2ndC
19	862	WW2	Flagon	1	15		2ndC
19	862	WW4	Flagon	1	4		2ndC
19	862	CG1	Jar	2	36		2ndC
19	862	OW3	Jar	2	17		2ndC
19	862	BB1	Jar	1	10		c.AD120+
19	862	GW3	Jar	1	11		2ndC
19	862	WW4	Flagon or Bowl	1	4		2ndC
19	862	WW2	Flagon	1	7		2ndC
19	862	WW2	Flagon	2	6		2ndC
19	1076	OW2	Misc	1	10		2ndC
19	1081	WW2	Misc	1	2		2ndC
19	1087	Samian	Dish	1	3	0.5	early-mid2ndC
19	1087	GW9	Misc	1	10		2ndC
19	1355	WW2	Misc	1	5		2ndC
19	1455	Samian	Bowl	3	11		2ndC
19	1455	Samian	Bowl	1	14		2ndC
19	1455	BB1	Dish	1	14		mid2ndC+
19	1455	WW2	Flagon	1	29		2ndC

Table 2 Romano-British pottery catalogue

Stratified Features

Area Two: Group 14
Demolition deposits: (1012), (1014)

One very small sherd of white ware, most likely a flagon or bowl dating to the 2nd century, was retrieved from (1012). Two sherds from a Black Burnished ware 2 bead rimmed bowl or dish were recovered from (1014). This fabric type is not particularly common in Leicester and dates to the second half of the 2nd century (Tyres 1996, 186-187).

Area Three: Group 19
Street metallings and silts: (862), (1081), (1355), (1455)

Demolition deposits: (1076)
Occupation deposits: (1087)

Two sherds (13g) were recovered from (1087) within the occupation deposits. The sherd of samian ware is a Drag.18/31 dish from Lezoux in Central Gaul dating to the first half of the 2nd century (Webster 1996, 35). The grey ware fabric is very coarse, probably from a jar or bowl. Although not closely datable, it could easily be contemporary with the samian ware. One sherd (10g) of oxidised ware was found in demolition deposit (1076). Again, this sherd is undiagnostic and could be from a jar, bowl or flagon. A date within the 2nd century is most likely.

The street metallings and silts revealed the most pottery, with (862) forming the largest single deposit (18 sherds, 183g). The assemblage includes a mixture of jars in grey, shelly, oxidised and Black Burnished ware fabrics. Most of the white wares are flagons, along with possibly a jar or bowl. The mortarium from Mancetter-Hartshill dates to the first half of the 2nd century. Two Central Gaulish samian ware vessels are present; a Drag.27 cup from Lezoux dating to the early 2nd century and a Drag.37 decorated bowl. The bowl is most likely from Les Martres-de-Veyre with the figurative design in panels suggesting a date of *c.*AD120-150 (Webster 1996, 83). The coarse wares are not closely datable however the presence of a Black Burnished ware jar indicates a date after *c.*AD120. A date within the 2nd century is most likely for the group as a whole, possibly within the first half.

Deposits (1081) and (1355) contained one sherd of white ware each. Both could be from either a flagon or bowl and probably date within the 2nd century. Finally, six sherds (68g) were recovered from (1455) comprising a white ware flagon base, Black Burnished ware dish and two samian ware Drag.37 decorated bowls. Both the samian ware bowls are from Central Gaul and date within the 2nd century. The Black Burnished ware dish has a plain rim with intersecting arc decoration, a long-lived form in production from the middle of the 2nd century until the end of the Black Burnished ware industry (Holbrook and Bidwell 1991, 111-112). Although these dishes can be difficult to date, given the nature of the rest of the assemblage a date within the second half of the 2nd century is highly likely. Almost all the pottery in Group 19 was found in the western sequence of deposits, with only (1455) associated with the eastern sequence.

Re-deposited Material

A scan of the pottery from post-Roman levels revealed evidence for activity throughout the Roman period from the 2nd to 4th centuries. In addition to grey, oxidised, shelly and white wares comparable to those from the stratified features and typical of the 2nd century, a range of later coarse wares was also present including oxidised wares from Much Hadham, East Midlands Burnished type grey wares and late Roman Harrold shell-tempered wares, indicating activity into the 3rd and 4th centuries (Todd 1968; Brown 1994; Tyres 1996, 168-169). A wider range of Black Burnished wares was also found including bead and flanged bowls dating to the late 3rd-mid 4th century (Holbrook and Bidwell 1991, 109-110).

Specialist wares are represented by mortaria and amphorae. No amphora sherds were found with the stratified pottery, however sherds from Baetican Dressel 20 olive oil

amphorae were found throughout the re-deposited material, including some substantial body sherds, a neck and two handles. This type of amphora is common on Romano-British urban sites from the Conquest to the mid-third century (Tyres 1996, 87-88). In addition, one sherd from a Cam 186 amphora associated with the importation of fish sauces was also found. This form dates to the late1st-early 2nd century and sources include Cadiz in Spain (Peacock and Williams 1986, 122-123). Mortaria from Mancetter-Hartshill, the Nene Valley and Oxfordshire all date to the 3rd and 4th centuries. The forms include hammerhead rims with red painted decoration dating from the 3rd century and possibly into the 4th from the two former sources. The Oxfordshire examples are white-slipped and red-brown colour-coated wares dating into the 4th century, perhaps the mid-late 4th century (Young 1977, 120-122; 127).

Samian table wares comprising cups, dishes and bowls typical of the 2nd century were found. In addition, a Drag.45 mortarium with applied lion's head spout was also present. These are not especially common in Leicester and date from the later 2nd century (Webster 1996, 55-56).

A wide range of Romano-British colour-coated wares was present, most from the Nene Valley but a few from Oxfordshire. The Nene Valley colour-coated wares comprise beakers, bowls, jars, dishes and flagons. Beakers with barbotine, white painted and roulette decoration date from the later 2nd century through to the 4th. Castor boxes, flagons, flanged bowls imitating the samian Drag.38 form, plain rimmed dishes and jars represent the later range of Nene Valley wares during the 3rd and 4th centuries (Howe *et al* 1980, 16-25). Only fairly small sherds of Oxfordshire red-brown colour-coated wares were found, most likely from bowls popular during the 4th century (Young 1977, 133-134).

Conclusion

Within both Groups 14 and 19, Black Burnished wares are the latest datable vessels which, combined with the total absence of other regional fabrics such as Romano-British colour-coated wares, suggests a date within the 2nd century for the stratified deposits. The Roman features had been severely truncated or lost completely as a result of building and occupation during the Medieval period, however, evidence for activity throughout the Roman period up to the middle of the 4th century and perhaps beyond was found within the re-deposited levels.

The Medieval and Later Pottery and Ridge Tile Debbie Sawday

The Medieval and Later Pottery

Introduction

The stratified pottery from selected groups from the Undercroft excavations in 1989, 812 sherds, weighing 15.669 kg, and a further 3139 sherds, weighing 104.562 kg from the excavations in 2003 on St Nicholas Place are examined here. Most of this material dated predominantly to the later medieval period.

Methodology

The pottery was recorded with reference to the *Minimum Standards for the Processing, recording, Analysis and Publications of Saxon and medieval Ceramics* (MPGR 2001). The quantification of the pottery, save for the material from the excavation of the Undercroft in 1999, which was quantified by sherd numbers and weight only, was by sherd number, weight and vessel rim equivalent, where one vessel is equal to 1.00 EVE. Only rims were used, as the bases were not generally a reliable indicator of vessel form, however. Inevitably certain identifiable forms without surviving rims were under represented, such as spouted pitchers and dripping dishes. The vessel forms are classified with reference to the terminology used in the Medieval Pottery Research Groups' *A Guide to the Classification of Medieval Ceramic Forms* (MPRG 1998).

Fabrics

The pottery was examined under a x20 magnification binocular microscope and classified with reference to the ULAS fabric series (Sawday 1989), (Davies and Sawday 1999) and (Davies and Sawday 2004), based on the original fabric series devised by Rosemary Woodland (Woodland 1981), (Woodland 1987). The fabric codes and sources – where known – are shown in the fabric list, Tables 1 and 2. Previously undefined fabrics or those of uncertain origin and new to the series are described below.

Additions to the Pottery and Medieval Tile Fabric Series (Table 1)

RS3 – Only one vessel, the upper half of a jar, occurs here in this fabric, which has frequent, ill sorted rounded & sub-rounded quartz inclusions ranging in size from 0.5 to 1.5 mm, traces of calcareous inclusions, and sparse sub rounded quartz and unidentified mineral inclusions up to 2 mm in size. The surface colour is black, with a grey core, 10R 5/1 and dark red margins, 10R 2.5/2. The fracture is hackly and the surfaces are hard and rough on the exterior, the interior is smooth and appears to have been wiped horizontally, possibly with a cloth, and the inner rim smoothed with a finger. The vessel is hand built with an everted, thickened rim and a shouldered profile, the average thickness of the wall varying between 25 and 50 mm. The degree of hardness and lack of variation in surface colour suggest that the pottery was made by a potter with a fair degree of expertise, and probably fired in a clamp or bonfire

kiln. The dating is uncertain – but the pot occurs in the earliest post Roman contexts at St. Nicholas Place, the dark earth in area 3, phase 2, in conjunction with Stamford ware and Potters Marston dating from the late 11th or 12th centuries (Illustration 1).

OS1 – Represented here by only one sherd, this fabric occurs in Leicester and the country only as a minor ware. The sparse to moderate, rounded and sub rounded and ill-sorted quartz inclusions range in size from 0.5 to 2.0 or occasionally 3.0 mm. Sparse and ill-sorted angular and platy shell up to 2.0mm in size and sparse to rare fragments of ironstone and flint are also present. The surfaces are hard and smooth to rough to the touch, the fracture is hackly. Surface colouration is generally pink to reddish yellow, 5YR 7/3 to 7/8, with a dark grey core, 7.5YR N4. Vessels are hand or coil built, and occasionally knife trimmed at the exterior basal angle. The most obvious characteristic of the pottery is the speckled red and white appearance of the surfaces. The range of mineral inclusions may suggest more than one source; origins to the south east of the county seem most likely, including Brackley in Northamptonshire (M. Mellor pers. comm.) The pottery cannot stratigraphically be dated earlier than the 12th century.

OS2 – The eight sherds found here in this fabric have sparse to moderate well sorted, sub rounded quartz inclusions 0.1 or, more usually, 0.2 to 0.5 mm in size. Angular and/or platy shell, ranging in size from 0.2 to 1.0 mm or occasionally 2.0 mm, and generally well sorted, is also present, together with sparse rounded and ill-sorted iron ore, 0.1 to 0.2 mm. Surface colour ranges from reddish yellow 5YR 6/6 to light brown, 7.5YR 6/4. The core and, occasionally the inner surface, is pale grey, N6. Both jars and jugs occur in this fabric, which is usually wheel thrown, though hand built examples are also known. Vessels are occasionally decorated with greenish yellow lead glaze and inscribed wavy lines. The earliest identifiable vessels, in phase 3.1, were two jars with everted and thickened rims. Sources in the Northamptonshire region are suggested for this pottery, which occurs in Leicester and the country only as a minor ware, and probably dates to the 12th or 13th centuries.

MS3 – This coarse sandy ware, although recently sub-divided into several other fabrics (see below) probably still encompasses several fabrics, but all share the common characteristics described here. The moderately frequent, ill-sorted sub rounded quartz inclusions range in size from 0.25 or less to 1.0 or occasionally up to 2.5 mm. Iron ore is also present and occasional fragments of clay or Mercia Mudstone (keuper marl). The surfaces are hard, or very hard, and rough, the fracture is hackly. Surface colour ranges from very pale brown, 10YR 8/3 to 8/4, white, N8 to N8/1 and pink, 5YR 8/4, or reddish yellow, 5YR 6/6 to 7/6, often with a pink 5YR 7/4 or grey core, 5YR 5/1 to 6/1, and a glaze colour ranging from green to yellow. The more highly fired and very hard sherds are often grey or reddish grey, 5YR 5/1 to 5/2, with a grey core and glazes ranging in colour from olive yellow to yellowish red and some times a very dark grey. All the vessels are wheel thrown, often with knife trimming at the exterior basal angle, the cisterns and jugs with pegged handles. Most of the jars are unglazed, bowls and frying pans are glazed internally, and the jugs, the most common vessel form in this group, and cisterns are externally glazed. The earlier, softer fired vessels tend to have an even glaze cover, the later, harder fired examples have only patches of glaze, generally on the upper half of the pot, in the case of the jugs forming a bib below the pouring lip. Decoration is limited to slashing and stabbing on the rod or strap handles, incised wavy lines on the inner rims of the

jars and thumbing round the neck of the cisterns. Ridge tiles also occur in this fabric, which first appears in phase 3.1. The fabric group is the most common on the site, representing over 24.7% of the site pottery totals by weight. MS3 occurs in large numbers in phase 4.1, dating from the later 13th or 14th centuries, and accounts for over fifty per cent of the pottery totals by sherd numbers and weight in group 6 phase 5, although residual in this phase. MS3 is commonly found in both the city and county, possible sources including production centres at Burley Hill/Allestree or Ticknall in Derbyshire and Staffordshire; with a suggested date range from *circa* 1200/1250 to *circa* 1400/1450 or possibly later, for the harder fired vessels in this group.

MS7 – The ill sorted, sub rounded sparse to moderate quart inclusions range in size from 0.05 to 1.0 mm. Iron ore and rare fragments of clay or Mercia Mudstone (keuper marl) are also present. The surfaces are hard and rough, often with pitted appearance where the fragments of clay have flaked off or spalled during firing, and the fracture is hackly. Surface colour ranges from reddish yellow, 5YR 6/6 to 7/6, to reddish-brown, 5YR 4/3, often with a reddish-yellow core and very pale brown margins 10YR 7.3. The glaze is frequently yellowish-red or dark reddish-brown. All the vessels are wheel-thrown, and often knife-trimmed at the exterior basal angle. The range of vessel forms comprises jars, bowls, frying pans and cisterns, as with MS3, the bowls and frying pans are generally glazed internally, and the jugs and cisterns, externally. This fabric group, of one hundred and twenty three sherds, forms a small but significant part of the later medieval assemblage on the site, first appearing phase 3.2 and becoming more common in later phases. Ridge tiles are also found in this fabric, which is thought to date generally from *circa* 1200/1250 to *circa* 1400/1450 or later. Similar pottery and tile has previously been identified as MS3 or as an unclassified Medieval Sandy ware. MS7 probably shares a similar distribution pattern to the former, both in the city and county. Possible sources may include Burley Hill/Allestree or Ticknall in Derbyshire.

Fabric Code	Common Name/Kiln & Fabric Equivalent where known	Approx. Date Range
ST3	Stamford ware 3 – coarse Stamford ware, fabrics E F/H A/D	c.850-1050+
ST2	Stamford ware 2 - fine Stamford ware, fabrics G B/(A) (1)	*c.*1050-12th C.-
ST1	Stamford ware 1 - developed Stamford ware, fabrics B/C (1)	*c.*1150-13th C.
LI1/2	Lincoln Kiln type/Lincoln late Saxon Shelly ware (2)	*c.*875 –11th C
RS3	Reduced Sandy ware 3	c.850+
RS	Reduced Sandy ware unclassified -? Local	*c.*850-*c.*1400
PM	Potters Marston ware - Potters Marston, Leicestershire (3)	*c.*1100-*c.*1300
SP3	Splashed ware 3 - ? Leicester (4)	*c.*1100-1250
OS1	Oxidised Sandy ware 1-? Local, Brackley fabric T68, Northants CTS fabrics 302-305, (5)	*c.*12th-13th C.
OS2	Oxidised Sandy ware2 -? Local.	*c.*12th-13th C.
CS/LY	Coarse Shelly ware (includes sherds previously catalogued as LY4 – Lyveden Stanion A ware) - Northampton fabric T1/2, T2, (6) Northants CTS 330 (7)	*c.*1100-1400
LY1	Lyveden/Stanion type ware 1 - Northampton fabric T2 (6), Lyveden/Stanion 'B' ware, Northants CTS fabric 320 (7)	*c.*1200/1225-1400
CO2	Coventry Sandy ware/type ware – Coventry fabric A (8), SQ202/203 (9)	12th-14th C
CO1	Coventry Glazed ware/type ware – Coventry fabric D (8), SQ21/SQ211 (9)	*c.*1150-1240
CO3	Coventry Canon Park ware/type ware – Coventry fabric E (8) SQ231/232 (9)	13th C
CC1	Chilvers Coton ware 1 - Chilvers Coton, Warwickshire, fabric A/Ai (10), WW01, WW012? (9)	*c.*1200/1250-1400
CC2	Chilvers Coton ware 2 - Chilvers Coton, Warwickshire, fabric C (10), SQ30 (9)	*c.*1250/1300-1500
NO1	Nottingham ware 1 - Nottingham fabric group W 7 (11)	Early/mid 13th *c.*1275/1300
NO2	Nottingham ware 2 - Nottingham fabric group W10/W13 (11)	1230-1280
NO3	Nottingham ware 3 - Nottingham fabric group W13/W14 (11)	Early/mid 13th-*c.*1350
NO	Unclassified Nottingham ware	Early/mid 13th-*c.*1350
BO2	Bourne war/type ware –Bourne fabric B (12)	*c.*1250-1450
BR2	Brill/Boarstall type ware –Brill/Boarstall 'standard fabric', Oxford fabric OXAM (13)	1200-1400
LI8	Lincoln ware 8 – Lincoln, St Marks kilns, fabric LMF (14)	1450-1550
MS1	Medieval Sandy ware 1 – misc. fine quartz tempered fabrics, including possibly fine examples of Chilvers Coton fabric A/Ai (10)	*c.*1200-1400
MS2	Medieval Sandy ware 2 – misc. coarse soft fired quartz tempered fabrics, including possibly coarse examples of Chilvers Coton fabrics A/Ai, other sources including Nottingham/Burley Hill-Allestree, Derbyshire (15)	*c.*1200-1400
MS3	Medieval Sandy ware 3 – misc. coarse hared fired quartz tempered fabrics -? Burley Hill/Allestree/Ticknall, Derbyshire (15)	*c.*1200/1250-1400/1450
MS7	Medieval Sandy ware 7 - misc. predominantly later medieval coarse red sandy fabrics, possibly from sources similar to the above.	*c.*1200/1250-1400/1450
MS8	Medieval Sandy ware 8 – misc. sandy fabrics possibly including under fired Midland Purple ware, fabric MP2 (15)	*c.*1200/1250-1400/1450
MS	Unclassified Medieval Sandy ware	*c.*1200/1250-1400/1450
MP1	Midland Purple ware 1 - Chilvers Coton fabric D (10)	*c.*1375-1550
MP2	Midland Purple ware 2 -? Ticknall, Derbyshire (16)	*c.*1375-1550
MP3	Midland Purple ware 3 – coarse vitrified MS3, -? Ticknall, Derbyshire (16)	*c.*1375-1550
MP4	Midland Purple ware 4 – Sparse quartz inclusions, buff bodied, transitional into EA1.	*c.*1375-1550
TG1/ 2	Surrey White ware/ Tudor Green type ware (18)	*c.*1375/1400-1600
CW1	Cistercian ware 1 -? Chilvers Coton fabric E (10)	*c.*1475-1550
CW2	Cistercian ware 2 -? Ticknall, Derbyshire (17)	*c.*1475-1550
SA	Saintonge (19)	*c.*1275-1500
SI	Siegburg Stoneware (19)	*c.*1400+

(1) Kilmurry 1980, Leach 1987	(10) Mayes & Scott 1984
(2) Adams Gilmour 1988, Young 1989, Young *et al* 2005	(11) Based on a fabric series by V. Nailor, Nottingham Castle Museum
(3) Haynes 1952, Vince 1984, Williams 1985, Sawday 1991, Davies and Sawday 1999	(12) Healey 1973
(4) Sawday 1998, Davies and Sawday 1999	(13) Jope & Irvens 1981, Jope 1982, Mellor 1995
(5) Mellor pers. comm., Blinkhorn 1996	(14) Jane Young, pers. comm, Young *et al* 2005.
(6) McCarthy 1979, Brown 1993/4	(15) Coppack 1980, Cumberpatch 2002-2003
(7) Blinkhorn 1996	(16) Coppack 1980
	(17) Spavold and Brown 2005
(8) Redknap and Perry 1996	(18) Pearce, Vince *et al* 1988
(9) Warwick Museum Post Roman Pottery type series	(19) Hurst *et al* 1986

Table 3 The Medieval Pottery and Ridge Tile Fabrics.

Fabric Code	**Common Name/Kiln & Fabric Equivalent where known**	**Approx. Date Range**
MB	Midland Blackware - ?Ticknall, Derbyshire (1)	*c.*1550-1750
MY	Midland Yellow ware - ?Ticknall, Derbyshire (1) (2) (3) (4)	*c.*1500-1725
RA/FR	Rhenish Stoneware - Raeren, Frechen/Cologne (5)	*c.*1500-1700
MA1/MA2	Martincamp type 1 and 2 flasks (5)	*c.*1500-1650+
EA1	Earthenware 1 – Coarse Post Medieval Earthenware - Chilvers Coton/Ticknall, Derbyshire(1) (3)	*c.*1500-1750
EA2	Earthenware 2 – 'Pancheon ware', Chilvers Coton/Ticknall, Derbyshire (1) (3)	17th-18thC.+
EA3/4/5	Earthen ware 3/5 - Mottled ware, Staffs//Ticknall(1) (3)	*c.*1650-1750
EA6	Earthenware 6 - Black Glazed Earthenware	16th-18th C.
EA7	Earthenware 7 - Slipware - Staffs etc	18th-19th C.
EA8/9/10	Earthenware 8/9/10 – Creamware/Pearl ware/ White Earthenware	1730+
EA11	Earthenware 11 - Tin Glazed	1650+
EA	Unclassified Post Medieval/Modern Earthenware	
SW3	Stoneware 3 - Grey Stoneware with white engobe & ferruginous wash - ?Staffs etc	late 17th/early 18th c.
SW4	White Salt Glazed Stoneware	1730-1770
SW5	Stoneware 5 - Brown Salt Glazed Stoneware - ? Nottingham/Derby etc	late 17th C. +

(1) Gooder 1984,	(4) Woodfield 1984
(2) Spavold and Brown 2005	(5) Hurst *et al* 1986
(3) Sawday 1989	

Table 4 The Post Medieval and Modern Pottery fabrics

MS8 – The moderately frequent rounded and sub rounded ill-sorted quartz inclusions range in size from 0.5 mm and less. Infrequent or sparse iron ore and white marl are also present. The surfaces are hard and the fracture hackley. Surface colour ranges from pinkish or reddish grey 5YR 5/2 and 6/2 to pink or light brown, 7.5YR 7/4 and 6/4. The thirty six pottery sherds in this group, which first occurs in phase 4.1, are from a jar, several bowls and a jug, two fragments of ridge tile are also present All the vessels are wheel thrown often with a dark brown or occasionally speckled yellow/brown and green/orange glaze. This fabric and is most common in group 6, phase 5. Similar pottery and tile has previously been identified as MS3 or as an unclassified Medieval Sandy ware and the fabric may also include under fired examples of the Midland Purple ware, fabric MP2 originating from Ticknall in Derbyshire. This pottery is found both in the city and county, and a date range from *circa* 1200/1250 to *circa* 1400/1450 is suggested for this pottery.

MP3 – The fabric group appears to essentially the same as fabric MS3, but the sherds are more highly fired, and often semi vitrified or vitrified and unlike the MS3 the range of identifiable vessel forms amongst the eighty three sherds in this group, which first occurs in phase 4.1, is limited to jars and jugs, with only one example of a cistern, and one of an urinal. Medieval ridge tile is also found in this fabric which is dated from *circa* 1375 to *circa* 1550. Similar pottery and tile has previously been identified as MS3 or an unclassified Midland Purple ware. Possible sources are thought to be similar to those for MS3, including Ticknall in Derbyshire and Staffordshire.

MP4 – The thirty sherds in this fabric group are characterized by a light yellowish brown body, 2.5Y 6/3 to 6/4 and light olive brown surfaces, 2.5Y 5/3 to 5/4 with sparse to moderate sub rounded and angular quartz inclusions from 0.25 or less to 1.0 or occasionally up to 2.5 mm. Iron ore is also present and occasional fragments of clay or Mercia Mudstone (keuper marl). The surfaces are hard, or very hard, and rough, the fracture is hackly. The thirty two sherds in this group are represented by a cistern and a jug and occur in later medieval contexts. The fabric, which first occurs in phase 4.1, is thought to be transitional into the post medieval fabric EA1, (Sawday 1989) or butter pot ware, possible sources including Chilvers Coton and Ticknall.

The Pottery by Phase (Tables 3 and 5)

The pottery from un-numbered groups in Area 0 and Area 1 are omitted from the discussion below.

PHASE 1

Area 2 – Group 14
Assemblage: three sherds, thirty seven grams, 0.05 EVEs, Average Sherd Weight (ASW) 12.3 grams.

The demolition deposit, (937) included a fragment of glazed Chilvers Coton ware, fabric CC1, and a highly decorated jug body sherd in a coarse unclassified Medieval Sandy ware – the latter is probably a variant of the generally more finely tempered CC1. The applied clay strip decoration, in an a iron rich clay, is typical of that found on the pottery from the earliest levels, for example, site 12, kiln 30, at the production centre at Chilvers Coton near Nuneaton in north east Warwickshire, (Mayes and Scott 1984, fig.103), possibly dating from the early to mid 13th century, though current thinking suggests a start date of *circa* 1250 for this industry (Redknap and Perry 1996, 43). This ties in well with the 13th-century date generally attributed to the dripping dish vessel from the same context, in Potters Marston ware. The pottery, which is, of course, intrusive in this Roman phase, is probably the result of the disturbance of the overlying stratigraphy associated with the cutting of the late medieval pit or well, 936, in phase 4.1.

Area 3 - Group 19
Assemblage: one sherd, one gram, 0.00 EVEs, ASW 1.0 grams

A single fragment, a body sherd in an unidentifiable vessel form, was recovered from a layer associated with the Roman Street metalling, (862). The fabric, in Coarse Shelly ware is dated from *circa* 1100. The sherd apparently represents contamination from the phase 3 dark earth lying above the Roman street.

PHASE 2 - circa 850-1100/1150

Area Three - Group 20 (Dark Earth)
Assemblage: ten sherds, 124 grams, 0.34 EVEs, ASW 12.4 grams

This small group derived from dark earth deposits, (1271) and (1407). Of note in (1271) was the upper half of a hand-made shouldered jar with an everted and thickened rim in a Reduced Sandy ware fabric, RS3, (Illus 1). The date of this pottery is uncertain, although elsewhere, hand-made late Saxon pottery, for example at York and Lincoln, is provisionally dated from the mid- to the late 9th century (Mainman 1990, 396-398), (Young *et al* 2005, 65-69), and is thought to become residual during the 11th century at York (*ibid*, 69).

Three sooted sherds in Stamford ware, fabric ST2, including an inturned, internally bevelled jar rim, Kilmurry form 4, (Kilmurry 1980) dating to the early or mid 12th century (in 1271) and another sherd in the same fabric with a patchy yellow glaze, possibly dating from the 10th or 11th centuries, and a fragment of early medieval Potters Marston, (both in 1407) may represent later intrusions caused by medieval pitting which truncated the dark earth.

FABRIC	PHASE									TOTALS
Late Saxon	1.00	2.0	3.1	3.2	4.1	4.2	5.0	6.0	U/S	
ST3					1/2					1/2
ST2		5/54	14/252	1/6	3/38		11/173			34/523
ST1			9/76				4/38			13/114
LI1/2			3/44				1/14			4/58
Sub Total		5/54	26/372	1/6	4/40		16/225			52/697
Medieval										
RS/RS3		4/64	1/11				2/23			7/98
PM	1/28	1/6	350/ 9747	63/ 1264	110/ 2747	17/ 242	154/ 4214	14/206		710/ 18454
SP3			2/43		2/22		3/88	2/42		9/195
OS1/2			8/129	1/10			5/38	1/2		15/179
CS/LY	1/1		5/94	2/41	4/212		3/54			15/402
CO1							2/49	1/15		3/64
CO2			8/608	1/20	2/17		3/61			14/706
CO3				8/268			1/45			9/313
LY1					1/7					1/7
CC1	1/3		28/ 778	66/ 1544	118/ 3729	5/ 134	88/ 2343	9/129	3/ 65	318/ 8725
CC2			2/154	1/ 4	78/ 2315	3/43	5/150		6/ 344	95/ 3010
NO2/NO			1/1	4/59	2/18		4/37	1/8	1/32	13/155
NO1/3/			6/62	25/ 821	40/ 834	5/66	37/ 1539	3/55		116/ 3377
BO2					2/22					2/22
BR2							3/8			3/8

LI8					**5/22**					**5/22**
MS	**1/6**			**9/143**	**52/ 2973**	**4/20**	**19/898**	**3/14**	**1/34**	**89/ 4088**
MS1/2				**1/6**	**8/188**	**1/7**	**43/2289**	**1/40**		**54/2530**
Sub Total	**4/38**	**5/70**	**410/ 11627**	**181/ 4180**	**424/ 13106**	**35/ 512**	**372/ 11836**	**35/ 511**	**11/ 475**	**1478/ 42355**
Later Medieval/Early Post Medieval										
MS2/3 MS3			**1/3**	**1/3**	**88/ 3478**	**1/38**	**581/ 22313**	**8/152**		**680/ 25987**
MS7				**9/438**	**27/ 1777**	**4/70**	**83/ 3423**			**123/ 5708**
MS8					**10/ 206**		**24/ 796**	**2/42**		**36/ 1044**
MP1					**18/ 1030**		**5/ 220**			**23/ 1250**
MP2				**1/74**	**131/ 6456**	**1/5**	**63/ 1762**	**9/197**		**205/ 8494**
MP3					**12/ 1173**		**71/ 3890**			**83/ 5063**
MP4					**25/ 1603**		**4/448**	**3/168**		**32/ 2219**
TG2					**8/38**	**1/3**	**4/18**	**1/8**	**17/ 225**	**31/292**
CW1					**3/43**			**1/18**		**4/61**
CW2/ MB					**31/ 725**	**3/18**	**14/ 690**	**17/ 265**		**65/ 1698**
SA			**3/23**		**3/35**					**6/58**
SI					**1/57**					**1/57**

Sub Total			**4/26**	**11/ 515**	**357/ 16621**	**10/ 134**	**849/ 33560**	**41/ 850**	**17/ 225**	**1289/ 51931**
Totals	**4/38**	**10/ 124**	**441/ 12025**	**193/ 4701**	**785/ 29767**	**45/ 646**	**1237/ 45621**	**76/ 1361**	**28/ 700**	**2819/ 94983**

Table 5 The Medieval Pottery from the 2003 excavations by fabric, sherd numbers and weight, phases 1 – 6 and U/S (including residual pottery in the post medieval and modern phases 6 and 7).

PHASE 3.1 – circa *1100-1300*

Undercroft Construction, Pitting

Area 2 - Group 15

Assemblage: four sherds, thirty five grams, 0.0 Eves, ASW 8.75 grams.

Part of a flat base from an unidentified vessel, probably a jar, in a late Saxon Lincoln/Lincolnshire Shelly ware and another flat base with external sooting in the early medieval Potters Marston ware, the latter dating from the late 11th or early 12th centuries, were recovered from the back fill of the pit 1005. The well, 932, also contained a sherd of early medieval Potters Marston ware.

Area 3 - Group 21 Undercroft construction cut.
Assemblage: 6 sherds, 0.133 kg., 0.08 EVEs, ASW 22.1 grams

Three sherds of the fine Stamford ware fabric ST2 and three sherds of Potters Marston ware were recovered from the fill (1359) of the Undercroft wall, 1358. The Stamford ware comprised the sooted rim of an upright collared jar, form 4-53, with an external bevel, and a glazed handle fragment, with double thumbing at the base. A date from some time after the second quarter of the 12th century seems likely for this pottery **(**Kilmurry 1980, 130-143).

Area 3 - Group 23 (pitting west of the Undercroft, 1075-1299)
Assemblage: 339 sherds, 9.108 kg. 3.28 EVEs, ASW 26.86 grams

Over eighty four per cent of the pottery by both sherd numbers and weight was in Potters Marston ware, the wheel thrown glazed sandy wares in the Chilvers Coton and Nottingham fabrics, making up less than seven percent of the assemblage by sherd numbers, but nevertheless suggesting a terminal date in the mid or later 13th century for this group as a whole.

The Potters Marston had a vessel rim equivalent of 3.06. Jugs were the most common form in this fabric, followed by jars and bowls), many of these vessels were highly decorated, with a range of combed, notched and incised decoration. A similar range of forms and decoration was recorded at Causeway Lane (Davies and Sawday 1999, figs.87-94). The presence of fragments of two relatively unusual vessel forms, a cauldron and/or a tripod pitcher in the Coventry fabric CO2, from the pit 1291 together with three sherds, twenty three grams, of what has been tentatively identified

as later 13th century Saintonge from the pit 703, a rare find in Leicester, suggests a degree of status may be associated with this pottery, which lies close to the Undercroft. However, nothing exceptional was recovered from the stone lined cesspit, 1502, which produced Chilvers Coton and Nottingham fabrics CC1 and NO3. Generally, few links were noted between the pits, none of which were fully excavated, and no vessels were fully reconstructable.

Area 3 - Group 24 (pitting and associated features north of the Undercroft)
Assemblage: 57sherds, 1.931 kg, 1.13 EVEs, ASW 33.8 grams

Potters Marston is the predominant ware with 61.4 and 63.96 per cent of the totals by sherd numbers and weight, followed by the Chilvers Coton fabrics CC1 and CC2 with 21.05 and 3.51 per cent, respectively. Three sherds of Potters Marston ware, dating from the 12th or 13th centuries, were recovered from the Wall 662. Two more sherds in fabrics CC1 and NO3 were found in the wall 888. The latter was from the neck of a jug with a reduced interior, suggesting a date from the later 13th century.

Small assemblages of seventeen sherds or less were recovered from each of the pits 736, 749, 836 1191, and from the well 1127, with a terminal date in the mid to later 13th century. Some of the fills could possibly be pre 1250 in date, but partial excavation of these features produced only limited dating evidence.

Area 3 - Group 25 (pitting east of the Undercroft
Assemblage: 35 sherds, 0.818 kg, 0.93 EVEs, ASW 23.37 grams

This small group of pottery, from the back fill of the pits 1389, 1391 and 1393, may date from circa 1150 to circa 1200/1250, the earliest in phase 3.1. Typically, the majority of the sherds are in Potters Marston, many, fragments of cylindrical or shouldered jars (Davis and Sawday 1999. fig.88), together with the Stamford ware fabrics ST2 and ST1. Once again the dating evidence is limited, this is a small group of pottery and the features were not fully excavated.

PHASE 3.2 – circa 1250-1300/1325

Undercroft Robbing/Construction of Building 2

Area 1- Group 1 (Building Two to the north of the Undercroft)
Assemblage: 35 sherds, 0.738 kg, 0.59 EVEs, ASW 21.08 grams

The floor, layer (550), produced a slightly abraded sherd of Chilvers Coton ware dating from the mid 13th century, whilst contexts (569) and (638) produced twenty seven sherds, Potters Marston and part of a hand made dripping dish in an unclassified Medieval Sandy fabric, possibly a Coventry A ware. The wheel thrown medieval wares from the same contexts included a relatively soft-fired jug rim in fabric MS3, and at least three jug handles with diagonal slashing – in fabrics MS1 and CC1. One of the handles and a simple upright jug rim in the latter fabric could be paralleled at Chilvers Coton where they were dated to the later 13th century. The group also

included a range of Nottingham green glazed wares, the heavy reduction on the interior of one of the jug rims also suggesting a terminal date in the late 13th or possibly the early 14th century.

The back fill, contexts (714), (778) and (617) of the soakaway, 770, whose presence suggested a kitchen, contained seven sherds of pottery, including 13th century Chilvers Coton ware, fragments from a highly fired jar in Potters Marston and a cistern rim in Midland Purple ware, fabric MP2, dating from the later 14th or 15th centuries. The latter fragment, weighing seventy-four grams, may be intrusive from the group 10 robber trench 547/592 in phase six, dated from the mid 17th century, which apparently targeted the east wall, 594, of building two, which in turn led to the collapse of the soakaway.

Area 1 - Group 2 (Yard area associated with Building Two)
Assemblage: 124 sherds, 2.948 kg., 0.62 EVEs, ASW 23.77 grams

A fragment of 12th or 13th century Potters Marston was recovered from (916), one of the lowest levels of the cobbled yard surface associated with building two. More sherds of Potters Marston ware, many of them abraded, were recovered from succeeding yard layers including (535), which produced a single rounded jar, with a simple everted rim and convex base, which had shattered into almost forty abraded fragments, in the Chilvers Coton fabric CC1. This and the later yard surfaces, contexts (532) and (1022), produced the unglazed fragments of two jugs, one with a thumbed base, and the other a baluster, weighing one hundred and sixty eighty grams, both possibly in, fabric CO3, Canon Park ware, though these wares are not generally thought to be traded much outside Coventry (Redknap and Perry, 1996, 42). Also present was a cylindrical jug, with cordons and a glossy brown glaze in the Medieval Sandy ware, MS7 and large thick walled body sherds in Nottingham ware, one with notched applied clay strips, suggesting that these were either jugs or large storage jars. These two latter fabrics and the heavy internal reduction on the former also suggest, as with the pottery from within building 2, a terminal date in the late 13th or the early 14th century for this group. A similar date is suggested for the pottery from within the building 2.

The fragment of wall 1077/1475 to the north of the yard contained a single thin walled sherd in Potters Marston ware, possibly of 12th rather than 13th century date. Only one of the three stone capped drains, 555**,** which traversed the cobbled surface, produced any finds in the backfill, in this instance, single sherds of Potters Marston and Nottingham ware, the latter part of a green glazed jug, with a terminal date in the later 13th century. Similarly only one of the circular masonry features, 793 to the east of the yard, thought to be the bases for industrial water tanks, contained pottery - Potters Marston ware, Stanion Lyveden type ware, and a slashed jug handle in Chilvers Coton ware - dating from the mid 13th century.

Many of the sherds in this group had an unusually large average weight, which ranged from 33.5 grams for the Coventry fabric, CO3, to 41.4 grams for the Nottingham ware, NO3, up to 45.4 grams for the Medieval Sandy ware fabric, MS7, suggesting that the yard may have been used as a dump or midden for domestic refuse. A sherd of Chilvers Coton ware, fabric CC1, recovered from the back fill of the partially

excavated pit 1053, to the north west of the yard, weighed 108 grams, and apparently represented primary refuse from the adjacent building.

Area 3 - Group 22 (Undercroft Alterations, Robbing)
Assemblage: 34 sherds, 1.015 kg, 0.79 EVEs, ASW 29.8 grams

The masonry plinth 1501 contained a single abraded sherd of the Chilvers Coton fabric CC1, probably dating from the mid 13th century. This date suggests that the plinth was a later addition to the main structure of the Undercroft.

Whist no pottery was recovered from contexts associated with the alterations and rebuilding of the western wall of the Undercroft, nineteen sherds of pottery were recovered from the backfill of the robber trench 794/870 in the vicinity of the doorway at the northern end of the west wall of the building. The earliest material included late Saxon Stamford ware and a 12th century jar rim in Potters Marston, as well as 13th century sherds in the Nottingham, fabric NO2 and the Chilvers Coton, fabric CC1. The single fragment of the Chilvers Coton fabric, CC2, may date from the mid to later 13th century or slightly later, this fabric occurred sporadically at Chilvers Coton during this period, becoming common from the 14th century (Mayes and Scott 1984, 41).

No links were noted between this pottery and that from the demolition layer (905), which contained a range of wares dating from the mid or later 13th century, including rounded jars and a dripping dish in Potters Marston ware, and a particularly large fragment, weighing 116 grams, from a jar in CC1, the vessel form suggesting a 14th rather than a 13th century date. An identical vessel in a similar but more finely quartz tempered fabric, MS1, was found in phase 11, dating to the 14th century, on excavations on the southern suburbs of the medieval town (Sawday 2004, fig.35.10). A highly fired jug rim in CC1 occurred in the same context, together with unidentifiable body sherds in fabric MS7 also suggesting a terminal date in the 14th century for this group.

The large average sherd weight of 36.5 grams for the pottery from the layer (905), suggests that at least some of this material was primary refuse. The two most obvious sources include rubbish dumped on the site from the adjacent street, now known as Guildhall Lane, or refuse from the Undercroft itself, whilst the building works were underway.

Undercroft Excavation (Table 4)
Groups A-D, Former Phase 4 = Phase 3.2 - window rebuild & possible Undercroft refurbishing and partitioning

Area 3 - Group A
Assemblage: - 120 sherds, 1.683 kg, ASW 14.0 grams

Two of the post pits F146 and F150, possibly associated with the refurbishment of the building, contained a fragment of Potters Marston and a Stamford ware jar, vessel form 4-36 (Kilmurry 1980), dating from the mid 12th century. The remainder of the pottery occurred in the spreads and layers making up successive floor levels in the building, contexts (3300=3317), (3023=3018), (3019), (3223) and (3321), including a

Stamford ware crucible *(ibid*, form 16) and Stamford ware jars (*ibid*, form 4/5) dating from the second quarter or the mid 12th century, as well as 12th of 13th century Potters Marston, Coarse Shelly ware and Splashed wares. The latest pottery, Nottingham ware, Medieval Sandy ware and Chilvers Coton ware, dating from the early to mid or later 13th century, was recovered from the floor levels, contexts (3019) and (3223).

Area 3 –Group B

Assemblage: 44 sherds, 0.805 kg, ASW 18.2 grams

The post pad 163 and the post holes 54, 66, and 122, and the beam slot, 68 produced Stamford and Potter Marston ware, dating from the 12th century. A glazed sherd of Potters Marston and sherds in the Chilvers Coton fabric, CC1, probably dating from the mid 13th century, were found in the gulley 31and the post hole 128.

Fabric	***Sherd***	**%**	***Weight***	**%**
Late Saxon				
ST3 - Stamford ware	13	1.60%	75	0.48%
ST2	29	3.57%	253	1.61%
ST1	25	3.08%	452	2.88%
Sub Total	**67**	**8.25%**	**780**	**4.98%**
Medieval				
RS – Reduced Sandy ware	4	0.49%	39	0.25%
PM – Potters Marston	534	65.76%	10961	69.95%
SP1 – Splashed ware	1	0.12%	2	0.01%
SP2	1	0.12%	4	0.03%
SP3	37	4.56%	668	4.26%
CS – Coarse Shelly ware	36	4.43%	856	5.46%
LY1 – Stanion Lyveden	1	0.12%	31	0.20%
CO1 – Coventry ware	1	0.12%	16	0.10%
CC1 – Chilvers Coton	16	1.97%	311	1.98%
CC2	6	0.74%	138	0.88%
NO3 - Nottingham	46	5.67%	612	3.91%
MS1 – Medieval sandy ware	1	0.12%	5	0.03%
MS2	6	0.74%	49	0.31%
MS3	1	0.12%	8	0.05%
Sub Total	**691**	**85.10%**	**13700**	**87.43%**
Later Medieval/Early Post Medieval				
MP2 – Midland Purple	5	0.62%	168	1.07%
TG1 – Surrey White ware	1	0.12%	3	0.02%
MB – Midland Blackware	8	0.99%	149	0.95%
MY – Midland Yellow	4	0.49%	61	0.39%
FR - Frechen	4	0.49%	132	0.84%
MA1/2 - Martincamp	1	0.12%	3	0.02%
EA1 - Earthenware	6	0.74%	192	1.23%
EA1/2	9	1.11%	137	0.87%
Sub Total	**38**	**4.68%**	**845**	**5.39%**
Post Medieval/Modern				
EA2 - Earthenware	6	0.74%	116	0.74%
EA3 – Mottled ware	1	0.12%	5	0.03%
EA4	2	0.25%	7	0.04%
EA6 - Blackware	2	0.25%	84	0.54%
EA7 - Slipware	4	0.49%	120	0.77%
SW4 - Stoneware	1	0.12%	12	0.08%
Sub Total	**16**	**1.97%**	**344**	**2.20%**
Total	**812**	**100.00%**	**15669**	**100.00%**

Table 6 The Pottery Totals by fabric, sherd numbers and weight (grams), from selected contexts in the Undercroft Excavations.

Area 3 –Group C
Assemblage: - 396 sherds, 8.932 kg, ASW 22.5 grams

Joins were noted between the pottery from the two cess pits, 92 and 100, suggesting that they were both in use at the same time. The range of fabrics and vessel forms recorded in the assemblage of three hundred and forty two sherds of pottery, weighing 8.342 kg, which were recovered from their backfill, implies a date soon after the mid 13th century for their abandonment. Stamford, Coventry, and Splashed wares with a terminal date in the mid 13th century, together with Potters Marston and Coarse Shelly ware dating generally, from the 12th to the mid or later 13th century were present, as well as three sherds of CC1 possibly dating from *circa* 1250.

The number of sherds in developed Stamford ware with copper glaze, a relatively uncommon find in Leicester, and the high ratio of jugs to jars, the former often highly decorated, may be indicative of status. Relatively unusual vessel forms were also present in Potters Marston ware, including a lamp and a possible fire cover. A massive bowl and several jugs in the same fabric were also highly decorated with thumbed applied clay strips, combed wavy lines and roller stamping.

The hearth, 4, contained a baluster jug base in Nottingham ware, fabric NO3, and a hard fired sherd in the Medieval Sandy ware fabric MS3, both dating from the later 13th or 14th centuries. A possible link was noted between the Nottingham ware and the floor context (3019) in Group A, phase 3.2.

Area 3 – Group D
Assemblage: - 50 sherds, 0.775 kg, ASW 15.5 grams

Three sherds of early medieval Potters Marston were recovered from the hearth, 48. The layer, (3254), also produced residual pottery together with a jug in Stanion Lyveden type ware, fabric LY1, probably dating from the late 13th or early 14th century.

Phase 4.1 – circa 1275/1300-1500
Area 1 - Group 3 (Building 1 – fronting on to the Swinesmarket)
Assemblage: 12 sherds, 0.193 kg, 0.00 EVEs, ASW 16.08 grams

The infill of the wall 522 produced two sherds in the medieval sandy wares MS3 and MS7, possibly dating from the mid to later 14th century; the latter is relatively highly fired, with brown glaze on the inner wall. Both the buttress 722 and the floor layers (728) and (731) contained abraded sherds in CC2, the two latter from the same vessel, suggesting a similar date range to the above. Another abraded sherd, a fragment of the Nottingham ware fabric NO3, dating from the late 13th or early 14th centuries, was found in context (728).

A sherd from wall 522 joins the demolition layer (518) relating to Building 1, group 6, phase 5.0.

Area 1 - Group 5 (Pit, robbing and demolition layers associated with Building Two)
Assemblage: 181 sherds, 6.771 kg, 1.99 EVEs, ASW 37.4 grams
Residual Potters Marston and Chilvers Coton ware was amongst the twenty three sherds recovered from the large pit 596, in the yard to the east of building 2. The pit also contained a jug fragment of Surrey White ware, fabric TG2, dating from *circa* 1400, if not the late 14th century (Pearce and Vince 1988, 17), together with part of a long necked beaker in Siegburg stoneware, dating from the 15th century. Two sherds of pottery were recovered from the robber trench 1474, one, the profile of a bowl in the Medieval Sandy ware fabric, MS7, is in a typical later 14th or 15th century form (Woodland 1981, fig.41.203).

The deposits associated with the demolition of building two, contexts (623) and (709), also produced sixty three sherds of pottery, weighing 1.706 kg, with an average sherd weight of 27.07 grams, dating predominantly from the mid to late 13th and early 14th centuries. This pottery was relatively unabraded and appears to be the result of the redeposition of material as make up levels from primary deposits on or adjacent to the excavations.

The layer (506) contained some residual pottery and late medieval wares, including the Midland Purple fabrics MP2, MP3 and MP4, Surrey White ware, Cistercian ware or early Midland Blackware and later examples of the Medieval Sandy ware fabrics MS3, MS7 and MS8 and three sherds of Saintonge, (Illustration 3) dating from the later 13th to the later 15th centuries. Three intrusive sherds in the post medieval Earthenware fabrics EA1 and EA7 were also present in the same context.

Area 1 - Group 7 (Building Three)
Assemblage: 40 sherds, 1.208 kg, 0.43 EVEs, ASW 30.2 grams

The wall [558] (589) contained three sherds of Nottingham ware dating from the later 13th century. Two sherds of presumably residual 12th and 13th century pottery and a late medieval Midland Purple ware fragment in fabric MP3, which joined the occupation layer (983) in the same group, were recovered from the earliest wall in the sequence with pottery, 986. Layer (983) contained 13th and 14th century Chilvers Coton wares; including a piece of distilling equipment, a mantle in CC1 (Woodland 1981, fig.44.290) together with two bowls in fabric MP3, and a fragment of Surrey White ware dating from the 15th to the mid 16th century. The layer (981) above, also contained residual material, as well as later medieval Midland Purple ware. These two layers apparently related to later walls within the complex. The stratigraphically latest wall in the group with recorded finds, 1479, contained three sherds in fabric NO3 and CC1, dating from the mid or later 13th century.

Area 2 – Group 16 (Kilns/ovens etc)
Assemblage: 5 sherds, 0.11 kg, 0.00 EVEs, ASW 22.0 grams

A piece of late medieval Midland Purple ware, fabric MP2, was recovered from the layer 970. The remaining sherds, in fabrics MS3 and MS7 and MP2, were all of unknown vessel form. These were found, together with a presumably intrusive fragment of post medieval Mottled ware, fabric EA3, dating from *circa* 1650, in the ovens or kilns 924 and 927. One of the latter, in fabric MP2, associated with 927, was

covered on all surfaces, including the breaks, with white sediment – suggesting some kind of secondary use – possible associated with industrial activity.

Area 3 – Group 26 (Pitting and Other Features North of the Undercroft)
Assemblage: 490 sherds, 19.387 kg, 110.95 EVEs, ASW 39.56 grams

The stone lined pits 667, 877 and 1284 contained predominantly late medieval pottery in a typical range of late medieval vessel forms and fabrics – the Medieval Sandy ware fabrics MS3, MS7 and MS8, the Midland Purple fabrics MP1, MP2, and MP4, the Surrey White ware fabric TG2, Cistercian and /or Midland Blackware ware, fabrics CW1, CW2 and MB and Frechen and Martincamp Stoneware. Fabric CW2 included several decorated cups in forms similar to those at the Austin Friars (Woodland 1981), including applied white clay pads, and in one instance, circles impressed directly on to the body of the pot. The only unusual pottery was five sherds in fabric LI8 from St Mark's kilns, with a terminal date in the mid 16th century (Illustration 2).

The pits 646 and 664 produced residual medieval as well as late medieval pottery, whilst the hearth or oven, 669, also contained residual pottery and fragments of two late medieval jugs in fabric MP2. The latter pottery had an average sherd weight of 192 grams, and perhaps related to the final use of the structure before it was abandoned, although, unfortunately, no direct evidence of any industrial activity relating to the feature could be deduced from the pottery.

Eight pottery sherds in fabrics CC2 and MS3 were recovered from the wall 752, whilst the floor 824 produced a single abraded sherd of CC2. All this pottery probably dated from the 15th century.

The layers 1170, 1181 and 1196 contained predominantly residual medieval pottery, as did the layer 786. The latter also produced a single sherd of the post medieval Earthenware, fabric EA1, possibly of late 15th or early 16th century date.

The late medieval Midland purple fabrics, MP1, MP2, MP3 and MP4 had an average sherd weight varying between 49.5 and 99.6 grams, suggesting that much of this pottery was primary refuse.

Area 3 - Group 27 (West of the Undercroft)
Assemblage: 54 sherds, 1.919 kg, 1.60 EVEs, ASW 35.5 grams

All the pottery is presumably residual in this phase including two sherds in the medieval Bourne ware fabric BO2 from the layer 1398. The only exception being a sherd of the late Medieval Sandy ware fabric MS8, which was recovered from the stone lined pit 695.

Phase 4.2 - *circa* 1400-1550

Area 1 - Group 4 (Building 1)
Assemblage: 46 sherds, 0.653kg , 14.00 EVEs, ASW 14.19 grams
The seven sherds recovered from the northern part of the building, wall 505/640, included residual Potters Marston, together with the later medieval fabrics MS3, MS7

and TG2 – the latter dating from the 15th century. A range of residual Potters Marston and Chilvers Coton wares, as well as late medieval Midland Purple and Cistercian wares, and one sherd, weighing seven grams, of the early post medieval earthenware, EA1, dating from the 16th century were found in the wall 1478

Ten sherds of predominantly 13th century Potters Marston, Chilvers Coton and Nottingham wares were recovered from the stone lined and capped drain 629. Sherds of Nottingham ware from the drain joined with pottery from the back fill of the robber trench 625, which lay along the eastern wall of the building. The assemblage from the robber trench comprised twenty sherds, 199 grams, of predominantly residual mid to later 13th century pottery. The remainder, one sherd of CC2, dated from the 14th century, and another, in an unclassified Medieval Sandy ware, perhaps an under fired example of fabric MP1, dated to the later medieval period.

Undercroft Excavation

Area 3 - door blocking etc
Group E, Former Phase 6.1 = Phase 4.1

Assemblage: 95 sherds, 1.708 kg, ASW 17.9 grams

The bulk of the pottery from this group was found in the pit, 94, which produced late medieval material as well as early post medieval pottery including Frechen and Martincamp stoneware and Midland Yellow and Midland Blackware, dating from the early or mid 16th century. This post medieval pottery in thought to be intrusive together with the three sherds of jewelled slipware, probably dating from *circa* 1680, in the upper fills of the feature. The backfills of the remaining pits, 116 and 118 and the spreads, (3253) and (3015) contained predominantly residual medieval pottery, but two sherds of late medieval Midland Purple ware, with a terminal date in the in 16th century, were also recovered from 116.

Phase 5 – circa 1550-1775+)

Area - 1 – Group 6 (Including Building One Robbing and Demolition).

Assemblage: 1111, 42.721 kg, 140.05 EVEs, ASW 38.45 grams

At least one sherd dating from the 12th century was amongst the forty sherds recovered from the well 503/818. Later pottery included 13th century Potters Marston, Chilvers Coton and Medieval Sandy wares, highly fired 14th century Chilvers Coton wares in fabric CC1, and three later medieval bowls in fabrics CC2, MS3 and MS7. One sherd in an unclassified Medieval Sandy ware – may be a late medieval transitional ware or an early post medieval Glazed Red Earthenware (Jennings 1981), (McCarthy and Brooks 1988, 420-423) dating from the mid 15th or the first half of the 16th century.

FABRIC	PHASE					TOTALS
	4.1	4.2	5.0	6.0	7.0	
MB	1/14		4/203			5/217
MY	1/5		15/480	9/218		25/703.
RA/FR	3/80			1/11		4/91
MA/MA2	1/10		1/65			2/75
EA1	3/47	1/7	10/745	23/1156	1/16	38/1971
EA2			4/706	26/1134	3/196	33/2036
EA3/4/5	1/40		89/2086	4/10	2/16	96/2152
EA6			5/196	23/324	1/14	29/534
EA7	1/36		13/502	9/186	1/44	24/768
EA8/9/10			1/5	23/117		24/142
EA11			16/315	2/20		18/335
EA			2/11			2/11
SW3			2/85	8/150		10/235
SW5			4/18	5/271	1/20	10/309
TOTALS	11/232	1/7	166/ 5417	133/ 3617	9/306	320/ 9579

Table 7 The Post Medieval pottery from the 2003 excavations by fabric, sherd numbers and weight, (grams) by phase (including pottery which is intrusive in phases 4.1 and 4.2).

The robber trench 624 contained residual 13th and 14th century pottery, including a fragment of Potters Marston weighing 52 grams, abraded sherds in fabrics MS3 and MS7 and quantities of the Midland Purple fabrics MP1, MP2 and MP3, the Cistercian ware fabric CW2 dating from *circa* 1475, and one intrusive sherd, weighing 112 grams, of the Blackware fabric, EA6, dating from *circa* 1650. Exclusively residual 12th and 13th century pottery was recovered from the robber trench 1486.

The backfill of the hearth, 619, contained large sherds, with an average sherd weight of sixty five grams, of predominantly later medieval pottery, including part of a flask rim in the 16th century Martincamp fabric MA2, fabrics MS3, MS7, MS8 and the Midland Purple fabrics MP2 and MP3. Also present were four 13th century sherds of Potters Marston, Chilvers Coton and Nottingham ware with an average sherd weight of seventy-two grams. Much of this material was possibly primary refuse, although

the presence of the large fragments of 13th century pottery may suggest that some of this material was the result of the disturbance and redeposition of earlier contexts in the area. A link was noted between the pottery from the hearth and the demolition layer (602) in the same group.

The pit, 508, contained small fragments of presumably residual jugs in fabric MS3, with one or two softer fired examples in MS2. The noticeably larger fragments, with individual sherds weighing up to 100 grams, were generally hard fired sherds in fabrics MS3, and MS7. The former fabric included later medieval bowls and large jars or cisterns. Other late medieval forms were a pipkin rim in the Coventry fabric CO3 and a urinal rim in MP2. Large fragments of MS7 also occurred in this group.

Links were noted between the pit and the demolition layers (576) and (610) in the same group. One sherd from the pit in MS3 linked with a sherd from the wall 522 in phase 4.1, group 3.

A number of the demolition layers associated with Building 1, contexts (580),(584), (602) (637), (792), and (882) all contained late medieval pottery in fabrics MS3, MS7, MS8, MP1, MP3. These layers also may be connected in some way with the circular masonry feature 793 in group 2, phase 3.2, which may in turn be associated with some form of industrial activity in the yard of Building 2. No direct links or joins were noted between the sherds from the two groups, but some evidence of industrial use was found amongst the pottery in group 6. A jug in fabric MS3 from contexts 580 and 584 (pot no 625 and 626) had fragments of lime and copper on the interior, possibly associated with the manufacture of a paint or pigment and two more pots of unknown vessel type from (637) (pot 699) in MP3 and (792) in MS (pot 705) also had traces of copper corrosion on the interior base (G. Morgan pers. comm.). Another bowl in MS from (602) (pot 664) had a hole bored in the middle of the base, before firing, and perhaps had some sort of specialist alchemical or industrial use. None of the other pots showed any indication of industrial activity in terms of residues, vessel forms, or evidence of use as industrial vessels - but are typically domestic in nature.

It is possible that some sort of industrial activity was taking place in or around both Building 1 and Building 2, or that the demolition deposits and spreads were moved from one backyard to the other, suggesting that these yards may have been communal at this time.

The demolition layer (869) contained residual 13th century pottery as well. The latest material in the demolition layers (606) and (509) comprised small sherds (suggesting a degree of residuality) of MS7, oxidised sherds – often fragments of small jugs in MS3, MP2, and a splayed base in the Cistercian ware CW2. The demolition layer (576) also included large hard fired sherds in MS3, MS7 and MP2 in a similar range of forms to those from the fill of the pit 508, as well as a cup rim sherd of TG2. Similarly, the layers (511) and (610) also contained large fragments in fabric MS3. Much of this material apparently represented primary refuse**.** Was the area used as a dumping ground during demolition phases? The remaining demolition layers with pottery associated with building 1 also contained a range of medieval and late medieval pottery.

Area 1 - Group 9

Assemblage: 76 sherds, 1.967 kg, 90.5 EVEs, ASW 25.88 grams

This group comprises the material from a single feature, a pit, which was only partially excavated. The assemblage included a small group of residual Saxo Norman Lincoln/Lincolnshire shelly wares, Stamford ware, hand made Reduced Sandy ware and Potters Marston dating from the 12th century, and 13th century CC1. The later pottery comprised single fragments of MS3, MP2, MY – with two sherds of Blackware, fabric EA6, and Tin Glazed Earthenware, fabric EA11, dating from the late 17th or early 18th centuries.

Area 1 - Group 10
Assemblage: 75 sherds, 2.017.kg, 1.52 EVEs, ASW 26.89 grams.

The backfill of the robber trench 547/592 produced residual medieval late Saxon Stamford and medieval wares. The latest pottery comprised three sherds of Mottled ware, fabrics EA3 and EA5, the Blackware, EA6, and part of a feathered Slipware dish in fabric EA7, probably dating from the mid or late 17th century. Similarly, another excavated section of the same wall, (954), produced post-medieval pancheon ware, fabric EA2, as well as Brown Salt Glazed Stoneware, fabric SW5, dating from the late 17th or early 18th century.

Area 2 - Group 17
Assemblage: 141 sherds, 4.333 kg, 43.05 EVEs, ASW 30.73 grams

Three sherds were recovered from the back fill of the well, 934, two were residual and the third, a fragment of the early post medieval Midland Yellow ware, fabric MY.

The layers (790) and (956) contained a range of later medieval and early post medieval wares. However, the later post medieval Earthenwares and Stonewares dominate this group, with fabric EA3, Mottled ware, accounting for over 49 per cent of the total by sherd numbers, followed by Tin Glazed Earthenware, fabric EA11, Slipwares, fabric EA7, and Midland Yellow ware.

Undercroft Excavation

Area 3 - Group F, Former Phase 6.3 = Phase5.0 - rebuilding of upper storey?
Assemblage: 15 sherds, 0.188 kg, ASW 12.5 grams

The pits 123, 124 and 170 contained a few sherds each of residual medieval pottery, 124 also producing two sherds in the early post medieval Midland Blackware. The spread (3233) also contained residual medieval pottery; together with a few sherds of the early post medieval Earthenware, EA1, and Midland Blackware.

Phase 6 - 1750+

Area 1 – Group 11
Assemblage: 158 sherds, 3.166.kg, 1.10 EVEs, ASW 20.03 grams

The entire assemblage came from layers in the backfill of the pit 593, which again included pottery dating from the 13th century to the late 18th or early 19th century.

Area 1 - Group 12 Yard associated with the demolition of Building One
Assemblage: 51 sherds, 1.812.kg, 0.37 EVEs, ASW 35.5 grams

The demolition layer (524) contained ten sherds of residual medieval and early post medieval pottery. The backfill of the pit, 585, which cut through demolition deposits associated with building one, also contained a range of post medieval and modern wares as well as residual material.

Area 3- Group G, (Former phase 7 = Phase 6)
Assemblage: 92 sherds, 1.465 kg, ASW 15.9 grams

The floor surface (3266) and the spread (3217) contained residual medieval pottery as well as Frechen stonewares and post medieval earthenwares dating from the 16th or 17th centuries. Post medieval earthenwares were also recovered from the floor levels (3007 = 3017), (3236), (3218) and (3221) and the pit 162. The slot 98 produced a single sherd of 18th century White Salt Glazed Stoneware dating from circa 1720.

The Pottery Record

Fabric	Sherds	% of total medieval sherds	Grams	% of total medieval weight
ST1-3 - Stamford ware	48	1.7	639	0.6
LI1/2 - Lincoln Kiln Type/Late Saxon Shelly ware	4		58	
PM - Potters Marston	710	25.1	18454	19.4
SP3 – Splashed ware	9		195	
CS/LY - Coarse Shelly/Stanion Lyveden type	16	0.5	409	0.4
CO1-3 - Coventry wares	26		1083	
CC1/2 - Chilvers Coton wares	413	14.6	11735	12.3
NO1-3 - Nottingham wares	129		3532	
MS3,7,8 – Medieval Sandy wares	834	29.5	32632	34.3
MP1-4 - Midland Purple wares	343	12.1	17026	17.9
CW1 - CW2/MB - Cistercian ware/Midland Blackware	69	2.4	1759	1.8
SA - Saintonge	6		58	
SI - Siegburg	1		57	
Miscellaneous medieval fabrics	211		7346	
Medieval Totals	**2819**	**100**	**94983**	**100**

Table 8 The Medieval Pottery Site Totals (excluding the Undercroft Excavations) by fabric, sherd numbers, weight (grams), showing the relative proportions of the major ware groups as a percentage of the totals.

The Pottery Fabrics

The range of medieval fabrics (Tables 3 and 6) is very similar, over all, to that noted elsewhere in the city, both within and without the town walls (Woodland 1981), (Sawday 1984), (Davies and Sawday 1999), (Davies and Sawday 2004). However the Reduced Sandy ware sherds from the dark earth, phase 2 (Illustration 1) are of note, they could possibly be late Saxon in date, and are a significant addition to the early pottery assemblages in the town. Regional imports, primarily Stamford ware, dominate the Saxo Norman pottery groups, with the Lincoln Shelly wares making up

only a very small part of the assemblage. The hand made local coarse ware, Potters Marston, dating from the late 11th or 12th centuries to the later 13th or early 14th century, accounts for over twenty five and nineteen percent of the medieval pottery totals by sherd numbers and weight, with the Leicester Splashed ware, SP3, only a minor element.

Fabric	*Jar*	*Bowl*	*Jug*	*Mantle*	*Dripping Dish*	*Cauldron*	*Pipkin*	*Skillet*	*Cistern*	*Beaker*	*Vtu*	*Total*
ST2	*6/88*										*28/435*	*34/523*
Eve	*52*											*52*
LI1 /2	*1/14*										*3/44*	*4/58*
Eve	*11*											*11*
RS3	*4/64*											*4/64*
Eve	*15*											*15*
PM	*77/2875*	*6/174*	*124/5272*		*3/93*						*500/10040*	*710/18454*
Eve	*399.5*	*45*	*320*		*15*							*779.5*
SP3			*2/66*								*7/129*	*9/195*
OS2	*8/129*		*5/38*								*1/10*	*14/177*
Eve	*20*											*20*
CS	*3/127*	*1/17*	*3/66*								*8/192*	*15/402*
Eve	*19*	*5*										*24*
LY1			*1/7*									*1/7*
CO2	*1/28*					*4/538*					*9/140*	*14/706*
Eve	*7*											*7*
CO1	*1/17*				*1/32*						*1/15*	*3/64*
Eve	*15*				*2*							*17*
CO3			*7/266*				*1/45*				*1/2*	*9/313*
Eve							*17*					*17*
CC1	*49/1355*	*13/541*	*111/4066*	*2/93*					*3/179*		*140/2491*	*318/8725*
Eve	*162*	*54*	*146*						*21*			*383*
CC2	*2/32*	*2/47*	*65/2236*					*1/120*			*25/575*	*95/3010*
Eve	*5*	*6*	*184*									*195*
NO1/2/3		*3/57*	*85/2337*								*39/1124*	*127/3518*
Eve		*16*	*92*									*108*
LI8										*5/22*		*5/22*
MS1/2		*15/697*	*26/1571*								*13/262*	*54/2530*
Eve			*54*									*54*
MS2/3			*5/107*									*5/107*
Eve			*82*									*82*

Table 9 The late Saxon and Earlier Medieval Pottery Vessel Forms – by fabric, sherd numbers, weight (grams) and Eves where applicable (100 = *one vessel) and excluding fabrics with no identifiable vessel forms.*

Fabric	*Jar*	*Bowl*	*Jug*	*Beaker*	*Lid*	*Dripping Dish*	*Frying Pan*	*Pipkin*	*Cistern*	*Urinal*	*Cup*	*Chafing Dish*	*Posset Pot*	*Flask*	*Vtu*	*Total*
MS3	*36/ 1638*	*77/ 3004*	*205/ 6269*				*24/ 1751*		*120/ 4469*						*213/ 8719*	*675/ 25880*
Eve	*152*	*124.5*	*259.5*				*93.5*		*131*						*1*	*761.5*
MS7	*11/475*	*12/1008*	*7/318*				*1/68*		*9/828*						*83/3011*	*123/ 5708*
Eve	*37*	*132.5*					*6*		*24*							*199.5*
MS8	*1/100*	*8/455*	*3/48*												*24/441*	*36/ 1044*
Eve	*10*	*26*														*36*
MS	*28/ 1404*	*2/237*	*26/ 1903*		*1/34*	*1/27*									*31/483*	*89/ 4088*
Eve	*91*	*25*	*190*			*2*										*308*
MP1	*4/110*		*3/273*					*2/375*	*5/158*						*9/344*	*23/ 1250*
Eve	*15*							*20*	*25*							*60*
MP2	*13/555*		*45/ 2871*					*3/90*	*40/ 1940*	*2/104*					*102/ 2934*	*205/ 8494*
Eve	*96*		*11*					*4*	*93*	*15*						*219*
MP3	*40/2251*		*20/867*						*1/96*	*1/36*					*21/ 1813*	*83/ 5063*
Eve	*103*		*68*						*8*							*179*
MP4			*1/330*						*1/57*						*30/ 1832*	*32/ 2219*
Eve									*10*							*10*
TG2			*1/4*								*7/39*	*10/167*			*13/82*	*31/292*
Eve											*37*	*42*				*79*
CW1/2/MB			*2/130*								*25/574*		*4/193*	*1/22*	*37/840*	*69/ 1759*
Eve			*10*								*205*		*2*	*25*		*242*
SA			*3/35*												*3/23*	*6/58*
SI				*1/57*												*1/57*

Table 10 The later Medieval Pottery Vessel Forms – by fabric, sherd numbers, weight (grams) and Eves where applicable (100 = one vessel) and excluding fabrics with no identifiable vessel forms.

Fabric	*Jar*	*Bowl*	*Jug*	*Pipkin*	*Cup*	*Mug*	*Flask*	*Bottle*	*Chamber pot*	*Dish*	*Plate*	*Vtu*	*Total*
MB					*5/217*								*5/217*
Eve					*30*								*30*
MY	*11/138*	*4/458*		*1/35*	*2/11*							*7/61*	*25/703*
Eve	*20*	*13*		*15*	*17.5*								*65.5*
MA2/MA							*1/65*					*1/10*	*2/75*
RA/FR			*3/80*									*1/11*	*4/91*
EA1	*7/1184*											*31/787*	*38/1971*
Eve	*77*												*77*
EA2	*2/663*	*6/444*										*25/929*	*33/2036*
Eve	*28*	*62*											*90*
EA3/4/5		*3/204*			*12/159*	*39/837*			*4/112*			*38/840*	*96/2152*
Eve		*14*			*71*	*172*			*8*				*267*
EA6		*15/202*			*3/52*				*1/30*			*10/250*	*29/534*
Eve		*27*							*6*				*33*
EA7		*4/144*			*1/82*					*11/448*	*2/50*	*6/44*	*24/768*
Eve										*90*	*11*		*101*
EA11	*3/50*	*2/54*	*1/125*								*1/14*	*11/92*	*18/335*
Eve		*21.5*									*8*		*29.5*
SW3						*7/134*						*3/101*	*10/235*
Eve						*10*							*10*
SW5	*3/60*	*1/20*				*2/6*		*1/28*				*3/195*	*10/309*
Eve	*2*	*8*											*10*

Table 11 The Post Medieval and Modern Pottery Vessel Forms – by fabric, sherd numbers, weight (grams) and Eves where applicable (100 *= one vessel) and excluding fabrics with no identifiable vessel forms.*

Contemporary regional imports from Coventry and Northamptonshire are also present, albeit in small quantities. Typically, the glazed Chilvers Coton wares from Nuneaton in Warwickshire, dating from the 13th century, are the most common glazed ware in the earlier high medieval period, with only a few sherds of 13th or early 14th century Nottingham ware present. Also of note are the five sherds from St Marks kilns in Lincoln and a handful of sherds identified as continental imports from the Saintonge region of France and the Siegburg from the Rhineland.

The Pottery Forms

Jars, jugs and bowls are the most common forms on the site during the late Saxon and medieval periods, (Tables 7 and 8). These, together with a range of other vessels, notably dripping dishes, cauldrons, pipkins, skillets, frying pans, cisterns, flasks, cups, chafing dishes and posset pots, are commonly associated with the preparation, storage and consumption of food and drink, and a similar range of forms has been noted elsewhere in Leicester (Woodland 1981), (Woodland 1987), (Davies and Sawday 1999), (Davies and Sawday 2004). More unusual was a possible fire cover from the Undercroft excavations, and two urinals in fabrics MP2 and MP3. A long necked beaker in Siegburg stoneware and a flask or beaker in the Lincoln fabric LI4 were associated with the demolitions layers relating to building 2, and in features north of the Undercroft in area 3, phase 4.1 respectively.

Only a few pottery fragments could be associated with industrial or some sort of specialist alchemical use: a Stamford ware crucible rim was found one of the post pits associated with the Undercroft refurbishment in phase 3.2 and part of a mantle was found in a layer associated with building 3 in phase 4.1. A sherd associated with the group 16 kilns or ovens in area 2, phase 1 was covered in white sediment, suggesting some sort of secondary use. Further evidence came from the demolition layers associated with building 1 in area 1, phase 5; a jug and two other vessels of unknown type had a green coloured residue, on the interior, and another vessel, a bowl, had had a hole bored in the middle of the base, before firing. The later medieval or early post medieval continental imports form Martincamp in France and the Rhenish stonewares from Raeren, Frechen and Cologne are regularly found in small quantities on most medieval sites in the city (Tables 5 and 9). The post medieval and modern pottery assemblages, although small, reflect the changes occurring in English and continental pottery production from the 16th and 17th centuries and later. Similar material has been previously recorded from Leicester (Sawday 1989), (Davies and Sawday 2004).

Fabric	Jar	Bowl	Jug	Frying Pan	Cistern	Urinal
MS3	34/1574	49/1042	172/5350	23/1729	120/4469	
Eve	122	25	181.5	93.5	131	
MS7	9/435	4/310			7/278	
Eve	22	26			10	
MS8	1/100	8/455	2/38			
Eve	10	26	00			
MP1			1/6			
Eve			00			
MP2					1/295	2/104
Eve					4	15
MP3	37/1888		20/867		1/96	1/36
Eve	66		68		8	00

Table 12 The Medieval Vessel Forms in selected late medieval fabrics Phase 5, Group 6 – by fabric, sherd numbers, weight (grams) and Eves where applicable (100 = one vessel) and excluding fabrics with no identifiable vessel forms

Discussion

The site is of particular note due to the relatively high proportions of later medieval pottery present when compared with the pottery assemblages at Causeway and Bonners Lane (ibid 1999 and 2004). The later medieval fabrics, MS3, MS7 and MS8, account for twenty five and thirty four percent of the pottery totals by sherd numbers and weight, the figures for Midland Purple being twelve and just under eighteen per cent. Both ware groups are thought to originate from production centres to the west of the county, primarily from Chilvers Coton in Warwickshire and Burley Hill/Allestree and Ticknall in Derbyshire, but perhaps including also, Staffordshire. The phase 5 demolition layers associated with building one, produced an interesting group of late medieval pottery, (Table 10), including a noticeably high number of jars and jugs, although, unfortunately, residual in this early post medieval phase. Similar material was recorded from the phase 9A drain at the Austin Friars, (Woodland 1981).

The pottery does provide some evidence for the site chronology, including an interesting addition to the Leicester late Saxon assemblage from the dark earth in area 2 (Figure 24) and a terminus post quem for the construction of the Undercroft. However the value of this dating evidence is limited somewhat by the fact that time constraints lead to only partial excavation of many of the features, the complexity of the stratigraphy, the high levels of residuality, and the absence of other dating evidence. Unfortunately, also, the three plots delineated by the three site areas are incomplete in extent, and not completely excavated, so it was not possible to compare the pottery from one plot with another. Whilst there was no definitive evidence of linking or joining sherds between the three plots, which suggest that the walls may indeed have defined the medieval property boundaries, there was also evidence that at least some of the pottery was being dumped on to the site, probably from adjacent buildings or from further afield. The demolition levels associated with Building 2 in phase 4.1 produced one such group of pottery; as did the robbing and demolition levels and the backfill of the hearth, 619 associated with Building 1, group 6 in phase 5.

Within the plots, the relationship between the courtyards and the buildings may not have always been clearly defined. In Area 1, for example, the pottery from the demolition layers associated with Building 1 group 6, phase 5 showed some evidence of industrial use, possibly associated with copper working and suggesting also a possible link between Building 1 and the industrial features in the back yard of Building 2. Further evidence of industrial activity in the same area, was in the form of a mantle, possibly associated with distilling, in phase 4.1, group 7, Building 3. Other evidence of industrial activity was even more limited, a sherd covered in white residue, including the breaks was recovered in Area 2, group 16, phase 4.1, and a Stamford ware crucible was found in the group A assemblage associated with the Undercroft in Area 3. The pottery evidence only hints at what was clearly an area of intense and varied activity - both industrial and domestic - during the Middle Ages.

In terms of providing evidence of high status on a site near to what would have been a major thoroughfare in the medieval town and close to St Martin's, the richest church in the borough by the late 13th century, (Courtney 2001, 124-126), the pottery is somewhat elusive. This is perhaps not altogether surprising; research elsewhere has shown that high status sites do not necessarily produce high status pottery, (Brown 2002). However, there are some indicators of possible wealth, pottery from cess pits in the Undercroft excavations included a high ratio of jugs to jars, the former often highly decorated. Relatively unusual vessel forms were also present in Potters Marston ware, including a lamp and a possible fire cover. A massive bowl and several jugs in the same fabric were also highly decorated with thumbed applied clay strips, combed wavy lines and roller stamping. There were also a number of 'developed' Stamford table wares with copper glaze. Whilst Stamford ware with copper glaze is characteristic of the later stages of the Stamford ware industry, and the ware was widely traded to Leicester, this copper glazed pottery is also relatively uncommon find here, and was possibly made to order.

More convincing evidence of high social standing was found in the pits and cesspits associated with the Undercroft in Area 3, including one unusual vessel which was found in a stone lined pit to the north of the Undercroft in phase 4.1. This was a fragment of Green Glazed Lincoln ware, Fabric LI8, from St Mark's kilns, Lincoln

imitating a prunted glass beaker or possibly a German flagon (J. Young and A. Vince pers. comm.), (Figure 25). Part of the stem and lid of a similarly elaborate vessel has been found at Lincoln in St. Mark's Late Medieval Fine wares fabric (Young et al 2005, fig.183.1381, 220). The vessel, the stem of which as here, is decorated with applied pellets of glass or prunts, has been tentatively identified a part of a lidded chalice or cup. The foot of what is thought to be the part of a similar vessel has been found at North Ormsby Abbey. The surviving fragments of the Leicester vessel are not like that of the Lincoln example, and may have no ecclesiastical connections, but the vessel was clearly made for show, probably as a table ware, and perhaps may be linked to the nearby Guild of Corpus Christi, which was built about 1400, and functioned as a 'socio-religious guild' (Courtney 1998, 136) or St George's Guild, first documented in 1499, which lay to the east of St Martin's Church in Townhall Lane (Courtney 2001, 125). Three fragments of what has tentatively been identified as Saintonge were also recovered from pit 703 to the west of the Undercroft. Another important find was a beaker fragment in Siegburg stoneware, dating from the 15th century which was associated with the robbing of Building 2 in area 1, phase 4.1. Although widely traded from the Rhineland around the North Sea and northern Europe, this pottery is not commonly found in England at this time, (Hurst et al 1986). Sherds from a large wine jug or spouted pitcher, decorated with an applied clay strip with stamped cruciform decoration under a yellow glaze, and dating from the later 13th to the 15th centuries in Saintonge (Cotter, J. and Brown D., pers. comm.) (Figure 26) were found in the same area. All of these pots would have come to Leicester as part of the household goods, probably of a wealthy family, rather than as items traded to Leicester in their own right.

The Illustrations: M. Hawkes

Illus. No	*Phase*	*Area*	*Group*	*Fabric*	*Comments*
1	*2*	*3*	*20*	*RS3 – Reduced Sandy ware 3*	*Jar – hand made*
2	*4.1*	*3*	*26*	*LI8 - Lincoln St Mark's kilns*	*A green glazed prunted glass beaker or possibly a flagon*
3	*4.1*	*1*	*5*	*Sa - Saintonge*	*Large wine jug or spouted pitcher, decorated with an applied clay strip with stamped cruciform decoration under spots of thin yellowish green glaze.*

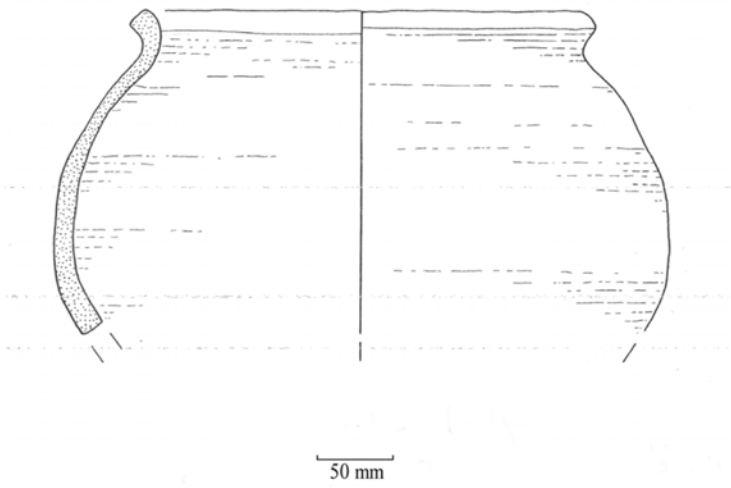


Figure 28: Pottery Illustration 1

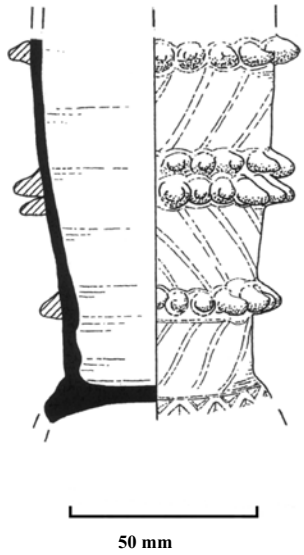


Figure 29: Pottery Illustration 2

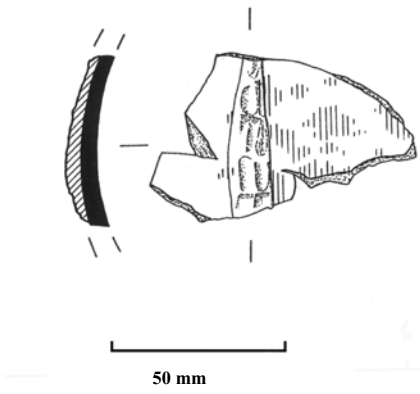


Figure 30: Pottery Illustration 3

The Medieval Ridge Tile and Roof Furniture

Fabric	***Phase***							***Totals***
	3.1	***3.2***	***4.1***	***4.2***	***5***	***6***	***U/S***	
SP3	***1/36***	***8/205***	***9/1807***	***1/18***	***7/846***	***1/56***	***2/398***	***29/3366***
PM			***12/425***	***1/20***	***6/707***			***19/1152***
CC1	***2/64***	***16/606***	***61/5121***	***1/70***	***23/1678***	***1/74***	***5/332***	***109/7945***
MS		***1/16***	***7/618***		***2/634***	***1/195***		***11/1463***
MS1			***10/574***	***2/430***	***1/30***			***13/1034***
MS2		***1/23***	***12/325***	***1/20***	***4/164***	***2/184***	***2/18***	***22/734***
MS3			***20/2174***		***63/6407***	***3/142***	***2/362***	***88/9085***
MS7			***12/1884***					***12/1884***
MS8			***2/98***					***2/98***
MP1					***1/44***	***1/52***		***2/96***
MP2			***4/472***		***5/1576***		***1/130***	***10/2178***
MP3					***7/880***			***7/880***
Totals	***3/100***	***26/850***	***149/13498***	***6/558***	***119/12966***	***9/703***	***12/1240***	***324/29915***

Table 13 The Medieval Ridge Tile and Roof Furniture by fabrics, sherd numbers and weight (grams) by phase.

The ridge tile fabrics MS3, MS7, MS8 and MP3 are described with the post Roman pottery above. Though fragmentary, a range of ridge tile crests were observable, similar to those recorded most fully at the Austin Friars, Leicester, (Allin 1981) but also found on other sites in the city (Davies and Sawday 1999), (Davies and Sawday 2004).

Several examples of a double horn crest (Allin 1981, fig.16.5) were here associated with the Splashed ware fabric SP3. This particular crest was thought to date to the late 13th or early 14th at the Austin Friars, but its presence here in Splashed ware suggests a somewhat earlier starting date in the 13th century for this particular crest. Examples of serpentine and looped crests occur in fabric CC1, and MP2 (ibid, fig.fig.15.2 and 3, fig.16.9). The close and tight loops were thought to be earlier in the sequence than the more open types at the Austin Friars, (ibid 59), but here one example in CC1, in phase 4.1 and probably late in the sequence, seems to have both types of loop on one crest. Ridge tile most commonly occurred in fabric MS3, and within this fabric group the pinnacle crest or spiked knob, with between three and six finger smears or 'petals' was the most common type, although there were also some

examples in MP2 (ibid, fig.16.11 and fig.17.13). Examples of pyramid or coxcomb crests, the triangles making up the crest varying on some tile fragments, between equilateral and right angular in shape are found in MS7. The evidence here suggests that the two types, classified at the Austin Friars by the differences in crest shape, are in fact, the same, (ibid, fig. 16.6-7, fig.16.8, 59).

Of particular interest were two fragments in an unclassified Medieval Sandy ware, MS, in demolition levels in area 1, phase 4.2, including a thumbed 'rim' and a circular hole circa forty mm in diameter. A zoomorphic ventilator from medieval tenements in Leicester (A302 1971. 17362), has two similar circular vents on each side. However the shape of these fragments suggests that they are more likely to be part of a ventilator or chimney pot with side holes (Dunning 1970, 85-100).

Discussion

Here, as elsewhere in Leicester, the ridge tile occurred in a range of fabrics covering the whole of the medieval period, but the early medieval fabrics SP3, PM and CC1 are particularly common, with the later medieval Sandy wares, MS7 and MS8, and the Midland Purple fabric MP2 making up the second largest group.

The bulk of the ridge tile when quantified by fragment numbers was found in area 1, with notably less in area 3, and little from area 2. Not surprisingly much of the tile was associated with demolition layers and deposits, particularly in area 1 phases 4.1 and 4.2. There were examples were the tile had been used as building rubble within stone walls, notably in wall 805 in area 3, phase 3.1 and in walls 722, 818, 1478 and 1479 in area 1 phase 4.1 and wall 752 in area 3 in the same phase. Ridge tile was also associated with the ovens or kilns 924 and 927 in area 2, phase 4.1, and the hearths 669 phase 4.1 in area 3, and 619 in phase 4.2 area 1. The relatively large assemblage together with the range of fabrics and crest types present evidently results from the long sequence of building and alterations or repairs to those buildings on the site, particularly in areas 1 and 3. The comparatively rare example of a ventilator or chimney pot is not unexpected given the location of the site in the commercial hub of the medieval town.

The Animal Bone Jennifer Browning

Introduction

In 2003, University of Leicester Archaeological Services carried out an excavation at St. Nicholas Place, Leicester. The site is located within the heart of the Roman and medieval town, and the work took place in advance of the construction of new premises for BBC Radio Leicester and the Asian Network.

The northern part of the site was dominated by a well-constructed masonry building, which had once fronted onto the present High Street. The rear wall of the structure included a possible window and a doorway opening onto a yard area. Attempts had been made to counter subsidence of the building into earlier pits by the construction of internal buttresses against the rear wall. This area was also characterised by a number of granite-lined kiln-like structures, possibly linked to the production of gypsum plaster for floor or building construction. The southern sector of the excavation, fronting onto Guildhall Lane, was dominated by the re-discovery of a rare Undercroft building, probably dating from the 12th-century. This was previously exposed in 1844 when its first-floor hall superstructure was demolished. The building was constructed from granite and re-used Roman brick and tile and measured 8.5m x 4.5m. It was also 2.5m deep and had been cut through a succession of Roman gravel street surfaces. A series of stone-lined rubbish pits were ranged along the northern boundary of the same parcel of land. Pottery sherds of a rare 15th-century type manufactured in Lincoln and a bone comb fragment indicate that this property continued to be occupied by wealthy residents into the later medieval period.

This report presents the results of a study of the animal bones recovered during the 2003 excavations. It aims to provide information on the range of species and nature of the remains found at the site.

Previous Work

An earlier excavation took place within the Undercroft itself in 1989-90. The report on the animal bone assemblage (Baxter unpublished) concentrates primarily on the remains derived from two 12th/13th century pits, 12th- 14th century floors and a 15th/16th century pit. Sheep bones dominated the pit assemblages, while pig bones were more common in the remains from the floors. Cattle bones were also represented but were only half as frequent as sheep overall. A large proportion of domestic bird bones were recovered from the two 12th/13th century pits. Domestic fowl was twice as frequent as goose and included a high proportion of immature remains and females in egg laying condition. The bulk of the animal and bird bone appeared to represent food refuse rather than slaughterhouse or industrial debris.

Rodents occurred in most of the medieval deposits, with house mouse most frequently represented. Black rat was also provisionally identified, representing an early occurrence in Leicester. Fish bones, including a large branchiostegal ray, were also identified (Baxter, Unpublished).

Dating and Provenance

Archaeological activity on the 2003 site has been assigned to the chronological phases detailed below. The number of bone fragments recovered from each phase is also shown. Phase 5 (1550-1775 AD) produced the greatest quantity of bone, accounting for almost half of the assemblage.

Table 14: The Animal Bone: Number of bones per phase

	Date	Hand-recovered	Samples	Total	% of assemblage
Phase 1	*Roman*	18		18	
Phase 2	*(c.850-1100/1150)*	95		95	2
Phase 3.1	*(c.1100-1300)*	202		202	5
Phase 3.2	*(c.1250-1300/1325)*	122	29	151	4
Phase 4.1	*(c.1275/1300-1500)*	742	487	1229	31
Phase 4.2	*1400-1550*	37		37	1
Phase 5	*1550-1775*	1830		1830	46
Phase 6	*Modern (1750+)*	356		356	9
Unphased		51		51	1
		3457	516	3973	

Issues concerning residual material are always a problem for multi-phase sites, particularly urban ones. It is reasonable to assume that the later phases contain a significant proportion of residual material. This is of concern at this site as the bulk of the assemblage derives from later deposits. The pottery has been used as a general indicator to the degree of residuality in particular features. However, deposits with good animal bone assemblages may have derived from activities that did not involve pottery, therefore bone condition has also been taken into account.

Methodology

Bone fragments were identified with reference to comparative skeletal material held by Leicester University, School of Archaeology and Ancient History. Species, anatomical part, state of fusion and completeness was recorded, to elicit information on species proportions, skeletal representation and age. For each identifiable fragment zones were recorded following Serjeantson (1996) with additional zones ascribed to mandibles, based on the system outlined by Dobney and Reilly (1988). Condition of the bone was assessed on a scale of 1 to 5, with reference to Behrensmeyer (1978), where 1 denotes a bone surface with no cracking or flaking and 5 indicates that the fragment is disintegrating into splinters. Butchery marks were described and either assigned a number following Lauwerier (1988) or sketched. Measurements followed von den Dreisch (1976) and were taken when completeness allowed. Epiphyseal fusion and assessment of toothwear followed Silver (1969) and Grant (1982) respectively. The information was compiled onto a pro forma computerised spreadsheet (Microsoft Excel). The presence of pathological specimens has been noted and commented upon but it was not possible to diagnose conditions.

All hand-recovered fragments were recorded as above. Inevitably not all fragments carried enough diagnostic features to enable confident identification. Some attempt has been made to characterise the remaining bones, mostly shaft fragments, ribs and

vertebrae, by classing them as small, sheep-size and cattle-size mammal, and unidentified bird. The hand-recovered fish assemblage was counted and Tony Gouldwell carried out the identifications (School of Archaeology and Ancient History, University of Leicester). The presence of fish in the coarse fraction and flots was recorded but the fragments have not been quantified and at this stage remain unrecorded. The sieved assemblage was scanned and identified where possible. Samples were only available from phases 3.2 and 4.1. Sometimes the abbreviation '*cf*' is used next to identifications (from Latin '*confer'* meaning 'compare'), where identification, although very close, is not considered definite.

Due to small fragment numbers species were quantified by NISP (Number of Identified Specimens) only, in most phases. Bones were more abundant in phase 4.1 and phase 5 and therefore an additional method Minimum Number of Individuals (MNI) was employed to counteract bias against smaller mammals. In an urban context, the MNI provides a further indication of species proportions, although it tends to over-estimate less common species.

The relative proportions of elements were calculated using, where possible, the recorded 'zones' (Serjeantson 1996) to avoid duplication. Unzoned elements are counted in an appropriate way. The total are then adjusted to reflect the number of times an element naturally occurs in the body. Side has not been taken into account.

Results

The following species were identified in the assemblage:
Cattle (*Bos taurus*); Sheep (*Ovis aries*); Goat (C*apra hircus*); Pig (*Sus scrofa*); Horse (*Equus caballus*); Dog (*Canis familiaris*); Cat (*felis domesticus*); Domestic fowl (*Gallus sp.*); Goose (*Anser sp.*); Red deer (*Cervus elaphus*); Fallow deer (*Dama dama*); Rat (cf *Rattus rattus*); Rabbit (*Oryctolagus cuniculus*);
Birds from the Crow family such as (*cf. Corvus monedula,* owl (*cf. Strix aluco)* and *passeriformes* (*cf Turdus merula*). The animals are referred to by their common names in this report.

Phase 1: Roman

A total of 18 fragments were recovered from features dating from the Roman period. These derived from road silting and demolition deposits and have probably therefore been re-deposited. Only cattle were positively identified. Three bones were butchered and one burnt, suggesting that they originally represented refuse from food production and preparation. The frequency of cattle and cattle-size bones is more a consequence of survival factors than a reflection of the general trend towards cattle on Roman sites (King 1989).

Table 15: The Animal Bone: Species proportions from Roman deposits

Species	Number
cattle	5
cattle-size	12
sheep-size	1
Total	18

Phase 2: Post-Roman

This phase encompasses a wide date range, accommodating post-Roman deposits. Most of the bones (n=67) were retrieved from a layer of dark earth (1361), overlying the Roman strata. A fifth of these bones were butchered and mostly belonged to the meatier parts of the skeleton (ribs, vertebra, and upper limb bones), which may imply that they are domestic waste from the preparation and cooking of meat. Both fine knife marks and heavy chops were noted. Gnawing was noted on two cattle bones. Two further bones are from a demolition deposit (1407). A layer (1277) contained 26 fragments consisting mostly of mandible, maxilla and metapodial from the main domestic species, perhaps representing waste from primary butchery. Cattle dominate this small assemblage, especially when taking into account the cattle-sized remains. There was little evidence for young animals; all the bones were fused except for a cattle distal radius (late fusing) and an unfused pig metacarpal.

Table 16: The Animal Bone: Species proportions (Phase 2)

Species	Number	% (NISP)
Cattle	23	61
Sheep/goat	6	16
Pig	7	18
Horse	1	3
Domestic fowl	1	3
Total identified	38	
cattle-size	41	
sheep-size	12	
unidentified	4	
Total	95	

Phase 3.1 Early medieval (1100-1300)

Groups 21 (Undercroft constructed (construction cut 1358; date: c. 1150-1250); Group 23 (Pitting and other Features West of the Undercroft (date: 1075-1299); Group 24 (Pitting and other Features North of the Undercroft (date: 1075-1299) and Group 25 (Pitting East of the Undercroft (date: 1075-1299).

These are all from Area 3 and are of particular interest, as they relate to the period that the Undercroft was in use. The dense pitting reflects intensive activity and a wider variety of species were recovered compared with the earlier phases. Overall, there are very similar proportions of cattle and sheep bones and considerably fewer pigs, however the profiles of each group were quite different. The largest quantity of material was recovered from Group 23, west of the Undercroft. This contained a wide variety of species among which cattle were the dominant species. In addition to food remains, frog and owl was represented. These could be residual or accidentally incorporated. Sheep outnumbered cattle in Group 24 but the Group only contained domestic species. This was also the case in Group 25, although proportions of cattle were slightly higher in this Group. Only 10 bones were recovered from Group 21 pits, all from domestic animals. Isolated elements of cat were recovered from Group 21 and 23.

Table 17: The Animal Bone: Species proportions (Phase 3.1)

Species	**Hand-recovered**	**% (NISP)**
sheep/goat (sheep -1, goat -2)	41	36
cattle	38	33
pig	19	17
horse	3	3
goose	4	3
frog	3	3
cat	2	2
dom. fowl	2	2
dog	1	<1
owl (tawny)	1	<1
cod	1	<1
Total identified	115	
?goose	1	
c-size	45	
sh-size	32	
small-mamm.	1	
unident. mammal	7	
unident. bird	1	
Total	202	

Cattle

Seven of the 18 bones with epiphyses were unfused (39%), among them only one early fusing bone. There were only three mandibles with age-able teeth, all of which were from adult animals (MWS stages ranging from 34-50). One had a mandible wear stage of over 46, which must have been from a fairly elderly beast.
Withers heights obtained from a metatarsal (pit group 25) and a metacarpal (pit group 23) suggest heights of 1.09m and 1.23m respectively.

Sheep/Goat

Cranial elements demonstrate the presence of both sheep and goat in this phase however the majority of the sheep/goat bones could not be differentiated. Goat is represented by two horncores but no post-cranial goat bones were identified. There was no evidence of young animals from epiphyseal fusion; only three out of eighteen epiphyses were unfused- all were from late fusing bones. This is supported by evidence from toothwear; six MWS scores were recorded, ranging from (28, 31, 35, 37, 38, 40,), therefore all retrieved from young adult prime mutton animals with all three molars coming into wear.

Pig

Examinations of tooth wear indicated animals in the Immature and Sub adult age categories (O'Connor 1988, 85) (MWS ranges: 15-19 and 21-24). These suggest animals over a year old and probably ideal for eating. There are not many bones with epiphyses; two of the seven fusion surfaces were unfused. A withers height of 0.86m was calculated from an astragalus, but unfortunately there was no comparable data

from the rest of the assemblage. A lower canine from a boar provided the only information on sex.

Butchery, burning and gnawing

Most of the butchered bones belonged to cattle and overall there were more chop marks than knife cuts. Group 23 contained the greatest number of butchered fragments. A cattle horncore had cut marks, presumably to remove the horn sheath. Most of the other butchery marks indicates division of the carcass into joints of meat and filleting of the meat from the bone. A cattle humerus was sawn but this is unusual and may suggest that it was intended for object making rather than being just a food bone. Two further worked bones were recovered from Group 23. A fragment of cattle-size bone had been neatly sawn and polished. Part of the proximal shaft of a sheep/goat metacarpal had been shaped, leaving a 'scoop' shape. The distal part possibly forms a handle, perhaps making an implement such as an apple-corer. Four cattle bones were gnawed, one from each pit group implying that bones were not left around as a matter of course for dogs to scavenge. A single bone was burnt.

Phase 3.2 (Early Medieval; c.1250-1300/1325)

Groups 1 (Building 2), 2 (associated yard surfaces);
Group 22 (Undercroft alterations and robbing)

Table 18: The Animal Bone Species proportions (Phase 3.2)

Species	Hand-recovered	Sieved	Total	% (NISP)
cattle	28		28	35
sheep/goat	12		12	15
pig	11		11	14
horse	1		1	1
(red) deer	2		2	2
cat	11		11	14
goose	3		3	4
fish (herring and cod identified)	12*	1	13	16
Total identified	80	1	81	
c-size	20			
sh-size	9			
unident. mammal	6	27	33	
unident. bird	7	1	8	
Total	122			

key *= different elements recorded, ^=antler only

Cattle comprised the largest proportion of bones in this phase. Sheep/goat, pig, cat and fish all yielded similar numbers of fragments, each comprising 14-16% of the assemblage. There is too little available information to speculate on age structures for the main domesticates in this phase. There were very few cattle epiphyses (n=11), only 3 (27 %) were unfused overall and none of these fused before 27 months. All of the four sheep epiphyses were fused. No mandible wear stages were obtained for

cattle only one for pig (Adult). Two sheep mandibles indicated one 'Sub adult' animal and also one 'Adult', probably aged around three and a half years old.

Other Species

Cat bones constitute 14 % of the identified assemblage. The bones are all recovered from wall deposit 575 and appear to represent part of the lower hind leg of a single animal. If this is the case, state of fusion suggests that the animal is less than a year in age (Smith 1969). There are no post-cranial bones of red deer, which is represented by two antler fragments. One of these is shed (therefore collected rather than hunted) but the other is simply the point of a tine, so it is impossible to tell. Both have cut and saw marks suggesting that they were used in tool or object manufacture.

Goose was the only bird identified in this phase, comprising a very small number of bones (n=3), two of which were from the same context (638).

The majority of fish bones were recovered from the same layer (920). Many were fragments of ribs or rays that did not prove identifiable, however, herring and cod were noted. The remaining three bones were isolated fragments within different deposits.

Butchery

There were 12 butchered bones belonging to the main domesticates along with a fragment of red deer antler. Seven of the butchered bones were from the cattle skeleton, four from sheep and there was one pig bone. Cleavers rather than knives were used to inflict most of the butchery marks. A sheep-sized vertebra was split sagittally, which suggests that facilities for hoisting the carcass were available. A sheep/goat mandible bore fine cut marks suggestive of filleting or skinning. A cattle scapula had been chopped through the articulation and the rest of the butchered cattle bones also have cleaver marks from disarticulating and dividing the carcass. A cattle metapodial was sawn at both ends leaving a hollow shaft segment, perhaps originally intended for use as a handle or other implement. Observations on bone from the Iron Age to the medieval period suggest that saws are almost exclusively used for bones and antler intended for tool manufacture (Grant 1987, 55), which perhaps supports this suggestion.

There were no obviously burnt bones and a single cattle humerus showed signs of gnawing. A single bone appeared abnormal; this was a pig metatarsal with a swollen shaft. A similarly distorted bone was noted in the Phase 5 assemblage.

Phase 4.1: 1275/1300-1500

Group 3 (Building One) Wall 522, Buttresses 514, 722 Floors 636, 728, 731, 768, 912, 913, 915
Group 4: Building One Rebuild/Extension (Walls 501, 505/640, 632, 1478, Drain 629, Yard Surface, 911 Well 503/818)
Group 5 Pit 596 (1300/1400-1550), Wall 1474, Demolition layers associated with Building Two; 623 & 709; Site Layer 506

Group 7 (Building 3)
Group 16 Kilns/Ovens 922, 924, 927, Pit 936, Site Layer;
Group 26 (Pitting & Other Features North of the Undercroft) (date: 1450-1550);
Group 27: West of the Undercroft, Stone-lined pit or soakaway 695 Context 1398 (1450-1650?);

Bone from Phase 4.1 constituted 31% of the total assemblage and was both hand-recovered and retrieved from sieving. This resulted in the identification of a wide range of species. Cattle are once again most frequent, comprising 22% of the identified bones. Bird bones are extremely common; domestic fowl and goose together account for nearly a quarter of the assemblage. Cat bones were also frequent.

An examination of the features shows that the majority of the bone (n=499) was recovered from Group 26 (pitting north of the Undercroft). All but 15 of the cat bones were recovered from this Group, along with the majority of bird bones from the phase. Rat bones, possibly belonging to a single individual were also recovered from a pit fill (context 804) in Group 26.

Table 19: The Animal Bone: Species proportions (Phase 4.1)

Species	**Hand-recovered**	**Sieved**	**Total**	**% (NISP)**
Cattle	119	2	121	22
Sheep/goat (2 sheep, 1 goat)	84	1	85	15
Cat	58 (1)	19 (3)	81	15
Domestic fowl	50 (14)	7 (8)	79	14
Pig	46	10	56	10
Fish (cod identified)	12*	44	56	10
Goose	25 (17)	2 (5)	49	9
Rat (cf *rattus rattus*)	13		13	2
Corvidae-jackdaw	3	3	6	1
Horse	3		3	<1
Dog	1 (1)		2	<1
Deer (*dama*)	1		1	<1
Rabbit	1		1	<1
Cf field vole		1	1	<1
Cf wood mouse		1	1	<1
Corvidae- raven	1		1	<1
Blackbird	1		1	<1
Cf pheasant	1		1	<1
Total identified	452	106	558	
c-size	120	2	122	
sh-size	80	2	82	
Small mammal	2	25	27	
unident. mammal	56	33	89	
unident. bird	24	25	49	
unident		294	294	
Total	*724*	*487*	*1221*	

Where identification is not certain the number of 'cf' bones is included in brackets, next to the 'certain' id. However, it is included in the NISP calculation.

Slaughter Age of the Main Domestic Animals

Table 20: The Animal Bone: Epiphysial fusion in cattle (phase 4.1)

Cattle	**Phase 4.1**			
Age (months)	**Bone**	**Fused**	**Unfused**	**% fused**
by 10 months	Pelvis (acet) and scapula D	8	1	89
13-18 months	1st Phal P, Humerus D, Radius P, 2nd phal P	9	1	90
24-36 months	MetaC D, Tibia D, MetaT D	6	4	60
36-48 months	Femur P, Calc P, Radius D, Ulna P, Humerus P, Femur D, Tibia P	9	4	69
		32	10	76

Although the numbers of available epiphyses are low, they indicate that few cattle were slaughtered prior to the age of two, after which there was a moderate rise in mortality. Evidence from teeth suggests a slightly different mortality profile. Of seven MWS recorded, three are from animals with m1 erupting, therefore less than six months in age, using data from Silver (1969). The remainder are from adult animals with m3 present but not heavily worn, therefore perhaps aged just over three years old.

Table 21: The Animal Bone: Epiphysial fusion in sheep (Phase 4.1)

Sheep	**Phase 4.1**			
Age (months)	**Bone**	**Fused**	**Unfused**	**% fused**
by 10 months	Pelv (acet), scapula D, Humerus D, Radius P	14	1	93
13-16	1st Phal P, 2nd Phal P	4	2	67
18-28	Metac D, Tibia D, MetaT D	8	3	73
30-36	Ulna P, femur P, Calc P, Radius D	3	3	50
36-42	Humerus P, Femur D, Tibia P	4	3	57
		33	12	73

A small number of early, middle and late fusing bones are unfused, however the proportion increases slightly with age, indicating that more animals were slaughtered in their third and fourth years. Six MWS calculations, all from Group 26, are ranged between 31 and 42, which indicate animals of prime mutton age, with the third molar in wear. The third permanent molar erupts by 24 months in modern breeds (Silver 1969), which corresponds with MWS 22-28. Previous work has suggested that MWS 28-49 represent archaeological animals of between 3 ½ and 7 years old (Grant 1984, 504).

Seven withers heights were calculated from sheep/goat bones, from 0.54m to 0.65m. Most of the measurements (n=5) were within the range of 0.54m-0.57m. These may represent variations in the same population although it is possible that the two measurements at the upper end of the scale represent rams.

Table 22: The Animal Bone: Epiphyseal data in pigs (Phase 4.1)

Pig	**Phase 4.1**			
Age (months)	**Bone**	**Fused**	**Unfused**	**% fused**
12	Scapula D, Humerus D, Radius P, Pelv, 2nd Phal	5	3	63
24	Metac D, Tibia D, 1st Phal P	2	2	50
24-30	Calc P, metat D	0	2	0
36-42	Ulna P Humerus P, Radius D, Femur P & D, Tibia P	1	8	11
		8	15	35

Most of the pig bones were unfused, indicating that slaughter generally took place at an early age. It can be seen from the above table that even some of the early fusing bones were in an unfused state and the proportion increases with age, perhaps suggesting that there was a preference for young pork. Several neonatal bones were observed in deposits of this phase, perhaps suggesting that pigs were raised within the town. The MWS obtained are too wide in range to be particularly useful.

Domestic Fowl and Goose

Bones of domestic fowl and goose together comprised 23% of the identified bones. Domestic fowl bones were common and distributed across a wide variety of groups and contexts. Observations suggest that they varied in size, which may suggest that different varieties of fowl were present. A quarter of the bones were juvenile, which implies that they were raised locally. Most parts of the body are represented, with the exception of the distal part of the wing beyond the radius. These elements are small so this may be a recovery bias, alternatively it may imply that the wingtips were trimmed and discarded elsewhere.

Goose was about half as frequent as domestic fowl. A single juvenile bone was identified. However no skull and few dentaries were identified. There was a particular emphasis on bones from the wing (carpometatarsus, humerus and radius) and to a lesser extent, the lower leg (tibiotarsus and tarsometatarsus) suggesting portioning of the carcass.

Cat

Cat bones comprised 15% of the assemblage and were predominantly found in Group 26 (pitting north of the Undercroft). A small number of bones were also present in groups 7 and 27. Context 909 contained the partial skeleton of an animal younger than a year (Smith 1969). Context 906 contained bones representing the remains of at least 2 animals, one skeletally adult and one probably only a few months old (unfused humerus) (Smith 1969). A cat tibia had a swelling in the shaft, with a roughened surface. No butchery marks were noted on cat bones from this phase.

Butchery, burning gnawing and pathologies

Overall, beef made the largest contribution to the diet in this phase. Bones such as the mandible, scapula, radius and femur were particularly common. With the exception of the mandible all of these elements were heavily butchered and were also highly fragmented. The tibia and mandibles of sheep/goat were the most frequent elements.

In total, 45 cattle bones were butchered and the table below shows that cattle bones were more likely to be butchered than those of other species. A cattle hyoid has a cut mark, possibly occurring during slaughter. The condyle of a mandible had been cut through, probably during disarticulation of the jaw. The head of the femur and pelvis were a distinct focus for butchery, presumably occurring during disjointing of the carcass. Chopping had occurred on examples of all major limb bones, which also had fine cut marks, indicating filleting of the meat. Some mid-shaft breakage and splitting had taken place, possibly to facilitate marrow removal.

Table 23: The Animal Bone: Butchery marks in Phase 4.1

Species	Cut	Chop	Cut and Chop	Total	% of species
Cattle and cattle -size	42	64	7	113	47%
Sheep and sheep-size	27	18	4	49	29%
Pig	6	1		7	13%

Only seven bones were gnawed, amounting to 1% of the assemblage. Half were cattle and sheep bones, probably gnawed by dogs. Three were goose bones with puncture marks, which appeared to have been caused by cat teeth.

Five bones were burnt with the degree ranging from partial charring (suggesting cooking), light burning to full calcination. There were six pathological bones amongst Phase 4.1 bones, including the cat tibia already mentioned. These included a sheep/goat mandible with possible periodontal disease as evidenced by pitting and re-absorption of bone around the first molar. There was eburnation on the caput of a cattle femur, where it must have ground against the hip socket.

Phase 4.2 (1400-1550)

Group 4: Building 1 rebuild/extension.

A total of 37 bone fragments were recovered from late medieval deposits in Group 4. All were hand-recovered; there were no sieved remains. Sheep/goat are the most common species, however, it is such a small collection of bones that it has little interpretive value. A domestic fowl tibiotarsus was spurred, suggesting that it is likely to derive from a male bird.

Table 24: The Animal Bone: Species proportions (phase 4.2)

Species	Hand-recovered	% (NISP)
Sheep/goat	8	62
Pig	2	15
Dom. Fowl	1	8
Cat	1	8
Cattle	1	8
Total identified	13	
c-size	11	
sh-size	6	
unident	7	
Total	37	

Phase 5 (1550-1775)

Group 6: Deposits associated with the destruction of building 1, robber trenches and dumps of material, some of which was industrial; Group 9: an irregular feature in the principal yard of Area 1; Group 10: robber trench and wall of building 2; Group 17: Well, pit and wall in Area 2

Phase 5 yielded the largest quantity of bones. The bulk of the bone was recovered from Group 6, with much lesser quantities from Groups 9, Group 10 and Group 17. Group 6 consisted of deposits associated with the destruction of building 1 including robber trenches and dumps of material, some of which was industrial. The ceramic record indicates that the material may have been dumped in the area while demolition was taking place (D. Sawday *pers.comm*). No deposits were sieved therefore the small species are likely to be under-represented.

Table 25: The Animal Bone: Quantity of bones in each Group

Group	Description	No of fragments	% of assemblage
6	Demolition of building 1	1478	81
9	Irregular feature in yard of Area 1	179	10
10	Robber trench of building 2	165	9
17	Well, pit and wall in Area 2	8	1
Total		1830	

Table 26: The Animal Bone: Species proportions (Phase 5)

Species	Hand-recovered	% (NISP)
Cattle	212	23
Cat (incl. 38 cf cat)	188	20
Sheep/goat (3 sheep)	155	16
Dom. fowl (inc 30 *cf* gallus)	132	14
Pig (incl 12 *cf* sus)	95	10
Goose (incl 9 *cf* anser	64	7

anser)		
Rat (14 def. *rattus rattus*)	54	6
Deer (2 *cervus,* 17 *dama*)	19	2
Horse	3	<1
Dog	1	<1
Rabbit	1	<1
Duck (incl 2 *cf anas* sp)	5	<1
Gull	1	<1
G. plover	1	<1
Pheasant	2	<1
Pigeon	1	<1
Fish	8	1
Total identified	942	
c-size	279	
sh-size	180	
unident. bird	110	
Small mammal	57	
unident	261	
Total	1830	

Group 6 contained the greatest variety of species, not surprising given the far larger quantity of bones. No sieving was carried out therefore the numbers of smaller species are likely to be under-represented. The remains are predominantly the remains of food species but also contain commensal animals such, such as rat and cat.

Cattle, sheep and pig

Consideration of the relative proportions of cattle, sheep/goat and pig, when quantified by fragment number suggests that they account for 46%, 34% and 21% of the bones on the site, respectively. The Minimum Number of Individuals (MNI) was also calculated, indicating that cattle and sheep/goat both have an MNI of seven, while pig is four (39%, 39% and 22%). This suggests that the bones of cattle are more fragmented than those of sheep/goat.

Among the cattle bones femur and tibia are the most common bone, each represented by a minimum of 14 separate examples. The femur was represented mainly by fragments of the distal shaft, while the tibia fragments were mostly proximal. In neither case were there any complete bones and both elements were a particular focus for butchery. These factors hint that leg of beef was a preferred joint at the site. Humerus was relatively common too and was also heavily butchered. Mandibular elements were most common for pig, which may be a consequence of better survival or might hint that the edible head frequently found its way onto the site. A number of sheep/goat elements were common and were fairly evenly represented. These included scapula, radius, pelvis, tibia and metacarpal. With the exception of the metacarpal, these are the more 'meaty' bones, suggesting that the Phase 5sheep/goat at the site were the remains of meals rather than representing primary butchering or the remains from tawyering.

Slaughter Age of the Main Domestic Animals

Table 27: The Animal Bone: Epiphyseal fusion for cattle (Phase 5)

Cattle	**Phase 5**			
Age (months)	**Bone**	**Fused**	**Unfused**	**% fused**
by 10 months	Pelvis (acet) and scapula D	6	1	86
13-18 months	1st Phal P, Humerus D, Radius P, 2nd phal P	21	0	100
24-36 months	MetaC D, Tibia D, MetaT D	11	1	92
36-48 months	Femur P, Calc P, Radius D, Ulna P, Humerus P, Femur D, Tibia P	22	24	48
		60	26	70

An examination of the numbers of fused and unfused bones for cattle (table 13) suggests most animals survived until they were at least three years old. However, a substantial increase in the numbers of unfused late fusing bones suggests a peak in slaughter between the ages of three and four. This is consistent with the animals having reached the optimum size before they were driven to the market and may indicate that the animals were raised specifically for the urban market rather than being the surplus from the rural economy. However there are no corroborating mandibles. All the toothwear evidence was recovered from animals with deciduous teeth (MWS 2-3) in Groups 6 and 9. These animals are perhaps only 3 or 4 months old and are therefore likely to be veal calves. The lack of corresponding long bones suggests that there was a different disposal pattern for bones from these young animals. It is possible that the heads of the older animals were removed prior to the distribution of the meat, whereas the veal calves may have been bought with heads intact. Although this explanation still leaves the question of the whereabouts of the rest of their skeletons.

Table 28: The Animal Bone: Epiphyseal fusion for pig (phase 5)

Pig	**phase 5**			
Age (months)	**Bone**	**Fused**	**Unfused**	**% fused**
12	Scapula D, Humerus D, Radius P, Pelv, 2nd Phal	5	3	63
24	Metac D, Tibia D, 1st Phal P	5	7	42
24-30	Calc P, metat D	1	2	33
36-42	Ulna P Humerus P, Radius D, Femur P & D, Tibia P	1	9	10
		12	21	36

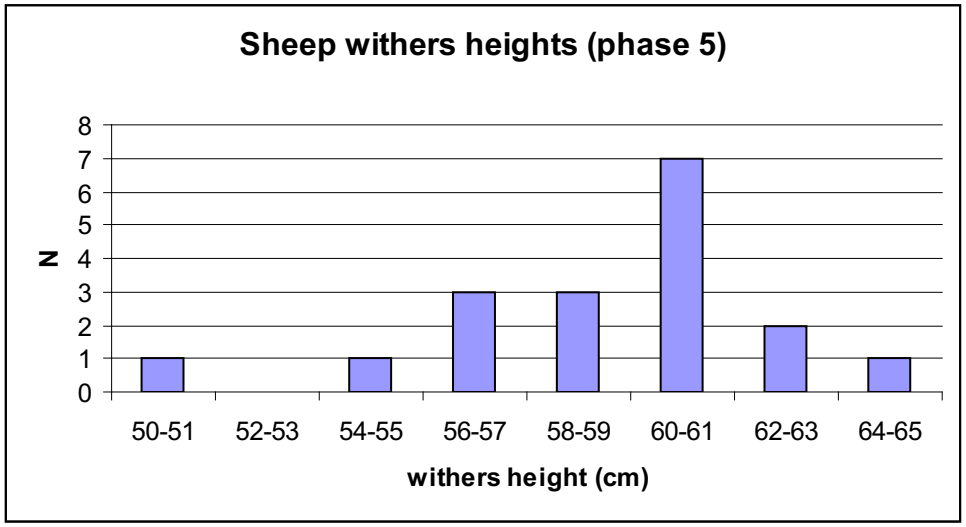
It is unsurprising that a greater proportion of pig bones are unfused than cattle or sheep. Table 14 suggests that few pigs reached skeletal maturity. The dental evidence is more mixed. It was possible to categorise seven jaws by age. Two of these were immature (second molar not in wear) and a further three were sub adult (molar 3 not in wear). However, two were from mature adult animals. These are probably over the optimum age for slaughter and may provide circumstantial evidence of urban pig keeping, perhaps representing older sows kept for breeding.

Table 29: The Animal Bone: Epiphyseal fusion for sheep/goat (Phase 5)

Sheep	Phase 5			
Age (months)	**Bone**	**Fused**	**Unfused**	
by 10 months	Pelv (acet), scapula D, Humerus D, Radius P	30	0	100
13-16	1st Phal P, 2nd Phal P	4	0	100
18-28	Metac D, Tibia D, MetaT D	20	3	87
30-36	Ulna P, femur P, Calc P, Radius D	8	2	80
36-42	Humerus P, Femur D, Tibia P	6	1	86
		68	6	92

The pattern of epiphyseal fusion for sheep suggests that few animals were slaughtered prior to skeletal maturity. The three Mandible Wear Stages (MWS) recorded (37, 37 and 35) support the fusion evidence, as all three molars are in wear and therefore they derive from adult animals. These results suggest that the sheep were not primarily keep for meat and may indicate that wool was also an important product.

A total of 18 withers heights were calculated from sheep/goat bones, ranging from 0.52m to 0.65m (figure 1). The measurements peak (n=7) within the 0.60-0.61m range.



Deer

A total of 17 bones identified as fallow deer were identified amongst the Phase 5 assemblage. Most of the bones were fused but a pelvis was unfused. They were from the fore and hind limbs, pelvis and vertebra and there were two phalanges. The bones represent a minimum of two animals. The lack of skull elements may suggest that primary butchery had occurred away from the site and that the bones were brought in as joints of meat. The phalanges are more difficult to explain, as these would normally be removed during primary butchery. Butchery marks were noted on the scapula, humerus, pelvis and tibia, seeming to result both from disarticulation and filleting of

meat. The bones are widely distributed within 11 different contexts. A red deer humerus and metacarpal were also identified.

Domestic fowl and goose

Domestic fowl and goose bones together comprised 21% of the assemblage. Domestic fowl was twice as common as goose. Both types of bird were abundant in Group 6 but present in smaller numbers in groups 9 and 10. There were no goose skulls but a small number belonging to domestic fowl were observed. All parts of the domestic fowl skeleton was represented but humerus, femur, tibiotarsus and tarsometatarsus were twice as common as the rest of the skeleton. Among the goose bones, there were a greater number of carpometarsus and tibiotarsus. There are clear differences in the age structure of the birds. A third of domestic fowl epiphyses were juvenile but there were no juvenile goose bones.

Cats and Rats

Cat bones comprise a substantial proportion of the identified assemblage, 20%. They were recovered from 15 different deposits, mostly within Group 6 but isolated examples were also recovered from Group 9 and Group 10. The bones were mostly found in small numbers representing only isolated bone elements or sometimes what appear to be partially articulated limbs. Particular concentrations of cat bones were noted in demolition layers (600) and (792). Context 792 produced 95 cat bones representing a minimum of two animals (MNI: mandible, femur, calcaneum and tibia). All parts of the body were represented and the bones were fused, suggesting that these were adult animals whose carcasses had been deposited either whole or at least partially articulated. Two mandibles bore fine cut marks on their basal surface, which suggests that the animals were skinned. Another layer (600) contained 57 bones, representing a minimum of 4 individuals (MNI: humerus). The wide range of skeletal elements, often appearing to be 'pairs', suggests that these animals were deposited whole or at least partially articulated. There are no phalanges or smaller elements but this is almost certainly due to the fact that this deposit was not sieved. There was one young animal present; the unfused bones suggest an age of less than 8 ½ months (Smith 1969). Evidence from the mandibles suggests that at least one of the animals was quite elderly; most of the teeth have fallen out or broken and the sockets partially healed. A cut mark was observed on the basal surface of another mandible. A pit deposit (507) contained a skull and mandible with adult dentition. This animal appeared to have suffered an accident or been mistreated. There was a possible fracture to the upper orbit and the facial bones were misaligned, which looks like pre-mortem damage. In addition, there were two apparent blows to the top of the skull and cut marks on the frontal. There were also possible cut marks on the basal part of the mandible.

Significant numbers of rat bones were recovered from six contexts among Group 6 deposits, with a particular concentration in context 606. These are likely to be under-represented due to lack of sieving. These were identified as black rat (*rattus rattus*), on bones where species could be distinguished. All parts of the body were represented

and a number of bones were unfused, suggesting that many of these rats did not survive to adulthood.

Butchery, burning and gnawing

A total of 50 bones, comprising 3% of the Phase 5 assemblage, were gnawed. Two thirds (n=34) belonged to the main domesticates; predictably the more meaty bones were apparently gnawed by dogs. However, a quarter of the gnawed bones (24%) belonged to domestic fowl and goose. Some had puncture marks that may have been caused by cat teeth, but others had unusual striations, which may possibly have resulted from the attentions of rodents. Four fragments were burnt, all belonging to cattle, sheep and pig; one was partially charred and the rest were completely calcined.

Butchery marks were widely distributed across the cattle carcass but there seems to be particular emphasis on the humerus, femur and tibia. Sheep, cattle and pig bones displayed a higher number of chop marks than cut marks, which indicates extensive use of cleavers. Ribs of cattle and sheep generally bore cut marks, although some cattle size ribs had also been chopped, presumably during division of the carcass. Almost all the butchered vertebrae of cattle and sheep (including cattle-size and sheep-size) were chopped sagitally, which suggests that butchery was carried out in professional premised with facilities for hoisting the carcass. Bird bones exhibited a few butchery marks but in all but one case these were cut marks, implying that this took place during the preparation of the carcass for cooking. A single goose tarsometatarsus was chopped, probably to remove the lower legs during preparation of the carcass.

Abnormal Bones

Pathological bones were comparatively rare; there were only 10 examples from the Phase 5 assemblage, including the damaged cat skull already described. A cat mandible had lost some teeth, the partially healed over sockets suggesting that this happened some time prior to death. A pig metatarsal had an abnormally swollen shaft. The bone was fairly smooth and did not look like a healed fracture so may possibly represent an ossified haematoma. A similarly distorted bone was noted amongst the phase 3.2 assemblage. A pig mandible had an abnormal deep pit below p4. Unusual extra bone formation was noted on a sheep/goat radius. A sheep horncore had a thumb-sized depression, an abnormality that has been linked with malnutrition and milking stress (Albarella 1995). A goose tibiotarsus shaft was bent, possibly suggesting a nutritional deficiency such as rickets. Pitting and distortion was noted on two cattle size vertebra and cattle sacrum.

Phase 6: Modern (1750+)

Group 12: yard zone. Pit 585 and demolition layer 524.
Group 11: building 2 zone, pits 520, 593

Table 30: The Animal Bone: Species proportions (phase 6)

Species	**Hand-recovered**	**%**
Sheep/goat (1 goat)	39	29
Domestic fowl (incl 9 *cf*)	32	24
Cattle	28	21
Pig	18	13
Goose (incl 2 cf)	7	5
Deer- fallow	4	3
Cat	1	<1
canid cf. fox	1	<1
Corvidae- cf jackdaw	1	<1
Duck	1	<1
G. plover	1	<1
fish	1	<1
Total identified	134	
c-size	62	
sh-size	51	
unident. bird	8	
unident	100	
Total	355	

There were a relatively low number of identified bones (38%) in the modern assemblage, which were all hand-recovered (Table 16). The assemblage is mostly composed of domestic animals. Sheep/goat and domestic fowl bones are particularly common. The bones are mostly from Group 11, with a lesser number from Group 12. Although it is a small assemblage, Group 12 bones are dominated by domestic fowl, along with lesser numbers of goose, sheep and cattle. This is particularly significant as domestic fowl are likely to be under-represented, due to the lack of sieving. Three domestic fowl bones were blackened with a burnt residue adhering to them.

The Group 11 pits contain a far wider range of species, including fallow deer, goat, golden plover and jackdaw. However, the main domesticates are most prevalent, with cattle particularly so. There was little available ageing information for cattle and only a little more for sheep/goat. Just over a quarter of the sheep/goat bones were unfused, these were a mixture of middle and late-fusing elements. The presence of a small number of young animals is supported by toothwear from pit 593, with contained the mandible of a juvenile animal as well as an adult sheep. Two complete bones from pit group 11, yielded withers heights of 62.02 and 63.33cm, which fall into the same range observed in Phase 5 (figure 1). A few calcined sheep/goat bones were recovered from pit 593 (Group 11), suggesting a mixed source for this debris.

Discussion

In the Roman period the *insula* on which the site is located was situated directly opposite the eastern edge of the Forum. The site had an equally prominent location within in the medieval town, at the intersection of the former High Street and Holyrood Lane (now Highcross Street/St. Nicholas Place/Applegate and Guildhall Lane). The southern (Holyrood Lane/Guildhall Lane) street frontage was occupied by an 11th- or 12th-century undercroft structure, which survived since the mid-19th century as a cellar. Unfortunately, relatively small amounts of animal bone were retrieved from the early phases at the site. The bulk of the assemblage was recovered from Phase 4.1 (1275/1300-1500AD), associated with intensive pitting activity and Phase 5 (1550-1775), which appears to represent abandonment. The later animal bone from the excavations has particular importance because good post-medieval assemblages have been so far rare in Leicester. This work has therefore provided an opportunity to examine material from an under-represented period. Study of the bones suggests more intensive activity in the post-medieval periods at the site, perhaps reflecting a change in the use of the site and suggesting that it was not kept so clean as in earlier periods.

The greatest species variety was observed in Phase 4.1 and Phase 5, which contained the largest numbers of bones. Similarities and differences between these phases are interesting, although they are not easily comparable because Phase 5 deposits were not sieved. In this phase there seems to have been intensification of activity represented by the quantity, range and variety of food waste recovered in the features in addition to an increase in waste from craft activities, and a greater number of scavenging creatures. All these factors point to the increased use of the site as somewhere to dump rubbish from nearby plots.

There is a generally low incidence of gnawing in the assemblage. This is even the case in Phase 5, where more gnawing was anticipated but only 2% of bones were affected. It is impossible to know how many bones might have been completely destroyed by gnawing and are therefore unrepresented, but it does seem that bones were deposited fairly quickly in all phases and were not widely available to dogs. There was very little burnt bone in the assemblage; comprising only 0.5% of the entire hand-recovered assemblage. As with most archaeological assemblages pathological specimens were few in number. They were most frequent in Phases 4.1 and 5, which contained the highest number of bones.

Domestic species

The majority of the bones represent the remains of domestic animals and birds. Cattle and sheep/goat were well represented in all phases. The relative proportions of species vary (in terms of fragments) but in most phases the actual numbers of bones are low, making comparisons between phases problematic.
The cattle in most phases appear to have been horned, which is consistent with observations made at other Leicester sites, such as Causeway Lane (Gidney 2000) and Bonners Lane (Baxter 2003) and no evidence for polled cattle was seen. However, horncores were mostly fragmented; a complete example found in Phase 4.1 is of the shorthorn type. The lack of whole bones precluded a study of stature, which is

disappointing as the identification of 'improved' stock is particularly important in the study of post-medieval animals. Examination of the toothwear and epiphyseal fusion data suggested that in Phase 5 most cattle were slaughtered over the age of three, however a significant number of calves around the age of 6 months were identified. This is similar to 17th century evidence at Little Lane (Gidney 1991), where a significant increase in the proportion of calves was noted compared with 16th century deposits suggesting that dairy and veal was becoming more important in the diet. However, at St Nicholas Place a less pronounced but similar pattern was also observed among the earlier Phase 4.1 (1275/1300-1500) bones. This may represent the change in cattle husbandry which has been observed in both in Leicester and other urban centres from the late medieval period, which appears to suggest increasing specialisation and possibly even urban dairying (Gidney 2000, 177).

Horncores provided the only positive evidence for goat (Phases 3.1, 4.1 and 6) at the site. Goat and sheep bones are notoriously difficult to distinguish, particularly when in a fragmented state. Although goats may therefore be under-represented, evidence from other Leicester sites supports this scarcity. As at St Nicholas Place, horncores and metapodials are the most common evidence for goat (although it should be noted that these are also the most easily recognised elements). This has led to suggestions that goats may have been brought in as skins, with the skulls and lower legs attached (Gidney unpublished). In the absence of more positive evidence it is probably fair to assume that the majority of small ungulates at the St Nicholas Place are likely to be sheep, in keeping with the lowland landscape of much of Leicestershire. In Phase 4.1 sheep/goat appear to have been slaughtered in their third or fourth year. In Phase 5, there is scant evidence for sub adult animals and the animals seem to have slaughtered at an older age.

Pigs were relatively common in all phases suggesting that pork comprised a stable component of the diet. Few fully adult pigs were observed, suggesting that these animals were generally slaughtered as soon as they were large enough to eat. A small quantity of neonatal bones in Phase 4.1 may hint that they were bred within the town during this period. Such observations have previously been made at other sites such as Causeway Lane (Gidney 2000) and York Road (Browning unpublished). In Phase 5 a small number of older animals (beyond prime meat age and therefore possibly kept for breeding) lends further weight to this suggestion.

Horse bones appear as isolated elements in all phases except Phases, 1, 4.1 and 6. Dog bones are even less common; single fragments were present in Phases 4.1 and 5 and it is likely that these bones have become incorporated into the deposits accidentally.

Cat

Cat bones are unusually common at St Nicholas Place. Cats were present in deposits of Phase 3.1, 3.2, 4.1, 4.2, 5 and 6. There were particular concentrations in Phase 4.1 but even greater emphasis in Phase 5, with cats comprising 20% of the assemblage. There is evidence that some of the Phase 5 examples were exploited for their pelts, implying that there was a nearby cottage industry in cat fur, which is likely to have started prior to 1500 and continued into the post-medieval period. Fine skinning marks were recorded on eight mandibles from the site. Two thirds of the bones were probably from cats aged less than 18 months, suggesting a general low life

expectancy. Concentrations of immature cats provide indirect evidence that the animals were exploited for their skins and this is a characteristic observed in similar deposits in other towns, such as Kings Lynn and Exeter (Serjeantson 1989, 131). However, at least one older animal was recovered, suggesting that the animals were not all purpose-bred. The discarded corpses, probably partially articulated, were dumped on the presumably abandoned site, alongside domestic food refuse. The remains do not seem to be waste from a specialised furrier, as animals with a higher fur value such as hare and fox or rabbit were not present. This hints that the animals were procured from inside the city rather than from the surrounding countryside. Young cat bones are not unknown from Leicester; a cat mandible with deciduous dentition was recovered from a 17th century context in the Undercroft excavations (Baxter unpublished). The medieval and post-medieval phases at Causeway Lane produced similar proportions of cat to St Nicholas Place (Gidney 2000, 327) where they were also interpreted as the waste from skins.

Domestic Birds

Goose and domestic fowl were quite prevalent at St. Nicholas Place; bones of one or both were present in all phases except the very small Phase 1 assemblage. They are likely to be primarily domesticated stock. Geese and domestic fowl are particularly well represented in phases 4.1 and 5 but in both of these phases are only half as common as domestic fowl. A significant number of domestic fowl from Phase 4.1 and Phase 5 were juvenile but most of the goose bones were from adult birds. It seems probable that domestic fowl were kept either on the plot or in its close vicinity, where they would have been valued for their eggs as well as their meat. Geese however, require a little more space and may well have been purchased as adult birds. This parallels the findings from two 12th-13th century pits in the Undercroft excavations, where domestic fowl was twice as frequent as goose and included a high proportion of immature remains and females in egg laying condition (Baxter Unpublished). Duck is rare at St. Nicholas Place, appearing only in Phases 5 (post-medieval) and 6 (modern).

Fish

Fish bones occurred in Phases 3.1 and 3.2, Phase 5 and Phase 6 but were most frequent in Phase 4.1 (1275/1300-1500), comprising 10% of the assemblage. These were mostly recovered during sieving however several large specimens were retrieved from among the hand-recovered assemblage. Where identified, they were mainly found to consist of cod and herring. Fish bones are associated with occupation and often with high status households.

Wild Mammals

Wild species form a very small proportion of the total assemblage and only a small proportion of them were exploited for food. Deer bones occur rarely in Phases 3.2 (antler only), 4.1 and 6 and are most numerous in Phase 5. Fallow was the most common deer species although two red deer bones were also recovered from deposits in this phase. Butchery marks clearly indicate that the carcasses were exploited for their meat. Antler was a valuable raw material for the production of objects.

Rodents

Several commensal species were identified, chief among them rat. These would have lived alongside the townspeople and were undoubtedly attracted by the food possibilities of the urban environment. The earliest phase that rat appears at the St Nicholas Place site is in Phase 4.1 (1275/1300-1500), and two bones provisionally identified as Black Rat were found in medieval deposits during the previous excavations in the Norman Undercroft (Baxter unpublished). Rat was most prolific in Phase 5 (1550-1775), where it comprised 6% of the identified assemblage. Although rats would have lived amongst the urban dwellers, the increased proportion perhaps suggests that there was a greater quantity of discarded material on the plot in this phase. No definite evidence of Brown Rat was found at the site, which probably displaced the Black Rat by about 1750 (Lovegrove 2007, 220). Smaller rodents were rare; mouse and vole were both represented in Phase 4.1 but not observed elsewhere in the assemblage. Rodent remains occurred in most of the medieval deposits at the earlier Norman Undercroft excavations, with house mouse being most frequently found (Baxter unpublished).

Wild Birds

Bones identified as plover (*pluvialis* sp.) were recovered from Phases 5 and 6. Pheasant, pigeon and duck (Phases 4.1 and 5) probably also contributed to the diet in a minor way. The *corvidae* bones at the site have been identified as jackdaw and raven. These birds are likely to have exploited the urban environment for food. Raven is thought to have been a common urban scavenger prior to the industrial revolution and raven bones have been found in Roman and Saxon deposits at Lincoln and in medieval ones at York (Dobney et al. 1993, 52). Until the end of the medieval period it was a punishable offence to kill a raven because of the beneficial effect of their scavenging on the urban environment (Lovegrove 2007, 164). There have been several identifications in Leicester too, for example at Causeway Lane (Gidney 2000) and raven has also been observed in medieval deposits from Freeschool Lane, Leicester (currently under analysis). A raven skeleton was found in an undated context at York Road, Leicester (Browning unpublished).

The Worked Stone Anthony Gnanaratnam

Notable Architectural Fragments

Context 521 – An architectural fragment of probable Norman date with billet moulding, Danehills sandstone, included within the fabric of wall 522 (Building One, Phase 4.1). This dateable fragment may relate to St Martin's church and fragments of billet moulding visible in the nave by the north side of the nave beside the chancel arch.

Unstratified – A colonette fragment in Danehills sandstone. This is broadly medieval in date but it is not possible to assign this to a specific period, and may relate to church rather than to domestic architecture.

Context 987, SF 106 – an octagonal shaft fragment, possibly of shelly oolite, incorporated into the fabric of wall 986 in Building Three (Phase 4.1). This is medieval in date and may be of ecclesiastical rather than domestic architecture.

Architectural Fragments of Secondary Interest

Context 780 – a rough squared block with small lewis/cramp hole or similar, of sandstone. Probably not datable, this piece is of interest only in terms of the lewis/cramp hole.

?Context 1400 – three paving slabs or fragments of either sandstone or ironstone. These derive from a 19th-century drain built into the undercroft building and so are unlikely to be of interest.

Architectural Fragments of Little/No Interest

Context 521 – a rough squared Danehills sandstone block with three very small holes, of very low interest.

Context 1400 – a possible angled fragment or else random breakage of sandstone or ironstone.

Additional Items

Context 944 SF 100 and Context 944 SF100 – 2 rotary quern fragments, probably of Roman date.

Context 883 – a probable mortar fragment, medieval, of oolitic limestone. Comparable examples have been found on other excavations in Leicester.

Comments

There are three fragments from the assemblage which are of architectural interest, and which may derive from St. Martin's church as a result of one of its various phases of rebuilding. Two of these pieces (from contexts 521 and 987) derive from buildings constructed in Phase 4.1 (*c.*1275/1300-1500) and so may provide some indication of the dating for this phase of church rebuilding work.

Table 31 The Worked Stone

CONTEXT	FEATURE NO.	SF NO.	*DATE*	NOTES
521	wall 522	-	1300-1550	*Arch fragment with billet moulding, Daneshill sandstone. Potential good – datable. May relate to St Martin's, fragments of billet moulding visible in nave by north side of chancel arch.*
521	wall 522	-	1300-1550	*Rough squared block with three very small holes, Danehills sandstone.*
U/S	-	106	-	*Colonette fragment, Danehill sandstone. Potential good, not very datable. Medieval likely to relate to church rather than domestic architecture.*
780	oven/kiln 793	-	1175-1299	*Rough squared block with small lewis/cramp hole or similar, sandstone. Potential – low, probably not datable, interest only in the lewis/cramp hole.*
883	-	-	1450-1550	*Probable mortar fragment, oolitic limestone.*
944	-	100	?	*Two rotary quern fragments*
987	wall 986	106	1450-1550	*Octagonal shaft fragment, shelly oolite? Potential good – probably datable. Medieval, likely to relate to church architecture than domestic.*
?1400	wall 1358	-	1050-1299	*Possible angled fragment or random breakage, sandstone/ironstone. Potential inspection needed to see if genuine and low otherwise none at all.*

The Small Finds Siobhan Brocklehurst and Nicholas J. Cooper

(with conservation by Graham Morgan, bone identifications by Jennifer Browning and archive photography by Heidi Addison).

Introduction

Diagnostic objects of copper alloy, iron, worked bone and glass have been arranged into Roman and medieval sections and then by functional category according to Crummy (1983).

Roman Period Finds

All but two of the diagnostic finds of Roman date came from road surface (1080) forming a 'cache' of objects which appear to have been deposited as a group, perhaps contained in a leather bag or wooden box, bound with leather and decorated with studs, that became embedded in the surface and appears to have been subject to burning (indicated by traces of burnt leather and calcined bone objects) as well as subsequent mineralisation, which caused the items to fuse into a single mass. The 'cache' group (Sfnos.114a-14m) comprises 13 individual items, six of copper alloy, one of iron, two of bone, two of glass, one of stone and a fragment of mineralised wood. The copper alloy objects comprise a swastika brooch, a small finger ring, two circular studs, a counter-sunk perforated disc and a hollow hemisphere with a protruding tang. Together with a small curving iron blade, the group would appear to form a metalworker's bag of scrap, perhaps, but the remaining items do not have any intrinsic financial value and all look more like personal keepsakes or alternatively had amuletic significance. These items comprise a bone hair pin of Crummy Type 1, a countersunk bone gaming counter together with two plano-convex glass gaming counters and an ovoid white quartz pebble. Also from the same road surface, but not clearly associated with the 'cache' group, was a slate cosmetic palette (sfno.111) and a copper alloy key handle (sfno.113). The dating of the group relies heavily on the presence of the swastika brooch as the counters are not closely datable. The hairpin would suggest a date in the 2nd rather than the 3rd century which would not be inconsistent with the presence of the key or the mixing palette, whilst the knife blade would appear to have been long-lived. The pottery from the road surfaces also indicates a 2nd-century date (Johnson, Appendix 1 above).

Plate 17: Roman 'cache' objects

Plate 18: Roman 'cache' group

Plate 19: Roman 'cache' group showing Cu object and quartz pebble (SF114j)

Category 1: Objects of personal adornment or dress

Brooch

SF114a: (1080) Cu Alloy plate brooch in the form of a swastika. Arms of triangular section, one bent and the tip of another missing. Sprung pin held between square lugs and a triangular catch plate set transversely. Width 29mm. An unusual plate brooch of 2nd-3rd century date. One is recorded by Richard Hattatt from Syria (Hattatt 2000; fig 216.1145) and another is known from Corbridge (Richmond 1969, 300-303, fig.106.108) originally published in 1912-13.

Plate 20: Roman swastika brooch (SF114a)

Hairpins

SF114f: (1080) Bone hair pin of Crummy Type 1 (Crummy 1983, 20; fig 17.113). Calcined and fragmented into four pieces. Tapering, with a slightly conical head. Lower shaft missing. Length 54mm. Hair pins with tapering shafts (Types 1 and 2) date from the middle of the 1st century to *c*.200.

SF107 (1013) Bone hair pin tapering polished shaft fragment. Probably of Crummy (1983) Type 1 or 2.

Finger ring

SF114b: (1080) Cu A. Plain hoop, D-shaped section with an internal diameter of 10mm. Rather small to be a finger ring, unless for a child. Similarly small examples are known from Colchester (Crummy 1983, 161-2; fig 197.4396).

Category 2: Toilet, Surgical or pharmaceutical instruments

SF111 (1080) Slate cosmetic mixing palette. Rectangular with bevelled edges which are slightly tapered. Both surfaces polished and bear linear knife blade scratches, perhaps indicating use as a cutting surface. Length 116mm, width 82mm, thickness 9mm. Neither surface bears any hollowing out from prolonged circular mixing action as seen particularly on the lower surface of a similar example from Colchester (Crummy 1983, 58, fig 62.1867) found in a context dated to *c*.AD60-80.

Category 5: Objects use for recreational purposes

Counters

SF114g: (1080) Opaque, round, white, glass counter of plano-convex section. Diameter 16mm. A white example came form Colchester (Crummy 1983, 92-3; fig 95.2286) whilst a dark glass example with a white patinated surface came from Causeway Lane, Leicester (Cooper 1999, 270, fig.131,156).

SF114h: (1080) Opaque, round, white, glass counter of plano-convex section stained green from surrounding copper. Diameter 16mm. Parallels as above.

SF114i: (1080) Plain bone countersunk gaming counter of Colchester Type 1 (Crummy 1983, 91-2; fig 94.2256). Small central indentation from a lathe centre. Calcined to black and white. Diameter 19mm, thickness 5.5mm. Interestingly, the sides of the counter are straight rather than bevelled; perhaps indicating that a different bone, besides a cattle long bone, was being used. Similar counter from Causeway Lane, Leicester (Cooper 1999, 272-3; fig 131.162).

SF114j: (1080) Clear white ovoid quartz pebble. Length 32mm, width 19mm.

Both bone and glass counters appear to occur throughout the Roman period and their function and chronology has been discussed at length elsewhere (Cooper 1999, 270; Crummy 1983, 91).

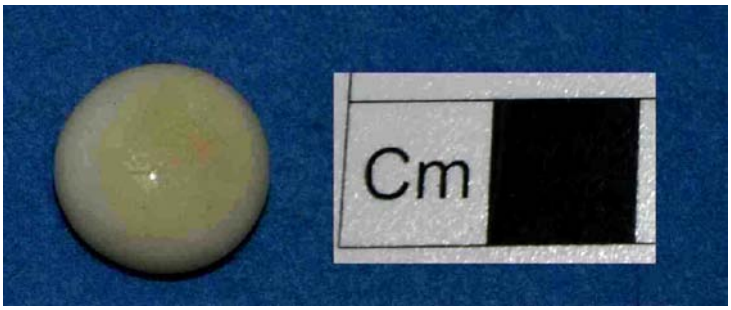


Plate 21: Roman glass counter (SF114g)

Plate 22: Roman 'cache' group showing bone gaming counter (SF114i)

Category 10: Tools

SF114*l*: (1080) Iron knife blade belonging to Manning's Type 23 (Manning 1985, 118, fig.29 and pl.56.Q66-67) with tang continuous with a concave back. Blade edge convex. Length 70mm, blade depth 25mm. This is an unusual blade shape and Manning identifies it as an Iron Age type which continues into the Roman period; the two small parallels cited above both coming from Hod Hill and the latest dated example from Newstead coming from a late Flavian context.

SF131 (1345) Area 3 demolition deposits. Iron. Fragment probably from the handle of a knife or other tool. Broken form main part of the implement. Flat, slightly tapering, profile. Terminal rounded with a small suspension hole centrally. D-shaped ring in situ through the loop. Tail of the 'D' broken and presumably would have continued to form a hook for hanging. Typologically the form of the suspension hole does not fit any of the knives in the British Museum (Manning 1985, 108; fig.28) which are more open and wider than the handle.

Category 11: Fasteners and fittings

SF113: (1080) Cu alloy key. Trilobate handle with constricted knob terminal, above two tapering, rectangular mouldings and a hollow circular shaft accommodating an iron shank (now missing). Length 66mm, width 32mm. A very similar example came from Vine Street, Leicester (Cool 2009, 192, fig.66.169) from a 4th-century deposit and the form is known to have been made from the later 2nd century onwards (Crummy 1983, 126; fig 142.4161).

Plate 23: Cu alloy key (SF113)

SF114c: (1080) Cu alloy. Countersunk disc with a large central perforation. Diameter 40mm, diameter of perforation 8mm.

SF114d: (1080) Cu alloy stud with convex head and part of integral, tapering shaft. Diameter 42mm. Residue of organic material (leather?) on the concave side. Unusually large example of similar size to a flat-headed stud from Causeway Lane, Leicester (Cooper 1999, 277-8; fig 135.199).

SF114e: (1080) Cu alloy stud with convex head and integral tapering shaft. Diameter 42mm. Remains of leather attached to concave underside. This may indicate that the two studs decorated a box bound with leather.

SF114*k*: (1080) Cu alloy. Hollow hemispherical sheet fitting with tang through one side. Diameter 25mm, height 20mm.

SF114*m*: (1080) Mineralised wood fragments. One of circular section; diameter 10mm, length 40mm. Second of rectangular section, with slots cut longitudinally. Width 10mm.

Medieval and later Finds

Category 1: Objects of personal adornment or dress

Brooch

SF55 (506) Copper alloy annular brooch. Pin missing. Upper surface decorated with a continuous string of eleven oval mouldings. Diam: 23mm. Decoration paralleled by an example from London of Ceramic Phase 9 dated 1270-1350 (Egan and Pritchard 1991, 249-250, fig.160.1311).

Buckles

SF61 (639) Double oval buckle frame with a central bar, cast as one but pin missing. Outer edges decorated with pin rests comprising a large central knop flanked by two smaller ones. Length 32mm. Double oval buckles are common during Ceramic Phase 11 and 12 (*c.*1350-1450) in London (Egan and Pritchard 1991, 82-83, fig. 332) and continue into the 16th and 17th century (Egan 2005, 35, fig.17), most of which are plain. The pin rest moulding is paralleled by a D-shaped buckle from London from a deposit dating *c.*1630-1650 (Egan 2005, 36, fig.18.100).

SF73 (507) Lead-tin shoe buckle. Circular frame with a central bar; pin missing (usually of iron wire). Diameter 24mm. Trace of decorative beading around outer edge as in example from London (Egan and Pritchard 1991, 66, fig. 40.227). All the London examples come form early 15th century deposits (Ceramic Phase 12).

Finger ring

SF16 (584) Finger ring comprising simple cast hoop of D-section, similar to medieval examples from London (Egan and Pritchard 1991, 331-332, fig.217.1626). Int. Diam. 16mm.

Dress pins

Six complete and three damaged dress pins were recorded with solid or wound wire heads and slender tapering shafts. The proportions of the head and shaft suggest these

examples are of late 14th-century date in accordance with those from a deposit of this date from London containing both head types (Egan and Pritchard 1991, 301, fig.200). The 14th century saw a vast increase in the manufacture and use of pins as hair and dress accessories due to the greater availability of drawn wire and the fashion for tightly plaited hair and veils.

SF3 (507) Dress pin. Copper alloy with flat, wound wire head. Length 38mm, width of head 2mm, width of shank 1mm.

SF72 (507) Dress pin. Copper alloy with wound wire head. Length 45mm, width of head 2mm, width of shank 1mm.

SF21 (584) Dress pin. Copper alloy with solid spherical head (now separate). Length 44mm width of head 3mm, width of shank 0.75mm.

SF84 (600) Dress pin. Copper alloy with wound wire head. Length 40mm, width of head 1.5mm, width of shank 1mm.

SF98 (622) Dress pin. Copper alloy with wound wire head. Lower part of shank bent. Length 35mm, width of head 2mm, width of shank 0.75mm.

SF68 (709) Dress pin. Copper alloy with wound wire head. Length 33mm, width of head 2mm, width of shank 0.75mm.

SF26 (530) Dress pin. Copper alloy with solid spherical head. Upper shaft and head only. Preserved length 18mm, width of head 2mm, width of shank 1mm.

SF27 (530) Dress pin. Copper alloy with solid spherical head. Upper shaft and head only. Preserved length 17mm, width of head 2mm, width of shank 1mm.

SF91 (606) Dress pin. Copper alloy with solid spherical head. Upper shaft and head only. Preserved length 23mm, width of head 3mm, width of shank 1mm.

Lace chape

SF95 (869) Lace chape. Tapering tube of copper alloy sheet, damaged at both ends. Length: 19mm, width 2mm. Used to reinforce the ends of laces of leather or textile and became more common from the 14th century onwards as laced clothing became more fashionable (Egan and Pritchard 1991, 281-90)

Hooked clasp

SF47 (602) Hooked clasp, cast in one piece, with a hook set longitudinally at one end and the other terminal rolled over to form an eyelet. Central moulding is asymmetrical with a perforation. Length 26mm. This was probably one of a pair set at either end of short chains or straps and used to attach items of clothing. Whilst not closely paralleled by any of the examples from London, designs seem very variable and the fashion for them fairly short-lived, from the late 15th to mid/late 16th century (Egan 2005, 43, fig. 25. 152-55).

Wig Curler

SF139 (790) Wig curler. Ceramic. Hour-glass shaped in solid pipeclay. Similar example from Empingam, Rutland (Fraser 2000, 114, fig 53.35). Length 55mm, max. width 12.5mm. The wearing of wigs began during the reign of Louis XIV and continued in to the early 19th century. This example probably dates to between 1690-1730 (Le Cheminant 1978, 188). A second example of a wig (or hair) curler fragment came from (956) dated by the associated clay pipes to 1690-1720 (Higgins below)

Category 2: Toilet Implements

SF93 (678) Ivory Comb. Double-sided comb of simple standard form with fine teeth (six per 10mm) on one side and coarse teeth (two per 10mm) on the other. One straight-sided end (slight tapering) preserved with about three quarters of the solid zone intact and about half the teeth remaining on each side. Guideline for the fine teeth visible on one side and, for the coarse teeth, on the other side. Profile of the end and the teeth is flat but tapered to a rounded point. The broken edge of the solid zone is rounded and polished, suggesting that the comb remained in use for a considerable time after its initial breakage. Preserved length 87mm, width 115mm, thickness 5mm.

Whilst a few medieval examples of ivory, rather than wooden, combs are known from London before the end of the 16th century, they were prohibitively expensive items due to the rarity of the material (Egan and Pritchard 1991, 366-376; fig. 249.1754). However, during the 17th century as access to elephant and walrus ivory became easier, this became the commonest material, eclipsing the use of wood (Egan 2005, 64-65, nos.295-97).

Category 3: Objects used in the manufacture or working of textiles

SF99: (910) Textile / Linen.

SF170 (591) Copper alloy (brass) thimble with flattened domed head. Machine-made with uniform pits arranged in a single spiral; plain band around base and rim bead. Height 20mm, base diameter 18.5mm. Dates to after 1620 and is likely to be 18th century at least. Similar to an example from Colchester (Crummy 1988, 30, fig.32.1912).

SF00 (u/s from undercroft interior) Copper alloy (brass) thimble with a domed head. Surface badly corroded but circular pitting on surface appears irregular but probably following a spiral pattern and there is faintly engraved line around the base. Height 22mm, base diameter 19mm. Parallels with the large assemblage from London suggests a date in the later 16th or earlier 17th century, before machine made thimbles from Netherlands became common (Egan 2005, 130-133, fig.126.624).

SF88 (637) Copper alloy needle. Tapering shaft with base of eye preserved. Lack of groove below the eye indicates not of Roman date, though of very similar proportions. An example of medieval or later date came from Colchester (Crummy 1988, 28, fig.31.1891)

Category 4: Household Utensils and Furniture

Kitchen or Table Wares

SF4 (573) Silver table ware vessel? Five fragments from a silver vessel such as a lidded jug or caddy. Remains of ovoid convex fragment with slot at one end (perhaps to accommodate a hinge) and a central protrusion (for a knob) appears to be a lid. One other fragment has the stub of a handle attachment. Length of lid 43mm. The silver was alloyed with copper which now coats the surface. A number of similar vessel fragments in copper alloy are known from London including the lid of a possible tankard dating to the mid-16th century (Egan 2005, 100, fig.86.457). The present vessel is of more recent date.

SF123 (1122) Iron. Small handle fragment from a cup or mug. Width 10mm. Modern date.

Kitchen utensils

SF32: (589) Ivory knife handle with a rounded asymmetric end and an iron tang of circular section *in situ*. Length 174mm. Probably of 18th or 19th-century date.

Plate 24: Ivory knife handle (SF32)

SF89 (586) Bone cheese scoop or apple corer. Made from an unfused sheep/goat metatarsal. Distal end forms a handle with unfused surface modified to form toothed

decoration. Handle tapers to a semi-cylindrical blade, the junction decorated with three transverse mouldings. Slightly polished. Length 87mm. The exact function of these tools is unknown but a scoop for testing the ripeness of cheese seems the most likely. Most known examples appear to be from 18th-century contexts (MacGregor 1985, 180, fig 87).

Plate 25: Scoop or corer (SF89)

SF138 (679) Handle of antler. Representation of a female figure in medieval costume comprising headdress, neckline and upper part of buttoned dress or tunic. Surface polished. Preserved length 40mm, width of head 18mm. Complete example from Oxford (MacGregor 1985, 168-170, fig. 88t) dating to *c*.1250-1350, indicates that a full figure with long dress would have been represented here.

Plate 26: Handle of antler (SF138)

SF39 (586) Whetstone in a grey micaceous sandstone. Square section with angled cornersand broken at both ends. Possibly of Ellis type 2B deriving from the south west or perhaps more locally (Moore and Oakley 1979, 282, fig 123). Blade grooves apparent at one end. Surviving length 137mm, width 34mm.

Category 5: Objects use for recreational purposes

SF45 (586) White chalk marble. Diameter 16mm. Paralleled by an example from Empingham, Rutland (Fraser 2000, 118, fig 56.61). Modern date.

Category 6: Objects employed in weighing and measuring

SF101 (u/s) Pb Trade weight. Triangular with rounded edges and raised upper edge surrounding a relief decorated upper surface depicting a ?lion with tail (upper part damaged by corrosion). Modern date.

Plate 27: Trade weight (SF101)

Category 7: Objects used for, or associated with, written communication

Pens

SF25 (583) Bone quill pen made from a goose radius with one end cut at an oblique angle to form a point. Length 138mm.

SF83: (792) Bone quill pen made of goose radius or ulna. Broken. End has been cut at an oblique angle to a point. Length 102mm. Parallels include Coppergate, York (MacGregor, Mainman and Rogers 1999, fig.932.7976 and 8059), Coventry and Cambridgeshire (MacGregor 1985, 123, fig 67h and i) and Little Lane, Leicester (Cooper forthcoming 363, fig.122.162) from a late medieval pit.

Stylus or Parchment pricker

SF76 (623) Bone stylus or parchment pricker. Lathe-turned. Spherical head surmounts a slightly tapered shaft of circular section, the upper half of which is decorated with transverse bands of evenly-spaced incised lines. Lower half ends in a rounded terminal, into which was inserted an iron point, the base of which is still visible. The entire surface of the object is highly polished. Length 68mm, diameter of head 6mm. The object type has now been more fully recognised as a stylus of 14th-century date during the most recent review of the examples from York (Macgregor, Mainman and Rogers 1999; 1974, fig 930.7971). Two other examples came from the Shires sites (Little Lane and St Peter's Lane), Leicester in 1988 (Cooper forthcoming, 363, nos.160 and 161) which, interestingly, lay adjacent to the medieval Parchment Lane.

Plate 28: Stylus/pricker (SF76)

Category 8: Objects associated with transport

SF189 (740) Iron horseshoe. Fragment with rectangular nail holes only visible on x-ray. Probably of 16th-century or later date on the basis of examples from Winchester when rectangular holes become common (Goodall 1990, 1054, fig.339).

Category 10: Tools

SF135 (1416) Iron knife blade with convex back continuous with tang. Edge poorly preserved but also convex(from x-ray). Length 125mm.

SF147 (573) Cattle bone or antler. Length of bone of rhomboidal section, tapered slightly to a flat terminal with a circular hole set longitudinally into the shaft perhaps to accommodate a tang (now missing). The drilling of the hole and/or the insertion of the tang is indicated by stress lines on both surfaces. The wider end has a semi-circular recess with sawn notch at the base and flanked by a notch either side of similar depth. The lower (narrower) edge has an identical arrangement. Length 73mm, width 15mm, thickness 5mm, diameter of perforation 3mm. The precise function of this object is unknown, but the deliberate arrangement of grooves suggests a specialised use. The grooves are reminiscent of pinners' bones which are known from London (Egan 2005, 138, fig. 131.722.

Plate 29: Bone or antler tool (SF147)

Plate 30: Bone awl (SF70)

SF70 (637) Bone awl or pin made from a cattle long bone. Flat head above tapering shaft of rectangular section. Polished surface indicates use. Grooves cut part way down the shaft indicate damage during use. Length 79mm, width 7mm, thickness 4mm. Similar in form and size to pig fibulae pins but lacking perforation to the head. Examples from York of 10th-century date (MacGregor, Mainman and Rogers 1999, 1950; fig.908.6830)

SF87 (637) Bone point crudely formed from cattle long bone. Tapering length of triangular section. Highly polished surfaces indicate prolonged use. Length 202mm.

SF146 (549) Bone toggle or 'buzz bone', made from an unfused pig metapodial, with a single 6mm diameter perforation in the centre of the shaft. Length 63mm. Common through the Late Saxon and medieval periods, a large group came from 16-22 Coppergate, York dating to the 10th century onwards. Function uncertain but considered to be ephemeral and used for creating noise when threaded on to twine and spun (MacGregor, Mainman and Rogers 1999, 1980, fig 939.7098a).

Category 11: Fasteners and fittings

Mounts or studs

SF71 (507) [508] Copper alloy flat mount depicting letter 'M' in black-letter with two rivets *in situ* on the reverse placed diagonally. Height: 33mm. The black-letter style of the lettering is paralleled on a strapend from London dating to the late 15th or 16th century (Egan 2005, 42 and fig. 23.149) and on a mount depicting the letter 'd' or 'p', also from London dating to the first half of the 15th century (Egan and Pritchard 1991, 202-203, fig 127.1097).

SF1 (506) Cu alloy figurative furniture mount or nail with head cast in the shape of a scallop shell with integral tapering shaft. Width 5mm, length of shaft 15mm. Similar to a larger and probably earlier example from London (Egan and Pritchard 1991, 200-201, fig.126.1083).

SF7 (516) Sexfoil mount in copper alloy. Slightly domed lobes. Diameter 16mm. Similar to several examples from London dating to the later 14th century (Egan and Pritchard 1991, 190-191, fig.120.1007)

SF29 (504) Domed sexfoil mount in copper alloy with the bases of two shanks around the edge on the reverse. Diameter 17mm. Paralleled by an example from London dating to the later 14th century (Egan and Pritchard 1991, 187-189, fig.119.983)

SF35 (602) Large domed multifoil mount in copper alloy with a separate central rivet. Diameter 37mm. Decoration comprises three concentric rings of raised lobes, similar to the arrangement on an unfinished example from London dating to the later 14th century (Egan and Pritchard 1991, 190-91, fig.120.1014).

SF48 (U/S, Area 2) Flat circular stud in copper alloy with trace of rivet or shank. Diameter 17mm. Examples from London predominantly date to the 14th century (Egan and Pritchard 1991, 170-71, fig.110.819).

SF54 (618) [619] Central part of a domed copper alloy stud with a separate rivet. Length of rivet 7mm.

SF132: (1345) Circular mount or fitting in copper alloy, the central part of which is laminated with a second sheet secured with an oval loop. Diameter 54mm.

SF80 (771) Nail. Copper alloy with flat round head. Length 41mm.

Hinge fitting

SF43 (u/s) Hinge cast in Copper alloy. Hinged end flat with two projections extending from an arched moulding. Shaft of plano-convex section with outer surface facetted and an iron rivet placed centrally. Terminal formed from a rounded lobe with a central iron rivet and separated from the shaft with a transverse moulding. Length 26.5mm. Presumably from a small box.

SF173 (600) Iron. Broken length of a plate from a hinge or bracket with one iron nail in situ. Fragments of lime mortar at one end. Incomplete length 115mm, width 25mm. From demolition deposits relating to Building 1

Keys

SF129: (u/s) Iron. Barrel padlock key of Type A with the shank set centrally to the wards (Ward Perkins 1940, 149; fig 45.1 and 5). The wards are cut into an ovoid plate and the shank tapers to a circular suspension loop. Length 103mm. Type A was in use between the 12th and 14th century on the basis of dated examples from Aylesbury and Rayleigh castle in Essex (Ward Perkins 1940, 146). A very close parallel from Winchester came from a contest probably dating to the 13th century (Goodall 1990 Type B, 1022, fig.323.3724).

Plate 31: Iron padlock key (SF129)

SF34 (591) Iron key for a mounted lock. Belongs to London Type 2 (Ward-Perkins 1940, 136; fig. 42 and pl. 30) or Winchester Type 3 (Goodall 1990, 1025) with a hollow stem, a rolled bit and an oval bow. End of stem and part of bit missing. Remaining fragment of bit has internal cut outs (visible on x-ray). The density of the x-ray indicates the bit is of the same thickness as the stem and would therefore be rolled from the same sheet and so be of Goodall's Type 3. Preserved length 117mm. The dating of examples from London and Winchester suggests a span of the 11th-13th century.

Iron nails

Over 100 fragmentary or complete nails were retrieved from the excavations. Complete examples ranged in length from 30mm to 75mm.

Miscellaneous Fittings

SF6 (509) CuA. Length of wire bent over to form a loop and then twisted to form a two strand cable. Length 28mm.

SF9 (545) CuA. Length of copper alloy rod of square section tapering to a flat terminal with a suspension hole through it. Broken end appears to form a cross member with a vertical element and suggest that the rod is mirrored on the opposite side. Length 53mm. One possibility is that this forms one half of a small balance arm of a kind found at Colchester (Crummy 1988, 67, fig.66.2988) but the perforations would normally be set transversely through the rod rather than vertically.

SF31 (507) Short cylindrical fitting in a leaded copper alloy with recessed ends and rectangular perforations around the circumference. Diameter 27mm.

SF36 (589) Broken length of copper alloy wire with candytwist. Length 94mm

SF58 (569) Iron. Fragment from a pronged implement. Three thin rods of square section visible on x-ray only fan out to form three hooks. Length 100mm, length of hooks 50mm. Flesh-hook similar to examples from Winchester from a context dating to the mid-late 10th century (Goodall 1990, 820 fig. 242.2546).

SF174 (602) Iron ring. X-ray indicates a subrectangular outline and that it was penannular. External diameter 30mm, internal diameter 17mm.

SF108: (u/s) Cylindrical bone fitting with internal thread at both ends and perforation of hourglass section, Made from proximal cattle humerus. Length 21mm, width 13mm. A number of similar fittings are known from Winchester dating from the 19th century (Biddle 1990, 4436-4439).

Plate 32: Bone fitting (SF108)

Category 13: Military equipment

SF41	(586) Pb musketball with casting sprue. Diameter of ball 14mm.
SF42	(586) Pb musketball with casting sprue. Diameter of ball 13mm.

Both examples probably belong to the larger class of shot, of twelve to the pound, judging by the diameters over 10mm and the size of sprues that would originally have joined each shot to a 'header', the waste evidence for which has been discovered at Beeston Castle (Courtney 1988, 3 and fig.5) .

The Coins and Jetons Richard Buckley and Paul Courtney

The Coins Richard Buckley

Table 32 The Coins

Context	SF	Material	Period	Emperor	Obverse	Rev	*mm*	Denomination	Date	Notes
694	25	Ca	Roman		Bust rt	GLORI[A ROM]ANORVM Emperor leading captive	*[]LVG*			
633	59	Ca	Roman		illegible	illegible			Prob. 4th C	
545	8	Ca	UP		Laureate bust rt [CO]	illegible		As/Dp	1st/2nd C	Not certain - Commodus?
509	65	Ca	UP							Flat CA sheet - may not be a coin or token
U/S	60	Ca	Roman		illegible	illegible			4TH C?	Poss. Irregular copy, but illegible
1064	118	Ca	Roman		Bust rt [AVG]	[GLORIA RO]MAN[ORVM] Emperor leading captive				
618	53	Ca	UP							CA disc illegible
?	30	Ca	Roman		Bust rt 4th C type	illegible			4th C	
U/S	51	Ca	UP							CA disc illegible
1361	127	AR	Roman	?Commodus	laureate Bust rt	illegible: figure standing		denarius	2nd century	
U/S	49	Ca	Modern		Bust of Charles Roe right. [CHARLES ROE] ESTABLISHED [THE COPPER WORKS 1758]	Female seated left holding cog and boring tool. [MACCLESF]IELD [HALFPENNY] 1791		halfpenny	1791	Token
857	90	Ca	Roman	Carausius	IMP C CAR[AVSIVS P F] AVG	Providentia standing left, holding rod and cornucopiae, globe at feet. PROVID AV[GG SP in field		antoninianus	AD 287 - 293	RIC V, 362
904	124	Ca	Roman	Constantine I	Bust rt VRBS [ROMA]	wolf & twins. poss irregular			AD 330-31	
1345	133	Ca	Roman	Antoninus Pius	Laureate Bust rt [TON[	Figure standing [S]C		sestertius	AD 138-161	Antoninus plus

The Jetons Paul Courtney

A4 2003 Area 2 SF50 U/S

Anonymous Rose/Orb brass jetton manufactured in Nuremburg, first half of 16th century.
Reverse: Imperial orb within a double tressure of three arches and three angles.
Inscription is partly illegible but is clearly fictitious.
Obverse: Three crowns, alternately with three lys, arranged around a central rose.
Inscription is illegible.
Size: 24 mm. in diameter.

A4 2003 Context 648 SF 67

Copper alloy jetton, probably Nuremburg of late 16th-early 17th century date.
Illegible except for a few raised lines on one side (?tressure).
Size: 27 mm. in diameter.

A4 2002 Context 584 SF 24

Copper alloy 'crown' jetton manufactured in France, based on écu d'or of reign of Charles VI, 1380-1422.
Reverse: Triple stranded straight cross fleuretty within four arched tressure. A- V- ? -? in angles.
Obverse: Royal crown with central fleur de lys and two peripheral lys.
Inscription: AVE MARIA GRACIA ILE (for Ave Maria Gratia Plena, Hail Mary full of grace).
Size: 24 mm. in diameter.

The Clay Tobacco Pipes D. A. Higgins

Introduction

This note provides a brief overview of the clay tobacco pipes recovered by the University of Leicester Archaeological Services from excavations at St Nicholas Place, Leicester. The site code used for this project was A4 2003. The pipes from the excavation were briefly examined and this note prepared in November 2008.

Material Recovered

A total of 166 fragments of clay tobacco pipe were recovered from the excavation, comprising 34 bowl fragments, 127 stem fragments and five mouthpieces. Almost all of the pipes date from the 17th century, and most of these date from the second half of the century. There are no marked pieces and the only decorated piece is a milled stem from Context 589. There is one reworked stem from Context 586 and half of a hair curler from context 956. The bowl forms and more significant pieces are discussed in greater detail below.

Bowl Forms

There were 22 out of the 34 bowl fragments where the original bowl style could be determined. Most of the 22 identifiable bowls (19 examples) are plain 17th-century spur pipes of typical local forms, most of which date from the second half of the century. There was just one heel bowl, represented by half of a heart-shaped heel dating from *c*1660-80 from Context 590. This form is occasionally found in the city where it only ever made up a very small percentage of the pipes in use.

The final two identifiable forms are also spur types, one dating from the first half of the 18th century (Context 1001) and the other from the late 18th or early 19th century (U/S). So little of this later bowl survives that it is not possible to tell whether it was decorated or not. The 12 indeterminate bowl fragments are probably all of 17th century date and all are plain and unmarked.

Milled Stem

Apart from the normal rim milling, the only decorated fragment from the assemblage is a piece of milled stem from Context 589 (Fig 1). This most likely dates from towards the end of the 17th century and it has a stem bore of 8/64". There is a single band of milling around the narrower end of the stem, the very end of which suddenly flares out slightly. Although the surface of this fragment is relatively smooth right up to the break, this flaring is most likely to have resulted from the stem having been broken during manufacture and then pushed together again to repair it. A repair such as this often results in a rough and uneven patch where the clay has been smeared

smooth on the surface and it is this mend that is often partially disguised using bands of milled decoration.

Hair Curler

Half of a hair curler was recovered from Context 956 (Fig 2). This is an interesting example, partly because of its form and partly because of the close dating that is afforded by the associated pipes. This context produced a total of 36 pipe fragments (6 bowl, 27 stem and 3 mouthpiece fragments). The stems are generally fairly large fresh looking fragments and all the pipes are consistent with this being a contemporary and little disturbed deposit. The six bowl fragments are all from different pipes, all of which are of local styles with large and fairly heavily made bowls dating from *c.*1690-1720. They were probably all spur forms (five certainly were but the base of the sixth example is missing). Three of the bowls were made in the same mould, which has a very distinctive and roughly horizontal mould flaw in the form of a clear ridge on each side of the bowl above the spur (Fig 3). Two of these bowls are complete and both are bottered but not milled. The drawing (Fig 3) is a composite image drawn using one of these complete bowls and a spur/stem fragment from a third example that has most of its bowl missing. The stem fragment has a bore of 6/64" but both of the complete bowls have bores of 7/64". The mould flaw at the side of the stem has been truncated by trimming, which in turn has left a sharp angle change, suggesting that the flaw was quite pronounced on this side.

Another substantially complete bowl in this group is clearly from a different mould as it has a much finer spur (Fig 4). The rim of this example is damaged but it was at least half milled and this pipe has a stem bore of 8/64". The upper part of another bowl survives, which is bottered and half milled, but the base and stem bore are completely missing. The final piece is a spur fragment from a similar, but different, bowl with a stem bore of just under 8/64". Taken together, the pipes suggest a very coherent group with a distinctive and relatively short-lived bowl form being the only style present. As such, the pipe date of *c*1690-1720 can be taken as reliable for the hair curler, closely dated examples of which are relatively rare.

The curler itself is made of a fine white firing clay, identical in the hand to that of the pipes. It has clearly been hand modelled, resulting in a slightly uneven surface, although the overall form and finish is perfectly serviceable. At its narrowest this curler measures 8.4mm and at its widest 14.4mm. What is particularly unusual about this example is that the entire surface shows faint traces of material impressions, which are most evident at its rounded end. The appearance is as if the whole object has been rolled and shaped while wrapped within a piece of cloth. This surface finish has never been noted on a hair curler before and is extremely unusual. Very little is known about the manufacturers and production techniques used for making hair curlers, although in several instances they are known to have been made as a sideline by pipemakers. This piece may well have been made in Leicester, where the use of a cloth wrapping could represent a distinctive local production technique. Further examples are clearly needed to examine this further but it is fortuitous that this first example comes from such a well dated deposit so that it provides a firm reference point for future studies.

Reworked Pipe

There is one stem from Context 586 that has been reworked after firing (Fig 5). The surviving fragment is 77mm long and has been cut or scraped along a 63mm section in the middle of the surviving piece so as to form three main depressions, each of which breaks through into the 7/64" stem bore. These hollows have been made to one side of the stem, with one edge of them roughly lining up with one of the mould seams (the illustration has been prepared to show the reworked area square on and from one side, and not to show the actual side and plan views of the pipe fragment, as would usually be the case). The reworking must have been done very carefully so as not to snap the stem completely. If the pipe were complete when this was done, then it is very fortuitous that it subsequently broke on either side of this reworking so as to leave this section complete. Alternatively, the stem could have already been snapped and just the broken piece reworked as someone idled away some time with it. It is, however, documented that smoking pipes were sometimes turned into simple whistles by cutting holes in the stem. The fact that there are three carefully worked and adjacent holes would certainly fit well with this piece having been made into a simple whistle, as would both the spacing and location of the holes to one side of the stem, which would have made them comfortable to use. The stem is of a 17th or early 18th century type and the context group also includes a stem of similar date and a complete spur bowl dating from *c*1680-1710 (Fig 6). The bowl is bottered and one quarter milled with a flattened base to its spur and a stem bore of just over 7/64". All three pieces would fit well with the date of the bowl, suggesting that this is a contemporary group, which in turn provides a good date for this unusual piece of reworked stem.

Summary

This is just a small assemblage of pipes, none of which are marked and only one of which is decorated with a single band of milling – and even that is likely to have disguised a repair rather than being intentionally decorative. The pipes are predominantly of later 17th century date and the bowls are of common local types, typical of those found in the city. Despite this, there are two particularly unusual fragments amongst the assemblage, both of which appear to be securely dated from the associated bowl forms. One of these is a hair curler of with an unusual surface finish. This can be dated to *c*1690-1720 and it provides an important reference point for this particular form and surface treatment. The other is a piece of stem that appears to have been reworked to form a whistle. This fragment probably dates from *c*1680-1710 and provides a rare example of a stem where a series of holes can be shown to have been made. A similar example, dating from somewhere between 1640 and 1740, and with the remains of at least two holes, has recently been recovered from Chester (Higgins, forthcoming)

The Environmental Material Angela Monckton

Introduction.

During the excavation by ULAS directed by Roger Kipling samples were taken from selected features of Roman, medieval and post-medieval date for the recovery of plant remains such as seeds and cereal grains which may provide evidence of diet, environment or activities in the past. The remains found here were mainly mineralized seeds from cesspits, together with some charred cereal grains, seeds and charred legumes. Other food remains included fish bones and scales. It was hoped that evidence from these remains would help to determine the type of occupation and activity on the site and compare with evidence from excavations of other sites in the town and suburbs of Leicester. The results were considered together with analysis of a larger group of samples from inside the undercroft which contained abundant charred and mineralized plant remains (Boyer 1991). Some of the cereals, not analysed in 1991 were re-examined for this report.

Methods

A total of 35 environmental samples from 32 contexts were taken from features selected by the excavators. From these 27 samples were processed including four of Roman date, four from Saxo-Norman deposits, and the remainder from medieval contexts mainly from Late Medieval cesspits, with three samples of post-medieval date. From the undercroft 68 samples from 54 contexts were processed by similar methods in 1991.

The samples were processed by wet-sieving in a tank using a 0.5mm mesh with flotation into a 0.3mm sieve. Unprocessed sub-samples were retained from each context. All residues were air-dried and the residue fraction over 4mm was sorted for all finds which are included in the relevant sections of the report. The residue below 4mm was examined for the presence of remains and retained for analysis. This work was carried out by Dave Parker at ULAS. During analysis the flotation fractions (flots) were all examined and sorted using a x10-30 stereo microscope. The plant remains were identified by comparison with modern reference material at the University of Leicester Archaeological Services. The plant remains from the eleven samples with more numerous remains were counted and tabulated (table 1), the plant names follow Stace (1991) and are seeds in the broad sense unless described otherwise. The results from the remaining samples were summarised (tables 2 and 3) and referred to in the text as from scanned samples. The undercroft samples were assessed and 21 with the most numerous remains were analysed and tabulated (Boyer 1991) and are discussed below.

Roman plant remains

The Roman samples produced a moderate amount of charred plant remains in two samples with very small numbers of plant remains from the road deposits (table 2). The cereals found were wheat, which included evidence for glume wheat either emmer or spelt (*Triticum dicoccum/spelta*) with some fragments of spelt chaff (glumes showing this cereal was used, together with barley (*Hordeum vulgare*). The weed seeds found included those of large grasses (Poaceae) and fat-hen

(*Chenopodium album*) which are known as weeds of arable or disturbed ground. Apart from the cereals the only other evidence for food remains was hazel nutshell (*Corylus avellana*) as gathered food. A sample from the demolition deposit contained seeds of grassy vegetation including knapweed (*Centaurea nigra*), hay rattle (*Rhinanthus* sp.), black medick (*Medicago lupulina)* and clover type plants *(Trifolium* type), together with crested dog's tail grass (*Cynosurus cristatus*). These are plants typical of hay-meadows so this is likely to represent hay brought to the town as fodder similar to that found at Causeway Lane (Monckton 1999).

The small amount of cereal remains with hazel nutshell suggest that waste from domestic food preparation is present in (1080) sample 34, this also shows the cereals present with their weeds. The demolition deposit (1345) sample 52 contains abundant charcoal with burnt rubble and includes probable hay, this may suggest that animals were kept in or near this building, although grassy material was also used as kindling. The roadside deposits contain only a scatter of charred remains from nearby occupation. These remains add to the distribution of Roman material in Leicester.

Undercroft layer (359)
This layer analysed by Boyer (1991) was rich in waterlogged seeds and was noted as being similar to the base layers of pit F100 which are just above this layer. This is the only waterlogged early layer and it occurs in this restricted area. Although the excavator was sure it was a distinct layer (J. Hagar pers comm.), it is possible that there was seepage of material from the later cesspit as the source of the seeds.

Table 33 Environmental Material: Plant Remains from St Nicholas Place, Leicester (A4.2003).

Phase	**4.1**	**4.1**	**3.1**	**3.1**	**5**	**2**	**4.1**	**4.1**	**4.1**	**4.1**	**4.1**	
Group	**24**	**24**	**25**	**25**	**4**	**20**	**26**	**26**	**26**	**26**	**26**	
Feature	**677**	**677**	**1389**	**1391**	**Drn**	**Soil**	**877**	**877**	**877**	**877**	**1284**	
Context	**1122**	**1123**	**1388**	**1390**	**907**	**1271**	**874**	**889**	**906**	**910**	**1204**	
Sample	**38**	**39**	**58**	**59**	**7**	**50**	**2**	**4**	**6**	**8**	**43**	
CEREAL CHAFF												
Triticum aestivum s l rachis.	-	-	-	-	-	1	-	-	-	-	-	Bread wheat
Hordeum vulgare L. rachis	-	-	-	-	-	-	-	1	-	-	-	Barley
Rachis fragment	-	-	-	1	-	-	-	-	-	-	-	Rachis fragment
Culm node large	-	-	-	-	-	-	-	-	-	5	-	Cereal straw
CEREAL GRAINS												
Triticum free-threshing grain	-	1	1	2	1	2	-	-	-	-	-	Free-threshing Wheat
Triticum sp(p)	1	-	-	-	-	1	-	-	-	-	-	Wheat
Secale cereale L.	1	-	-	1	-	-	-	-	-	-	-	Rye
Hordeum vulgare L.	2	3	-	-	1	1	-	-	-	-		Barley
Avena sp	-	-	-	3	1	-	-	-	-	-	-	Oat
Cereal/Poaceae	-	-	-	3	-	1	-	-	-	-	-	Oat/Grass
Cereal indet	-	-	1	4	5	6	1	-	-	1	-	Cereal
LEGUMES												
Vicia faba L.	-	-	-	-	-	-	-	-	-	2	-	Bean
cf *Vicia faba* L.	-	-	-	-	-	-	-	-	-	7	-	Bean
Vicia/Lathyrus/Pisum	-	-	-	2	1	-	1	-	-	8	3	Peas/Vetch cultivated
Vicia/Pisum	-	1	-	-	-	-	-	-	-	11	-	Bean/Pea
Pisum sativum L.	-	-	-	1	-	-	-	-	-	4	-	Pea
CULTIVATED												
?Linum usitatissimum L. (m)	-	-	-	-	1?	-	-	-	-	-	-	?Flax
OTHER FOOD PLANTS												
Ficus carica L. (m)	237	217	2	-	11	-	2	59	96	282	1100	Fig
Papaver somniferum L. (m)	-	-	-	-	-	-	-	6	-	-	-	Opium poppy

Corylus avellana L.	-	-	-	1	-	-	-	-	-	-	-	Hazel nutshell
Fragaria sp. (m)	7	4	-	-	-	-	1	88	16	3	-	Strawberry
Prunus spinosa L. (m)	1	-	-	-	-	-	-	-	-	-	-	Blackthorn, Sloe
Prunus sp. (m)	-	-	-	-	-	-	-	-	-	-	1	Bullace/Plum
Malus sylvestris s.l. (m)	3	-	-	-	-	-	-	1	-	-	-	Crab Apple/Apple
Malus/Pyrus (m)	3	-	-	-	-	-	-	1	-	-	-	Apple/Pear
Rubus fruticosus agg (u)	1	1	-	-	-	-	-	4	-	-	-	Blackberry
ARABLE or DISTURBED GROUND												
Papaver rhoeas/dubium	-	-	-	-	-	-	1	-	-	-	-	Poppy
Chenopodium sp	-	-	-	1	-	-	-	-	-	3	-	Goosefoots
Chenopodium sp (m)	-	-	-	2	-	-	1	-	1	-	-	Goosefoots
Chenopodium album type	-	-	-	-	-	-	-	1	-	-	-	Fat-hen
Stellaria media type	-	-	-	1	-	-	-	-	-	1	-	Chickweed
Agrostemma githago L. (m/ch)	-	-	-	1m	-	1	-	1m	-	-	-	Corn Cockle
Polygonum aviculare L.	-	-	-	-	-	-	-	-	-	2	-	Knotgrass
Rumex sp	3u	1	-	-	-	1	-	-	-	-	1	Docks
Brassica/Sinapis	-	-	-	-	-	-	-	-	1u	-	-	Cabbages/Mustards
Euphorbia helioscopia L.	-	-	-	-	-	-	-	-	1	-	-	Sun Spurge
Hyoscyamus niger L. (m)	-	-	1	-	-	-	-	1	-	-	-	Henbane
Anthemis cotula L.	1	1	1	1	2	1	-	-	-	1	-	Stinking Mayweed
Tripleurospermum inodorum (L.) Schultz-Bip.	-	-	-	1	-	-	-	-	-	1	-	Scentless Mayweed
Bromus hordeaceus/secalinus	-	-	1	-	-	1	-	-	-	1	-	Lop-grass/Rye-brome
GRASSLAND												
Lotus/Trifolium	-	-	-	-	-	-	3u	-	-	-	-	Bird's-foot-trefoil/Clover
Plantago lanceolata L.	-	-	-	1u	-	-	-	-	-	-	-	Ribwort Plantain
cf *Phleum* sp	-	-	-	-	-	2	-	-	-	-	-	cf Cat's-tails
DAMP OR WET GROUND												
Lemna sp	-	1	-	-	-	1	-	-	-	-	-	Duckweed
Juncus sp	-	-	-	-	-	-	20	-	-	-	-	Rush
Eleocharis palustris/uniglumis	-	-	-	-	-	1	-	-	-	-	-	Spike-rush
HEDGE OR WOODLAND												
Sambucus nigra L. (u)	1	2	19	16	1	44	-	2	1	1ch	-	Elder
UNCLASSIFIED												
Chelidonium majus L. (u)	-	-	-	-	-	-	1	-	-	-	-	Greater Celandine
Cerastium/Stellaria	-	-	-	-	1	-	-	-	-	-	-	Mouse-ear/Stitchwort
Fallopia convolvulus (L.)	-	-	-	-	-	-	-	-	-	1	-	Black bindweed
Malva sp (m)	-	-	-	-	-	-	-	-	-	1	-	Mallow
Vicia sp	-	1	-	2	-	-	-	-	-	-	-	Vetch
Vicia/Lathyrus	-	-	-	-	-	-	-	-	-	1	-	Tare/Vetch/Vetchling
Medicago/Melilotus/Trifolium	-	-	-	-	-	2	-	-	-	5	-	Medick/Melilot/Clover
Apiaceae (m)	-	3	-	-	-	-	-	1	-	-	1	Carrot family
Solanum dulcamara L.	1	-	-	-	-	-	-	1	-	-	-	Bittersweet
Lithospermum arvense L.	-	-	-	1	-	-	-	-	-	-	-	Field gromwell
Lamiaceae (m)	-	1	-	-	-	-	-	-	-	-	-	Deadnettle family
Lamium sp	-	-	-	-	1	-	-	-	-	-	-	Dead-nettles
Mentha sp.	-	-	-	-	-	-	1	-	-	-	-	Mint
Prunella vulgaris L. (m)	-	-	-	-	-	-	-	1	-	-	-	Self-heal
Asteraceae	-	-	-	-	-	-	1u	-	-	1ch	-	Daisy family
Carduus/Cirsium	1u	-	-	1u	-	-	-	-	-	-	-	Thistles
Carex spp (2-sided)	-	-	-	-	-	1	-	-	-	-	-	Sedges
Carex spp (3-sided)	-	-	-	1	-	-	1u	2u	-	1u	-	Sedges
Carex sp (m)	12	4	4	2	21	-	6	-	-	-	-	Sedges
Poaceae (small/medium)	-	-	-	1	-	2	1u	-	-	1	-	Grasses
Poaceae (large)	1	4m	1	2	-	3	-	-	-	1	-	Grasses large
Poaceae (large) (m)												Grasses
Indeterminate seeds	4	-	1	2	2	1	-	1	-	2	2	Indeterminate seeds
Indeterminate seeds (m)	21	1	2	-	4	1	9	4	6	3	28	Indeterminate seeds
OTHER												
Fragments, organic	+	-	-	-	++	-	-	-	+	-	-	Fragments
Fungal sporangia	-	-	++	++	-	-	-	-	-	-	-	Fungus

Concretions/coprolite frags	++	++	-	-	-	-	+	+	-	-	-	Coprolite frags.
Stem/leaf (m)	+	+	-	-	-	-	+	-	+	+	+	Stem/leaf frags.
Culm node small	-	-	-	-	-	2	-	-	-	13	-	Grass stem
Poaceae rachis	-	-	-	-	-	-	-	-	1	-	-	Grass rachis
Woody buds	-	-	-	1	-	-	-	7	-	6	-	Charred fragments
Fish remains	+	+	+	+	++	-	+	++	+	+	++	Fish remains
Insect puparia	++	++	-	++	+	-	+	++	++	-	++	Insect remains
TOTAL	301	246	46	71	52	75	50	183	123	348	1137	TOTAL 2632 items
Sample Vol	6	6	4	5	9	9	6	5	5	5	3	litres
Flot Vol	50	45	20	30	35	20	22	55	95*	55	85	mls
Items/litre	50	41	12	14	6	8	8	37	246	70	379	items/litre

Key: Remains are seeds in the broad sense unless described otherwise. (m) = mineralized, (u) = uncharred.

Table 34 Environmental Material: Summary of remains from Roman samples

Samp	Cont	Feat Type	Samp Vol. Litre	Flot Vol. mls	Gr	Gl	Se Ch	Se un	Nut	Chc	Comments
34	1080	Layer	7	20	2	4	21	2	24	+	Spelt chaff, two cereal grains and weed seeds.
37	1085	Road	7	15	1	-	1	-	1	-	Scatter
60	862	Road	23	27	1fr	-	1	-	-	-	Scatter
52	1345	Demol	10	460	-	-	61	-	-	+++	Abundant charcoal, 50% flot sorted, seeds of plant typical of hay-meadow with weed seeds.

Key: Gr = grain, Gl = glume base (chaff), Se = seed, ch = charred, un = uncharred , Nut = nutshell fragment, Chc = charcoal; fl = flecks.

Medieval plant remains

Cereals: Charred cereals were not numerous in samples from the excavation but included barley grains (*Hordeum vulgare*) of a hulled form and a small amount of wheat (*Triticum* sp.) was present mainly as free-threshing wheat grains which in the absence of diagnostic chaff in all but one sample from Phase 2, could have been bread wheat (*Triticum aestivum* s.l.) or rivet wheat (*Triticum turgidum* type) both of which are free-threshing wheats which have been found in medieval Leicester. The latter was found in Undercroft context (245) confirming the presence of this cereal on this site in the Early Medieval period. An additional cereal found was rye (*Secale cereale*) present as grains only. Oat (*Avena* sp) was also present. Charred plant remains were under-represented in the excavation samples because samples were mainly from cesspits. Cereals were much more abundant in samples from the Undercroft with numerous wheat and oat grains in some samples, some of the oats in context (328) being germinated grains. Chaff was also well represented in some of these samples.

Other foods: The samples also contain legumes including peas (*Pisum sativum*) and fragments of legumes either beans or peas. Legumes may also include cultivated vetch because some of the legumes are of this size but this could not be confirmed as

the seeds were incomplete. Legume crops are element of crop rotation. All the legumes found were charred probably as accidental spillage during cooking so probably represent domestic rubbish. It is thought that legumes are under-represented in the archaeological record as they do not come into contact with fire in their processing and are probably only burnt by chance during food preparation, they are poorly represented here as in other samples from within the walls of the town at the Shires and Causeway Lane (Moffett 1993, Monckton 1999). Plants which may have been collected and consumed are represented by fragments of hazel nutshell (*Corylus avellana*), occasional stones of sloe (*Prunus spinosa*) and possibly by bramble (*Rubus fruticosus* agg.) and elder (*Sambucus nigra*). Other fruits are represented by apple (*Malus sylvestris*) possibly crab apple or a cultivated variety, plums (*Prunus* sp.) of a small variety, strawberry (*Fragaria* sp.) probably similar to the wild type, but all may have been cultivated for supply to the town. Figs (*Ficus carica*) were also found, most numerous in the Late Medieval phase, which are likely to be imports.

Seeds: Charred seeds were mainly those of arable or disturbed ground including the numerous seeds of stinking mayweed (*Anthemis cotula*) which is a plant of heavy soils, large grasses (Poaceae) including brome grass (*Bromus* sp), and cleavers (*Galium aparine*) found only in the Undercroft, and corn cockle (*Agrostemma githago*), all of which are known as weeds of the cereals, the latter two being associated with autumn sown cereals. Other weeds of disturbed ground included goosefoots (*Chenopodium* sp), and scentless mayweed (*Tripleurospermum inodorum*) was found in one sample. Other plants included some of grassy vegetation such as clover type plants (*Trifolium* type) which, together with some of the plants of damp ground such as buttercups (*Ranunculus* sp), may have been brought to the site with fodder. Other plants such as rushes (*Juncus* sp.) and sedges (*Carex* sp.) may have been brought to the site for other purposes such as flooring. However, some of these plants may have grown in field margins and damp areas of the cultivated fields and so have been brought to the site with the crops.

Table 35 Environmental Material: Summary of remains in medieval samples

Samp	Con	Cut. Type.	Samp Vol. litres	Flot Vol. mls	Gr	Cf	Se ch	Se un	Le	Nut	Chc	Comments
Ph.2												
55	1361	Soil	5	12	8	-	7	60	-	1	+	Wheat, st-mayweed, corn cockle seeds, weed seeds. Elder uncharred. Few fishscales.
56	1361	Soil	5	20	25	-	20	42	-	2	+	Wheat, barley, rye, oats, st-mayweed, vetches, mallow. Elder uncharred. Few fishscales.
57	1361	Soil	4	15	6	-	2	19	-	-	+	Barley, grass and spike-rush seeds. Elder uncharred.
50	1271	Soil	9	20	10	1	18	2	-	-	+	Wheat, barley, rachis of bread wheat, brome grass, corn cockle, st-mayweed, weed seeds. #
Ph.3.1												
41	1064	Constr	7	220	11	-	8	4	1	1	++	Wheat, oat, bean/pea, weed seeds, stem frags.

58	1388	1389	4	20	2	-	2	28	-	-	+	Wheat charred; 2 figs, sedge, elder, henbane uncharred #
62	1388	1389	4	25	4	-	1	20	-	1	+	Wheat, 2 figs, sedge, few fish.
59	1390	1391	5	30	12	-	17	25	2	1	+	Wheat, oats, rye, both mayweeds. Uncharred sedge and elder. #
Ph.3.2												
25	921	drain	4	30	3	-	2	2	2	-	+	Wheat, peas/vetch, 2 straw frags. Fig and elder uncharred. A fish bone and scale.
20	1024	oven	1	30	-	-	5	-	3	-	++	Peas, st-mayweed, twigs, buds, weed capsules.
Ph.4.1												
17	895	floor	1.3	150	-	-	-	-	-	-	++	Charcoal only, some round-wood?
23	926	oven	3	190	1fr	-	-	-	-	-	++	Charcoal and coal, a cereal and straw frag.
38	1122	677	6	50	4	-	1	+++	-	-	+	Mineralized seeds. #
39	1123	677	6	45	4	-	3	+++	1	-	+	Mineralized seeds. # Fish
2	874	877	6	22	1	-	-	++	1	-	+	Mineralized seeds. #
3	876	877	5	50	-	-	-	+	-	-	+	Mineralized seeds
4	889	877	5	55	-	1	3	++	-	-	+	Mineralized seeds. # Fish
6	906	877	5	95	-	-	-	+++	-	-	+	Mineralized seeds. #
8	910	877	5	55	1	-	19	+++	32	-	++	Mineralized seeds. #
43	1204	1284	3	85	-	-	3	+++	3	-	++	Mineralized seeds. # Fish.
Ph.5												
7	907	drain	9	35	7	-	5	38	1	-	+	Wheat, barley, oat, st-mayweed. Uncharred fig, sedges. Fish scales++, few insect remains. #
15	882	layer	1.5	55	-	-	-	-	-	-	++	Charcoal and coal only.
16	943	layer	10	170	10	-	6	12+ 121	2	-	++	Wheat, barley, weed seeds, pea/bean. Uncharred fig, hemlock, henbane, and elder x 121 seeds. Few fishscales.

Key: Gr = grain, Cf = chaff, Se = seed, ch = charred, un = uncharred, Le = large legume;
Nut = nutshell, Chc = charcoal, fl = flecks. # = selected for analysis see (table 1).

Discussion of Medieval Contexts

Saxo-Norman, Phase 2 (AD c.850-1100/50).

Group 20: 'Dark earth' 1361 samples 55, 56 and 57, and 1271 sample 50.
The samples from 1361 were moderately rich in charred plant remains including cereal grains and weed seeds which were quite well preserved and appeared more similar to material from pits than from 'garden soils' seen at other sites. This suggests that this is a dump of rubbish rather than a build-up of material in a cultivated soil where the remains would be more dispersed and broken. This could represent a midden of dumped material as one of the activities suggested in 'dark earths'. The plant remains include free threshing wheat grains with corn cockle and stinking mayweed seeds as found in early medieval pits at Causeway Lane which were of 12th to 13th century date suggesting that this may belong to the end of the phase here.

Undercroft spread 98, context 204.
This layer analysed by Boyer (1991) contains a few charred cereal grains with weed seeds including stinking mayweed. It also includes uncharred seeds with elder most numerous with a fig seed, and a couple of blackberry pips which could all represent food remains although elder is ubiquitous in urban deposits, because it occurs as a plant of waste ground. This is similar to the 'dark earth' samples described above and could have a similar origin.

Early Medieval, Phase 3.1 (AD 1150-1250)

Group 21, sample 41: construction deposit of the undercroft contains a few charred cereal grains of free-threshing wheat and oat with a few weed seeds, a fragment of pea or bean and a hazel nutshell fragment. This appears to be domestic waste and is similar to material from rubbish pits or floor deposits and compares to the Phase 2 samples described above.

Early Medieval, Phase 3.1 (AD 1150-1300)

This phase included 34 pits and consists of Group 15 with two pits and a well, Group 23 West Area with 18 pits, a stone lined pit and a drain, Group 24 North Area with 12 pits and a well, and Group 25 East Area with three pits. Of these the two pits of Group 25 were sampled.

Group 25, Pits east of the undercroft, pit 1389 samples 58 and 62, and pit 1391 sample 59 were thought to be cesspits and were sampled to represent this phase. They were situated on a narrow strip of ground next to the undercroft on the east side in the next property. Pit 1389 sample 58 contained a few charred remains including wheat with stinking mayweed, uncharred seeds included two fig seeds with more elder seeds and a henbane seed fragment. A single fish bone and a scale were the only other remains. Charcoal was also present. Sample 62 contains fragments which appear to be of coprolites with a few fly puparia similar to those seen in cesspits at Causeway Lane. Uncharred seeds of fig, elder and a fragment of a fruitstone were found with mineralized stem fragments possibly of grass, and a few fish scales. A few charred remains include a fragment of hazel nutshell, occasional cereal fragments and weed seeds were also present. The pit is probably a rubbish pit with some latrine waste included as it is not very rich in mineralized material. Pit 1391 contained mainly charred remains with a few free-threshing wheat grains and oat grains, the weed seeds included both stinking and scentless mayweed, corn cockle and corn gromwell as crop weeds. Hazel nutshell and pea sized legumes represent other food waste. A few uncharred seeds are of weedy species probably from the surroundings. A few fish bones were present but more fly puparia than the previous pit suggest that this may be a similar rubbish pit.

Early Medieval, Phase 3.2 (AD c.1250-1300/25)

Group 2, yard of building 1 in Area 1, drain 1482 sample 25, and tank/oven 793 sample 20 are the only samples to represent this phase of the excavation. The sample from drain 1482 contains a few charred cereal grains and seeds together with an uncharred fig seed, elder seeds and a fishbone. This appears to be filled with a scatter

of domestic waste rather than from the use of the drain. The oven or tank base 793 which was sampled contains abundant charcoal with some domestic waste including a few charred peas and weed seeds with some small plant capsules probably representing weedy material used as kindling. The material appears incidental to the use of the feature for some heating process.

Undercroft pits F92 and F100 and floor layers 317 and 223 where a total of 17 samples were taken (Boyer 1991). These pits occur within the walls of the undercroft and it was uncertain at the time of the undercroft excavation whether they were from a phase when the undercroft was without a roof. However, it now seems certain that the building always had an upper storey (N.Finn pers comm.) and that these pits functioned as cesspits within the building. Examples of undercrofts with cesspits and cisterns are know (Schofield and Vince 2003, p.115) and date from the time when privacy for individuals and families was becoming more important.

Analysis by Boyer (1991) has shown that the lower layers certainly contained sewage from the evidence of microscopic ova of parasitic worms of the human gut. These layers also contained mineralized seeds including fruit remains (table 4), fish bones and scales as evidence of foods consumed. The middle layers of the pit are rich in charred plant remains and bones as domestic waste, the charred cereals include wheat and oats from cereal processing which require further analysis because they are the only cereal rich deposits from the site. The upper layers of the pits are rich in weed seeds probably from backfilling the pits with soil from outside the building. These seeds include hundreds of henbane seeds, and although this plant is rich in dangerous alkaloids with anesthetic properties if used carefully, this plant grows in polluted soils such as are found near pits and middens. Unfortunately there are too few samples from this period from the rest of the site to say whether these conditions were found here in the Early Medieval period although occasional henbane seeds were found in single numbers in other samples.

These pits in the undercroft were backfilled by the mid 13th century (D.Sawday pers comm.) so the only pits of comparable date sampled in the excavation are the two pits of Group 25 with three samples described above. The undercroft pits differ from these in containing well preserved mineralized and waterlogged seeds in sewage in their lower layers and with their middle layers exceptionally rich in charred cereals. No similar charred deposits were found in the excavation to trace the area of these activities, but this phase is under-represented in the samples.

Medieval to Late Medieval, Phase 4.1 (AD 1275-1500)

Group 7, floor deposit (985) sample 17, assoc with building 3 contained abundant charcoal including some possibly of roundwood, no food remains were found to suggest that this was a domestic area.
Group 16, kiln or oven 924 sample 23, Area 2, also contained abundant charcoal with occasional cereal fragments and single numbers of fish remains. This was one of three kilns in the area.

Area 3, Stone-lined Cesspits, Group 26 pits 677, 877 and 1284:

These pits were well-built stone-lined cesspits of the same form, they would have been cleaned out and reused probably over the long period of this phase. However, the remaining deposits are likely to date from when they went out of use at the end of the phase. All three pits contain Late Medieval pottery (D. Sawday pers comm.) particularly 877 which includes elite pottery of Late Medieval date, so the fills of three pits are probably all of Late Medieval date.

Cesspit 677 samples 38 and 39: The samples from this pit contained abundant fig seeds, with strawberry and apple and occasional pips of blackberry and elder, fish remains were also present as evidence of foods consumed and present in sewage. Probable coprolite fragments and fly puparia were present also indicating the presence of sewage. A few charred remains included wheat, barley and rye grains, a few legume fragments and weed seeds (table 1).

Cesspit 877 samples 2, 3, 4, 6 and 8: Four of these samples were analysed (table 1) and found to be rich in mineralized plant remains; cloth and other organic fragments were found during excavation. Organic material becomes mineralized by phosphate replacement from the minerals in sewage in such cinditions as occur in cesspits. Lime was sometimes added to kill smells and flies adding to the minerals present. This pit also contained numerous fig seeds with strawberry, apple and elder with the addition of opium poppy, a plant used as seasoning as well as having medicinal uses and being an ornamental plant. Fish remains were also present as food remains. Amongst other seeds present henbane, greater celandine and sun-spurge are of note. Charred remains were present mostly in sample 8 which contained the most peas and beans from the site with a few weed seeds. Charred material from hearths may have been added to cesspits because it absorbed smells.

Cesspit 1284 sample 43: This sample was very rich in fig seeds with a strawberry and plum of a small variety being represented. Abundant fish remains were present with insect puparia as evidence of sewage. A few charred remains were also present (table 1).

Undercroft pit F94 and layer (254): A sample from this pit in the undercroft contained only a few remains but included single fig and blackberry seeds with occasional seeds of rushes and sedges. The layer (254) contained numerous wheat grains with some oats and chaff, and hazel nutshell as charred remains. Uncharred seeds were dominated by hundreds of henbane seeds unlike anything sampled in the excavation with rushes and sedges and a single seed of opium poppy.

Post-medieval, Phase 5 (AD 1400-1550)

Group 4, drain 629 sample 7, assoc with building 1: This sample contained seeds of figs with fish scales and sedge seeds in moderate numbers suggesting the contents of the drain which have some similarities to the cesspits of the previous phase.

Group 6 Demolition assoc with Building 1, samples 15 and 16: Sample 15 contained only charcoal and coal; sample 16 contained a few charred cereals and legume fragments probably from the scatter of domestic waste on the site, with uncharrred

seeds of hemlock and henbane and abundant elder seeds, all of which are plants of urban waste ground.

Table 36 Environmental Material: Occurrence of food and other plants in samples from the excavation and from within the undercroft by phase.

Plants	Ph.2 all	Ph.3.1 Excav.	Ph.3.2 Excav.	Ph.3.2 Ucroft	Ph.4.1 Excav.	Ph.4.1 Ucroft	Ph.5 Excav
Wheat	X	X	X	XXX	X	XX	X
Rye	X	X	-	X	X	-	-
Barley	X	-	-	X	X	-	X
Oats	X	X	-	XXX	X	X	X
Chaff	X	-	-	XX	-	-	-
Nutshell	X	X	-	XX	-	X	-
Peas	-	-	X	X	X	-	-
Beans	-	-	-	X	X	-	-
Legumes	-	X	X	X	X	XX	X
Figs	X	X	X	X	XXX	X	X
O.Poppy	-	-	-	XX	X	X	-
Strawberry	-	-	-	-	XX	-	-
Apple	-	-	-	X	X	-	-
Plum	-	-	-	X	X	-	-
Bramble	X	-	-	XX	X	-	-
Elder	X	X	X	XX	X	X	X
Rushes	X	-	-	XX	X	X	X
Sedges	X	-	-	XX	X	X	-
Henbane	-	X	-	XXX	X	XX	X
Samples	5	4	2	17	10	2	3

Key: x occasional, xx several, xxx frequent.

Table 37 Environmental Material: Plant Remains from the Undercroft, Guildhall Lane (A38.1989).

Period	RB?	E.M.	Med	Med	Med	Med	Med	Med	Med	Med	
Excavation Phase	?	S-N	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	
Undercroft Phase	1B	2C	4A	4E	4E	4E	4E	4E	4E	4E	
Feature	L	L	L	F92	F92	F92	F92	F92	F92	F92	
Context	359	204	317	241	243	245	246	248	262	277	
Botanical names											Common names
CEREAL GRAINS											
Triticum free-threshing grain	-	-	-	-	1	25	-	-	1	-	Free-threshing Wheat
Triticum sp(p)	1	7	21	7	1	6	2	9	10	9	Wheat
Secale cereale L.	-	-	-	-	-	4	-	-	-	-	Rye
Hordeum vulgare L.	1	1	-	2	2	1	-	6	-	5	Barley
Hordeum vulgare L. hulled	-	-	-	-	-	12	-	-	-	-	Barley
Avena sp	-	12	12	-	1	31	-	-	16	-	Oats
Avena sp. Germinated	-	-	-	-	-	6	-	-	-	-	Oats
Cereal/Poaceae	-	-	-	-	-	16	-	-	-	-	Oat/Grass
Cereal indet	-	-	-	-	2	5	-	-	3	-	Cereal
CEREAL CHAFF											
Triticum turgidum/durum rachis	-	-	-	-	-	4	-	-	-	-	Rivet/Macaroni wheat
Triticum aestivum s l rachis.	-	-	-	-	-	6	-	-	-	-	Bread wheat
Triticum free-threshing rachis	-	-	-	-	-	1	-	-	-	-	Free-threshing Wheat
Secale cereale L. rachis	-	-	-	-	-	7	-	-	-	-	Rye
cf Secale cereale L. rachis	-	-	-	-	-	-	-	-	-	-	cf Rye
Hordeum vulgare L. rachis	-	-	-	-	-	5	-	-	-	-	Barley
Avena sp spikelet, diploid.	-	-	-	-	-	2	-	-	-	-	Oat spikelet
Avena sativa L. spikelet	-	-	-	-	-	3	-	-	-	-	Cultivated Oat
Rachis fragments	-	-	-	-	-	9	-	-	-	-	Rachis fragments
Cereal chaff, glumes, awns.	-	-	-	-	-	++	-	-	-	-	Chaff indet
Cereal culm nodes	-	-	-	-	1	10	-	-	1	-	Straw fragments
LEGUMES											
Vicia sativa cf ssp *sativa*	-	-	-	-	1	1	-	-	-	-	Vetch cf cultivated
Vicia/Pisum	-	-	1	1	2	1	-	-	2	-	Bean/Pea
CULTIVATED/COLLECTED	-		-								
Papaver somniferum L.	-	-	1u	1u	-	-	-	-	-	-	Opium poppy
Ficus carica L.	-	1u	-	-	-	-	-	-	-	-	Fig
Vitis vinifera L.	1u	-	-	-	-	-	-	-	-	-	Grape
Corylus avellana L.	+	-	-	-	-	+	-	-	-	+	Hazel nutshell
Rubus fruticosus agg (u)	1u	2u	7u	-	-	-	-	6u	1u	-	Brambles
Prunus sp.	-	-	-	-	-	-	-	-	-	2u	Plum/Sloe
Malus sylvestris s.l. (u)	-	-	-	-	-	-	-	1	-	-	Crab Apple/Apple
ARABLE / DISTURBED LAND											
Papaver rhoeas L	-	-	2u	21u	1u	1u	-	-	2u	-	Poppy
Urtica dioica L.(u)	46u	1u	-	-	-	-	-	2u	-	-	Stinging Nettle
Chenopodium sp	-	-	-	1	-	7	-	-	2	-	Goosefoots
Chenopodium sp (u)	13u	1u	-	1u	-	-	-	-	-	-	Goosefoots
Chenopodium album type	37u	-	-	-	-	-	-	-	-	-	Fat-hen
Stellaria media type	9u	-	-	-	-	-	-	-	-	-	Chickweed
Stellaria cf *palustris*	21u	-	-	-	-	-	-	-	-	-	Marsh Stitchwort
Agrostemma githago L.	-	-	1	-	-	-	-	-	1	-	Corn Cockle
Polygonum aviculare L.	84u	-	45	-	-	-	-	-	-	-	Knotgrass
Rumex sp	47u	-	1	-	-	19	-	4	2	1u	Docks
Rumex acetosella L.	4u	-	2	-	-	-	-	-	-	-	Sheep's Sorrel
Brassica/Sinapis	-	2	-	13	1	-	-	-	-	-	Cabbages/Mustards
Brassica nigra (L.) Koch	-	-	1	-	-	-	-	-	-	-	Black Mustard
Brassica sp.	2u	2	-	12u	-	-	-	-	-	-	Cabbage family
?Camelina sativa L.	-	-	-	1u	-	-	-	-	-	-	Gold of pleasure
Vicia cf *cracca*	1u		-	-	-	-	-	-	-	-	Vetch
Vicia sativa ssp *nigra* (L) Ehrh	-	-	2	-	-	-	-	-	-	-	Common Vetch
Hyoscyamus niger L. (u)	1u	5u	5u	40u	100u	-	-	50u	2u	-	Henbane
Lythospermum arvense L.	-	-	-	1u	-	-	-	-	-	-	Field gromwell
Anthemis cotula L.	-	2	-	4	-	33	-	-	1	-	Stinking Mayweed
Chrysanthemum segetum L.	-	-	-								Corn Marigold
Tripleurospermum inodorum (L.) Schultz-Bip.	-	-	-	-	-	-	-	-	1	-	Scentless Mayweed
Bromus hordeaceus/secalinus	-	-	-	-	-	2	-	-	3	-	Lop-grass/Rye-brome

GRASSLAND											
Leontodon cf *hispidus*	6u	-	-	-	-	-	-	-	-	-	Hawkbit
Cynosurus cristatus L.	-	-	-	-	-	-	-	-	2	-	Crested Dog's-tail
DAMP OR WET GROUND											
Montia Fontana L.	101u	-	-	-	-	-	-	-	-	-	Blinks
Juncus sp (u)	50u	20u	50u	20u	10u	2u	-	27u	28u	100u	Rush
Eleocharis palustris/uniglumis	21u	3	-	-	-	-	-	1	2u	-	Spike-rush
HEDGE OR WOODLAND											
Sambucus nigra L. (u)	3u	100u	35u	1u	1u	3u	-	40u	11u	2u	Elder
UNCLASSIFIED											
Ranunculus sp (m)	11u	-	-	1	-	-	-	-	-	-	Buttercup
Ranunculus acris/repens/bulbosus	40u	5u	-	1u	-	4	-	1u	-	-	Buttercups
Thalictrum minus L.	1u	-	-	-	-	-	-	-	-	-	Meadow-rue
Atriplex sp	-	-	1	-	-	3	-	-	-	2u	Oraches
Cerastium/Stellaria	-	-	-	-	-	2	-	-	-	-	Mouse-ear/Stitchwort
Persicaria sp.	4u	-	-	-	-	-	-	-	-	-	Persicaria
Hypericum cf *maculatum*	1u	-	-	-	-	-	-	-	-	-	St John's-wort
Vicia sp	-	1	-	8	1	35	-	1	1	-	Vetch
Vicia/Lathyrus	-	-	-	3u	1u	5	-	-	1	-	Tare/Vetch/Vetchling
Medicago lupulina L.	-	-	-	-	-	1	-	-	-	-	Black medick
Medicago/Melilotus/Trifolium	-	-	-	-	-	4	-	-	2	-	Medick/Melilot/Clover
Medicago/Melilotus/Trifolium (u)	-	-	-	-	-	1u	-	-	-	-	Medick/Melilot/Clover
Aethusa cynapium L.	1u	1u	-	-	-	-	-	-	-	-	Fools-parsley
? *Pastinaca sativa*	1u	-	-	-	-	-	-	-	-	-	?Wild parsnip
Conium maculatum L. (u)	-	-	-	-	-	-	-	-	-	-	Hemlock
Lamiaceae (u)	-	-	5u	-	-	3	-	2u	-	1u	Deadnettle family
Lycopus europaeus L.	1u	-	-	-	-	-	-	-	-	-	Gypsywort
Stachys arvensis L.	9u	-	-	-	-	-	-	-	-	-	Woundwort
Galeopsis sp.	2u	-	1u	-	-	-	-	-	-	-	Hemp-nettles
Prunella vulgaris L.	10u	-	-	-	-	1	-	-	-	-	Self-heal
Asteraceae	-	-	-	-	-	2	-	-	-	-	Daisy family
Sonchus sp.	-	-	-	-	-	1	-	-	-	-	Sow-thistle
Artemisia sp.	-	-	3u	-	-	-	-	-	-	-	Mugwort
Lapsana communis L.	1u	-	-	-	-	-	-	-	-	-	Nipplewort
Carduus/Cirsium	5u	-	-	-	-	1u	-	-	-	-	Thistles
Centaurea sp.	-	-	-	-	-	1	-	-	-	-	Knapweed type
?Isolepis setacea R. Br.	-	-	-	-	-	1	-	-	-	-	Bristle club-rush
Carex sp (u)	56u	35u	100a	2u	1u	3u	-	11u	3u	23u	Sedges
Carex sp. (charred)	-	-	-	-	-	11	-	-	-	-	Sedges/Docks
Poaceae (charred)	-	3	1	5	1	50	-	5	1	1	Grasses
Poaceae (small)	9u	-	-		1	3			1		Grasses
Allium cf *ursinum*	-	-	-	1	-	-	-	-	-	-	Ransoms
Indeterminate seeds (charred)	-	3	2	17	1	26	-	6	6	-	Indeterminate seeds
Indeterminate seeds (u)	100a	8	19a	4	2	-	-	3	4	30	Indeterminate seeds
Sample Vol	18	17	22	2.5	2.0	8.0*	5.5	6.5	4.0	17	Litres
Flot Vol	88	28	23	75	13	117	++	32	25	20	Mls
% SORTED	all	All	all	all	all	25%	all	all	all	all	%
Items/litre	39	12.5	14.5	67.2	66.5	190	0.7	26.9	27.5	10.4	items/litre

Key: Remains are seeds in the broad sense and are charred unless described otherwise.
(u), u = uncharred, a = approximate numbers particularly henbane and rushes. * = 25% sorted.
Not tabulated F92 (247) one small vetch seed in a 1.5 litre sample.
Re-tabulated from Boyer's Table 1 (Phases 1-4A) and Table 2 (F92).
All analysis by Peter Boyer 1992, additional cereals and chaff by A. Monckton 2008.

Table 38 Environmental Material: Plant Remains from the Undercroft, Guildhall Lane (A38.1989).

Period	**Med**							**L.M.**			
Excavation Phase	**3.2**	**3.2**	**3.2**	**3.2**	**3.2**	**3.2**	**3.2**	**4.1**	**4.1**	**4.1**	
Undercroft Phase	**4E**	**4E**	**4E**	**4E**	**4E**	**4E**	**4E**	**4C**	**4F**	**5B**	
Feature	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**L**	**L**	**F94**	
Context	**309**	**319**	**326**	**328**	**329**	**330**	**344**	**223**	**254**	**294**	
Botanical names											Common names
CEREAL GRAINS											
Triticum free-threshing grain	-	-	42	134	-	-	-	-	192	-	Free-threshing Wheat
Triticum sp(p)	-	2	12	75	17	15	2	5	32	-	Wheat grains
Secale cereale L.	-	-	12	8	-	-	-	-	36	-	Rye grains
Hordeum vulgare L.	-	-	3	4	-	3	1	1	4	-	Barley grains
Avena sp.	-	-	53	217	9	10	2	6	4	-	Oat grains
Avena sp. Germinated	-	-	29	47	-	-	-	-	-	-	Oats germinated
Cereal/Poaceae			86	+					19		Oat/Grass
Cereal indet	-	-	22	300a	-	-	-	-	123	-	Cereal
CEREAL CHAFF											
Triticum turgidum/durum rachis	-	-	-	-	-	-	-	-	-	-	Rivet/Macaroni wheat
Triticum aestivum s l rachis.	-	-	-	10	-	-	-	-	-	-	Bread wheat
Triticum free-threshing rachis	-	-	-	-	-	-	-	-	-	-	Free-threshing Wheat
Secale cereale L. rachis	-	-	-	15	-	-	-	-	-	-	Rye
Hordeum vulgare L. rachis	-	-	-	5	-	-	-	-	-	-	Barley
Avena sp spikelet, diploid.	-	-	-	5	-	-	-	-	-	-	Oat 2x spikelet
Avena sativa L. spikelet 6x	-	-	8	55	-	-	-	-	-	-	Cultivated Oat? 6x spf.
Rachis fragments	-	-	1	31	-	-	-	-	-	-	Rachis fragments
Cereal light chaff, glume frags	-	-	+	++	-	-	-	-	-	-	Light chaff
Cereal culm nodes	-	-	4	44	-	-	-	-	1	-	Cereal straw
LEGUMES											
Vicia/Lathyrus/Pisum	-	-	-	-	-	-	-	-	-	-	Bean/Peas
Vicia/Pisum	-	-	-	-	-	6	-	-	3	-	Bean/Pea
CULTIVATED/COLLECTED											
Papaver somniferum L.	-	-	1u	-	-	-	-	-	1u	-	Opium poppy
Ficus carica L.	-	-	-	-	-	-	-	36u	-	1u	Fig
Corylus avellana L.	+	-	-	-	+	+	+	+	+	-	Hazel nutshell
Rubus fruticosus agg (u)	-	-	-	-	8u	4u	2u	1u	-	1u	Brambles
Prunus sp.	-	-	-	-	3u	11u	34u	-	-	-	Plum/Sloe
Malus sylvestris s.l. (u)	-	-	-	-	-	1u	-	-	-	-	Crab Apple/Apple
?Anethum graveolens	-	-	-	-	-	-	1u	-	-	-	?Dill
ARABLE/ DISTURBED LAND											
Papaver rhoeas L	3u	-	2u	-	4u	2u	2u	1u	65u	-	Common Poppy
Urtica dioica L.(u)	-	-	-	-	1u	-	4u				Stinging Nettle
Chenopodium sp	-	-	1	-	4	-	-	-	-	1	Goosefoots
Chenopodium sp (u)	-	-	-	-	3u	1u	5u	-	-	-	Goosefoots
Chenopodium bonus-henricus L.											Good-King-Henry
Chenopodium album type	-	-	1	10	-	-	-	-	-	-	Fat-hen
Stellaria media type	-	-	-	-	-	1	-	-	-	-	Chickweed
Agrostemma githago L.	-	-	-	-	-	-	5	-	-	-	Corn Cockle
Polygonum aviculare L.								-	-	1u	Knotgrass
Rumex sp	-	-	8	3	-	-	2	1	3	-	Docks
Rumex sp. (u)	-	-	-	-	-	1u	2u	-	1u	-	Docks
Brassica/Sinapis	-	-	-	-	3	-	-	-	4	-	Cabbages/Mustards
Brassica cf *nigra* (L.) Koch	-	-	-	-	-	-	-	-	53m	-	?Black Mustard
Brassica sp. (u)	-	-	-	-	1u	-	2u	-	-	-	Cabbage family
Brassica cf *napus*	-	-	-	-	-	-	-	1u	-	-	?Rape/Swede
Vicia sativa ssp *nigra* (L) Ehrh	-	-	-	12	-	-	-	1	22	-	Common Vetch
Hyoscyamus niger L. (u)	1u	1u	-	-	-	-	-	5u	400a	1u	Henbane
Solanum dulcamara L.	-	-	-	-	-	-	1u	-	-	-	Bitter-sweet
Lithospermum arvense L.	-	-	-	-	-	-	-	-	1	-	Field gromwell
Galium aparine L.	-	-	-	-	-	-	-	1	-	-	Cleavers
Veronica polita/agrestis											Speedwell
Centaurea cyanus L.	-	-	-	1cf	-	-	-	-	-	-	Cornflower
Anthemis cotula L.	-	1	1	3	8	-	-	-	6	-	Stinking Mayweed
Bromus hordeaceus/secalinus	-	-	2	-	-	-	-	-	-	-	Lop-grass/Rye-brome
GRASSLAND											
Leontodon sp.	-	-	-	-	-	-	1u	-	-	-	Hawkbit

DAMP OR WET GROUND											
Juncus sp (u)	9u	15u	50u	20u	100u	25u	25u	25u	50u	8u	Rush
Luzula sp.	-	-	-	-	-	1	-	-	-	-	Wood-rush
Eleocharis palustris/uniglumis	1u	-	1	-	5u	2u	4u	-	-	-	Spike-rush
HEDGE OR WOODLAND											
Sambucus nigra L.	-	-	1	-	-	-	-	-	-	-	Elder
Sambucus nigra L. (u)	1u	2u	1u	2u	17u	16u	1u	9u	5u	1u	Elder
UNCLASSIFIED											
Ranunculus sp	-	-	-	-	-	-	1u	-	1	-	Buttercup
Ranunculus acris/repens/bulbosus	-	2u	-	1	2u	4u	9u	-	-	-	Buttercups
Thalictrum minus L.	-	-	-	-	-	-	-	1	-	-	Meadow-rue
Atriplex sp	-	-	-	-	-	-	-	-	5u	-	Oraches
Cerastium/Stellaria	-	-	-	-	-	1u	-	-	-	-	Mouse-ear/Stitchwort
Hypericum sp.	-	-	-	-	-	-	-	-	2	-	St John's-wort
Vicia sp	-	2	2	5	3	-	-	-	3	-	Vetch
Vicia/Lathyrus	-	-	-	-	7	45	2				Tare/Vetch/Vetchling
Medicago lupulina L.	-	-	-	-	-	-	-	-	7	-	Black medick
Medicago/Melilotus/Trifolium	-	-	-	-	-	1u	-	-	1	-	Medick/Melilot/Clover
Conium maculatum L. (u)									1		Hemlock
Lamiaceae (u)	-	-	-	-	4u	2u	-	1u	-	-	Deadnettle family
Lamium sp	-	-	-	-	1	-	-	-	-	-	Dead-nettles
Galeopsis sp.	-	-	-	-	-	-	1	-	-	1u	Hemp-nettles
Picris hieracioides L.	-	-	-	1	-	-	-	-	-	-	Hawkweed oxtongue
Artemisia sp.	-	-	-	-	-	-	-	-	26u	-	Mugworts
Centaurea sp.	-	-	-	-	-	-	1	-	-	-	Knapweed type
?Isolepis setacea R. Br.	-	-	-	-	-	1	-	-	-	4u	Bristle club-rush
Carex sp (u)	2u	5u	19u	2u	23u	31u	9u	21u	8u	5u	Sedges
Carex sp. (charred)	1	1	1	10	1	4	-	1	3	-	Sedges/Docks
Poaceae (charred)	-	1	4	14	2	3	-	1	-	-	Grasses
Poaceae (u)	-	-	-	-	-	-	1u	1u	-	-	Grasses
Indeterminate seeds (charred)	1	1	3	20	3	52	6	3	21	5	Indeterminate seeds
Indeterminate seeds (u)	1u	4u	5u	-	8u	12u	8u	11u	2u	1u	Indeterminate seeds
Sample Vol	3.0	2.5	3.5	1.5	19	10.5	12.5	7	16*	3.5	Litres
Flot Vol	196	16	27	84	35	40	156	39	105	12	Mls
% SORTED	All	all	all	all	all	all	all	all	50%	all	%
Items/litre	6.7	15	107	703	12.5	24.3	10.7	19	138	8.6	items/litre

Key: Remains are seeds in the broad sense and are charred unless described otherwise.
(u), u = uncharred, m = mineralized, a = approximate number, particularly henbane and rushes.
+ + present, ++ = abundant, * + 50% sorted. One part only of sample F100 (330) sorted.
Re-tabulated from Boyer's Table 3 (F100) and Table 1.
All analysis by Peter Boyer 1992, additional cereals and chaff by A. Monckton 2008.

Comparison with other sites

The cereals from the medieval phases compare with those from the same period at the Shires and Causeway Lane, all of which probably represent domestic waste as a low density scatter although there are too few samples here to confirm this. This is with the exception of the cereals from the rich deposits in the pits in the undercroft which represent some type of possibly commercial waste. To date commercial waste has only been found in late and post medieval deposits in the southern suburb at Bonners Lane (barley processing) and Bowling Green Yard (malting barley), with a deposit of barley at Oxford St which had a low level of germination (either spoiled cereal or possibly malting waste). Re-examination of the Undercroft deposit (328)

showed that it contained hundreds of wheat and oat grains in about equal numbers, the oat grains had about 20% germination. This may be brewing waste as deposits with germinated oats have been found at a number of sites in the midlands suggesting that this oats were used to make ale, sometimes mixed with other cereals. However, the germination rate is too low to be certain that this was malted grain but may be waste from some part of the process.

Some of the weeds provide evidence of agriculture. Stinking mayweed: the presence of this plant indicated the cultivation of heavy soils such as are found in this area. This was a weed which became more common in medieval times and the increase may have been associated with the use of the mould board plough which enabled the cultivation of heavier soils (Greig 1991, p319). Stinking mayweed was called 'mathes' or 'doggefenell' and was described by Fitzherbert in 1523 as 'the worst wede that is, except terre' (i.e. *Vicia* sp) (Jones 1988, p90). Stinking mayweed is more numerous at Bonners Lane but is present in most of the samples here.

Mineralized remains were found here such as were found in the earlier medieval phases at the Shires and Causeway Lane, medieval pits at York Road, post-medieval phases at Bonners Lane and Bowling Green Yard (summarized in Monckton 2004). Mineralised remains are preserved in cesspits where the minerals in the sewage cause fruit pips and stones and other remains to become semi-fossilised which provide evidence of the food consumed and of the domestic occupation. Hence there is strong evidence of features was used as cesspits. The pits from the undercroft contain sewage in the lower layers which appear to date from the use of a garderobe or latrine within the building. The seeds appear to include both mineralized and waterlogged preservation, a greater variety was found than on the Shires and Causeway Lane where only the more robust seeds were preserved in wells and csspits. The middle fills contain some charred and other domestic rubbish together with some mineralized remains which are also found in the backfill in the upper layers.

Evidence from Austin Friars (Mellor and Pierce 1981) showed the presence of damp pasture in the 13-14th century, with damp pasture and cultivated land in the 16th century. Both damp grassland and cultivated land are represented in the samples from this site in early medieval deposits in the undercroft so the riverside may have been the source of the wetland material. Numerous seeds of rushes and sedges were found in the undercroft pits and floor layers and occur in smaller numbers in some of the cesspits on the excavation, this probably represents material brought to the site to use as flooring.

Conclusions and Summary

A Roman demolition deposit contained remains of hay possibly from the previous use of the building, while an occupation deposit contained remains of spelt probably from food preparation. The other samples from the roadside contain only small numbers of charred plant remains showing a scatter of probably domestic waste with the same cereals as found in other sites of this date in Leicester.

The majority of the Early Medieval samples from the excavation contained a few charred cereals including barley, free-threshing wheat, rye and oats with arable weed seeds. Stinking mayweed was present as a typical medieval weed indicating the

cultivation of heavy clay soils such as are found in the area, other weeds indicated the autumn sowing of some of the cereals, probably the wheat. Charred legumes including peas were also found as an additional crop and gathered plant food was represented by hazel nutshell and sloe stones and other possibly gathered fruits of blackberry and elder. Occasional fig seeds were found. The samples from the Undercroft contained more abundant mineralized and probably waterlogged remains of seeds with very abundant cereal remains in some of the deposits. Rivet wheat was found as an additional typically medieval cereal, and a deposit with charred wheat included about an equal number of oat grains with at least 20% germination. It is possible that this represents brewing waste but no comparable samples were taken from the excavation, so investigation of the site of the activity was not possible.

A greater variety of fruit remains were recovered from the Late Medieval cesspits. Probably cultivated fruits included apple, plums and strawberries with figs as a probable import. The quantity and variety of fruits increased in the late medieval period to include strawberry and more abundant figs, perhaps related to the high status of the property.

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Oasis Information

Project Name	An Archaeological Excavation at 9 St. Nicholas Place, Leicester NGR SK 5840 0448
Project Type	Excavation)
Project Manager	Richard Buckley
Project Supervisor	Roger Kipling
Previous/Future work	Archaeological evaluation
Current Land Use	BBC Radio Leicester/BBC Asian network
Development Type	BBC Radio Leicester/BBC Asian network building project
Reason for Investigation	PPG16
Position in the Planning Process	Construction work completed
Site Co ordinates	NGR SK 5840 0448
Start/end dates of field work	10th February – 23rd May 2003
Archive Recipient	Leicester City Council
Study Area	416m²

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APPENDICES

Appendix One: The Excavation and Structural Survey of a Medieval Undercroft in Guildhall Lane, LeicesterJules Hagar

1: Introduction

From May 1989 to July 1990 members of the Leicestershire Archaeological Unit's Employment Training Scheme undertook a detailed structural survey and limited excavation within a surviving medieval undercroft in Guildhall Lane Leicester. The survey and excavation was funded by the Employment Training Scheme and The Leicestershire Archaeological unit and co-directed by J. Hagar and R. Buckley. The excavation team was entirely composed of members of the Employment Training Scheme.

The undercroft is located under the northern side of Guildhall Lane and 13 metres from the junction of Guildhall Lane and Applegate, formerly Highcross Street, in the heart of Leicester City (illus.1). The Cathedral Church of Leicester, St. Martins, which has a probable Norman foundation (Brandwood 1984), is approximately 40 metres to the east, whilst the 14th century Guildhall is on the opposite side of the street. Guildhall Lane itself is probably an early element in the medieval street pattern leading off medieval High Street (now Highcross Street). Leicester. The name of Guildhall Lane has changed on several occasions; the earliest appellation being Holyrood in the 12th and 13th centuries. Then latterly called Kirk Lane, Kirkgate, Town Hall Lane and finally Guildhall Lane (Bennett 1985). Today the undercroft survives as a cellar and the surviving structural and archaeological remains were extensive.

2: Documented History

The first reference to the undercroft occurred in 1844 when on 28th September of that year a Mr. John Flower was informed of its existence by the Sexton of St. Martins Church, now the Cathedral Church of Leicester. The Sexton lived in the overlying 'Elizabethan' house with a large projecting gable (Arch. Jour.1 1845, 390). This building is just visible in the middle distance, behind the furthest pub sign on the right hand side of Guildhall Lane in one of John Flowers' lithographs of the Guildhall in Guildhall Lane dated to 1826 (illus.2). Mr. Flower recorded four windows in the west wall with internal splays and sloping sills leading to narrow slit windows. He also mentions four niches in the east wall and describes the general composition of the fabric of the stone walls and the internal dimensions of the building.

However, in 1854 the east and west walls were drawn by a Mr. Dryden who also mentioned two doorways one in each of the north and south walls at their western ends. The overlying timber framed house was described as 17th century and of post and pan construction (illus.3). The cellar at that time was in occupation by Swain and Teddy Cheesemongers (Dryden 1854). It is not until 1861, when the overlying timber framed house was demolished, that the true extent of the Undercroft's remarkable state of preservation came to light. Mr. J. Weatherhead, Museum Curator at that time

had the foresight to photograph the exposed remains. He photographed the west wall with the four windows (illus.4). The Undercroft was thought to date to the 11th or 12th centuries. Its suggested function then was to serve as an Undercroft for storage beneath a 1st floor hall and solar.

Traces of two windows were also recorded in the north and south walls, not doors as mentioned by Dryden in 1854. Outer splays to the four windows in the west wall were also recorded in 1861. This suggests that deposits were removed from around the outside of the west wall of the building in 1861 to reveal these possible outer splays or that they may have been partially visible anyway. An article later in the same year, however, states that there were no outer splays to the windows, only excavation around the outside of the building will resolve this contradiction. The Undercroft is referred to in 1864 (T.L.A.H.S. III, 12) and 1902 as a parallel for other similar structures in Europe, notably Trier in France (Stepheim 1902). Nothing is mentioned about the Undercrofts preservation until 1949 when it is referred to as being 'still largely surviving'and thought to be a Norman if not late Saxon secular public building (Cottrill 1949).

In 1956 the cellar was further mentioned as being full of coal and difficult to see, but still intact and 'scheduling without delay' was necessary (Clarke 1956). This was not followed up. After 1958 it seems the cellar was largely forgotten about. It was not until January 1989 that a location plan of 1958 was re-examined. A search was then undertaken by the Leicestershire Museums Survey Team. The cellar was duly re-discovered. The surviving structure is largely the same as it was described 150 years ago with a few additions which went unnoticed then. N-S the building is 28 ft. 6 inches long (8.70m) and just over 15ft. wide (4.56m). The walls are at least 0.70m thick and the east wall stands to a height of 2.65m.

In 1861 considerable alterations were undertaken. The overlying timber building was demolished and a brick building replaced it. The Victorian building is partially above and to the west of the undercroft. Some of the timbers from the earlier building were probably re-used in the later one and are visible today supporting the upper storey. The undercroft, which by now served as a cellar, was divided into two rooms by a brick partition wall. In the south room two further shorter brick piers were built which created three alcoves, but their primary function was to serve as supports for the eastern foundations of the building above. On top of the brick piers thick slate lintels carry the main weight of the foundations. A brick staircase was also inserted in the north room on the west side, which destroyed part of the west wall and most of the northernmost window, and the undercroft roofed with a brick vault. An unbonded brick floor was then laid.

The only access to the building is via a manhole and then down a short flight of brick built steps. In 1989 the cellar was still full of coal and other assorted rubbish. Subsequently, Richard Buckley initiated a project to clear the cellar of debris and to undertake the detailed survey of the standing building and to carry out limited excavation. An Employment Training Scheme Team was sent to clear the Undercroft out and over 12 tons of accumulated rubbish was removed from the site. The walls were then cleaned thoroughly and detailed elevation drawings undertaken of the surviving structure.

3: Drawing Methods

All the drawings were scaled at 1:10 with a continuous datum at a fixed height secured to all the walls. The datum was calibrated using an E.D.M. The measurements of the walls were obtained using basic tools such as 30m tapes and hand tapes. Every stone in all the walls was measured at several points to obtain maximum accuracy using the continuous datum. The lower courses of the walls were drawn with a levelled planning frame after the medieval floors had been excavated. All the windows and niches were profiled horizontally and vertically and a general profile of the Victorian vaulting was undertaken. Additionally, a C.A.D. drawing of the west wall was produced from the 1861 photograph which is the only surviving archive record of how the west wall appeared before the Victorian alterations. This work was undertaken by the Leicester C.A.D. Centre at Leicester Polytechnic (now De Montfort University) School of the Built Environment.

Computer Aided Mono-Photogrammetry is a sophisticated technique of image enhancement with a typical scale accuracy of 1% (10 in 1000) (Watt and Ashton 1989). It can be seen from the C.A.D. and the conventional elevation drawings of the west wall that both complement each other very well indeed.(illus. 5 and 10). The 1989 survey recorded the undercroft as it is today with all the Victorian alterations. By the C.A.D. method it has been possible to reproduce an elevation drawing of the west wall of the undercroft as it appeared in 1861.

4: Introduction to Survey and Excavation Reports

The aims of the survey and excavation were to record the standing structure and to attempt to establish a construction date for the undercroft. Due to the confined space and excavating 3.00m underground considerable logistical problems were encountered. The site could only be entered through a manhole below which was accessed by a short flight of brick stairs. Artificial lighting had to be installed and for safety reasons only four people could work on the site at any one time. Spoil was bucketed out via the manhole and then into a skip. The manhole was also the only means of ventilation and any rigorous excavation by more than one excavator caused severe condensation and air depletion. The excavation and survey were undertaken entirely by hand.

The survey report details all the structural features, wall descriptions and mortar types. Each wall is dealt with separately, all of which are phased in subphase 2.3 of the excavation report below. The excavation report consists of 7 main phases which are subdivided into subphases; e.g. Phase 1.1, 1.2 etc. The foremost priority was to undertake detailed internal, hand drawn and measured elevation drawings of the entire surviving structure. This was a time consuming process and took 3 months to complete. Additionally many detailed photographs were taken. In view of the significance of the archaeology it was decided to evaluate the extent of the surviving archaeology below the Victorian brick floor. Initially the evaluation was confined to 2 square metres in the extreme S.E. corner of the building in order to obtain some dating evidence for its construction. 2 square metres was insufficient and half of the brick floor in the south room was lifted to extend the excavation. Latterly the

surviving deposits were so remarkable that the whole of the north room was excavated as well.
Conventions used in the report are as follows:-
Stratigraphy: e.g. F4 [8] = Feature Number followed by context number(s) in square brackets.
[7] = context number without feature number
Pottery: e.g. (10) = number in parentheses indicates the number of pottery sherds found in each context.
All finds and records deposited with Leicestershire Museums (ACC. A38 1989).
Full archive report deposited with Leicestershire Archaeology Unit.

5: The Excavation
PHASE 1
THE ROMAN LEVELS (Illus. 6-8)

Very limited excavation of the Roman deposits took place. It was fortunate that a large, deep medieval pit (F100 of sub-phase 4.5.illus.24) was encountered. This pit was fully excavated. It soon became apparent that the compacted gravel deposits revealed in the sides and bottom of the medieval pit could have been naturally derived, (the subsoil in the City is sand and gravel of varying consistency) or, as was hoped, as the result of Roman occupation in the form of street levels. It was necessary therefore to continue downwards through the bottom of the medieval pit. This action confirmed without doubt that the gravel deposits were indeed Roman street levels and that earlier features were sealed by the primary street deposits.

SUBPHASE 1.1: EARLY - MID 1ST CENTURY A.D.
Shallow Pit: F176 [367].
Layers: [363]; [368].

The earliest layer encountered which lay immediately above natural subsoil was context [368]. This layer was a dusky red, sandy clay loam. Immediately above [368] and cut by F176 was context [363] which was a greyish brown sandy clay loam. Neither [363] nor [368] contained any finds. Cutting [363] was F176 a shallow, flat bottomed pit. Fill [367] consisted of a brownish-yellow compacted sand. [367] contained one animal bone.

SUBPHASE 1.2: MID 1ST CENTURY A.D.
Layers: [359]; [361]; [403].

Sealing F176 of 1.1 was layer [361]. This was a very fine, light brown sandy silt. [359] sealed [361] and consisted of a very dark grey clay loam with frequent charcoal. Also above [361] was [403] which consisted of a compacted red clay. Both [403] and [359] were cut by F177 of 1.3. None of these layers contained any finds.

SUBPHASE 1.3: MID TO LATE 1ST CENTURY A.D.
Channel: F177 [369]
Post hole: F172 [360]

Cutting [359] of 1.2 was a small posthole F172. Fill [360] was a very dark red sandy clay loam. It contained no finds. Cutting [359] and [403] of 1.2 was F177 which was a channel running north-south. Its fill [369] consisted of a soft pale brown sandy clay silt. It contained Roman pottery (5), animal bone and a large fragment of tile.

DISCUSSION OF SUBPHASES 1.1-1.3

The very limited extent of the earliest excavated features and deposits renders any interpretation as highly speculative. Additionally, the only dating evidence was recovered from the fill of F177 of 1.3. Subphase 1.1 on stratigraphical grounds could possibly represent pre-Roman conquest activity. Context [359] of 1.2 suggests, from the environmental evidence, to be of natural origin and as such probably waste ground. Whereas [403] of the same subphase may indicate a clay surface of some kind. A similar sequence of layers was observed below a Roman street during the 1964 St. Nicholas Circle excavations (A 365 1964, unpubl.). F177 of 1.3 was a gully, and from the limited quantity of pottery present in the fill, probably dates to the second half of the 1st century A.D. Posthole F172 could further be contemporary with gully F177 or surface [403] because the relationship between contexts [359] and [403] had been destroyed by the intrusion of F177.

SUBPHASE 1.4:
Introduction:

As the bulk of the Roman street levels were only seen in section (the sides of F100) to a depth of 1.65m only three separate phases can be determined with any confidence. Two of the street phases which contain three contexts only are late and closely associated with the construction of a Roman structure. Therefore, the bulk of the contexts assigned to the street levels have been grouped into one phase. Only the topmost street levels were revealed in plan. A total surface area of 32.52m² of Roman street was recorded. There was also a total lack of dating evidence from any of the street layers.

SUBPHASE 1.4: EARLY 2ND TO MID 4TH CENTURIES A.D.
Roman Street: F186 [343, 373-375, 384-388, 391-399, 401-2, 491]
Rut: F185 [489]

The earliest context ascribed to the street formation process was [343]. This layer sealed both F172 and F177 of 1.3 and consisted of a dark yellowish brown, compacted sandy gravel. It contained no finds. All the street layers above [343] were yellowish brown to reddish brown compacted sands, gravels and sandy gravels. Two exceptions were layers [391] and [395] which contained high quantities of oyster shell [395] was almost entirely composed of oyster. Also of note was [393] which was the same as context [375]. It comprised 90% large pebbles and was a discrete layer

within the street layer sequence and may be indicative of a slight camber toward its eastern edge. Cutting street layer [491] was F185. It was filled with a dark greyish brown sandy clay silt with a granite stone directly on its eastern slope. This could be a post hole or more likely a rut running north-south. It contained no finds. Finally sealing [385] and F185 were contexts [384] and [373]. These both represent the same layer, a strong brown compacted sandy gravel.

SUBPHASE 1.5: MID TO LATER 4TH CENTURY A.D.
Wall: F181 [381, 372]
Wall: F178 [371, 372]

Wall F181, which was orientated N-S, cut context [384] of 1.4 and is contemporary with F178. Context [372] was common to both features and comprised almost pure Mercia Mudstone serving as a bonding agent for the foundation stones. Larger, irregular blocks of granite were used in the construction of F181; the largest encountered being 0.61m east-west and 0.38m deep. The foundation stones used for F178 were altogether smaller and narrower. F178 was orientated N.W-S.E. F181 had a deeper construction cut than F178. Context [381] of F181 consisted of roughly shaped granite stones in three courses bonded together with Mercia Mudstone. Context [371] of F178, however, consisted of two courses of mortar bonded well-faced granite stones. The mortar was a soft friable reddish brown colour with frequent flecks of oyster shell. Its texture would be consistent with degradation through water action. Only F181 was partially excavated, F178 was only uncovered. Both walls are still in situ.

SUBPHASE 1.6: MID TO LATER 4TH CENTURY A.D.
Street: F186 [383]
Spreads: [376, 400]

After the structure of 1.5 had been built, the Roman street was remetalled. [383] of F186 represents this resurfacing which built up against the east face of wall F181 of 1.5. [383] consisted of a brownish yellow very compacted sandy gravel. This layer was well laid to an even depth of 0.06m. Context [376] consisted of a light brownish yellow sandy silt with frequent degraded Danehills sandstone. This spread was confined to the west side of F181 but present on both sides of F178. A greater proportion of [376] was present inside the structure that is to the west of F181 and to the south of F178. [376] also occurred to the north of F178 and leached into fill [378] of F179 of 1.7. Although [376] abutted F181 and F178 it lay directly over [384] of F186. Context [400] lay above [376] and was confined to the same area as [376]. [400] consisted of a light brownish yellow sandy silt and differed slightly from [376]. This layer had built up against the west side of F181 and the south side of F178. It was confined to the interior of the structure. Neither [376] nor [400] contained any finds.

SUBPHASE 1.7: 4TH CENTURY A.D.
Soakaway/Sump: F179 [378]; [492].
Spread: [377].

Cutting [383] of 1.6, but sealed by [379] of 1.8 was F179. It had been badly truncated by F100 of 3.1. Its fill [378] consisted of a greyish brown, sandy silt with one large granite stone and small granite fragments. The relationship of [378] to [376] of 1.6 must remain uncertain especially as [378] contained a thin lens of [492] a sandy material identical in character to [377]. [378] contained no finds. Context [377] was a brownish yellow, sandy silt and occurred to the north and south of F178. It was cut by F179 of 1.7. It contained frequent crushed Danehills sandstone fragments and no finds.

SUBPHASE 1.8: 4TH CENTURY A.D.
Street: F186 [379, 205]

Contexts [379] and [205] were the same layer, representing the final resurfacing of the street. [379=205] was a dusky red compacted gravel. In places there were patches of large highly polished pebbles. This layer built up against the east face of wall F181 of 1.6 and sealed F179 of 1.7. [205] produced some animal bone and an amorphous copper alloy fragment and Roman pottery (1).

SUBPHASE 1.9: LATER 4TH CENTURY A.D.
Drain: F180 [380, 389]

F180 consisted of an unbonded stone drain running in a north-westerly direction; that is away from the structure of 1.6. It also cut the latest street surface [379-205]. The fills of the drain were excavated but its structural integrity was left in situ. Its construction consisted of unmortared large granite blocks set close together with the faced sides forming the channel of the drain. Around these large stones smaller granite stones had been used as packing. Furthermore other intermediate sized stones were used to cap the drainage channel, some of which had toppled into the channel of the drain. Also some of the stones forming the north side of the channel had subsided towards the south side. Fill [389] was a strong brown, sandy silt. [380] was a mixed layer with an overall brown hue. It consisted of very compacted sandy clay. There were also frequent flat fragments of sandstone rubble and small granite rubble. Neither fills contained any finds and [380] was sealed by [204] of 2.1.

SUBPHASE 1.10: LATE ROMAN/MEDIEVAL.
Post holes?: F71 [206]; F73 [208]; F74 [210]; F75 [211]; F76 [212]; F77 [210]; F78 [213].
Post Pits?: F72 [207]; F184 [487].
Robber Trench: F182 [382].
Spread: [209].

All the features and contexts listed above were sealed by context [204] of 2.1. Except for F182 all the other features cut the latest street surface [379=205] of 1.8. Towards

the southern end of the site there was a series of possible shallow postholes and post pits. All the fills were reddish brown to brown sandy clay loams. At the bottom of possible post pit F184 were F74 and F77 which were two post hole-like depressions. No finds were present in any of the fills. Spread [209], although cut by F184 may belong to this subphase. It consisted of a strong brown, sandy clay. It contained no finds. F182 probably represents a partial robbing of wall F181 of 1.5 and had disturbed some of the stones and binding Mercia Mudstone of F181. Its fill [382] was a brown sandy loam and it contained no finds.

DISCUSSION SUBPHASES 1.4-1.9

The depth of the Roman deposits suggests that the latest layers are very likely to be 4th century although there is no dating evidence to support this assumption. Subphase 1.4 represents the successive surfaces of the Roman street probably ranging in date from the early second to the mid to late fourth centuries. To judge by the later features cutting into the street probably supports the view that there has not been any major truncation of the latest Roman levels. It would be futile to attempt a multi-phase analysis of the street levels as only a small proportion was recorded in section and only [379, 205] were recorded in plan. The street is still in situ.

The fact that no camber was observed, apart from a general rise of 0.16m to the south east corner of the site, (the natural subsoil also rises gradually in that direction), and that it is known that two major Roman streets should cross in this area, suggests that the excavation revealed a near central area of this crossroads. That the main roads were encountered is supported by the 1.65m depth of recorded street levels. Also, other excavations in the immediate vicinity would support the view that the Fosse Way and a main north south street junction has been located.

During the later Roman period the two walls of subphase 1.5 were built. The wall F178 is of a lighter construction in its foundations than that of F181 running north-south. The two walls do not form a right angle but F178 runs obliquely at an angle of 35 degrees to join F181. From the structures position when related to the known street grid it appears to be central to the Roman crossroads discussed above, and probably polygonal in plan.(illus.8). A return wall or continuation for F181 was looked for in the alcove immediately to the south of the Victorian brick staircase but none was located. Therefore it is logical to assume that F181 was a short but substantial wall probably no more than 1.50m long, with an oblique return wall mirroring F178. This southern oblique wall is concealed by the Victorian staircase. It is very probable that the other half of the polygonal structure lies to the west of the excavated evidence. Added to which the street was still resurfaced on two occasions (subphases 1.6 and 1.8) after the structure was built. But more importantly in order to determine the type of structure with which F178 and F181 are associated, it is necessary to consider the deposits inside the structure itself. All the deposits associated with the structure were silty, no flooring was encountered at all.

When all the evidence is taken into account it seems likely that this structure was a fountain or an elaborate water trough in a prime position at the centre of the main crossroads in Roman Leicester (illus. 8). Added to which drain F180 was constructed next to it probably to drain away any overflow. The N.E. direction of the drain

leading away from the fountain or trough is consistent with the general slope down towards the River Soar in this area. All the features in this subphase 1.10 may represent traces of a very late Roman or post Roman structure. If this is the case then it may have been circular. (illus. 6). It is also possible that they may have been potholes in the Roman street or indeed remnants of scaffolding holes for construction of the undercroft. Robber trench F182 predates the construction of the Undercroft and [204] of 2.2. It may be that this was a Roman robber trench which is uncommon in Leicester but Roman robber trenches have been observed in the Forum area. (Mellor and Hagar forthcoming).

MEDIEVAL LEVELS: PHASE 2: POST-ROMAN TO EARLY 12TH CENTURY

SUBPHASE 2.1: Layer: [204]

This layer sealed all the latest Roman levels and was present over most of the site. [204] was absent from the western wide of the site. It had an irregular edge with a maximum distance from the west wall of 1.32m while at its closest it was 0.32m from the wall [204] continued under the W, N and South walls and pre-dates the construction of the undercroft. It was a thin, very dark brown compact gritty clay layer. All the finds of bone or pottery were very small and abraded most of which were retrieved from sieving. This layer also had a high seed content indicative of damp waste ground. It contained Roman pottery A(9) and animal bone.

SUBPHASE 2.2: Spread: [98]

Spread [98] was a reddish brown compacted sandy clay and continued under the south wall only. It was only apparent at the south end of the site. It is possible that [98] is the remains of an earlier floor to the building or its presence resulted from the construction of the walls. As it was confined to a limited area its purpose must remain speculative. It was an extensive spread and was truncated at its northern end by F92 of 4.5. It contained Roman pottery (1).

SUBPHASE 2.3: (illus.9-16).

Introduction: The construction of the building is included in this subphase because it is certainly later than [98] of 2.2 but earlier than the mortar floor of this subphase. The mortar floor [97=318] was below layer [36] of 2.4.

As the building is so archaeologically important all the detail relating to the surviving structure is included in this section of the report. Although there are areas of different mortar discernible within the general fabric of all the four walls it is difficult to determine a secure structural phasing for the building. Only two elements of the building are securely phaseable, namely the structure itself and the door blocking. One other noticeable change in the west wall is the northern most window F90 and the area of wall around it. Stylistically this window is probably 12th century or later and it may belong to the postulated rebuilding phase of 3.6. Additionally there is doubt as to the origin of the tile used in the architectural features of the building. (Lucas p. below).

MEDIEVAL WALLS: NORTH WALL: (illus.10)
Niches: F81; F82.
Mortars: [700-1, 703-4, 712].
Clay Bonding: [702].
EAST WALL:(illus.11-12).
Niches: F83; F84; F85; F86.
Mortars: [704-7, 709-13].
SOUTH WALL: (illus.13).
Mortars: [712-14, 721].
WEST WALL: (illus.14).
Windows: F87; F88; F89; F90.
Doorway: F79.
Niche: F80.
Mortars: [715-20, 722-26] Mortar Floor [97=318].

DESCRIPTION NORTH WALL: (illus. 9)

The total length of the north wall is 4.55m and survives to a maximum height of 2.01 metres. This wall is heavily damaged by the Victorian refurbishments of 1861 at both its eastern and western ends. The western end is where a door or another window was possibly noticed in 1844 and 1854. There are fragments of Danehills Sandstone immediately to the west of the Victorian bricks that may support this view. Additionally, the height of the north wall has been reduced due to the insertion of the brick vaulting which arcs southwards from this wall. The heavy bricking at the east and west ends of this wall are more likely to be extra support for the vaulting.

Built into the north wall are two niches F81and F82. Niche F81 has been badly damaged by the Victorian refurbishments. Two brick tiles survive, one horizontal and one vertical on the east side, forming a right angle with one another. As can be seen from (illus.10) no absolute dimensions can be given. However, it is highly probable that F81 was of a similar shape and size to the best preserved niche in the building F82. This niche has all its brick tiles in situ and intact, which form a neat box with an internal width of 0.33m, height of 0.28m and depth of 0.40m. Both niches are contemporary with the construction of the wall and went unnoticed until 1989. Four different types of mortar were noticed in the north wall which, rather than being different phases of building, probably represent differential mixing.

Mortar [700] is a yellowish brown sandy matrix with patches of brown sandy clay loam and mortar lumps interspersed throughout. [700] was confined to an area immediately able niche F82 and has a maximum length of 0.80m and height of 0.23m. There is also a noticeable small concentration of Roman wall tile fragments in this small area of the north wall. Mortar [701] was the main mortar matrix of the north wall and was a yellowish brown, sandy and very gritty in composition. Context [702] was a red pebbly sandy clay and was over [701]. It was confined to the lower central portion of the north wall and may indicate the remains of a later repointing of the wall or possibly as a base for a newly destroyed wall plaster layer. Context [703] is a light brown compact sand which was very difficult to sample. It is probably Victorian in date as it is only confined to the east end of the north wall where there is considerable Victorian brickwork. Mortar [704] is a yellowish brown sandy, very gritty mortar common to the lower portions of the north and east walls. It is essentially the same as

mortar [701], although it had a slightly higher clay content. Mortar [712] this is common to all the four walls of the building but confined to the very lowest portions of the walls. Its maximum height is 0.50m. It comprised a yellowish red, sandy, slightly sticky compacted mortar with a higher pebble content. The stone courses within it also appeared to be different in construction to those above. This mortar almost suggests an earlier building phase, especially as in all the corners of the building within this mortar were well squared quoins of sandstone with diagonal tool marks clearly visible.

DESCRIPTION EAST WALL: (illus. 10-11)

This wall is 8.70 metres long and stands to a maximum height of 2.65 metres. It is still very much intact despite the addition of the Victorian partition walls and brick vaulting. Built into the east wall are four niches. All of these niches are badly damaged with their brick tiles either in a very fragmented state or missing altogether. Niche F83 the northernmost of the four measures, a maximum of 0.50m wide, 0.40m high and 0.47m deep. Only two of the brick tiles survive forming at the top of the niche. Niche F84, 1.00m to the south of F83 measures 0.47m wide, 0.55m high and 0.30m deep. There are two surviving small fragments of brick tile at the top on the north and south sides, and a complete tile at the rear. 0.97m to the south of F84 is niche F85.

F85 is very badly damaged. It was bricked up in 1861 and the eastern half of the Victorian partition wall was built in front of it. Its surviving measurements are 0.45m in width, 0.51m high and 0.35m in depth. This niche had been filled with rubble and loose earth after it was bricked up. There was no trace of any brick tile. 0.90m to the south of niche F85 is niche F86. This measures 0.45m in height and width and is 0.33m deep. Once again, there were no surviving fragments of brick tile. Mortar [704, 712] are common to both the east and north walls and are described above. Mortar [705] is a dark yellowish brown slightly clay sandy matrix which forms the bulk of the upper portion of the east wall.

[709] and [713] have the same consistency as [705] but are a yellowish red colour. [706] is a dark yellowish brown very friable sandy matrix with a high, small and medium pebble content. It is confined to the central portion of the northern half of the wall. 707] by comparison is yellow and more clay with few pebble inclusions and is located just to the south of [706] in the same part of the wall. [710] was a non-lime mortar bonding the bricks which blocked niche F85 and was a patch in the lower central portion of the south wall. [711] over [713] is identical to [702] of the north wall and possibly further suggests a later repointing of this wall. Again, the whole construction of this wall is very suggestive of rough coursing.

DESCRIPTION SOUTH WALL: (illus. 12).

The south wall survives to a height of 1.80m and is 4.56m long and it does not contain any features. There are possibly two phases in this wall because at its western end and extending for 1.76m eastwards is an area of more regular stone work which gives the impression of being stepped. The rest of the wall appears to be more randomly

coursed with three very substantial granite blocks serving as footings. There is a dressed sandstone quoin with diagonal tooling marks in the S.E. corner which is identical to those present in the N.E. and N.W. corners of the building. The difference in construction could have been as a result of differential building technique but it is still possible that this wall displays a structural addition. Mortars [712, 713] have been described above. [714] is a yellowish red sandy matrix and forms the main mortar fabric of this wall. [721], however, is located to the western end of the wall near Victorian bricks. It is not of recent origin and possibly indicates an earlier repair. The stones are certainly smaller and uncoursed. Additionally, there are three very large granite blocks forming part of the foundations of this wall but within mortar [712]. Indeed, the whole aspect and style of this wall when compared to the other three walls of the building is different. The presence of a sandstone foundation quoin in the south-eastern corner of this wall is identical to that noted in the north-east and north-west corners of the building. The difference in construction is possibly as a result of different building skills, but it is more probable that it is a later structural addition. The 'rough-coursing' is clearly visible but it is altogether cruder in construction. There is the possibility that a doorway or window existed at the far western end of the wall. This area is heavily bricked up and an access point Ais there in 1861 (see illus. 5).

DESCRIPTION WEST WALL: (illus. 13-14).

As can be seen from the photograph of 1861 (illus. 5), this wall then displayed four remarkably well-preserved windows. In the photograph three windows have the same arches while a fourth nearest the camera is different. We now know that the three former windows had tiled arches, whilst the latter had a stone arch. The photograph was taken looking south-west with the Leicester Guildhall visible in the background. Unfortunately, during the Victorian refurbishment of 1861, three of the windows were bricked up and obscured by partition walls and the northernmost window F90 almost completely destroyed by the staircase. The west wall today measures 8.70m in length, but before the Victorian refurbishment of 1861 it was longer by 1.10m. It survives to a maximum height of 2.80m. This wall contains the bulk of architectural detail of the building. Profiles of the windows that survived the 1861 redevelopment are shown (Illus. 15). Window F87 is the southernmost. It measures internally 1.21m in height and is 0.55m in width. The windowsill is semicircular and horizontal for 0.25m then slopes up at an angle of approximately 0.20 degrees for 1.00m to a narrow slit aperture 0.15m wide and 0.40m high. This window is the best preserved of all despite the Victorian bricking up and construction of the alcove wall which partially obscures it and badly damaged the tiled arch.

The jambs of this window all survive and are formed with Leicestershire Danehills sandstone laid in a side alternate fashion. The tiled arches are composed of brick tile. The form and dimensions of windows F88 and F89 are the same as F87 except that the slit apertures have not survived the Victorian refurbishment of 1861. The northernmost window of the four, window F90, did not survive the Victorian redevelopment. Only three sandstone jambs on its lower southern side remain. The Victorian brick staircase obscures it totally but it originally measured 1.10m high and 0.58m wide. However, it is quite clear from the photograph of 1861 that this window was of an altogether different construction. There are three major differences.

Firstly, it had a stone arch, secondly the sandstone jambs are not laid side-alternately, and thirdly the sloping sill is rectangular, not sub-circular as in the three tiled arch windows. Additionally, the wall fabric around this window is of a much more random construction using smaller stones. In the 1861 photograph it will be noticed that there is an area below windows F89 an F90 which appears to be neatly squared stones. This was wall plaster which had been scored to imitate well-dressed stonework. This has not survived.

From the site elevation drawings it can be seen that this area of plaster was covering some very rough stonework indeed. All around this window the stonework is very irregular compared to the stonework found in the rest of the fabric of the building. This strongly suggests a later rebuild of this part of the wall; probably repairing partial dereliction on this area of the west wall. Also, there is a noticeable kink in the wall at this point which further supports rebuilding activity. It is possible that this repair may be linked to refurbishment activity recorded from the excavation in the early decades of the 12th century (see subphase 3.6), or indeed later still in the 13th or early 14th centuries within the doorway was partially blocked. The relative distances apart of the four windows are slightly variable when measured from their internal sides. From the northernmost internal side of window F87, F88 is 0.85m distant, while the distance between F88 and F89 is 0.72m. F90 is 0.85m away from F89. The bases of the window sills are midway up the wall at 1.65m from the mortar floor of this subphase.

0.60m to the north of window F90 is the doorway, now blocked. This survives to a height of 2.10m and is 1.56m wide. It is part of the original construction of the building. Once more the jambs, certainly in the right-hand side, laid in a side-alternate fashion incorporating niche F80 described below. As can be seen from the elevation drawing (illus.14) the door was first blocked with stones, mostly of granite. They are not bonded with mortar but clay. From the excavation this is likely to have occurred sometime in the late 12th or early 13th centuries. (See subphase 5.1) The upper left hand side of the door has been altered or repaired prior to the main Victorian in-filling. There is a clear division between the smaller bricks (0.06m thick) forming the left hand side of the door and the Victorian bricks abutting them. Additionally, below the Victorian brickwork but above the stone blocking is a patch of thinner bricks, again 0.06m thick, which may belong to the same period as those repairing the left side of the doorway. Dating this particular brick repair work is fraught with difficulties, it could be anywhere between 1250-1861. One point is indicated, however, that after the initial partial stone blocking the doorway was probably still used.

The blocking may have resulted from further soil build-up outside the building or possibly a change in function of the building. It may be that the doorway was partially blocked and acted as a shop counter, a not uncommon event in the medieval period. Niche F80 is unusual when compared to the other niches described above. Its left hand and top sides are formed by the right hand jambs of the doorway. Whereas the right hand side of the niche is formed by a re-used Roman wall tile, as is the rear. The base of the niche is lower than the other 6, it being 1.00m from the mortar floor. Its internal dimension are 0.43m in width, 0.35m in height and 0.36m in depth.

Mortars [715-720] represent a similar mortar mix which is brownish yellow to yellowish brown in colour and of a sandy, slightly clay, texture. It forms the major mortar mix of this wall and is more friable. Mortar [722] is confined to an area immediately to the south and near the top of window F90 where the arch of that window would have begun. It is a reddish yellow sandy more compact matrix bonding random coursed tightly packed smaller stones. It is quite distinct from [719] immediately to the south. [723], although brownish yellow in colour is compact and bonds the stones in very similar fashion to [722]. Again, the stones here random-coursed, smaller and tightly packed together. There is a noticeable lack of clay in the textures of [722] and[723]. Both of these mortars suggest a repair to this part of the wall and would further support the view that window F90 with the stone arch is a later addition or repair.

Context [724] is not a mortar at all. It is a dark brown sticky clay which bonds the stones in the lower blocking which again suggests that the doorway was not completely blocked off at this stage. It could not have borne much weight and has bulged slightly with the addition of the Victorian bricks above it. Context [725] is a small area of mortar confined to the uppermost north-west corner of the building immediately above niche F80 and adjacent to the right hand side jambs of the doorway. There is a disproportionate amount of Roman brick tile in this area of the wall; in fact, stone of any sort is rare by comparison. [725] was a yellow sandy compact matrix and appears to be a part of the original construction of this wall. Any relationship to the north wall in this area has been lost due to the Victorian brickwork at the western end of the north wall.

Mortar floor [97=318] was a strong brown sandy matrix with frequent small pebbles. In places the floor lay directly over the latest Roman street levels [205, 379] of 1.8 and sealed [98] of 2.2. It also covered [204] of 2.1. The mortar floor covered the whole site and had a consistent thickness of 0.03m. It had several small worn patches scattered throughout with a larger worn area confined to the North East corner of the building. The floor postdates the construction of the walls and continues through the blocked doorway at the northern end of the west wall. There was very little evidence of wear patterns around the doorway. Although in section in the centre of the doorway the mortar floor appeared to have been fragmented. This could have been caused by the falling stones described below in 2.4. It is possible that the mortar floor served as a bonding agent for some type of stone tile, considered pebbled flooring the only evidence for which is described in subphase 2.4. [97] contained a crucible fragment and a spindle whorl of uncertain date.

SUBPHASE 2.4: (Not illustrated).
Spreads: [333];[390];[36].
Grooves: F151 [331]; F152 [332]; F153 [334].

Confined to a small area as was context [333]. This small spread consisted of very small pebbles and small fragments of tile pressed into the underlying mortar floor [97= 318]. It was reminiscent of very crude mosaic work although far removed from that flooring technique. The fills of grooves F151, F152 and F153, [331, 332, 334] respectively, were identical. They were a dusky red clay colour with no finds. Spread

[390] was two, isolated, small patches of charcoal confined to an area immediately to the south of the central portion of the north wall. [390] produced no finds.

Context [36] was largely confined to the southern end of the site and truncated by F92 of 4.5. It was a dark reddish brown gritty sandy silt. A number of granite stones, of variable size, were found overlying the mortar floor with [36] partially accumulating around those at the southern end of the site. There was, however, a notable concentration of fallen stones in and around the doorway of the west wall. There was an occasional patch of [36] at the northern end of the site but it was by no means as consistent as that found at the southern end of the building. [36] contained Medieval pottery (41).

DISCUSSION PHASE 2:

One possibility is that [204] of 2.1 represents the remains of an earlier once thicker layer which has been truncated by the method of construction of the building: as there were no foundation trenches to any of the walls it is almost certain that a large rectangular construction pit was dug and the walls built around the inside of it or that the building was built directly onto the Roman street without any foundation trenches at all. Alternatively, [204] may be a layer derived from the exposure of the sides of the construction pit to weathering prior to the construction of the walls. Although there was a total lack of construction debris in this layer, this could be explained if the interior was cleared out before the mortar floor of Subphase 2.3 was laid down. This is counteracted, however by the fact that [204] continued for the same thickness under the walls of the building.

The building was constructed above [204] and it is very remarkable that no medieval pottery was recovered from this layer. [204] was extensively sampled and no medieval pottery was recovered from wet sieving either. From the environmental analysis it would seem that this layer represents waste ground with weed growth (Bowyer, Appendix 2 below). [98] of 2.2 may have been a remnant of a partial resurfacing of the street or a path following the line of the street. No building debris of any kind was contained within it, which suggests that it was not derived from the construction of the building. This also suggests that [204] of 2.1 was naturally derived.

Although there is no conclusive evidence to date the construction of the building it is probable that it predates the 12th century. This assumption is based on the pottery evidence for subphase 2.4 below, which gives a date range of 1050- 1150 A.D. for layer [36] (Sawday p. below) which was above the mortar floor [97=318] of 2.3. This may be further supported by the complete lack of medieval pottery from [204] of subphase 2.2 which predates the building. It is also reasonable to assume that if the building had been constructed in the medieval period then residual medieval pottery should be expected in deposits which either predate or are contemporary with the construction of the building. This is not the case.

The position of the building is also notable in that it was constructed practically on top of a Roman street (this area of Roman street is now known to be a major crossroads) and it is aligned on the known Roman street grid. (illus.17). This possibly

suggests that the builders knew where the Roman streets were and used the highly compacted gravels of the streets as a firm base on which to build. This also suggests that the Fosse Way had ceased to be a major thoroughfare through Leicester when the building was constructed. The choice of the site for the building may also have been dictated by the presence of substantial but ruinous Roman buildings in that area. The building does not appear to have constructed with a stone vault. There is no evidence for this at all and therefore any first floor or roof probably would have been supported on strong lateral timbers. The building is narrow enough for this technique to have been employed. At this stage there was no evidence of internal supporting vertical timbers, probably indicating that lateral timbers were used.

The bottom of the doorway is at the same level as the bottom of the walls of the building. It is possible that this led to another chamber or more probably to the exterior of the building. As an undercroft a short flight of steps would have been needed; as a freestanding building only a threshold would have been required. The niches would have been all lined with tile and may have been used for lighting or for some sort of storage. Niche F80 immediately adjacent to the north side of the doorway is lower than the rest and its position may have been dictated for activity in and out of the building. It too was tile lined.

The stratigraphic and pottery evidence suggests that the building had fallen into disuse or partial dereliction in the very early 12th century. This is supported by date of the pottery from [36] which has a date range of AD 1050 - 1150. It is possible that the southern end of the building was open to the elements at this stage which probably accounts for the presence of context [36] whereas the northern end of the building may have remained partially covered. The presence of fallen granite stones scattered throughout the building but concentrated around the doorway further supports the partial dereliction hypothesis. The stones in and around the doorway could indicate Athat part of the wall and possibly the door arch had collapsed. [333] was possible evidence for an original floor for an original floor which had been worn away or removed. If it had been removed this might explain the presence of grooves F151, F152 and F153. It is possible that these grooves represent tool marks; that is spade, shovel or pick. Equally they could have been caused by root action.

PHASE 3: Early to Mid 12th Century (Illus. 18-19)
SUBPHASE 3.1:
Stakeholes: F41 [72]; F42 [73]; F42 [74]; F43 [74]; F44 [76]; F45 [77]; F52 [86]; F53 [87]; F56 [88]; F57 [89]; F58 [90]; F59 [91]; F60 [92]; F63 [95]; F149 [325]; F154 [335]; F164 [348]; F165 [349]; F166 [350]; F167 [347]; F168 [352]; F173 [362].

This subphase represents two groups of stakeholes with no obvious pattern except that they only occur within 1.00 metre of three of the undercrofts walls. Features 49, 154, 164, 165, 166, 167, 168 and 173 were confined to the N.E. corner of the building and sealed below [300-317] of 4.1. F167 cut [97=318] of 2.3 whereas F149 and F173 were truncated by F148 of 3.6.

All the stakeholes in this group had diameters between 0.04 - 0.08m although most were between 0.04 - 0.05m in diameter. Their relative depths were between0.04m - 0.14m with clay fills dark yellowish brown to dark brown in colour. Two exceptions

were, fill [352] of F168 which was a very dusky red and fill [362] of F173 which was almost entirely composed of charcoal. Charcoal inclusions were present in all the fills with varying degrees of frequency. No finds were present in any of the fills.

The second group of stakeholes were confined to an area 0.50 -1.00m north of the eastern end of the south wall. Features 41, 42, 43, 44, 45, 52, 53, 56, 57, 58, 59, 60 and 63. All were between 0.02m - 0.06m in diameter and 0.03- 0.08m in depth. The sandy clay fills were all dark tellowish brown to very dark brown with frequent pebbles. Again there were no finds. These stakeholes were sealed by [64=37=78] of 3.2 and cut mortar floor [97=318] of 2.3.

SUBPHASE 3.2:
Layer: [64=37=78]
Spread: [353].

[64=37=78] was only encountered in the southern half of the building and was a dark brown sandy clay silt 0.02 - 0.03m in depth and sealed the southern group of stakeholes of 3.1. The inclusions consisted of frequent pebbles 0.02m or less in size, small lumps and flecks of red clay and mortar, and occasional charcoal flecks. [64=37=78] together contained medieval pottery (9) and a tile fragment. There was a distinct lack of finds throughout which suggests lack of domestic activity.

Spread [353] was a reddish brown lumpy but friable sandy clay mottled patch with occasional flecks or charcoal, oyster shell and small pebbles less than 0.02m in size. It was cut by stakehole F168 of 3.1 and lay partially over [333] of 2.4, but it was confined to a patch where there was no mortar floor below it. It measured a maximum 0.98m north to south and 0.46m maximum east to west. This spread had been badly truncated by F100 of 4.2 and F94 of 5.5. It contained no finds.

SUBPHASE 3.3
Gully: F37 [68].

Cutting [64=37=78] was gully F37 which was cut by F36 of 3.4. Its fill was a dark yellowish brown sandy clay silt and contained no finds.

SUBPHASE 3.4
Gully: F36 [39, 55]

Cutting F37 of 3.3 was gully F36. Its upper fill [39] consisted of a very dark brown sandy clay silt and contained medieval pottery (4). Below [39] was fill [55] which was a dark yellowish brown, sandy clay gravel confined to the N.E. edge of the gully. It contained medieval pottery (2) and animal bone.

SUBPHASE 3.5
Layer: [41]
Spread: [42]

Sealing F36 of 3.4 was layer [41]. This comprised a dark brown sandy gravel with granite chippings. This layer was slightly compacted and confined to the southern half of the building. It produced medieval pottery (12) and animal bone. Spread [42] was a very dark grey, sandy clay silt. Its relationship to [41] must remain uncertain as [42] may only be an area of discolouration of [41]. [42] also sealed F36 of 3.4 and contained medieval pottery (4).

SUBPHASE 3.6
Stakeholes: F18 [43]; F19 [44]; F20 [45]; F21 [46]; F22 [47]; F23 [48]; F24 [50]; F25 [51]; F26 [52]; F27 [53]; F29 [54].
Post Holes: F34 [66]; F35 [67].
Post Pits: F146 [322]; F147 [323]; F148 [324]; F150 [327].
Scoop: F145 [316].
Misc. F70 [203].
Spreads: [321]; [342]; [354].

In this subphase there is a group of stakeholes and two post-holes confined to the southern half of the building. The fills were essentially the same ranging in colour from dark brown to brownish grey. Texturally the fills were mostly sandy clays with occasional flecks of charcoal. All the stakeholes cut [42] and [41] of 3.5. Postholes F34 and F35 were contemporary with the stakeholes. Fill [66] of F34 was a dark brown sand. It contained no finds. Fill [67] of F35 was a dark yellowish brown sandy clay. It contained no finds. Both postholes cut layer [41] of 3.5.

In the north half of the building F146, F147 and F148 were sealed below [300=317] of 4.1. F146 and F147 were located against the northern half of the east wall. They were 0.50m apart. The fill of F146 was [322] which comprised a dark yellowish brown clay. It produced medieval pottery (2) and animal bone and cut the mortar floor [318] of 2.3 but was truncated by F92 of 4.1. Contemporary with F146 was spread [321]. This was a dark yellowish brown compacted sandy gravel. It was present in two patches immediately above [318] mortar floor of 2.3. [321] thick was confined to the north of F146 and to the south of F147 and it abutted the east wall. It contained medieval pottery (4).

F147 was of a similar shape to F146 although smaller. Its fill [323] was a brown silky clay and contained animal bone. Contemporary with F147 was a discrete spread [354]. This consisted of a brownish yellow compacted gravel which also abutted the east wall. It produced no finds. F148 abutted the north wall and it was much shallower than F146 and F147. Fill [324] consisted of a dark yellowish brown clay and contained no finds. Contemporary with F148 was spread [342]. This comprised a compacted dark yellowish brown gravel and abutted the north wall to the west of F147 and formed a discrete spread similar in location and thickness to [321] and [354] described above. It too lay directly onto the mortar floor [318]. It contained no finds.

F150 was the largest of these pits and did not have an associated spread at one end of its long axis. F150 occupied a near central position to the north wall. Fill [327] comprised a dark yellowish brown sandy clay and it contained Medieval pottery (1). [327] also contained a fragment of 14th century ridge tile but this was intrusive from F116 of 5.3 which had truncated the top of F150. F150 cut the mortar floor [318] and was sealed by [317=300] of 4.1. F145 was a subcircular depression near the centre of

the northern half of the building. Its fill [316] was a very mottled highly compacted mortar-like substance with a high content of charcoal lumps, mortar lumps and frequent granite and sandstone fragments. All the above were sealed by floor [317=300] of 4.1. F70 was an indistinct shallow pit-like anomaly of indeterminate function. Its fill [203] was a dark brown sandy silt. It contained animal bone. F70 was sealed by [18=23] of 4.3 and cut by F31 of 4.4.

DISCUSSION PHASE 3

The two groups of stakeholes of 3.1 are of unknown function. There is no clear pattern to them except that they are concentrated in two distinct groups. It is possible that they represent some form of light scaffolding perhaps the walls needed some sort of repair in these two respective areas. It is noteworthy that the two groups of stakeholes were near the probable doorways or windows which were documented as being located in the north and south walls. If there is a limited refurbishment being undertaken at this stage then it is difficult to see how context [64=37=78] of 3.2 were derived. These seem to be present as a result of natural accumulation either during a refurbishment or indeed a prolonged state of partial dereliction noted and discussed in Phase 2. It is possible that [64=37=78] represent trample after the stakes had been removed as both these contexts seal the stakeholes at the southern end. It seems as if context [353] and F145 at the northern end of the building were repairs to the mortar floor [318] of 2.3. But dereliction of some form is further supported by the gullies of 3.3 and 3.4. It is possible that they were formed by water running into the building from Guildhall Lane through a door or window that was documented as being in the western end of the south wall (see above documentary History). Likewise the presence of contexts [42] and [41] may indicate dereliction. [41] may be derived from overspill from F31, whereas [42] may represent some form of levelling which would indicate that the building still functioned although any activity may have been of a low status.

It is not until 3.6 that a body of evidence points strongly to a concerted refurbishment of the building. It must be noted that the scatter of stones resting on the mortar floor [318] of 2.3 were not removed and either indicate building debris or more probably decay. Again at the southern end of the building the presence of numerous stakeholes and two postholes suggest the erection of light scaffolding. Indeed context [714] in the south wall appears as a rebuilding of this part of the wall and should be attributed to this phase.

The post pits F146, F147, F148 and F150 are possible evidence of a refurbishment especially as F146, F147, F148 had associated spreads [321], [354] and [342] with them which probably represent compacted and trampled spoil from these post pits. Additionally they were not cleared away. These post pits probably held moderately substantial posts to hold either heavier scaffolding or to shore up these parts of the north and east walls. It is possible that the posts were inserted to support the roof of the first floor. The top portion of the northern end of the east wall may have been rebuilt as is evidenced by the much more irregular stonework contained within mortar context [706].

Although there is no absolute evidence from the excavation it seems highly probable that window F90, the northernmost, was constructed or rebuilt at this stage and the neatly squared scored plaster put on this part of the wall. To judge from the stratigraphic sequence and the evidence of the pottery it appears that this refurbishment was undertaken in the middle years of the 12th century. The building may have had a first storey added to it at this stage and as such it may have been re-vitalised as an undercroft. F145 may represent a repair to the mortar floor [318] and is included in this phase as a part of the general refurbishment pattern. However, F145 could easily be assigned to 3.2. Indeed the stakeholes assigned to 3.1 could have been cut from a higher level and thus it would make them contemporary with all their features assigned to 3.6.

PHASE 4: MID 12TH TO LATE 13TH CENTURIES (illus. 20-24)

SUBPHASE 4.1

Layers: [28]; [32]; [27]; [300=317].

This phase sees the levelling of the interior of the building after the structural alterations of Phase 3. Essentially these layers are either made up layers or more likely floors. Contexts [28], [32] and [27] had different characteristics and were all at the approximately same level at the southern end of the building whereas contexts [300] and [317] were the same layer but confined to the northern half of the building. Any relationship between the layers in the southern half of the building to those in the north in terms of their chronological deposition must remain unclear as pit F92 of 4.5 had destroyed those relationships.

Context [28] was a yellowish brown, sandy clay loams and confined to the south east corner of the site abutting the east and south walls. Of the three abutting layers in the southern half of the building, chromatically and texturally [28] was very similar to [300 = 317] found in the northern half of the building. It contained medieval pottery (3). Floor layer [32] was a reddish yellow, friable sandy clay gravel with small granite fragments. It covered the larger part of the southern end of the site and abutted [27] and [28]. It also abutted the east and south walls. It contained medieval pottery (1). Context [27] was a dark grey, mixed loose, clay loam with abraded small tile fragments. It was largely confined to the southern extremity of the site and contained residual Roman pottery, medieval pottery (1) and tile. A copper alloy Roman coin was also recovered. Contexts [300=317] share the same horizon and are essentially the same layer, although there was a slight variance in colour between them. Both were confined to the northern half of the building. Context [300] was an olive brown sandy clay loam. It was quite mixed; in places it was composed entirely of clay. [300] sealed F146 of 3.6. [3I7] was a dark yellowish compacted clay which had a loamy feel to it. It extended across the building from the east to west walls. [317] also continued under the blocked doorway F79. Where this layer abutted the north, west and east walls the clay was altogether cleaner for a maximum distance from those walls of 0.15m. This possibly indicates a lack of trampling or walking near the walls. The finds from [300=317] were residual Roman pottery, medieval pottery (21) and animal bone. The pottery evidence suggests a 12th century date for this floor.

SUBPHASE 4.2

Stakeholes: F13 [24; F14 [25]; F15 [26]; F132 [298]; F133 [299].
Misc: F131 [297].

Stakeholes F13, F14 and F15 had a random distribution and all their fills were brown to dark brown. No finds were retrieved from these fills. F132 was probably a small posthole rather than a stakehole. It was altogether indeterminate as it had been truncated by F93 of 6.4. Its fill [298] was a dark brown clay loam. It contained no finds. Stakehole F133 cut F132 and its fill was [299] was a dark grey clay loam. No finds were present. F131 may be the remains of a slot. It too had been truncated by F93 of 6.4 and of indeterminate purpose. Fill [297] was a dark brown sandy clay silt and contained no finds. All the contexts and features of 4.1 and 4.2 were sealed by the floor layers of 4.3.

SUBPHASE 4.3

Floors: [23=18]; [223]; [19].
Spread: [272].

[23] and [18] were confined to the whole excavated area in the southern half of the building while [223] occurred in the whole northern half of the building. [23] and [18]were both brown compacted sandy gravel with small lumps of Mercia Mudstone and granite fragments. Both layers combined produced residual Roman pottery, and medieval pottery (2). Floor [223] was a slightly darker brown than [23] and [18] and it had very frequent lumps of mortar in it. The finds from [223] were residual Roman pottery, and medieval pottery (75) and fragments of animal bone. The pottery evidence suggests a late 12th to 13th century date for this floor. Context [272] was a spread of dark olive grey sandy clay loam. It was within [223] but near the top 0.03m. It is possible that there had been a pile of organic matter in this area. It produced one fragment of Roman tile and no other finds. This floor phase should be seen as in use with the features described in subphases 4.4 and 4.5 and 4.6 below. Context [19] was a yellow brown sandy clay. This patch was very moisture retentive and cut by F4 of 4.6. [19] was confined to the very south-east corner of the building. It had an uncertain relationship to [18] and could have been a cleaner patch of [18]. It contained medieval pottery (10) of 13th century date.

DISCUSSION SUBPHASES 4.1 TO 4.3

These three Subphases demonstrate that from the mid 12th to the early 13th centuries two successive floors were laid down. The first represented by contexts (300=317], [27], [28] and [32] appeared to have immediately followed the suggested structural alterations discussed in Phase 3. It is conceivable that in the mid 12th Century the building was re-utilised and became an undercroft. Its primary function must remain speculative. As an undercroft the building was probably used for storage and this may account for the lack of features and other activity during this period. However, form the environmental evidence the presence of a high percentage of sedge and reed seeds from [300=317] that these materials were brought in to be used as flooring.

(Monkton pp. below). The stakeholes of subphase 4.2 may have resulted from the tethering of small livestock or domestic animals but otherwise their presence and function must remain speculative.

In subphase 4.3 further floor levels are laid down or accumulate and from the stratigraphical sequence and the pottery, [23=18]=[223] representing this floor Subphase, date from the early 13th century. This floor phase seems to have been in use during the 13th and early 14th centuries as no other floor was laid down until the 15th or 16th centuries represented by [256] of subphase 5.1. One notable aspect of both the floor phases is the larger quantities of animal bone present within them. Additionally in the north west corner of the building several granite stones were found to be lying scattered on [223]. This might support the structural refurbishment described in subphase 4.4 below.

SUBPHASE 4.4

Post Pads: F163 [345]; F55 [31].

Post Holes: F9 [20]; F10 [21], F11 [22]; F16 [30]; F46 [79]; F54 [85]; F64 [84]; F66 [35]; F67 [201]; F128 [293]; F134 [304]; F174 [365]; F175 [366]; F122 [281].
Stakeholes: F28 [49]; F49 [81]; F50 [82]; F51 [83]; F61 [93]; F62 [94]; F65 [200].
Beam Slot: F68 [38, 59].
Gully: F31 [61=62].

This subphase strongly suggests a period of structural redesign within the building all the features listed above are either contemporary or very near contemporary and as such they have all been grouped into this subphase. Probably the two earliest structural elements were postpads F163 and F55. F163 was a circular, flat-bottomed postpad with compacted granite and sandstone fragments and pebbles in a clay fill. Its position within the building was equidistant from the east and west walls at 2.31m and it was 3.30m distant, centrally from the north wall. The fill [345] around the stones was a dark yellowish brown clay. This was used as the binding agent to consolidate the dense stone and pebble packing. It contained medieval pottery (1)

F55 was badly truncated by later Victorian activity in phase 6. Only 0.56m of its northern edge survived and it was cut by F68 and F46 of this subphase. To judge by the surviving configuration of the cut F55 was probably circular in plan. It was however flat bottomed with near vertical sides as indeed was the case for F163. Its fill [31] was a dark brown compacted sandy clay gravel. It contained medieval pottery (1). The position of this feature is also remarkable. F55 was 2.75m from the south wall and 2.90m south of F163 and equidistant from the east and west walls at 2.30m a distance which corresponds almost exactly to that of F163. It is interesting to note that the distance of 2.90m between F163 and F55 was exactly one third of the total length (8.70m) of the visible building. F66 was badly truncated by water activity could have been a further substantial support for a timber partition. When measured from its central point it was 1.30m from the east wall and 2.85m from the south wall. Its fill [35] was a dark brown compacted sandy clay with frequent large pebbles and medium sized fragments of granite acting as packing or consolidation. One larger granite stone 0.15m long was also contained within the fill. It contained medieval pottery (3),

animal bone and tile. F64 was a sub-rectangular shallow depression. Its fill [84] was a grey brown clay and it is possible that a stone had rested in this space very possibly acting as a post-pad. The finds from [84] were animal bone and tile.

Associated with F55, F163, F66 were postholes F46, F54 and Beamslot F68. Beamslot F68 extended from the west baulk for 0.60m and had a maximum width of 0.20m. It was U-shaped in profile and measured 0.12m deep. There were two fills present. The upper fill [38] was a light grey soft sandy silt. It contained no finds. Fill [59] constituted the main fill. It was a very dark grey clay loam with a large lump of burnt clay. It contained medieval pottery (3), animal bone and tile. Associated with this Beamslot was F54 the fill of which [85] was a light reddish brown compacted sandy clay gravel. It contained medieval pottery (2) and animal bone. Also assigned to this partition was posthole F46. This cut the south edge of the beamslot F68 but probably respected the super structure of the partition. Its single fill [79] was a reddish yellow sandy clay with occasional small pebbles. It contained no finds. Scattered around the south side of F64 and thinning out towards F54 were several stakeholes. The fills were predominantly dark brown to dark reddish brown in colour. There did not appear to be any pattern to their distribution. Still in the southern half of the building were further small post holes of similar to F46.

The fills of Features 9, 10, 11, 16, and 67 were dark brown to yellowish brown sandy clay loams except F11 which had a fill of reddish yellow clay. There were no finds from most of the fills, but fill [30] of F16 produced a few abraded tile fragments. At the northern end of the building running in an E-W. line were five larger post holes F122, F128, F134, F174, F175. F128, F174 and F175 had been cut by F100. The fill [366] of the western most posthole F175 consisted of a dark yellowish brown, sandy clay loam. 0.80m to the east of F175 was F174 the fill of which [365] was similar to that for F175 and neither contained any finds. F128, 0.80m to the east of F174, was badly truncated and its fill [293] comprised a dusky red compacted sandy gravel with larger pebbles serving as packing. It contained medieval pottery (23). F134 was 1.40m to the east of F128 and its fill [304] was a very dark brown clay loam. F128, F134, F174 and F175 were all 0.90m away from the north wall.

Probably contemporary with this line of postholes was feature F122. Its position was 2.20m from the north wall and it abutted the east wall. Its fill [281] was a dark brown clay loam with larger granite stones the largest of which was 0.09m long. It contained medieval pottery (9) and animal bone. Gully F31 cut [18 = 23] of 4.3 and it was wider at the northern end and narrowed to 0.35m at the south. Its fill although allocated two context numbers comprised a dark greyish brown clay sand silt. The finds retrieved from it were medieval pottery (2), animal bone and a tile fragment. It is possible that this gully only ran as far as the partition represented by F68, F55, F54, F66, F64 and F46 described above.

SUBPHASE 4.5: (illus.24-25)

Pits: F100 [301-303, 309, 319-20, 326, 328-30, 344].
F92 [241, 244-50, 270, 277, 291-2].
Stakeholes: F155 [336]; F156 [337]; F157 [338].

After the subdivision and probable structural alterations of 4.4 two large pits were dug. F92 cut F68 of 4.4 and F100 cut F128, F174 and F175 also of 4.4. Both pits also cut floor [18=23=223] of 4.3. They are both confined to the larger area of the building to the north of the partition. F100 was the deeper of the two pits and was positioned 0.40m to the east of the doorway in the north end of the west wall. Its shape in profile was near vertical sided on all sides with a flat base. Several fills were contained within it and the top fills [301] and [302] were sealed by [254] of 4.6.

Fill [301] was a dark yellowish brown sandy clay loam and was present across southern half of the pit. It contained medieval pottery (6), animal bone and a tile fragment. [302] was similar to [301] contained medieval pottery (24). [301] and [302] both sealed [309] which was a homogeneous, black charcoal clay loam fill across the pit. It contained no finds. Below [309] was [320] which was confined to the southern half of the pit. It consisted of dark yellowish brown clay and gravel. It contained no finds. All the following fills were homogeneous within the pit. [320] sealed fill [303] which was a brown sandy clay loam and contained medieval pottery (53) and animal bone. Below [303] was fill [319]). It comprised a very dark brown clay loam and it contained medieval pottery (24) and animal bone. Below [319] was fill [326] which was dark grey ashy clay loam and it contained medieval pottery (6). [326] sealed [328] which was a black clay loam almost entirely composed of charcoal. This fill was patchy but with the largest area covered being 0.95m east to west and 0.72m north to south in the centre of the pit. It contained medieval pottery (1).

Below [328] came fill [329]. This fill consisted of a dark greyish brown clay silt and it contained medieval pottery (27) and animal bone. Below [329] was fill [330]. This fill was a black clay loam with preserved flecks of wood and fragments of granite and slate. There were many finds from [330] and it contained medieval pottery (157) and animal bone. Below (330) was [344] the primary fill of F100 which was a very dark brown clay loam with occasional charcoal. The finds retrieved from it were medieval pottery (4) animal bone, preserved wood and daub and leather fragments. It is possible that F100 was wattle and daub lined. F92 was cut by pits F109 and F69 of 5.4. F92 also had several fills of a remarkably homogeneous nature. The top fill [247] was a very dark greyish brown sandy clay loam and it was confined to the top central area of the pit. It contained no finds. Sealed below [247] was fill [241]. [241] was a black sandy loam with abundant charcoal and burnt red clay flecks. There were very thin bands of lighter clay running through it. This fill had a raised ridge in the centre of the pit which might indicate the possibility of collapsed and decayed timbers. [241] contained medieval pottery (1) and animal bone.

Below [241] were fills [262] and [292] which abutted one another. [262] was a very dark greyish brown clay silt and was confined to the western half of the pit. It contained animal bone. [292], however, was a brown mortar spread located centrally in the pit. [292] sealed [291] which was a yellowish red very compact sandy clay. This fill again was confined to the central area of F92. No finds were present. Below [291] was fill [248] that was a dark reddish brown sandy silt. It is possible that this fill is derived as a result of puddling of water from gully F31 of 4.4. It contained animal bone.

At this stage during the excavation of pit F92 three stakeholes F155, F156 and F157 were found sealed beneath [248] but cutting fill [244]. Their fills were very dark

brown to very dark greyish brown sandy clay loams with an abundance of charcoal flecks. No finds were produced from any of the fills. Associated with these stakeholes was a larger granite stone which measured 0.30m square and 0.10m thick. The south-west corner of this stone had been broken off and the stakeholes were located within 0.20m to the west of it. Stakehole F157 was almost centrally placed within the pit. Fill [244], which was cut by the stakeholes and on which the squared stone rested, was a highly compacted reddish brown sandy clay gravel. It contained medieval pottery (1) and animal bone. Below [244] was fill [245] which was a dark reddish brown sandy silt with granite chippings. It contained medieval pottery (5) and animal bone.

[245] was above fill [249] which was a yellowish red compact clay and was not too dissimilar to [244] detailed above and produced medieval pottery (9). Fill [250] was the interface between [249] above it and [270] below it. This was a yellowish red to dark reddish brown consistent, mottled fill. It was composed of clay and small pebbles. It produced finds of medieval pottery (3) and animal bone. [270] was a dark yellowish brown clay loam and it contained animal bone. Below [270] came the primary fill of F92, [277]. This was a dark greyish brown clay loam and it contained medieval pottery (15) and a high proportion of animal bone.

SUBPHASE 4.6
Hearths: F48 [80, 96, 99]; F126 [285]; F119 [265, 271, 296].
Hearth?: F4 [8].
Layer: [254].
Spread: [289].

Assigned to this subphase is one clay lined hearth F48, one probable clay lined hearth F119, one unlined hearth F126 and a possible hearth F4. F48 was heart-shaped in plan with its wider end to the east. It virtually abutted the east wall. Its northern half, although truncated by Victorian construction trench F32 of 6.4, had subsided it to F92 of 4.5. It also cut F64 of 4.4 and floor [18=23=223] of 4.3. It contained three fills of differing character. Its uppermost fill [80] was a very dark grey sandy clay with an abundance of charcoal lumps and flecks. The charcoal was particularly dense in patches interspersed throughout this fill and was also a thin spread for 0.13m over [18=23=223] on the south side of the hearth. This suggests very strongly that floor [18=23=223] was still in use. [80] produced a limited amount of finds but Medieval pottery (3) was present along with some animal bone.

Below [80] was fill [96]. This produced no finds and was a dark reddish brown clay loam with frequent flecks of charcoal. Contained within this fill and resting on the clay lining [99] was a small roughly squared granite stone. Two other smaller stones were located at the south east corner of the feature also resting on the clay lining. Fill [99] was a partially scorched clay lining which covered the whole of the base of the hearth. This was a dark reddish brown with very red scorched patches. It had a variable thickness of between 0.02m on its western side down to 0.01m or less at the base to 0.03m on its eastern side. No finds were retrieved from [99].

In the south east corner of the building was possible hearth F4. F4 cut [19] and [18=23=223] of 4.3. Its fill [8] was a very dark brown sandy clay loam with

occasional patches and small lumps of mortar and frequent flecks and small lumps of charcoal. Its finds were medieval pottery (46), animal bone and tile. 0.48m from the north wall and 1.20m from the west wall was hearth F126. Its fill [285] was a very dark brown clay loam with abundant flecks of charcoal with a particular thick concentration of charcoal lining the sides and bottom of the hearth. It cut layer [254] which overlay [223] of 4.3. [285] produced two tile fragments. F119 had three fills contained within it and it had been truncated by F94 of 5.5.

Top fill [265] was confined within the whole of the surviving cut and consisted of a black sandy clay loam with an abundance of charcoal. It contained medieval pottery (1) and animal bone. Below [265] was fill [271]. This was a small patch of burnt red Mercia Mudstone at the central southern end of the hearth. It is possible that this was the remains of a clay ridge within the hearth or the remains of a clay lining. It was heavily scorched and contained medieval pottery (5). [296] was below [271] and was the primary fill but it was less burnt and contained frequent flecks of charcoal and burnt clay which may indicate a degraded lining. It contained medieval pottery (9) and animal bone. F119 was 0.70m from east wall and 1.60m from north wall. It is noteworthy that these three hearths were all positioned either against or near a wall.

Layer [254] was only located at the northern end of the building. Its maximum extent southwards was 2.54m but it was a continuous layer from the west to east walls and continued through the doorway F79 at the northern end of the west wall. [254] sealed F100 of 4.5 into which it had later subsided. This layer was a very dark brown clay sand. It was uncompacted in consistence with abundant flecks and small lumps of charcoal. From the initial environmental results there appears to be a substantial quantity of cereal grains contained within it. The door blocking [724] lay immediately above this layer. The finds from this layer were medieval pottery (47) and animal bone. Spread [289] was a localized deposit which was above [254] but confined in a subsided area of the eastern end of F100 of 4.5. It was sealed by [256] of 5.1. [289] was a dark yellowish brown sandy loam. It produced medieval pottery (8) and animal bone.

DISCUSSION SUBPHASES 4.4 - 4.6:

Subphase 4.4 possibly indicates a probable internal if not superstructural refurbishment and addition to the building. A partition, dividing one third of the building off at the southern end is strongly suggested by the features which have been ascribed to that subphase. This partition was built immediately to the north of probable post pad F55.

Indeed prior to the construction of the partition two large post pads F163 and F55 were installed either to support a new floor or indeed a new roof to the building. It can only be surmised that the building had an upper storey which was probably timber-framed. The likelihood is that it did have a first floor hall supported on strong lateral timbers from the west to east walls. F163 and F55 would give extra stability. The partition hints that a 1st floor hall was divided into a hall and solar which was mirrored in the undercroft. The presence of the small postholes F9, F10, F11, F16, F46 and F67 suggest temporary scaffolding within the smaller partitioned area. Numerous bent nails were found lying on the floor [18=23]. All the stakeholes of

subphase 4.4 could also be associated with this scaffolding. The partition divided an area almost one third of the total which further supports the hall and solar hypothesis (ref.Wood 19). The line of postholes running in a line from the northern jambs of the doorway also indicate possible substantial superstructural support or indeed some form of stalling for small domestic animals. There is a marked difference in the animal bone content of the floors in use during this period [18=23] and [223]. [18=23] was to the south of the partition and contained no animal bone at all. Whereas [223] to the north of partition produced 101 fragments of which 25% were sheep or goat species. It is possible that the two fills in Beamslot F68 represent two phases of beam slot.

This period of subdivision was probably short lived. As there were no post pipes encountered in the postholes forming the partition or in the post-holes forming a line in the northern part of the building suggests that they were all purposefully removed. F64 may have contained a stone for a post-pad it would seem that the stone was restored as well. There appears to be a change in the function of the undercroft when the two pits, F92 and F100 of 4.4, were dug. The larger postpads F163 and F55 were probably still standing as F92 clearly respects them albeit by a narrow margin. F100 cuts through postholes F128, 174, 175 while F92 cut F68 the beamslot. The initial function of both these pits seems to have been to serve as cess pits. The environmental evidence from the primary fills of these pits supports this (Bowyer, Appendix 3 below). Their presence within the building is, however, noteworthy. If they were cesspits then it would seem that the status of the undercroft had been downgraded. If there was also an inhabited first floor hall above them, with only a timber floor separating the two storeys, then the odour emanating from the pits probably would have been very uncomfortable. The environmental evidence suggests that the building was open to the elements. It seems probable that in their final stages of usefulness the pits were used as rubbish pits. F100 may have been wattle and daub lined initially.

Probably by the end of the 13th century they had both been backfilled and went out of use. The position of the two pits is interesting. F92 although positioned virtually against the east wall is centrally placed within the building. F100, however, is positioned directly in front of the doorway F79 which was unblocked at this stage. This has three possibilities. Firstly, the doorway F79 had already ceased to function as an access point and therefore this would support the 19th century documentary records of there being doors or windows in each of the north or south wall. The south wall is the more likely candidate as it is on the street frontage. Secondly, that the pit was so positioned for easy and convenient access but this would have its dangers when access to F92 was required unless an alternative access mentioned above was in use at the same time. Thirdly, F92 and F100 could have been planked over.

This assumes that the doorway F79 lead to the exterior of the building via a short flight of steps. It could be that it lead into another chamber but this seems unlikely and perhaps finally they were both backfilled at the same time because the top two fills of F92 [247] and [241] and the top two fills of F100 [302] and [309) are almost identical in colour and texture: i.e. [247] and [302] are similar as are [241] and [309]. These fills also had the appearance of decayed wood which may be evidence of collapsed planking which had covered the pits. During the filling process of these pits is it interesting to note that 40% of all animal bone in F92 and 36.6% in F100 were of avian species a high proportion of which were retrieved from the lower fills of both

pits. Also significant quantities of egg shellwere recovered from the fills of the pits. The overall percentages of domestic species are strikingly similar from both pits and it appears that sheep/goat was a common food. (Baxter, Appendix 1 below).

In the late 13th and early 14th centuries there is possible evidence to suggest a further change in function of the undercroft. By now the partition and post holes of the late 12th and early 13th centuries had gone the pits F100 and F92 had been backfilled and were out of use. The only features and layers still in use were the two larger post pads F163 and F55 and floor [18=23] and [223]. The presence of the hearths in 4.6 is noteworthy. It is possible that layer [254] represents some form of burning localized to the north end of the building or more probable a burnt spread related to the hearth activity. A high proportion of carbonize seeds were recovered from it. Three hearths F48, F4, F126 are all positioned very near a wall probably to minimize the risk of fire. Probably further supporting the view that the timber uprights were still in position where post pads F163 and F55 were located. F119 position was within 0.45m of post pad F163. It was heart-shaped and appears to be a larger version of F48.

It is noteworthy that there is a small and large hearth together at both ends of the building [254] although seemingly cut by F126 and F119 is probably a spread from hearth activity. Latterly the doorway F79 was partially blocked off. [254] contained a high proportion of cereal grains (Bowyer, Appendix 2 below). From the early 14th Century until the end of the 15th century it appears from the excavated evidence that the undercroft was not used. There is no trace of further building activity, collapse from a derelict building nor of anything domestic. The next floor layer of 5.1 was patchy in the northern half of the building.

PHASE 5: LATE 13TH TO MID 17TH CENTURIES: (illus.14; 26-28)

SUBPHASE 5.1

Door Blocking: F79 [724]
Layer: [256]; [341]
Spread: [15]; [253]

Layer [256] Sealed [254]) of 4.6 and probably represents the remains of a clay floor. It consisted of a yellowish red pebbly, compacted clay (Mercia Mudstone). It occurred in small patches on the northern half of the building. The largest area was to be found subsided into F100 where it measured 2.44m on a east to west axis and 1.25m north to south and it was 0.03m thick. It contained medieval pottery (3) and animal bone. A further patch was located abutting the west wall 0.20m to the north of the doorway. The patch measured 0.50m from the west wall and was 0.30m long north to south. Once more its depth was 0.03m. A further small patch was located at the southern end of F119 which it sealed.

A smaller patch of [256] extended for 0.25m from the west baulk in the southern end of the building associated with spread [15] which partially covered it. This clay patch was 0.25m square and heavily scorched due to the presence of [15]. The scorched patch sealed F68 of 4.4. Another small patch occurred 1.70m to the east of this patch which partially covered [80] of F48 of 4.6. [15] was a localized very dark brown clay loam spread with burnt clay lumps and abundant charcoal flecks. It produced

medieval pottery (2). Context [341] was the same as [256] but was a small patch and it partially sealed fill [345] of post pad F163 of 4.4. It was truncated on its south side by F161 of 7.1 and produced no finds. Spread [253] was a dark reddish brown sandy compact clay and could have been part of [256]. It contained medieval pottery (3) and animal bone. It sealed F119 of 4.6. The doorway F79 was partially blocked with granite bonded with clay and is still in situ. The blocking lay directly over [254] of 4.6.

SUBPHASE 5.2
Pit: F94 [219-20, 237-8, 286-88, 290, 294]; F118 [274].
Stakeholes: F105 [234]; F106 [235]; F107 [239]; F109 [251]; F113 [259]; F114 [260]; F115 [261]; F117 [264]; F120 [279]; F121 [280]; F129 [295]; F135 [305]; F136 [306]; F137 [307]; F138 [308]; F139 [310]; F140 [311]; F141 [312]; F142 [313]; F143 [314]; F144 [315].
Stone Footings: F96 [224, 273].

All these features belong statigraphically to this subphase but there is very little dating evidence. The only pottery evidence was retrieved from the primary fill of F94 [294] and the top fill of F94 [219]. Additionally all the stakeholes listed above surrounded pit F94 and as such are regarded as contemporary. [294] produced pottery of late 15th to early 16th centuries while [219] produced pottery dating to the 17th century therefore F94 was cut sometime in the late 15th to early 16th Centuries. Stratigraphically this would be correct.

Pit F118 cut [256] of 5.1 and was below F96 and cut by F116 of 5.3. Its fill was a compacted brown clay sand with small granite stones. Its southern side had partially subsided into F100 of 4.5. It contained medieval pottery (5) and animal bone. Above F118 was F96. F96 had been possibly truncated by F116 or it had originally abutted it on its north side. F96 consisted of a semicircular discreet group of pitched granite stones which had also partially subsided into the eastern end of F100. F96 had two 'fills' the uppermost [224] was a light yellowish brown clay silt which covered and lay in amongst the stones and had seeped below them. The stones were nearly all triangular in shape, of similar size, and had been pitched longitudinally into fill [273]. The broad ends of the stones were uppermost and set close together to give the effect of cobbling. There was considerable polishing of the tops of these stones and they gave the impression of having been walked on frequently. These stones did not appear anywhere else on the site and were very localized. F118 was probably the construction trench for the stones because fills [273] and [274] were very similar. Neither [224] nor [273] contained any finds. F96 had a maximum recorded depth 0.21m and was probably contemporary with pit F94 which was 0.30m to the S.E. F94 was circular in plan with a noticeable bulge on its north side. Each of the fills described below were homogeneous fills within the pit.

The uppermost fill [219] sealed the pit and was probably a slumped lower portion of floor surface [221] of 6.5 which it was below. [219] was a dark brown sandy clay silt. It contained medieval pottery (1) post-medieval pottery (5) and animal bone. Fills [220], [237-8] and [286-8] were all yellowish brown to dark brown clay loams with small quantities of medieval and post- medieval pottery, brick, slate and animal bone. [288] was above the primary fill of pit F94 [294] which was a dark yellowish brown

sandy clay silt with a dense pile of granite stones around the northern bottom edge. These appeared to have been dumped in the pit and were not structural material within the pit into which they had collapsed. It produced post-medieval pottery (2) and animal bone. Contemporary with F94 was a series of surrounding stakeholes. There were twenty stakeholes in all and their fills are very similar ranging from black to dark greyish brown clay loams. None contained any finds.

SUBPHASE 5.3
Robber Trench: F116 [255, 263].

F116 was a linear feature running east to west located in the north east corner of the building and it contained two fills. Its upper fill [255] was a thin dark yellowish brown clay silt with small mortar lumps and contained Medieval pottery (33) and later medieval pottery (2). This thin covering lay directly over fill [263] which comprised a mottled dark brown compact clay loam with very mixed granite and mortar rubble. It contained animal bone.

DISCUSSION SUBPHASES 5.1 TO 5.3:

After the hearth phase of subphase 4.6 there is a broad gap in any datable evidence that can be assigned to the mid 14th century up to the end of the 15th century. In terms of features there are none from this site which can be dated with any confidence to that period but the likelihood is that they are later. However, subphase 5.2 demonstrated renewed activity within the undercroft but it was only confined to the N.E. corner of the site. F116 of 5.3 may have been hardcore for supporting a low wall or probably a later robbing which had become compacted through pressure. It does, however suggest the presence of a low internal masonry structure to which the cobble stones of F46 were added. F94 was also dug at this time and had a wattle fence erected around presumably for reasons of safety.

The silty nature of [224] of F96 and the considerable wear of the granite stones which formed it, suggests the case for the use of water in the area. The water coupled with a sandy clay could act abrasively on the stones. It is possible that clay floor [256] was still in use at this stage and any amount of water would make it very slippery indeed. Therefore the presence of a stone plinth would give greater stability to anyone working there. It is possible that F116 once supported a water trough or a such like container. F116 is unlikely to have been for steps as it is 0.25m away from the north wall unless it served as a stone foundation for a timber stairway. There are documentary references for an entrance into the building at this point.

F94 was too shallow to be a well but deep enough to collect water. The gravel forming the Roman streets does not drain well; with this drainage possibility it is surmised that F94 was used to store water and the bulge in the northern side, of F94 which was probably caused by erosion, suggests that later was poured in from that point or dragged out. F116 seems to have been associated with whatever activity was carried out. The possible activity envisaged for these features is either a dyeing process or domestic washing. It is equally possible that F94 was a vain attempt to dig

a well with the highly compacted Roman street surfaces being too difficult to remove, and perhaps producing too much spoil in such a confined area.

If F116 was a low stone wall supporting a trough it was subsequently demolished; and [263] may be demolition rubble. The presence of granite stones at the bottom of the northern side of F94 in fill [294] may further support this. Additionally fills [288] and [287] of F94 had copious amounts of building debris in them and the tipping appeared to be from the north. F94 was backfilled rapidly and consolidated with Fill [220] and all the other fills with their high gravel content would make sure that any heavy subsidence was countered. It is probable that at this stage post pads F163 and possibly F55 of subphase 4.4 were still in use.

SUBPHASE 5.4

Pit: F108 [240]
Make up/Fills: F69=F159 [60=202=215]; [75]. [356]; [267]; [278]; [266]
Spreads: [40]; [58]; [233]; [268]; [269]; [275]

Fill [240] of Pit F108 was identical in texture and colour to contexts [60=202=215] listed above which it appeared to cut. There was considerable subsidence into F92 of 4.5 and all these contexts are confined within the area of F92. F108 can probably be explained if the subsidence in F92 had already been consolidated by [60=202=215] but continued to do so after their deposition. In which case F108 may have been test pit which was quickly backfilled with the same materials. All these fills were waste building debris. Fills [240], [60=202=215] were all yellowish brown in colour and were very friable sandy degraded mortar with abundant lumps of mortar and flat stone fragments and slate fragments with mortar still adhering to them frequently on both sides. Samples were kept of these. Combined they contained medieval pottery (4) and animal bone. Fill [75] was below [60] and above [247] of 4.5 and it consisted of a dark brown sandy clay with mortar and small stones-. It contained medieval pottery (2), Post Medieval pottery (2) and animal bone. Lying at the extreme southern end of F69=F159 was a large circular granite stone 0.62m in diameter and 0.21m thick. This lay above the fill and may appear structural yet the fill below was so soft this would seem unlikely. This large stone was covered by two spreads one above the other. The lowest [58] was a light brownish yellow compacted sandy clay loam. It contained medieval pottery (1) and animal bone and was 0.02m thick. Spread [40] was a very dark greyish brown sandy clay loam. It contained animal bone. Stratigraphically it is possible that [40] is the same as [221] of 5.2.

Make-up [356] was a brown friable sandy mortar with thin bands of brown sandy loam at intermittent intervals running through it. There was a high charcoal fleck content throughout and a large 0.09m diameter circular patch of black within it which was not charcoal or a post-hole but probably the remains of a decayed piece of wood lying horizontally. This context was very mixed but similar on the whole to [60=202=215]. Where F100 had subsided further spreads and make-up deposits occurred. [275] was a very dark brown sandy clay loam which lay directly over [256] of 5.1. It contained no finds. [269] was a small patch above [275] which abutted [273] of F96. [269] was a very pale brown sandy mortar and contained no finds.

Sealing [269] was [268] this was a spread confined to the eastern half of the subsidence in F100. It consisted of a light brownish grey clay silt and it lay partially over [224] of F96 of 5.2 and contained no finds. Sealing all of these spreads was [267 which was a levelling layer within the subsidence of F100. It filled the whole area of subsidence in F100 and was a very dark grey sandy clay loam with crushed mortar and mortar lumps. It contained medieval pottery (31), post-medieval pottery (5) and animal bone. It was cut by F125 if 6.1. Spread [233] was a narrow mixed mortar spread extending along the north wall and along the west wall in the north-west corner of the building. It extended for a maximum of 0.65m northwards from the west wall and 0.20m southwards from the west wall. It lay over [256] of 5.1 and was sealed by [236] of 6.2. It was a sandy mortar with small lumps of mortar and clay patches. It contained medieval pottery (5) and Post medieval pottery (2) -and was very similar in composition to [60=202=215] and [240] described above.

SUBPHASE 5.5
Pits : F123 [282]; F124 [283]; F125 [284]; F170 [357]; F171 [358]; F110 [252].

Features 123, 124 and 125 were three intercutting pits. F123 cut F124 which in turn cut F125. Fill [282] of F123 consisted of a dark brown plastic clay loam with frequent mortar and charcoal flecks. It contained Post Medieval pottery (1). Fill [283] of F124 was a black greasy clay loam. Its finds were medieval pottery (2), post-medieval pottery (2) and oyster shell fragments. Fill [284] of F125 was a very dark greyish brown clay loam. It cut [267] of 5.4 and contained no finds. These three pits ran in a line 1.00m eastwards from the doorway in the west wall.

F170, F171 and F160 represent another small group of intercutting pits. Located virtually in the centre of the building. The fill of F171 was a dark yellowish brown sandy loam. It contained animal bone and cut [356] of 5.4. Cutting F171 was F170. Its fill [357] was a dark brown sandy loam. The fills of F171 and F170 were very similar. It contained later medieval pottery (3) and animal bone. F160 was another small pit approximately 1.00m to the east of F171. It was possibly a post-hole. Its fill [340] was a brown sandy mortar with a slight clay content. There were frequent flecks and small lumps of mortar. In essence this fill was not to similar to [240], [60=202=215] described above 5.4. It contained no finds. F160, F170, F171 were all sealed by [221] of 6.2. The fill of F110 was a dark yellowish brown clay loam with mortar and charcoal flecks. It contained animal bone and clay pipe fragments.

DISCUSSION SUBPHASES 5.4 TO 5.5:

Subphase 5.4 probably indicates a general levelling of the interior of the building after a probable refurbishment or rebuilding of the building above the undercroft. The features of subphase 5.3 were all either removed or backfilled as part of the rebuilding. The high mortar content of all the fills and spreads in the subphase possibly support a refurbishment if not rebuilding, or at least a demolition of an earlier building. All this was occurring in the late 16th or early 17th centuries and if the interpretation of the archaeological building is accepted this new building replaced one which was already approximately 4-500 years old. There were in all probability minor alterations over those many years but it seems only the more major ones have

left any evidence. The pits of subphase 5.5 do not appear to have been rubbish pits but probably temporary post holes for structural alterations. Their backfills containing residual pottery, but food items from the builders at that time. It is highly probable that this later 16th or early 17th century building was the one demolished in 1861 and the archaeology in some respects supports the documentary evidence when that building was described as 'Elizabethan' in 1844 and 17th century 'post and pan' in 1861. The fill of F110 was so similar to [221] of subphase 6.2 that it may have cut through [221] rather than being sealed by it.

PHASE 6: MID 17TH TO MID 19TH CENTURIES.(illus. 25; 29-30)

SUBPHASE 6.1

Spreads: [266]; [278].

Both of these spreads were confined to the subsidence of F100 of subphase 4.5. [266] was a dark brown sandy clay loam. It was confined to the eastern half of the depression caused by the subsidence of F100 of4.5 -and it contained post-medieval pottery (9), animal bone, and brick fragments. [278] was a black sandy clay which almost entirely composed of charcoal. It contained no finds and was confined to the western end of F100 subsidence and was partially overlain at its eastern end by [266]. Both of these layers were levelling prior to the build up of the floor in subphase 6.2.

SUBPHASE 6.2

Floors: [217=221=236=242]; [7=17].

The contexts listed above represent accumulated soil and debris which became the floor surface from the 17th to 19th centuries. [217=221=236=242] extended over the whole of the excavated area in the north half of the building and this general floor horizon was also represented as a thin layer in the southern half of the building by [7=17]. [217=221=236=242] was a very mixed layer consisting of a dark brown to dark yellowish brown compacted sandy clay loam. There was much crushed material in it suggestive of prolonged trampling. Its thickness varied from 0.04m - 0.05m overall with a 0.15m thickness where the subsidence into F100 had occurred. [219] of 5.3 may represent a lower portion of this floor which had subsided slightly into F94. It was a very firm horizon which sealed everything below it.

[7=17] was a dark brown compacted sandy clay 0.01 - 0.02m thick and also sealed all earlier features and spreads. [7=17] contained Post medieval pottery (1) and [217=221=236=242] contained post-medieval pottery(14), animal bone, glass and brick/tile fragments and clay pipes. One clay pipe bowl had the monogram of Richard King who was active in Leicester from 1805 - 1828 (Higgins D. pers. comm.). A notable small find from [236] was a George III cartwheel penny of 1797. The coin and the clay pipe were both surface finds on [221] and the cartwheel penny was sealed below floor [218] of 6.4.

SUBPHASE 6.3
Pits: F162 [346]; F93 [216]
Misc.: F112 [258]
Animal Burial: F158 [339]

F162 cut [221] of 6.2 and was cut by construction trenches F161 and F30 of 7.1. F162 abutted the west wall between windows F89 and F90 and it may have been a large posthole. Its fill [346] was a dark reddish brown sandy loam. It contained post-medieval pottery (2), animal bone and half a thin brick with a dog footprint on it. F93 was located 3.20m to the north east of F162 and was a shallow depression 0.20m from the east wall. Its fill [216] was a brownish yellow, sandy mortar with frequent small flat stones and mortar lumps. It contained no finds.

F112 (not illustrated) was an oddly shaped feature circular at its east end and with a narrow channel 0.07m wide running for 1.3m eastwards from the west baulk in the north half of the building. The eastern circular end had a diameter of 0.17m and was 0.09m deep. The channel was 0.04m deep. Its single fill was a dark greyish brown compacted clay loam and it contained no finds and cut [221]. F158 has been interpreted as a burial because part of an articulated immature bird skeleton was found in situ within a cut. It had been badly truncated by construction trench F161 of 7.1. Only the southern end of this burial survived. F158 cut through [221] and is probably 19th century in date.

SUBPHASE 6.4
Floor: [218].
Slots: F97 [225]; F98 [226]; F102 [230]; F103 [231]; F104 [232].
Pit: F17 [14, 29].

[218] was a yellowish red compacted clay with dark brown clay patches and flecks and small lumps of cement. It was a square area of clay flooring 0.03-0.06m thick. It was confined to the north-west corner of the building where it abutted the north and west walls. It contained post- medieval pottery (5) and animal bone. [218] sealed [217=221=236=242] of 6.2 in this north-west area of the site. Above [218] were five linear slots. 3 were orientated east to west and two north to south. All fills were the same and none cut each other. They appeared to be the imprint of a joisted frame which had pressed into [218] and in the extreme north-west corner of the building. F97, F98, F102 ran east to west and F97 and F98 abutted the west wall. They were all 0.35m apart north to south.

At right angles to these three slots were slots F103 and F104 which were 0.80m apart. All the fills of F97, 98, 102, 103, 104 were dark brown clay loams. They produced no pottery or animal bone but from F97 a corroded coin, probably Georgian, was found. Three mortar patches were found, one in the N.W. angle between F102 and F97 another in S.W. angle of F97 and F104 and a small patch to the south of the western end of F97. The reason for their presence is unclear. F17 was a feature which may have been connected with the construction of the timber building in L.16th or E.17th centuries which had subsequently been robbed or interfered with. It was located just to the south to the larger stone in the top of F69 mentioned above in 5.4 which F17 cut. It also cut [7=17] of 6.2. An initial construction cut, however, was not observed.

F17 contained two fills. The upper fill [14] was yellowish brown, sandy loam with brick and granite fragments. It contained no finds. Fill [29] was a dark brown sandy mortar with brick and mortar fragments and a large irregular block of granite centrally positioned. This block measured 0.56 east to west and 0.45m north to south. It contained medieval pottery (1) and glass.

SUBPHASE 6.5
Pit: F111 [257]

F111 was an isolated pit cutting [218] at its extreme S.E. extent. Its fill [257] was a dark brown, sandy clay loam. It contained post-medieval pottery (18) and animal bone.

DISCUSSION PHASE 6

Essentially phase 6 demonstrates a lack of activity in the cellar which the undercroft had now become. After the probable construction of a timber building in either Late 16th or Early 17th centuries the cellar may have been used for storage. Floor [217=221=236=242] had every indication of being well trampled and compacted and was probably the dark soil horizon visible in the 1861 photograph. F100 was still causing problems with subsidence, as it had done since the late 13th to early 14th centuries, and spreads [266] and [278] were thrown in to counteract this. The doorway in the northern end of the west wall was possibly still in use, perhaps this is the reason for [217=221=236=242] being thicker at the northern half of the building; i.e. more trample accumulated in this area. This is possibly further supported by the positioning of the probable racking in subphase 6.4. The southern half of the building may not have been so intensively used and therefore suggests that any opening at that end was largely idle; although by 1861 it seems that the only access into the building was in the western end of the south wall. This may suggest that the floor at the southern end had either been truncated or worn away

The 18th century a few pits were dug. F162 may be a posthole shoring that part of the west wall or the floor above. The 'burial' F158 is a mystery as the initial results postulate an immature chicken. Further work is needed to clarify the species buried. Sometime at the end of the 18th century (certainly after 1797) or in early decades of the 19th century, floor [218] was laid and possibly some kind of racking installed. This might explain the slots F97, F98, F102, F103, F104, but the position of this flooring racking, as mentioned above, by the blocked doorway, further supports this doorway still being in use at that time, and that the blocking of the 14th century in subphase 4.6 was only partial. It is tempting to assign the racking to Swain and Teddy Cheesemongers who were in occupation of the premises in 1854 (Dryden 1854).

PHASE 7: 1860 ONWARDS.(illus.31-2)

All the features and layers described below can all reasonably be assigned to the redevelopment of the building above the cellar in 1861. Only brief descriptions of the features are given here and none of the fills are described at all.

SUBPHASE 7.1

Construction Trenches: F30 [57]; F32 [63]; F161 [243]; F8 [10]; F12 [16].
Post Holes: F91 [214]; F99 [227]; F33 [65].

F30 was the construction trench for the western partition wall F191. F30 cut F162 of 6.3 and abutted the west wall of the building. F32 was the construction trench for the eastern partition wall F192 and both these construction trenches were 3.40m from the south wall. F8 was the construction trench for the southern most brick pier F188 and only the extreme eastern end of it was excavated and it contained animal bone. F12 was with construction trench for the northern most brick pier F189 and once more only with extreme eastern end of it was recorded. F12 contained post-medieval pottery (3) and clay pipe fragments. Postholes F33 and F91 were probably scaffolding post holes for the construction of the partition walls. No finds were present. Posthole F99 abutted the west wall and it cut [218] of 6.4 and had four unfrogged imperial bricks forming the base. F99 contained post-medieval pottery (1), animal bone and post-medieval glass.

SUBPHASE 7.2

Postholes: F5 [12]; F6 [13]; F47 [56].
Brick Pads: F3 [9]; F95 [222]; F101 [229]; F183 [486].
Spreads: [5]; [6].
Pit: F7 [11].

Approximately 1.20m north of the south wall were two small postholes F5 and F6 with well- preserved slivers of wood still in situ. No finds were contained within either of them. Both these small post holes cut [7=17] of 6.2. Post hole F47 was much larger and it cut F32 of 7.1 and abutted the brick footings of the eastern partition wall. F3, F95, F101 and F183 were all shallow features with either a single imperial brick or half an imperial brick lying horizontally in them. They were all located within 0.20m of the walls. F183 did not have a cut but was pressed into [218] of 6.4 below it. There were no finds in them. Pit F7 was located almost centrally to the southern half of the south room it was full of pieces of cement and mortar and copious fragments of broken brick. It contained later post-medieval pottery (8) and animal bone. Spreads [5] and [6] were confined to the southern room. Context [5] sealed construction trench F8 of 7.1 while [6] was a spread further to the east. [6] sealed F7, F5 and F6 above of this subphase and no finds were present.

SUBPHASE 7.3
Layer:[4].
Floor:[3].

[4] was a very mixed and mottled layer which was continuous throughout the whole building. It sealed all the construction trenches, post holes and post pads of 7.1 and 7.2. It represents either a separate levelled floor or it is levelling 'hardcore' for the brick floor [3]. However prior, to [4] occurring [228] was deposited to fill a depression caused by the continual subsidence of medieval pit F100 of 4.5. [228] also contained abundant cement, mortar and brick. It seems to have been building debris from 1861 used to level this area off. With [4] and [228] levelling the interior of the building brick floor [3] was laid down. No firm date can be given for this floor but it was either laid down during 1861 redevelopment or later because 20th century pottery was found in [4]. It is possible, however, that as the brick floor was unmortared or bonded with anything else the 20th century pot could have worked down through the gaps between the bricks. The bricks are all imperials laid in alternating rows as for standard English bricklaying and should be assigned to the redevelopment of 1861. At the time of the survey this brick floor was also subsiding into F100.

SUBPHASE 7.4
Sump: F1 [1].
Sump Construction Pit: F2 [2].

Cutting brick floor [4] was the construction pit F2 for a brick lined sump F1. A large slate slab 0.02 - 0.03m thick covered the bottom and a single width of bricks (F1) then lined the construction pit and the lowest course was cemented to the slate slabs.

DISCUSSION PHASE 7

It is indeed fortunate that there is a surviving photograph of the undercroft, accurately dated to 1861, which was taken after the probable late 16th or early 17th century timber building was demolished. From this we know that the Victorian rebuilding occurred at that time or shortly after. Subphase 7.1 demonstrates that the partition walls, brick piers and stairs were constructed at the same time.

It is also interesting to note that the Victorian partition is only 0.60m to the north of where the 12th to early 13th century partition would have stood. All the features in subphase 7.2 probably all belong to the construction of the brick vault after the main partition and alcove walls had been built. Posthole F47 is evidence for this as it cuts F32 the construction trench for the eastern partition wall. Presumably a wooden template was formed which would have required a great deal of support, prior to the laying of the bricks for the vault. A great deal of timber supports are missing from the archaeological record and therefore planking on the floor or other means of support must have been used for greater stability. The brick post pads were probably part of this scaffolding support system. When all the superstructural construction was completed, the interior was levelled off and a brick floor laid. At a slightly later date a brick lined sump was inserted.

CHRONOLOGY AND CONTEXT

If the building was constructed as an undercroft then the likelihood is that 2/3rds of the building would have been above ground which would mean that the construction pit for the undercroft would have been cut from approximately 63.00m O.D. (illus. 33). This causes problems because the 14th century Guildhall opposite has the bottom of its foundations at 64.35m O.D. (Hagar A29 1992 unpubl.). This suggests that the general ground level in this area during the 14th century was not significantly different to that of today at 64.73m to 64.95m. Also the ground level around St. Nicholas and St. Martins churches does not appear to have altered significantly since their construction. Both churches are of probable early foundation, certainly St. Nicholas, which has late Anglo-Saxon characteristics in the walls of the church.(Brandwood 1984).

During excavations on the Forum area *c*.40m to the west a 1-2m build up of 'garden soils' was recorded sealing 12th and 13th century features and where there was no medieval activity these 'garden soils sealed the latest Roman levels' (Mellor and Hagar forthcoming). Similar deposits have been recorded from the Causeway Lane excavations (Connor 1992, 8), the Shires excavations (Lucas and Buckley 1989, 106) and the Elbow Lane excavations (Lucas 1989,23). They are generally encountered on most sites in the city where they have survived and have date ranges from the 13th to 16th centuries. In some areas of the city they can be as late as the 18th century (Lucas 1989, 23). This 'garden soil' build up may explain why so little of the undercroft is above ground level. In some areas the opposite can be the case. For example, some of the stone buildings with undercrofts of Norman date in Colchester were recorded, prior to their demolition in the 19th century, as being substantially above ground (Crummy 1981).

The appearance of the undercroft *c*.1100 may have been with a timber first floor hall supported on strong lateral timbers spanning the east and west walls. The Leicester undercroft does not appear to have had a vaulted roof. There is no evidence for one at all visible today and nor is there in the photograph of 1861 (illus.4). A possible parallel for this was found in Colchester where a stone building dated to after AD 1120 showed no evidence of a stone vaulted roof but there was limited evidence that the upper floor had been supported on two central posts (Crummy 1981, 53). Initially the four windows of the undercroft were all tile arched internally as the northern most window appears to have been rebuilt at a later date with a stone arch. Stylistically, all the evidence is internal, nothing is known about the external appearance of the undercroft apart from the suspect reference to there being outer splays to the windows (Dryden 1854).

Colchester castle keep is an example of a late 11th century building with its narrow looped windows having internal tiled arches, but the external arches are turned with stone.(Renn 1968, 151). It is possible that the windows were glazed without wooden frames an example of this was found at St. Mary All Saints at Rivenhall in Essex where plaster fillets were used to hold the glass in place (Rodwell and Rodwell 1985, 138). No window glass was retrieved from the Leicester excavation. The arch of the doorway may have been tile or stone arched and from the excavated evidence the stones lying on the mortar floor may indicate the latter which had collapsed. Although there is no evidence for it, a tiled arch is equally possible. A window or doorway may

also have existed in the north and south walls. It is possible that these apertures, if they ever existed, were not part of the original construction as it is sometimes the case that windows and doors can be inserted at a later date. It is also possible that the building was not built as an undercroft at all but as a freestanding building although this would seem unlikely.

As an undercroft the building would have been used for storage and owned by a merchant or financier or a larger ecclesiastical or secular organization. The possibility that it belonged to a Jew should not be over looked as during the 12th and 13th centuries stone houses were often owned by Jews but not exclusively so (Wood 1965, 6). An example of this is documented in Colchester where Aaron The Jew owned four stone houses in St. Runwalds parish (Crummy1981, 69). He was an extremely rich Jew who lent money to kings and bishops and others (Wood 1965, 2). The undercroft and its first floor hall would have stood out amongst a mass of timber-framed buildings around it. The Jews were ordered out of Leicester in 1250 (Billson 1920, 15) and out of England in 1290. This is close to the time when the two cesspits (subphase 4.5) were in use and it seems that the building was downgraded and may have been open to the elements or more probably derelict.

It is possible that it may have been a public building of some sort or attached to a larger complex of buildings and its position just to the east of the Roman Forum may also be significant and its alignment on the Roman street grid (illus.17). Also the undercroft's proximity to St. Martins church *c*.20m to the east may be significant as this church is aligned on the Roman street grid as well. The possibility of the undercroft as having served as a Synagogue should not be entirely dismissed. In Colchester the Patent rolls of 1293 indicate that a Synagogue existed in the Colchster Jewry (Crummy 1981, 69). In Canterbury the house of Jacob the Financier is documented as having a Synagogue at its rear (Wood 1965, 5). This implies that the Synagogue may not have been a large building. Canterbury has over 30 recorded stone houses which existed by the end of the 12th century nearly all owned by financiers (Urry 1967).

Another possibility regarding the function of the building is as a basement to a moot hall. One example of a Moot hall was demolished in 1843. This was a raised hall 1.8m above the street level with a partially sunken undercroft. It was built entirely in stone and dated to the early to mid 12th century (Zarnecki 1981, 67). After the 13th century there is very little evidence of activity within the building until the 16th or 17th centuries (subphase 5.1) when some sort of 'washing' activity was recorded. Thereafter the undercroft was probably used for storage and evidence for this is probably represented by the possible racking in subphase 6.4.

Architecturally, the building displays closer affinities to late Anglo-Saxon traditions in the use of tile in the window arches and side alternate window and door jambs. Two stone houses in Colchester of 12th century date are possible parallels. The stone house found on the corner of Lion Walk and Culver Street in Colchester had tiled arches over the arches of two doorways and a square niche with Roman tile forming its top and base while the sides consisted of tile jambs. Another was located in the Foundary yard also in Colchester which was demolished in 1866. This building consisted of a first floor hall and a barrel vaulted undercroft sunk partially below ground level. The undercroft had four internally and possibly five looped windows

and seven round headed niches. All the doors, windows niche jambs and arches were all formed with re-used Roman tile.(Crummy 1981, 53).(illus.34). In Leicester the closest parallel to the undercroft are two window arches in St. Nicholas church which are of probable late Anglo-Saxon date (Brandwood 1984). The surviving portico of the Jewry wall also displays tiled arches although doubled.

Other parallels for tiled arch windows can be seen in St. Mary All Saints church at Rivenhall in Essex. The north wall of the chancel has two single splayed windows with front and rear tiled arches and jambs and large quantities of Roman tile are used throughout the earlier phases of the building (illus.35). This Rivenhall group of churches have a provisional date of the late 10th to 11th centuries (Rodwell and Rodwell 1985, 136). Another church at Layer de la Haye also in Essex has a surviving tiled window in the north side of the chancel and Bradwell church of St. Cedd also has tiled windows and is dated to the mid 7th century (Webb 1956).

One other example closer to Leicester is Brixworth church in Northamptonshire. This church has been extensively surveyed in recent years and its date is still uncertain it is probably 7th century or later. Brixworth has a magnificent set of double tiled arches not unlike the portico to the Jewry wall baths in Leicester. One interesting question arose from the Brixworth survey and that was whether the tile used in the construction was entirely of re-used Roman material. In the main it is true that many tiled features of Saxon or Norman buildings are generally built out of Roman tile but there is the possibility that those used in the Leicester Undercroft may not be re-used Roman tile.(Lucas p. below). In Southampton several undercrofts have been recorded but none of them display any sure similarities with the Leicester example and in any case most are of later date (Faulkner 1975). One further interesting and intriguing clue to a possible earlier date for the undercrofts foundation lies in its internal dimensions. Recent studies have shown that the Anglo-Saxons had more or less standard measures when laying out the plan of their timber houses. They used rods of 5.03m (16.5ft) and 4.65m (15ft) in laying out the house with the long axis in general being twice the width although by no means always.(Fernie 1991).

The area for the construction of the building was marked out and the construction trenches dug around the outside of the line. Also these rods were subdivided into 1/6ths and 1/3rds for example a building may be 2 and 1/3rd rods long and 1 and 1/6th rods wide (Huggins 1991). These measurements have been extensively tested on several Anglo-Saxon settlement sites such as Raunds (Northants.), West Stow (Suffolk), Mucking (Essex) and many others. If this principle of measurement is applied to the Leicester undercroft with its internal dimensions of 4.56m wide and 8.70m long then it is very close to one 4.65m rod wide and 1 and 5/6ths rods long. It seems to be significant that this building falls neatly into this system. None of the Norman domestic buildings such as the 'Jews' house in Lincoln or the Music House in Norwich fit into this measurement system.

SUMMARY OF ARCHAEOLOGICAL EVENTS

PHASE 1: 1ST TO 4TH CENTURIES A.D

SUBPHASE 1.1:
Fields?
Agricultural Activity?

SUBPHASE 1.2: c50 - 70 A.D
Waste Ground?

SUBPHASE 1.3: c.50 - 70 A.D
Roman Gully and Posthole.

SUBPHASES 1.4 TO 1.9: c.70 - 350? A.D
Successive Street Metalling
Construction of 'Fountain'/Water Trough.
Streets resurfaced twice.
Construction of Soakaway.
Co-nstruction of Stone Drain.

SUBPHASE 1.10: c.350+AD
Possible timber structure on Street or Potholes etc.

PHASE 2: c.400 - 1100.

SUBPHASE 2.1: c.400 - 1000?
Accumulation of Blacksoil.

SUBPHASE 2.2: c.400 - 1000?
Earliest Floor?
Partial resurfacing of Roman Street?

SUBPHASE 2.3: c.900 - 1050?
Building Constructed?
1ST Floor (Mortar) laid down.

SUBPHASE 2.4: c.1050 - 1100.
Building Derelict?

PHASE 3: c.1100 - 1200.

SUBPHASES 3A TO 3.5: c.1100 - 1150.
Building Delapidated?
Partial dereliction?

SUBPHASE 3.6: c.1150 - 1200.

Refurbished 1st Floor Hall added?
Building becomes undercroft?
Stone arched window added/rebuilt?

PHASE 4: c.1150 - 1350

SUBPHASE 4.1: c.1150.
2ND Floor Laid/Builds up.

SUBPHASE 4.2 TO 4.3: c.1150 - 1200.
3RD Floor Laid/Builds up.

SUBPHASE 4.4: c.1150 - 1250.
Further refurbishment.
1st floor repaired? rebuilt?
Undercroft partitioned by one third.

SUBPHASE 4.5: c.1150 - 1250.
Building Downgraded.
Two large pits F92 and F100 dug.

SUBPHASE 4.6: c.1250 - 1350
Pits of 4.5 backfilled and levelled.
4 Hearths (not commercial)
Door partially blocked.
(Scant evidence of occupation 1350 - 1450)

PHASE 5: c.1350 - 1600.

SUBPHASE 5.1: c.1500+
Clay floor laid.
North end of building used as
washing/dyeing area?
Pit F94 probably waste water pit,
with wattle fence around it.

SUBPHASE 5.2: 1500s.
Waste pit backfilled.

SUBPHASE 5.3: 1500s.
Interior of building levelled.

SUBPHASE 5.4: c. 1550 - 1600.
Rebuilding of upper storey? c1600
(New building on top of undercroft)
Upper left had jambs of doorway rebuilt.
(Is this the building which was demolished in 1861?)

SUBPHASE 5.5: c.1600 - 1700.
Floor and levelling.

PHASE 6: 1700 - 1860.

SUBPHASE 6.1: c.1700 - 1800.
Few isolated small pits

SUBPHASE 6.2:
Lack of detectable activity.

SUBPHASE 6.3: 1800 - 1860.
Probable racking in N.W. Corner of building.
Discreet red clay floor in that area.

PHASE 7: 1861 +

SUBPHASE 7.1 TO 7.2: 1861 - 62.
Construction of present building above undercroft.
Undercroft now brick vaulted.
Partitions added, stairs built etc.

SUBPHASE 7.3: 1861+
Brick floor laid.

SUBPHASE 7.4: 19TH TO 20TH CENTURIES
Sump inserted through brick floor.

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Appendix Two Animal Bones from the 1989-90 Excavations, Guildhall Lane Leicester (A38.1989)

Ian L. Baxter

Introduction

From August 1989 to July 1990 a survey and excavation was carried out under the auspices of the Leicestershire Archaeological Unit by trainees from the Leicestershire County Council employment training scheme of a probable Norman undercroft, which survives as a cellar under Guildhall Lane opposite the western end of the Guildhall. The present report covers in detail the animal and bird bone found in 12th/13th century pits F92 and F100, 12th, 13th and 14th century floors (referred to in tables and text as Floors 'A' phase 4.1, 'B' phase 4.3, and 'C' phase 4.6) and F94 a 15th/16th century pit. Bone from other contexts was scanned and anything of particular interest was included in the report. Pits F100 and F94 were completely excavated but F92 could only be partially excavated due to the presence of a Victorian wall.

Methodology

Bone was identified by comparison with published descriptions (in particular Amorosi 1989, Schmid 1972, Boessneck 1969, Sisson and Grossman 1953, Lawrence and Brown 1968, Cohen and Serjeantson 1986), and reference material housed at Leicestershire Museums (access arranged by kind permission of Miss J.E. Dawson), the University of Leicester (access arranged by kind permission of Mr. A.J. Gouldwell), and at the L.A.U., Humberstone Drive. No attempt was made to calculate minimum number of individuals (MNI) or any similar measure due to the smallness of the sample (cf. O'Connor 1985).

Numbers of fragments per taxon are presented for hand-collected bone in table 1, coarse fraction (>4mm) and fine fraction (<4mm) samples in tables 2 and 3, and for all fragments identified to level 1 in table 4. Identification to level 1 embraces general categories such as large mammal (L.M.) and medium mammal (M.M.).

Identification to level 2 is identification to species or a similar category such as sheep/goat and frog/toad. Withers heights and metapodial indices are presented in table 5. The remains of small mammals from the samples are listed in table 6. Tables 7-9 list the skeletal elements present for the three main domestic species. All measurements taken on medieval and Tudor bones are given in millimetres in table 10. Data on tooth eruption and wear are presented and evidence of epiphyseal fusion for the three main domestic species are given in tables 11 and 12. Evidence of butchery is presented in detail in Appendix 1 and the results of an examination of domestic bird bones for medullary bone in Appendix 2.

Following O'Conner (1988) house mouse is identified as AMus sp.

Species Represented

A) Domestic

Horse	A(Equus caballus L.)	Dog	A(Canis domesticus L.)
Cattle	A(Bos f.domestic)	Cat	A(Felis catus L.)
Sheep	A(Ovis f.domestic)	Fowl	A(Gallus f.domestic)
Goat	A(Capra f.domestic)	Domestic or greylag goose	A(Anser anger L.)

B) Wild

Fox	A(Vupes vulpes L.)	Water Vole	A(Arvicola Terrestris L.)
Rabbit	A(Oryctolagus cuniculus)	Wood Pigeon	A(Columba palumbus L.)
Rat	A(Rattus radius (L.))	Frog/Toad	A(Rana/Bufo)
House Mouse	A(Mus sp.)	Indeterminate small Bird	
Field vole	A(Microtus agrestis (L.))	Indeterminate Fish	
Bank vole	A(Clethrionomys glareolus schreb.)		

Notes on the Species

Horse

Only two horse bones were amongst the fragments examined in detail, a hoof bone (phalanx III) from the 12th century floor ('A') and a proximal rt. Mc III fragment from pit F100. This has been chopped obliquely from top to bottom on both medial and lateral sides (see Appendix 1).

The bones of horses, dogs and cats are infrequent and isolated in the undercroft deposits and probably represent elements brought in from elsewhere amongst the backfill of cut features. It is generally considered that horses, dogs and cats were buried separately from the fragmented remains of domestic food species during the medieval period (cf. Gidney 1991b:8-9).

Cattle

Cattle bones constitute only 6.6% of the skeletal remains examined from the prioritised contexts, a figure that can be boosted to around 20% if amalgamated with those fragments classified as large mammal. Only one horncore was recovered from the medieval deposits. This was from F100 [344] and is short horned in the classification of Armitage and Clutton-Brock (1976). It bears marks indicating that it was probably chopped off the skull by an oblique upward blow (Appendix 1). Cranial and mandibular elements (excluding loose teeth) comprise 11.6% of total cattle fragments overall. There do not seem to be any significant differences in the proportions of anterior and posterior skeletal elements represented. Too few teeth are available to draw any conclusions relating to age structure (Table 11) but evidence of epiphyseal fusion indicates that most early and intermediate fusing epiphyses had fused while the majority of late fusing epiphyses had not (Table 12). This suggests that most cattle were slaughtered between the ages of 18 months and 3 1/2 years.

The limited evidence of butchery (Appendix 1) indicates the use of facilities to suspend the carcase and its splitting sagittally. Mandibles were removed from skulls by means of cuts in the condylar and coronoid regions, and meat removed from the shoulder blade by means of chopping and cutting with a knife. Two cattle rib fragments bear marks suggestive of utilization in craft working or an industrial process. One is derived from a sample (S277) taken from F100 [330] and the other, from phase 5.2 F94, has a longitudinal score mark over 120mm long running the length of the inner surface area and splitting for subsequent use. MacGregor (1985: Fig.9) illustrates comb case fragments made from rib bones. A cattle metacarpus III + IV from Floor C, phase 4.6, gives a withers height of 1.11m using the multiplication factor of Fock (1966). A horncore from phase 6.1 [266], a late 17th century deposit, has had its tip sawn off. According to the classification system of Armitage and Clutton-Brock (1976) this would be a longhorn, i.e. .200mm, but medium horn in the system of Armitage (1982), i.e. <360mm.

Sheep/Goat

Remains attributed to sheep/goat constitute 11.6% of identified bone from pits F92 and F100. Most of the fragments classified as medium mammal probably also belong to sheep/goat, which is the most numerous non-avian taxon represented at the site. Apart from loose teeth the most numerous element of the skull is the mandible, n=4, but this is not as common as radius and pelvis, 11 each, followed by scapula, femur and tibia, 9 each (Table 8). The limited evidence available from tooth eruption and wear, (Table 11), suggests that 23% of the medieval sample are juvenile, 31% under 2 years and 46% over 2 years. Epiphyseal fusion (Table 12) indicates that 1/3rd of epiphyses usually fused by 10 months are unfused, 54% of those fused by 3 years and 50% of those fusing after 3 years. The high proportion surviving to over 2 years, around 50% using both ageing methods, suggests a strong emphasis on prime mutton and wool production. This is comparable with the situation at Little Lane rather than that at St. Peter's Lane (Gidney 1991a & b).

As with cattle, sagittally split vertebrae indicate division of the carcase while suspended. The pelvis has also been chopped through both ilium and ischium. Meat has been removed using a sharp knife and there is some evidence of disarticulation using a knife (Appendix 1). No remains attributable to goat were seen in the medieval sample. A goat horncore from F30 [57] dating to 1861 has been sawn off near the skull. Sexable pelvic remains (n=3) seem to be mostly female. Withers height could be calculated from a radius and scapula at 0.57m and 0.54m respectively (Table 5). This is within the range for sheep at other Leicester sites of the period (Gidney 1991a & b).

Pig

Whereas in pits F92 and F100 pig accounts for under 5% of identified bone, in the 12th and 13th century floors ('A' & 'B') it comprises over 10%. This is much closer to the figures for sheep in these contexts. In the make-up of the 14th century floor ('C') pig remains represent over 17% of total identified fragments, a figure greater than for any other species. A similar situation was found at 'Hamwih' where pig bones were under-represented in pits compared to the occupation surface (Bourdillon and Coy 1980:112). Unlike cattle and sheep, elements from the head region are most frequent in the medieval deposits − over 40% (n=19) of identified fragments

(exclusive of loose teeth). Next most common skeletal elements are the pelvis (n=5) and femur (n=6).

Epiphyseal fusion data indicates no survival for pig beyond 2 years (Table 12), a conclusion generally supported by tooth eruption and wear (Table 11). The only exception is a partial skull from F92 [241] dating from the 13th century. This, consisting of both maxillae, lt.premaxilla fragment, lt. and rt. lacrimals, lt.malar and lt. and rt. frontal fragments, bears a close resemblance to an almost complete specimen from Austin Friars (Thawley 1981: plate 16). On the basis of tooth wear the F92 skull belonged to an animal between 2½ - 3 years old (Amorosi 1989: fig. 3-8). It possesses expanded canine sockets and is probably male. Like all pigs prior to selective breeding in the 18th century, these pigs closely resemble wild boar in terms of body shape and general physiology lean and long legged. The practice of pannage would have ensured an element of gene flow between wild and domestic populations (Dent 1974: 65-9; 73). The size of its M3 teeth indicates that the skull from F92 belongs to a domesticated rather than a wild pig (Table 10).

Dog
The lt. radius of a large dog was found in pit F100 [329]. This belonged to an animal 0.58m high at the shoulder (Table 5). A highly worn premolar tooth possibly from a dog was found in a sample (S300) from the same pit. A proximal Mc IV from a smaller dog was found in the make-up of the 13th century floor ('B').

Cat
Isolated skeletal elements belonging to domestic cat occurred in samples from F92 and F100 (S322, 260, 299, 267). A mandible with deciduous dentition was found in a late 17th century context, phase 6.1 [266].

Birds
The majority of the 270 bird bones recovered are attributable to domestic species, the only exceptions being a carpometacarpus and a tibiotarsus fragment referable to wood pigeon. Of the fragments identified to species, domestic fowl is nearly 2½ times as frequent as goose in F92 and slightly under twice as frequent in F100. In phase 4.3 as a whole domestic fowl accounts for 10.3% of identified fragments and domestic goose for 4.7%. Total bird fragments account for nearly 35% of fragments identified to level 1 in pits F92 and F100. Many of these are phalanges and claw bones recovered from the coarse and fine fraction samples. In the phase 5.2 pit F94 goose remains are more frequent than fowl, 3.8% and 2.9% respectively, with bird accounting for 13.4% of fragments identified to level 1.

The femora and tibiotarsi of fowl and goose were examined for the deposition of medullary bone, which builds up in the interior of long bones prior to egg-laying in females (Driver 1982; Wing and Brown 1979). In most cases this was facilitated by drilling a hole through the cortical bone with a 3/32" bit and microscopic examination. Results for the femur were much more conclusive than for the tibiotarsus (Appendix 2).

Fowl
Of the 75 fragments attributable with some confidence to domestic fowl from pits F92 and F100, 11 15% were from immature birds. Fragments of eggshell were found in

most contexts (88.2%) including F92 and F100 (P. Boyer pers. comm.). All 4 femora examined from these two pits were packed with medullary bone, indicating females in egg laying condition. Of the 9 measurable tarsometatarsi from these contexts 7 appear to be from females on the basis of overall size and the absence of a spur or socket primordium. A single specimen from F92 [277] undoubtedly once possessed a spur, now broken, and probably represents a male. Another specimen from F100 [300] is much larger than all others recovered from the site and has a socket primordium indicating an unfused spur. This would have belonged to either a male or a capon (cf. West 1982; 1985).

None of the immature tarsometatarsi have spurs or a socket primordium. The partial skeleton of a young chicken was found in a 18th/19th century pit.

Goose

As mentioned above goose bones are less frequent in the phase 4c pits than those of fowl. Of the 3 femora and 2 tibiotarsi available for examination none contained deposits of medullary bone (Appendix 2). The distal breadths of the tibiotarsi are close to the male mean in Bacher's 1967 study (cited in Bourdillon and Coy 1980). On grounds of size the goose bones are comparable to greylag A (Anser anser) and probably represent its domestic descendant. No immature birds are represented. Geese were probably kept primarily for meat and down and slaughtered at a later age than chickens. A future study may reveal to what extent geese have contributed to the eggshell recovered from the undercroft, on the basis of present evidence this may be expected to have been slight.

Butchery

Disarticulating cut marks were noted on a fowl proximal humerus and goose ulna and radius. Other less obvious knife scrapes are probably present on most of the bird bones but they were not subjected to microscopic analysis.

Wood Pigeon

A lt. carpometacarpus of wood pigeon was found in the make-up of the 12th century floor (Floor 'A') and a tibiotarsus fragment attributable to the same species in that of the C13th floor (Floor 'B'). This latter is peculiar in possessing a notch in the lateral epicondyle, possibly a pathological feature.

Indeterminate Small Bird

Fragments belonging to small birds occurred in samples 299 from F100, 326 and 332 from F92, 142 from F94, and 179 from [254]. It has not been possible to establish if these represent wild species or immature domestic birds.

Fox

Two small canid metacarpals were found in F100 [303] and the make-up of the 14th century [254]. These seem closer in size and morphology to fox A (Vulpes vulpes) than domestic dog.

Rabbit

A left mandible and a proximal ulna of Rabbit were found in context [221], a 17th century deposit.

Rat
Two bones provisionally identified as black rat A(Rattus rattus) were found in samples from F100 and F94 (Tables 2-4,6). No rat bones were identified from the Roman and medieval deposits at the Shires (Gidney 1991c). Confirmed as Rattus cf. rattus by T.P.O'Connor pers.comm.

Mice and Voles
House mouse was identified from six contexts spanning the pre-undercroft period to the 14th century. Field vole occurred once below the original undercroft mortar floor, phase 2.1 and once in F100 [330] S260. A single toothless mandible belonging to bank vole was found in a sample from the same context, S272. An M1 fragment referable to water vole came from S13 [27], a phase 4.1 context.

Amphibian
Isolated post-cranial fragments belonging to frog or toad occurred in samples from F92 and F100.

Fish
Fish bones occurred in pits F92 and F100. In F92 these account for nearly 4% of the total fragments identified to level 1 and include a large branciostegal ray. Identification to species must await specialist study.

Summary and Conclusions
The excavation of the Norman undercroft on Guildhall Lane has provided a rare opportunity to study animal remains from deposits within a medieval building in Leicester. The function of pits F92 and F100, both dug around *c*.AD 1150, remains obscure. Most, if not all, of the fill from these and other features probably originated from no great distance outside the building and gives no indication of prolonged exposure to the elements.

Sheep are the most numerous domestic mammal species in the medieval pits and floors, although pig is more frequent on the occupation floors than in the pits. The sheep are of small stature typical of the period and similar to those from the Shires sites. The pigs are of the long snouted, long legged type similar to wild pigs, common in England before the 18th century. Identifiable cattle bones may be under represented to some extent due to fragmentation, but are only half as frequent as sheep overall. No goat was identified from the medieval and Tudor levels. A remarkable feature of the two 12th-13th century pits F92 and F100 is the large proportion of domestic bird bones. Domestic fowl is twice as frequent as goose and includes a high proportion of immature remains and females in egg laying condition. Isolated bones of horses, dogs and cats are probably redeposited from disturbed burials elsewhere. The bulk of the animal and bird bone represents food refuse rather than debris from slaughter yard or industrial processes. Two cattle rib fragments are probably off-cuts from craft working.

The remains of rodents occur in most of the medieval deposits, with house mouse most frequently represented. Two bones provisionally identified as black rat were found, one in pit F100 and the other in post-medieval pit F94. That from F100 would represent the earliest occurrence in Leicester to date if confirmed. Two rabbit bones were recovered from a 17th century context and isolated fox metacarpals in two

medieval contexts. Fish bones were found in pits F92 and F100 including a large branchiostegal ray in F92.

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Appendix 1. Butchery.

Cattle

1. lt. Horncore. Probably chopped off by oblique upward blow. Phase 4.5 F100 [344].

2. Posterior lt. Mandible. Multiple cut marks on posterior border below condyle. Phase 4.5 F100 [300].

3. Posterior rt. Mandible frag. Cut marks on inner surface between coronoid and condyle, other marks in from condyle. Disarticulating. Phase 5.2 F94 [288].

4. lt. Scapula frag. Horizontally chopped. Phase 4.5 F92 [270].

5. rt. Scapula frag. Origin of spine cut off; chopped obliquely through glenoid; 4 cut marks on posterior surface at level of acromion. Phase 4.5 F100 [344].

6. lt. Innominate frag. Chop mark on laterial edge of acetabulum. Phase 4.5 F100 [330].

7. Distal rt. Femur epiphysis frag. Medial and lateral chops. Phase 5.2 F94 [287].

8. rt. Calcaneum. Tuber possibly chopped off. Phase 4.3 [223].

9. rt. Astragalus. Possible cut marks on lateral distal articulation. Phase 4.5 F100 [330].

Large Mammal

1. Ribs: transverse/oblique chop/cut marks - Phase 4.5 F92 [250] 2; Phase 4.5 F92 [277] 1; Phase 4.5 F92 [241] 1; Phase 4.5 F100 [301] 1; Phase 4.5 F100 [330] 4; Phase 4.3 [223] 1; Phase 4.6 [254] 3; Phase 4.5 F100 [329] 1.

Proximal rib with transverse cut marks below head, head very neatly cut off leaving smooth surface. Phase 5.2 F94 [236].

Horizontal cut marks - Phase 4.5 F100 [330] 1.

2. Vertebrae: sagitally chopped - phase 4.5 F92 [277] 1; Phase 4.5 F100 [330] 1.

3. Pelvis: transverse chops through ilium - Phase 4.5 F92 [277] 1; Phase 4.5 [301] 1; Phase 4.3 [223] 1.

Horse

1. Proximal rt. Metacarpal III frag. Transverse chop mark on anterior surface. Obliquely chopped proximally - distally on both sides.

Sheep/Goat

1. Posterior lt. Mandible frag. Cut marks on outer surface below condyle and on opposite side of ascending ramus. Phase 5.2 F94 [236].

2. Atlas. Cut mark on lt. posterior articular surface. Phase 4.5 F92 [277].

3. Atlas. rt. Wing chopped off. Phase 4c F100 [330].

4. Axis. lt. Transverse process chopped off. Phase 4.5 F100 [330].

5. rt. Scapula frag. Chop marks on lateral posterior border and across spine. Phase 4.5 F100 [329].

6. rt. Radius. 3 short cut marks on posterior medial edge and surface. Phase 4.5 F92 [277].

7. lt. Radius. Transverse cut marks on anterior surface below articulation, transverse cut marks on posterior surface to rt. of ulna scar. Phase 4.5 F100 [330].

8. Thoracic vertebra. Sagitally split. Phase 4.5 F100 [330].

9. lt. Innominate frag. 2 cut marks across ischiatic spine, body of ischium chopped? Phase 4.5 F100 [329].

10. lt. Innominate. 2 chop marks across body of ischium. Phase 4.5 F100 [329].

11. rt. Innominate frag. Ilium chopped through. Phase 5.2 F94 [294].

12. lt. Calcaneum. Possible cut mark on anterior process. Phase 4.5 F100 [329].

Pig

1. rt. Mandible frag. Chop mark from glancing blow running obliquely across lower outer surface below P3. Phase 4.5 F100 [330].

2. Distal lt. Humerus. Cut mark between condyles. Phase 4.5 F100 [330].

3. Proximal rt. Ulna frag. Head chopped off; chopped off above lateral coronoid process. Phase 4.3 [223].

Medium Mammal

1. Ribs: transverse/oblique chop/cut marks - Phase 4.5 F92 [241] 1; Phase 4.5 F92 [250] 1; Phase 4.5 F92 [277] 3; Phase 4.5 F100 [303] 1; Phase 4.5 F100 [319] 1; Phase 4.5 F100 [330] 7; Phase 4.5 F100 [329] S245 1; Phase 4.3 [223] 1; Phase 4.1 [317] 2; Phase 5.2 F94 [220] 1; Phase 5.2 F94 [236] 1; Phase 5.2 F94 [294] 1.

2. Vertebrae: sagitally split - Phase 4.5 F92 [244] 1; Phase 4.5 F92 [241] 1; Phase 4.5 F100 [329] 2; Phase 4.5 F100 [302] S284 1; Phase 4.5 F100 [329] S245 1; Phase 4.5 F100 [330] S255 1; Phase 4.3 [223] 2.

Bird

Fowl
1. lt. Humerus. 3 oblique cut marks on head. Phase 4.5 F100 [330].

Goose
1. rt. Ulna. Short cut marks on medial side above and on articulation. Phase 4.5 F92 [370].

2. lt. radius. 3 cut marks on posterior surface below proximal articulation. Phase 4.5 F100 [330].

Appendix 2. Examination of Bird Bones for the Presence of Medullary Bone.

A. Fowl A(Gallus - domestic)

Femur (n=5)	ATibiotarsus (n=11)
F92 [277]	F92
G1 + packed	[250]
F100	G6 - [277]
[303]	G7 + coating only
G2 + packed (broken)	G8 -
[329]	G9 + ? thin coating/traces
G3 + packed	G10 -
[330]	G11 + ? thin coating
G4 + packed	
	F100
C13th Floor [223]	[330]
G5 -	G14 -
	G15 + thin coating
	[344]
	G16 -
	C13th Floor [223]
	G17 - (broken)
	F94 [287]
	G18 -

Note: Numbers G12 and G13 are invalid.

B. Goose (Anser - domestic)

Femur (n=3)	ATibiotarsus (n=2)
F92 [277]	F92 [277]
A1 -	A4 -
A2 -	
	C12th Floor [300]
C12th Floor [300]	
A3 -	A5 -
+ = present	Instrument used: 3/32" drill
- = absent	

References

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