University of Leicester

Archaeological Services

An Archaeological Excavation on Land to the south of Bosworth House, Southgates, Leicester (NGR SK 583041)

Dr. Roger Kipling

ULAS Report No 2010-220

An Archaeological Excavation on Land to the south of Bosworth House, Southgates, Leicester

[NGR SK 583 041]

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For: De Montfort University

Approved by

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An Archaeological Excavation on Land to the south of Bosworth House, Southgates, Leicester [NGR SK 583 041]

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Summary

A programme of archaeological investigation was undertaken by staff of University of Leicester Archaeological Services on behalf of De Montfort University on land to the south of Bosworth House, Southgates, Leicester, between 26th July and 13th September 2010. The work proceeded from an archaeological evaluation undertaken between the 7th and 10th December 2009, which revealed a well-preserved sequence of archaeological deposits of likely early Roman date, possibly relating to the town's southern earthen defensive rampart, in addition to possible evidence for the medieval town defensive wall and/or ditch.

A preliminary programme of contiguous concrete piling of the limits of the excavation trench enabled excavation of the complete archaeological sequence. Excavation revealed a predominately Roman sequence of occupation, beginning with post-Conquest activity in the form of a single gully or shallow ditch followed shortly afterwards by major timber building structural activity, possibly in two phases, spanning the later first to late second century AD and likely associated with external hearths and yards. These structures appear to have been demolished in order to make way for the earth and timber town defences in the late second century, the clay rampart of which sealed at least one timber building. Construction of a masonry wall at the rear of the defensive rampart during the later Roman period may represent either a building or an attempt to demarcate, and separate, civilian and military zones within the walled town.

Subsequently the trench was traversed by a substantial ditch of 1100-1250 date, possibly representing a short-lived defensive measure associated with the Norman castle and the Sack of Leicester of 1173.

The site archive will be deposited with Leicester City Museum Service under the accession number A17.2009.

Introduction

An archaeological excavation was conducted by staff of University of Leicester Archaeological Services (ULAS) on land to the south of Bosworth House, Southgates, Leicester, on behalf of De Montfort University between 26th July and 13th September 2010.

Work was undertaken in accordance with Planning Policy Guidelines 16 (PPG16, Archaeology and Planning, paragraph 30), which provided a written scheme of investigation for partial mitigation of the effects of the development proposals on

buried archaeological remains, as required by the City Archaeologist, Leicester City Council as adviser to the planning authority. The scheme addressed the impact of a proposed extension to the south side of the building in order to lift access to all floors and provided details of a programme of work comprising monitoring of pile installation, excavation and sampling of archaeological deposits which were to be affected by the proposals.

In addition, since part of the site lies within the Scheduled Ancient Monument of Leicester Castle, the scheme was also intended to assist in the determination of an application for Scheduled Monument Consent for the works by the Department of Culture, Media and Sport, in accordance with the Ancient Monuments and Archaeological areas Act 1979.

The Ordnance Survey Geological Survey of Great Britain Sheet 156 (Leicester) indicates that the underlying geology consists of Mercia mudstone, with underlying river sands and gravels. The land lies at a height of *c*. 64.40m OD.

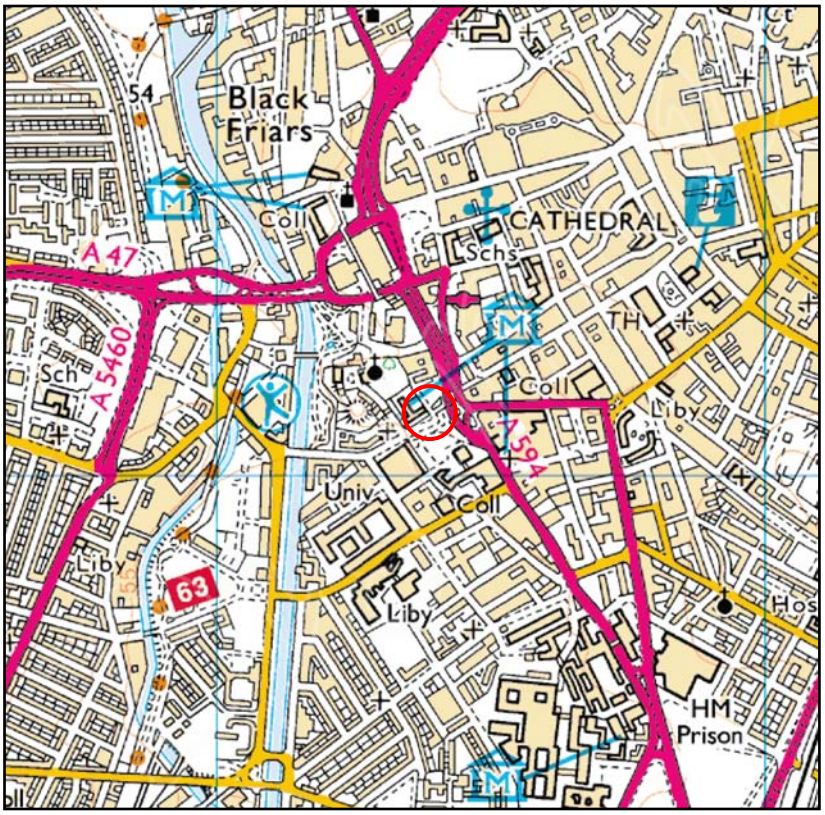

Figure 1: Site Location. Scale 1: 50 000
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Aims and Methods

The archaeological excavation at Bosworth House followed a written scheme of investigation (*Written Scheme of Investigation for archaeological excavation of proposed basement area, Bosworth House, Leicester, Leicester (SK 424 023)),*

intended to provide partial mitigation for the impact of a proposed extension to the south side of the building in order to provide lift access. The programme of work initially comprised monitoring of pile installation work followed by full excavation and sampling of archaeological deposits to be affected by the development. The principal aim of the excavation, within the stated project objectives, was to establish the nature, extent, date, depth, significance and state of preservation of archaeological deposits on the site. All work was undertaken in accordance with the Institute for Archaeologists' (IfA) Code of Conduct and adhering to their *Standards and Guidance for Archaeological Field Evaluation*.

The preliminary, pre-excavation archaeological watching brief stage initially involved monitoring of groundworking activity, undertaken between 24th June and 25th June 2010. The programme involved machine removal of modern overburden and 18th and 19th century cellar walls prior to the establishment of a road stone piling rig mat over an approximate 12m x 12m area (Figure 2). Proceeding from this, an intermittent watching brief between the 30th June 6th and July 2010 monitored the installation of a contiguous piled foundation wall. The process was recorded via photographs and description in order that it could be related to the subsequent excavation, analysis and sampling. Archaeological monitoring of these works was also deemed necessary in order to avoid unnecessary damage to buried archaeological remains should any obstructions be present which may have impeded the piling operation (Figure 3 & Figure 4).

Figure 2: Machine clearance of modern overburden

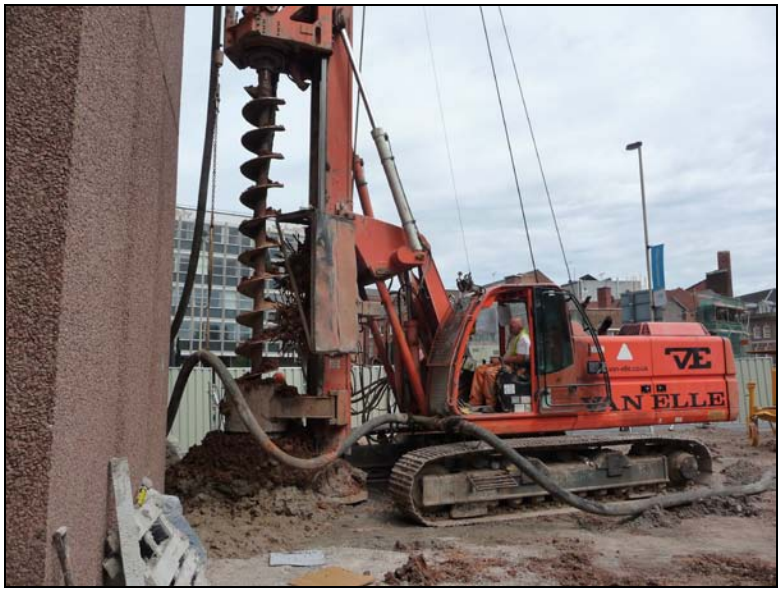

Figure 3: Piling work in progress

Figure 4: The completed piled foundation box showing pile caps

Following completion of the rectangular 10m x 8m pile wall defining the excavation trench, the piling mat material and modern overburden was removed using a 360° mechanical excavator under archaeological supervision to the top of archaeological levels. Three baulks of undisturbed overburden adjacent to the west, south and east pile walls were left temporarily in position to enable sections to be photographed, recorded and sampled for chemical testing (Figure 6 & Figure 7). Due to the instability of the strata, baulks were to be restricted to a maximum 1m height and removed following recording/sampling.

On completion of machine excavation, modern features including pipe trenches and cellar fills were hand-removed prior to cleaning and initial planning of the top of archaeological deposits at 1:20 scale. Subsequent hand excavation of the full stratigraphic archaeological sequence was undertaken in tandem with the single

context recording technique in order to establish the stratigraphic and chronological sequence. The relatively confined nature (*c.*7m x 10m in area) and depth (up to 3m) of the excavation trench presented unusual challenges in terms of accessibility, necessitating ladder access for staff and provision of a hoist and skips for the removal of spoil (Figure 5).

Figure 5: Machine hoist in operation with skip to rear

Figure 6: Soil sampling for chemical analysis

Figure 7: Chemical testing sample baulk (B)

Archaeological and Historical Background

The desk-based assessment (Meek 2001) indicated that the site lies within the walls of Roman and medieval Leicester, and partly inside the Scheduled Ancient Monument of Leicester Castle.

An Iron Age ditch found in the Newarke Houses Garden excavation in 1939 (Clarke 1952) is the only feature of pre-Roman date within the vicinity of the assessment area (HER Ref. LC393). Excavations at Mill Lane (Finn 2002) produced numerous sherds of Iron Age pottery, although these were in residual (later Roman) contexts. The Elfed Thomas site (Cooper 1996) produced a single Celtic coin, (LC872). A few sherds of Iron Age pottery were recovered from the northern part of the open plaza between the site of the former James Went Building and the Hawthorn Building during a watching brief of water mains renewal in the area (Warren 2000, sections 28 and 38).

Excavations just to the east in 1967 (Buckley and Lucas 1987, 11-16; Site 1, A1100.1967) revealed late 1st-early 2nd century activity, including the remains of a masonry structure thought to be indicative of a fairly substantial building. Post-dating these levels was a fragment of rampart relating to the towns earthen defences (LC54) constructed in the late 2nd century.

A massive stone wall, measuring over 3m wide with surviving superstructure, was also discovered and almost certainly represents the town wall, probably added to the front of the rampart in the 3rd century. It was postulated that the proposed development area could clip the tail of the 2nd century rampart and also produce evidence for domestic and commercial occupation of the Roman period.

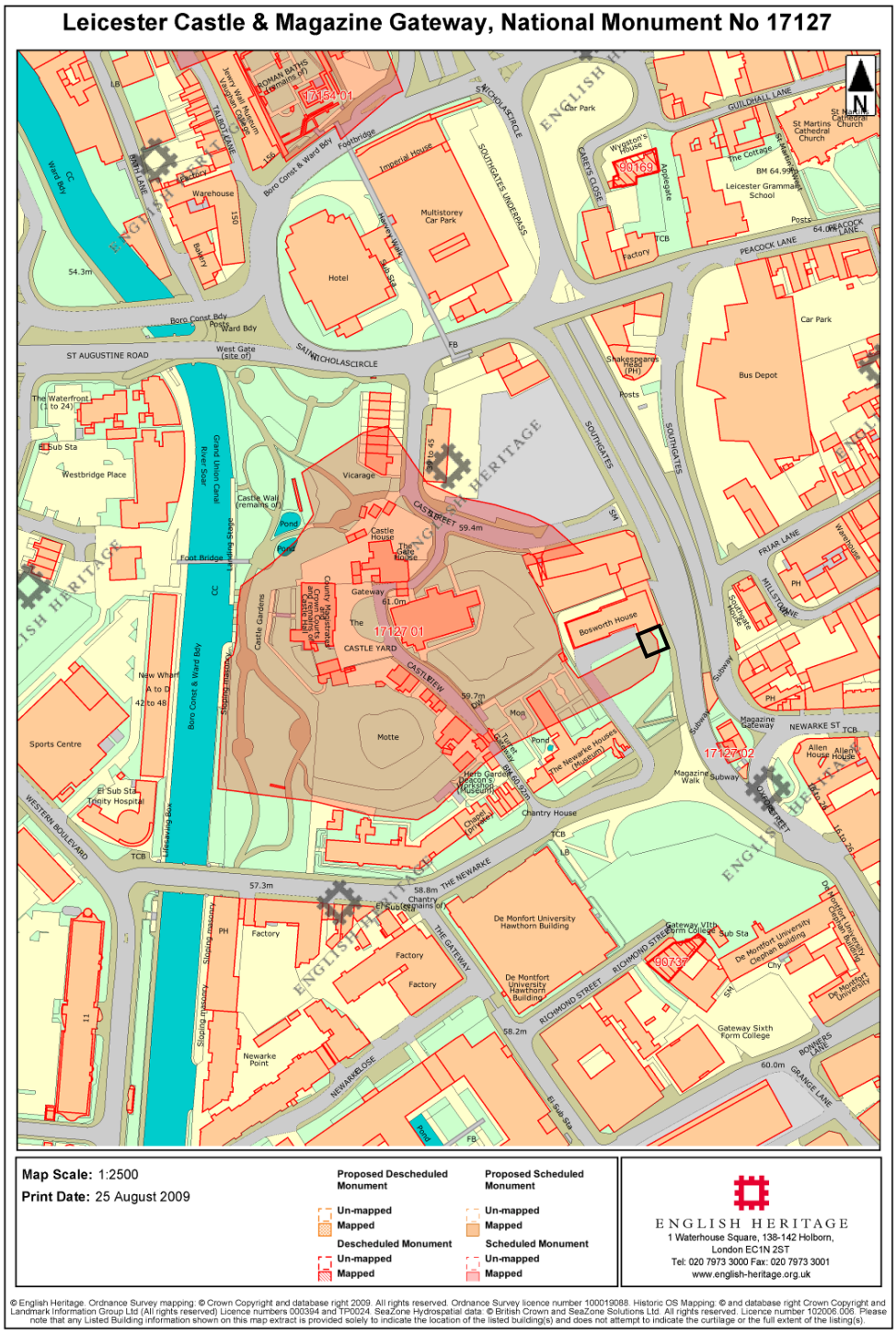

Figure 8: Leicester Castle and Magazine Gateway, National Monument 17127 showing approximate location of proposed development area (not to scale). © English Heritage

The projected line of the former bailey ditch of Leicester Castle (Figure 9), believed to have been constructed initially in *c.*1068, had been traced by archaeological excavation to the west on the former Newarke Houses Car Park site (Buckley and Lucas 1987, 45; A263.1972); Figure 9). Sandstone possibly relating to the demolition of the former curtain wall that stood on the inside of this ditch was revealed within the bailey ditch fill on the site excavated within the Newarke Houses Gardens, to the west

of the development area (Clarke 1952) and elsewhere on the circuit. It is possible that nationally important archaeological remains relating to the former castle and its destruction following the 1173 sack of Leicester exist in this part of the assessment area.

The excavations in 1972 also revealed traces of the town's southern defences (Buckley and Lucas 1987, 45). The Roman town wall had been robbed, possibly before the castle bailey ditch was cut, indicating an early demise for the town defences in this area. The site also produced evidence for a series of medieval burgage plots, presumably relating to properties fronting on to Southgates. Hence the proposed development area offers the potential to impact upon the town defences and domestic activity of the medieval period.

Figure 9: The partially excavated castle bailey ditch as revealed in the 1972 excavation. View north.

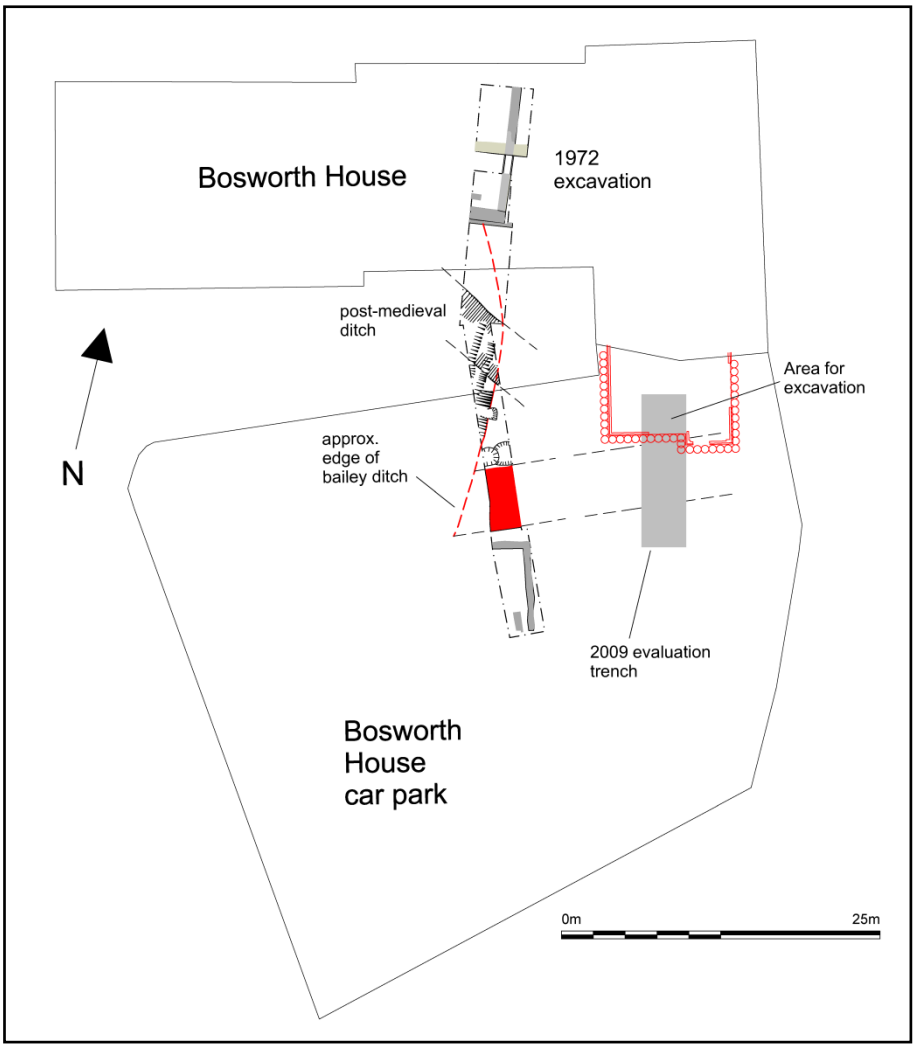

Figure 10: General location plan of 1972 Newarke Houses car park and 2009 Bosworth House excavations

Archaeological Evaluation

As a preliminary to the excavation, a trial trench measuring 3.5m x 12m at present ground level, and 1.6m x 8m at base (top of archaeological levels) was examined by ULAS in December 2009 in order to evaluate the nature, extent, date and significance of any archaeological deposits which might be present. (Kipling 2010) This work was required by the Planning Authority and English Heritage in order that an assessment could be made of the impact of the proposals on buried archaeological remains which might potentially be of national importance, relating to the Scheduled Monument of Leicester Castle.

Machine removal of the present-day tarmac car park surface revealed a 1.80m-2.00m accumulation of garden soils and bands of brick demolition rubble deposits and service pipes and cabling associated with the demolition of 19th-century buildings which occupied the site until its clearance in the 1960s. Beneath this, there was evidence for *c*. 0.8-1.0m of well-preserved archaeological deposits of Roman and

medieval date, the former potentially relating to the rampart of the late 2nd-century town defences.

A re-examination of archaeological interventions previously undertaken in the locality of the Bosworth House evaluation taken in combination with results from the latter strongly suggest that these pertain to the southern defensive sequence of the Roman and/or medieval town. Certainly, previous observations of the town wall indicate the projected line as running directly across the Bosworth House trench. Consequently, the undisturbed early Roman stratigraphic sequence identified overlying natural clay and containing quantities of 1st century AD pottery may represent the early Roman earthen defensive rampart known to pre-date the 3rd-century masonry wall. In the medieval period, the Roman defensive circuit was maintained but there is little archaeological information relating to the short stretch of town wall, rampart and ditches between the south gate and bailey ditch of the castle. Clearly the junction of the town wall and castle bailey ditch would be unsatisfactory in defensive terms and an early demise for the former has been suggested in this area (Buckley and Lucas 1987, 45), coinciding perhaps with the construction of the first castle in *c*.1068. In the evaluation trench, it is possible that the medieval archaeological deposits banked against the southern edge of the putative Roman rampart represent a backfilled robber trench targeting the medieval town wall. Excavations conducted in 1967 on Southgates, immediately to the east of the present excavation revealed a substantial wall superstructure, possibly representing the town wall (Buckley & Lucas 1987: 12). Consequently the De Montfort development was deemed to have the potential to provide invaluable information regarding the relationship of castle and town defences.

Results

The Watching Brief

The watching brief initially involved the monitoring of exploratory machine investigation of foundation piles at the southwest corner of Bosworth House, construction of which appeared to have removed all archaeological deposits in the immediate vicinity. Natural dull orange silty clays were observed at a depth of *c.*2.85m below present car park level. Removal of a cellar wall running south from Bosworth House and likely associated with a 18th or 19th century building fronting Southgates to the east indicated good archaeological survival, with a 1m+ depth of probable Roman stratigraphy sealed by modern dump material (Figure 11: Roman stratigraphy observed during machine removal of cellar walls; view south. Further fragmentary traces of modern buildings were encountered during preparatory machining prior to the establishment of the piling mat in the area south of the present building and fronting Vaughan Way (Figure 2). The formation level (0.8m) was, however, of insufficient depth archaeological for stratigraphy to be encountered.

Figure 11: Roman stratigraphy observed during machine removal of cellar walls; view south

The second stage of the watching brief served to monitor the contiguous piling operation, wherein 30cm diameter pile shafts were drilled to a *c.*13m depth prior to the insertion of concrete and steel reinforcement. No archaeological 'obstructions' were encountered during this process. Material brought to the surface during the drilling operation consisted of likely modern brick rubble and garden soils with, below, natural clays and Mercia Mudstone. No archaeological material was encountered, although this likely stemmed from difficulties in terms of identifying soil changes and the depths at which these were occurring from the resultant spoil.

The drilling of two piles in the northeast corner of the pile box did, however, produce several fragments of Roman ceramic building material (roof tile).

The Excavation

The programme of contiguous foundation piling for the Bosworth House extension resulted in an approximately rectangular reinforced concrete box measuring *c.*10m x 8m and serving to define the excavation trench. Between 26th and 29th July 2010 the piling mat material and modern overburden, comprising *c.*0.8m of road stone piling mat material and a further *c.*1m of modern brick cellar floors and dumps layers, was removed under constant archaeological supervision using a 360° mechanical excavator to the top of archaeological levels. Cleaning of the trench following removal of a Victorian pipe trench and cellar wall revealed the top of a well-preserved 1m+ deep sequence of archaeological stratigraphy (Figure 12 & Figure 13), excavation of which proceeded following detailed preliminary recording.

Figure 12: The top of archaeological stratigraphy following initial cleaning and removal of modern features; view northeast

Figure 13: Top of archaeological stratigraphy following initial cleaning and removal of 19th century features; view southwest

The Roman Period

Phase 1: Early Roman Sub- & Topsoil (mid- to later1st century AD)
[151, 152, 154, 155, 158, 208]

(Figure 14, Figure 15, Figure 16 & Figure 17)

The earliest deposits identified ([151, 152, 154, 155, 158] consisted of fine mid grey clay silts likely representing the early Roman topsoil; greenish tinges suggested organic staining. [151] produced later 1st century AD samian and amphora fragments and two late prehistoric flint flakes, whilst [152, 154 & 155] contained samian dating to *c.*AD 50-70, with a vessel join with a sherd from [197] of Phase 2, and mid- to late 1st century, possibly Claudian, pottery. Grey ware sherds included a Gallo-Belgic Terra Nigra style-cup comparable to a vessel found at Vine Street in Leicester suggesting a date towards the last quarter of the 1st century.

Environmental evidence included a spelt glume, a wheat grain, seeds of brome grass and sedge from [151], and cereal grain and seeds fragments and ash and charcoal flecks from [153]. The latter may represent either the base of a cultivated soil or rubbish dump material (A. Monckton pers. comm.).

The underlying possible subsoil material [208] consisted of a 0.10m-thick pale yellowish-brown stiff, slightly plastic clay/sand mix accumulation extending over the entire excavation area. Irregular linear patching suggested ancient root action. The deposit produced no finds.

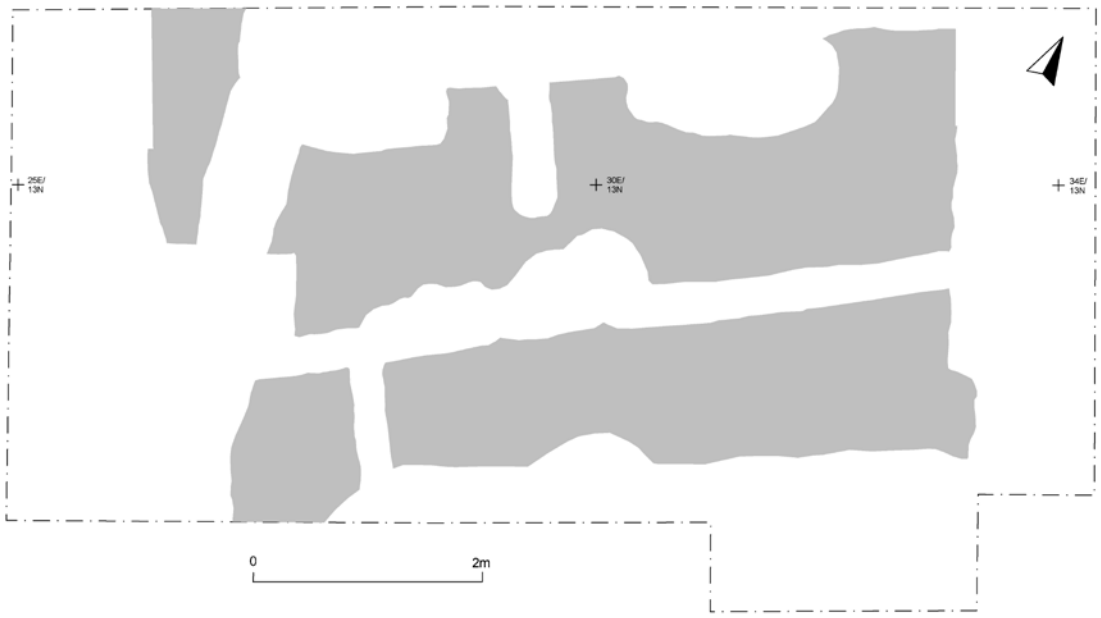

Figure 14: Phase 1 (early Roman subsoil)

Figure 15: Early Roman subsoil exposed: view east

Figure 16: Early Roman subsoil: view southwest

Figure 17: Early Roman subsoil exposed: view southeast

Phase 2: Early Roman (mid-1st to later 1st century AD)
(Figure 18, Figure 19, Figure 20)

Ditch/gully 196 [197]
Stake holes 210, 211, 212, 213

The principal feature of Phase 2 consisted of a single truncated linear gully or truncated ditch 196 [197] situated towards the western end of the excavation on an approximate northwest-southeast alignment and bisected by modern cellaring, The 3.90m+ long feature measured *c.*0.40m-0.70m wide and *c.*0.35m-0.45m deep with 45° sloping sides to a concave base. The single fill [197], a mid-brown silty clay, contained pottery sherds from two Claudian or Neronian samian vessels dating to AD 50-70. The presence of a sherd from the same samian bowl as was recovered from [152] of Phase 1 in addition to comparable pottery suggests that the ditch contents derived from the early Roman subsoils.

A small group of stake holes (210, 211, 212 & 213) flanked the eastern side of the linear feature.

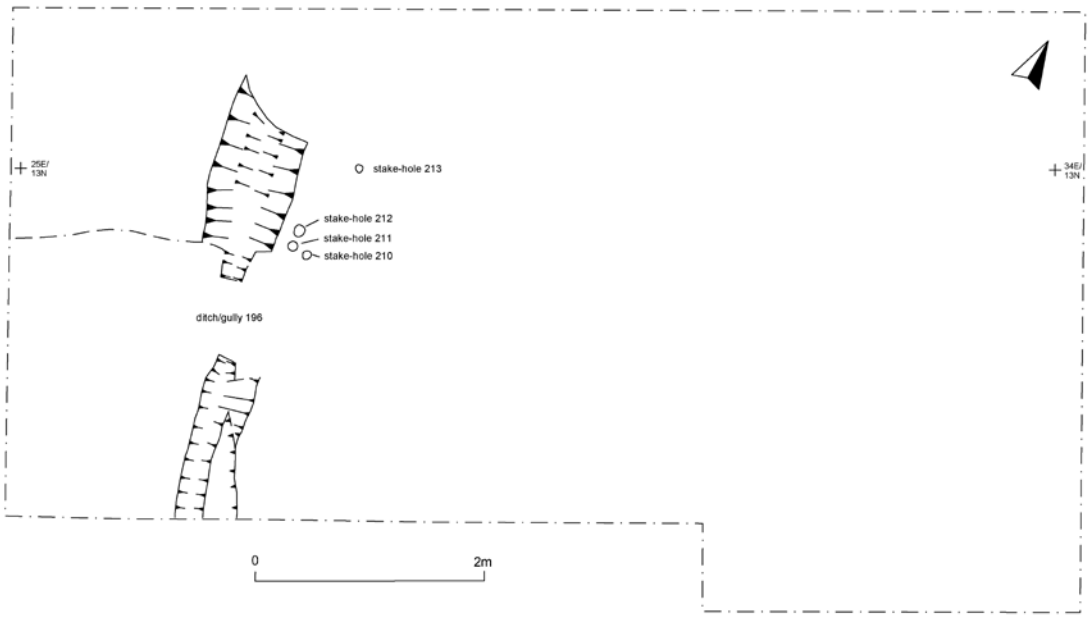

Figure 18: Phase 2 features

Figure 19: Linear feature 196 during excavation

Figure 20: Ditch/gully 196 after excavation, running top to bottom, traversed by timber phase features. View north

Phase 3: Primary Timber Building Phase (later 1st/early 2nd century AD)
(Figure 21, Figure 22, Figure 23 & Figure 24)

Subphase 3.1
Pit/Posthole complex194 [195]
Beam slot 220 [221]
Post holes 214 [215] & 216 [217]

Subphase 3.1 comprised features likely pertaining to the earliest, likely timber, building phase, and was dominated by an oval feature or, possibly, intercutting group of small scoops and/or postholes 194 [195] measuring 2.5m long, 0.8m+ wide and 0.3m deep with 45° sides and irregular bases. The single beige silty sandy clay fill [195] produced later 1st into 2nd century grey ware pottery as well as an opaque black glass counter (SF011) dating to *c.*AD 250-300. Feature 194 was cut by Phase 3.2 beam slots.

A small group of features situated alongside the western trench edge consisted of a short length of probable beam slot and two post holes (Figure 24). The former, 220

[221], measured 0.8m+ long, 0.4m wide and 0.2m deep with near-vertical sides and a flat base and was on a northwest-southeast alignment. The dark grey silty clay fill (220) contained later 1st/early 2nd century pottery dating to between AD 90 and AD 120 and which included a rare (in Leicester) lead-glazed sherd. The accompanying post holes 214 & 216, measuring 0.35m and 0.15m in diameter respectively, did not produce any finds.

Feature 194 is problematic in terms of its precise dating. It was clearly cut by and so pre-dated the beam slots of the major timber phase (3.3). However, the presence of a central post hole within this group which appeared, in alignment, to respect the beam slot of Phase 3.2 directly to the north, suggests that it may belong to the same structure. Dating is, however, insufficiently precise to be sure, as a result of which 194 has been allocated a separate subphase. The probable beam slot feature 220 differed noticeably, albeit slightly, in alignment to those of Phase 3.3 and hence is likely to form part of a separate structure.

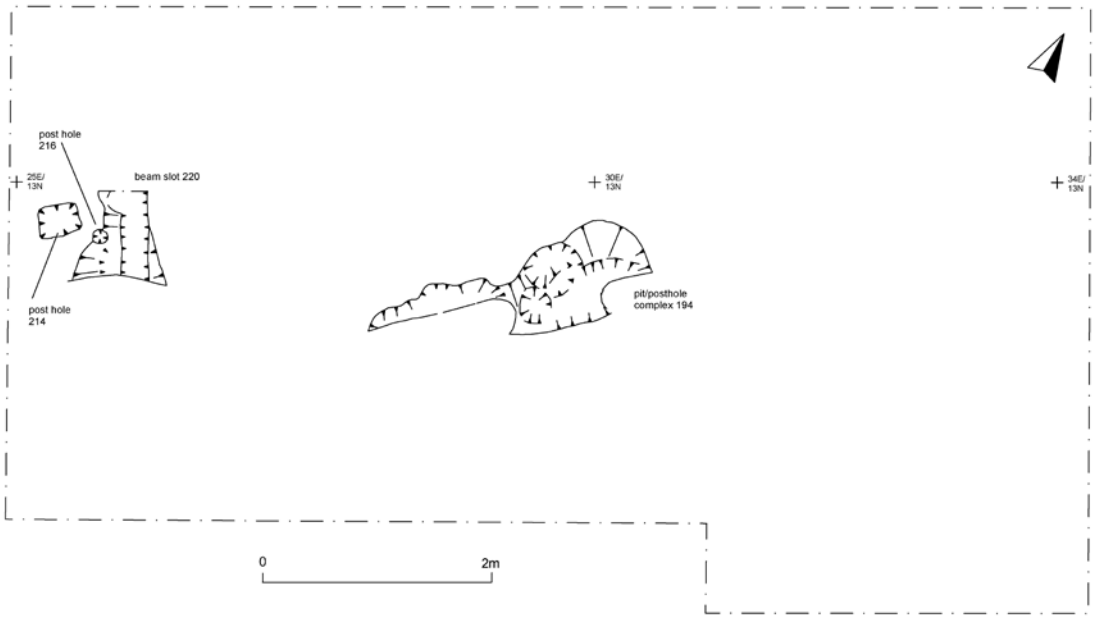

Figure 21: Phase 3.1

Figure 22: Posthole/pit complex 194; view north

Figure 23: Phase 3.1 & 3.2 features excavated; view northeast

Figure 24: Phase 3.1 beam slot & post holes; view south

Subphase 3.2

(Figure 22, Figure 23, Figure 25 & Figure 26)

Beam slot 198 [199]
Stake holes 186 [187], 188 [189]

Subphase 3.2 consisted of features cut by Subphase 3.3 features, dominated by a short linear feature 198 [199] measuring 1.2m in length, 0.35m wide and 0.15m deep with a rounded southern terminal end and aligned northwest-southeast. Its dimensions, vertical sides and flat base suggest a beam slot function. The feature was cut by Phases 3.3 and 7 features. A single Roman ceramic brick or roof tile placed at the terminal end may represent a post pad, whilst two stake holes (186 [187] and 188 [189] located within the beam slot may have formed additional structural elements. None of the pale yellow-grey sandy clay silt fills of these features produced pottery. In terms of size and form, this arrangement has a direct correlation with the Phase 4 structure(s) and hence may be contemporaneous.

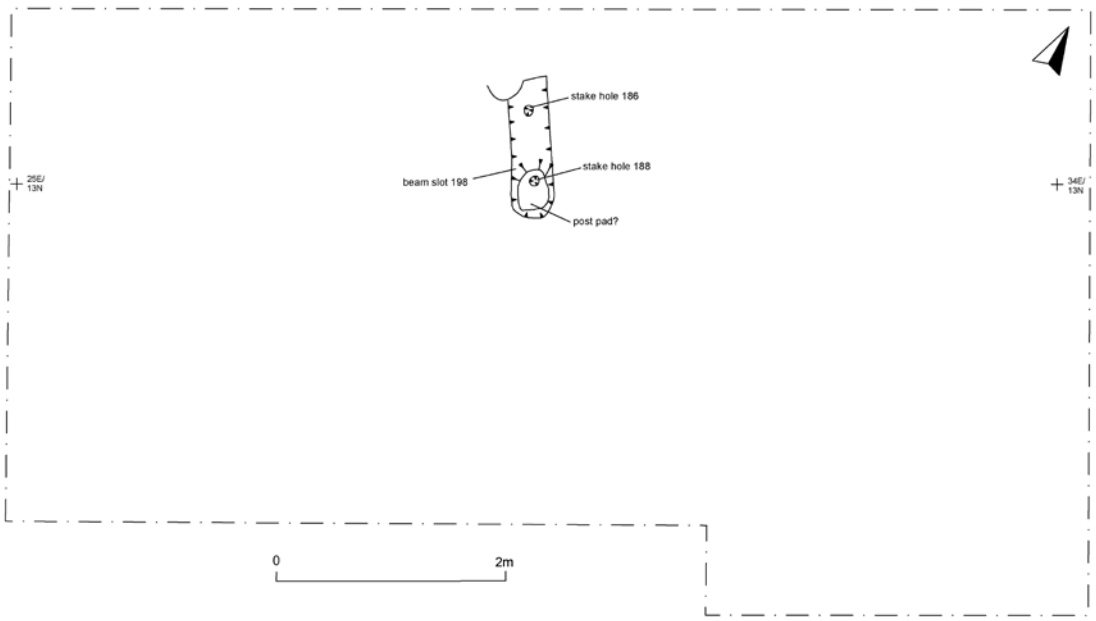

Figure 25: Phase 3.2 features

Figure 26: Excavation (of the Roman subsoils) in progress

Subphase 3.3: Post Structure

(Figure 27)

Postholes 201 [200], 202 [203], 204 [206], 219 [218]

Subphase 3.3 consisted of four small post holes measuring *c.*0.3m in diameter forming a T-shaped arrangement, the long axis of which (201, 202 and 219) was aligned approximately northeast-southwest, and the shorter arm, terminating in post hole 204, southeast. The overall dimensions of the area defined by the post holes measured *c.*6.5m+ north-south and 2m+ east-west. Post hole 202 cut beam slot 198 of Subphase 3.2, and post hole 219 was situated beneath wall 129 of Phase 7.

The absence of associated features and/or floor or occupation layers makes interpretation of this structure problematic, but it may represent either fence lines associated with the Phase 4 building(s) or a related structure. None of the post holes produced pottery.

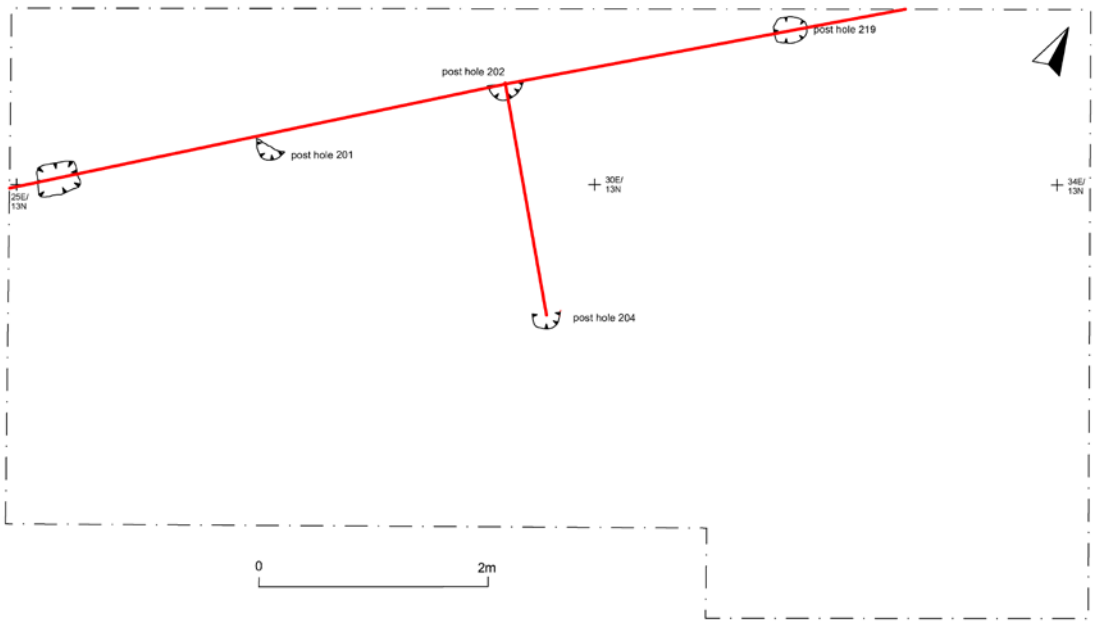

Figure 27: Phase 3.3 features

Phase 4: Principal Timber Building & External Yard & Hearths (Later 1st /early 2nd century AD)

(Figure 28-Figure 41)

Building
Beam slots 174 [153, 134], 175 [161], 180 [181]
Post holes 176 [177], 178 [179]
Stake holes 138 [139], 140, 141, 142, 143, 144, 145, 146, 170 [171]. 186 [187] & 188 [189]

Associated area
Hearths 125 [126], 182 [183/184], 185 [172]
Spreads [150, 193]
?External surfaces [132, 136, 137, 147, 149, 163, 192]

Occupation spreads [80], [117], [135]

Possible further structural elements
Post holes 164 [148], 166 [167], 223 [224] & 225 [226]
Gullies 124/130 [131], 159 [160], 206 [207]
?Drip gully 156 [157]
[165]

Possible occupation sequence beneath rampart, overlying subsoil [151]:
[214, 215, 216, 217]

Phase 4 represents a probable single timber structure of beam slot and post hole construction and an adjacent (possibly open) area of craft and/or industrial hearths.

The Building
The building consisted of a principal wall line formed of two successive beam slots (174 & 180) representing a minimum building length of 8.2m, although its true length could not be established due to later truncation to the east by the Phase 9 medieval ditch and to the west by the Phase 11 cellars. A 0.7m gap between the two features formed by their butt-ends may represent a doorway or opening. The beam slots were of comparable size and form, with a square profile and flattish bases, measuring *c.*0.3m wide by 0.3m deep and 3.1m and 3.8m in length respectively.

Beam slots (Figure 31Figure 35, Figure 38 & Figure 39)
A third beam slot (175) projected south at right angles from 180, forming a probable internal building division and indicating a minimum building width of 2.8m+ (externally), and 2.5m+ (internally). All three beam slots were filled with a common pale brown sandy clay silt fill [153, 134, 161 & 181]. Fill [153] of 174 contained late 1st century pottery, whilst beam slot 175 [161] produced a single sherd of samian ware pottery dating to *c.*AD 50-70.

Post holes & stake holes (Figure 36 & Figure 37)
The two north-south beam slots featured substantial post holes positioned within the slots' construction cuts. 176 in beam slot 174 [153] measured 0.4m in diameter and 0.3m deep and 178 [179] in beam slot 180 measured 0.4m in diameter and 0.35m deep. The post hole fills were indistinguishable from those of the beam slots. In addition, a series of stake holes (138 [139], 140, 141, 142, 143, 144, 145, 146, 170 [171]. 186 [187] & 188 [189]) were placed randomly along the length of the beam slots, with the great majority located within Feature 174, observed as voids extending to the base of the slot cuts and sealed by the possible rampart clay material of Phase 5.

Further possible structural elements
A number of probable associated (possibly structural) features were located adjacent to beam slot 174 on its south side, including a shallow possible drip gully 156 [157] measuring 2.3m x 0.3m and 0.15m deep. Its pale grey silty clay fill produced mid-first – early 2nd century grey ware and samian pottery from *c.*AD 50-70 and the later 1st century. A similarly shallow linear gully 124/130 ran parallel with 156, measuring 0.7m in length, 0.2m wide and 0.1m deep; its fill [131] produced late 1st or early 2nd century pottery. An adjacent gully 159 [160] measuring 2.1m x 0.2m x 0.1m was cut by a substantial oval post hole 166 [167] (0.4m 0.6 x 0.4m deep containing 1st century pottery (*c.*AD 50-70), as well as a short length of a possible

fourth linear feature with a butt end, 206 [207]. The latter produced pottery of *c.*AD 50-120. A single post hole 164 [148] (0.3m in diameter, 0.2m deep) flanked the western edge of beam slot 180, adjacent to post hole 178 in the possible external yard area. Two further post holes, 223 [224] & 225 [226], 0.4m and 0.3m in diameter and 0.2m deep, heavily truncated by modern cellaring, lay to the west. The former may, as with post hole 178, appears to have been located within beam slot 180.

The area flanking the western side of the timber structure was characterised by granite- and CBM-built hearths set in spreads of occupation and/or industrial deposits. Hearth 125 [126] (Figure 40) consisted of a single course of unbonded Roman ceramic bricks or tiles individually measuring 0.4m x 0.2m forming the edging to an originally approximately rectangular construction cut (125). Although the feature had suffered heavy disturbance, notably from the Phase 7 masonry building, the scorched ashy surviving clay appeared to have formed the hearth base. The feature, which produced no dateable finds, measured a minimum of 0.9m+ x 1m+.

A second hearth, 182 [183/184], was located 2m to the southwest of the first (Figure 41). The base of the approximately oval feature comprised a single course of tightly packed, roughly shaped unbonded granite blocks forming a flattish surface measuring 1.3m x 1m overall. The base was overlain by a pale grey silt [184] with a high ash and charcoal content (80% +) which produced a pre-AD 150 mortarium sherd. Surrounding ash- and charcoal-rich clay silt spreads [150 & 193] likely represent floor surfaces and waste deposits associated with the hearth. [150] produced pottery dating to the later 1st or early 2nd century, plus a glass melon bead fragment dating to the 1st or 2nd century AD (SF 010).

A third probable hearth base 185 [172] was located between 125 and 185, and as with the former consisting of a shallow rectangular cut containing dense dull red clay [172]. Two substantial stake holes 186 [187] and 188 [189] were positioned internally at the northwest and southeast corners of the construction cut and are likely to have formed part of the hearth or oven superstructure.

The hearths appear to have been associated with a sequence of possible mortar and gravel metalled floor surfaces and occupational and/or industrial debris likely linked to use of the hearths ([117, 147, 149, 150, 163, 192 & 193]. Of these, [150], a mid brown clay silt comprising an alternating sequence of silt and charcoal/ash lenses was the most extensive and substantial, with the remainder comprising either patchy gravel metalled surfaces [147, 163, 192] or further possible floors and/or occupation debris [117, 149, 193]. [117] produced several sherds of a blue-green glass bowl (SF009) dating to between *c.*AD 43 to the end of the 1st century AD. [149] produced later 1st to early 2nd century pottery, including a sherd with a vessel join to [135] (see below).

Fragmentary traces of metallings [132 & 136] and occupation spreads [80, 135 & 137] were also encountered in the area between the beam slots and the 19th century pipe trench to the east. Pottery from [135] dated to the later 1st or early 2nd century, including a vessel join with [149], whilst [136 & 137] both contained later 1st century or later amphorae.

Possible occupation sequence beneath rampart, overlying subsoil [151]:

A 0.5m thick sequence of probable floor surfaces and occupation spreads [214, 215, 216 & 217] was identified in the northeast corner of the excavation against the trench edge, overlying the early Roman subsoil [151] and sealed by the Phase 5 rampart. Time and logistics dictated that the sequence could only be recorded in section, but it appeared to comprise 5cm-15cm thick possible clay silt floor layers (214, 216, 217) and at least one sandy clay silt occupation deposit (215). Although the sequence produced no dating evidence, these contexts were evidently stratigraphically Roman.

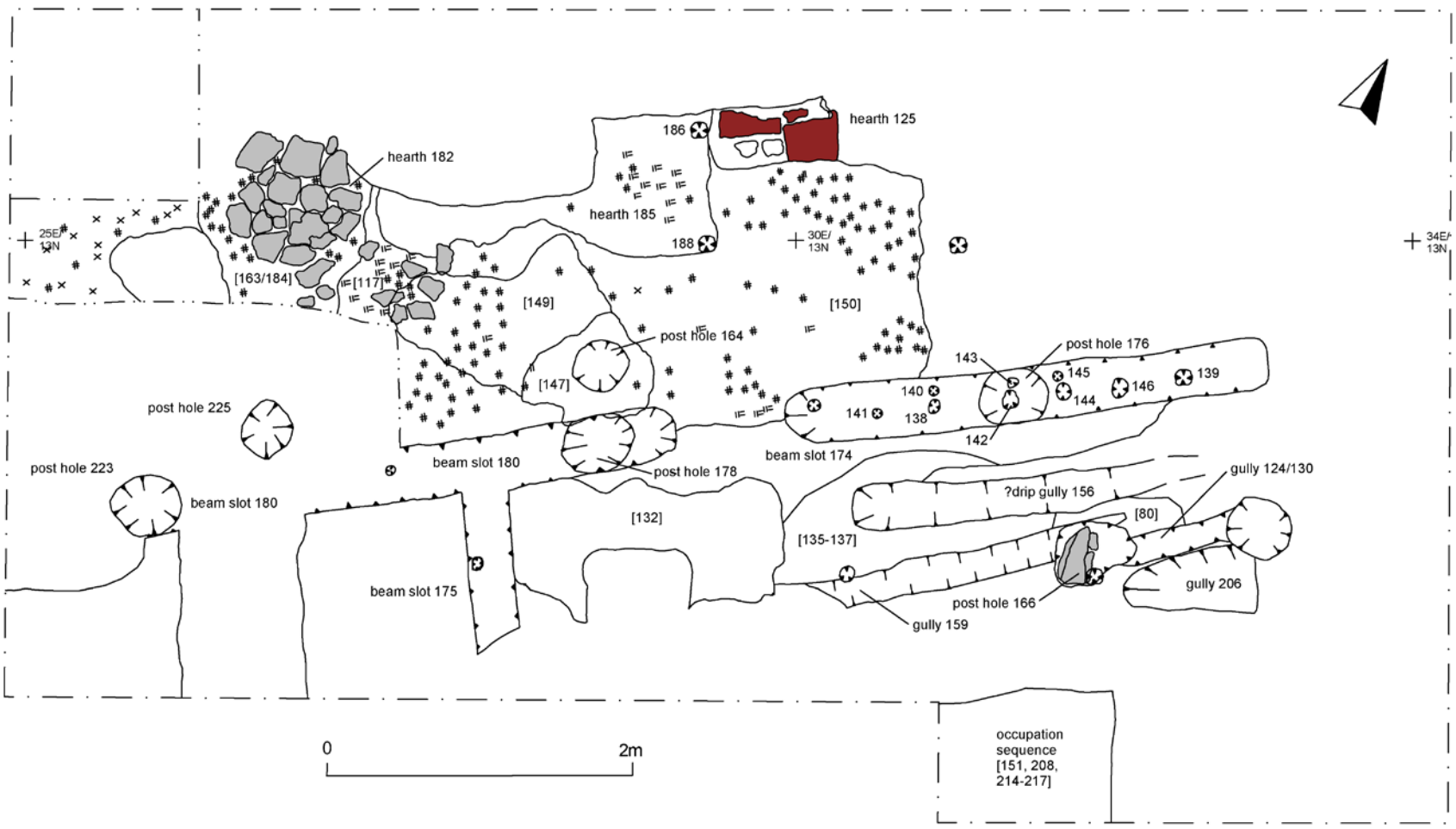

Figure 28: Phase Four features

Figure 29: View east across timber building prior to excavation of beam slots and post holes

Figure 30: View east across timber building following excavation of structural elements

Figure 31: Eastern section of beam slot 174 showing stake holes; view north

Figure 32: Timber building following excavation of stake holes; view southwest

Figure 33: Beam slots 174 & 190 & post holes 176 & 178 excavated; view southwest

Figure 34: Beam slot 174 & 190 pre-excavation and associated hearths & other features; view east

Figure 35: Beam slots 174 & 190 excavated; view southwest

Figure 36: Posthole 178 situated at eastern terminal of beam slot 180

Figure 37: Posthole 176 and beam slot 174

Figure 38: Timber phase features excavated; view east

Figure 39: Timber phase features excavated; view southeast

Figure 40: Hearth 125 cut by wall 129 (left of picture)

Figure 41: Hearth 182

Phase 5: Earthen Town Defences (c.AD 180)

(Figure 42-Figure 45)

?Rampart material [65 & 118]
?Rampart structural element 67=222
Hearth 127 [128]
Post hole 123 [120]

Phase 5 comprises the likely demolition and clearance of the Phase 2-4 timber building(s) in order to make way for construction of the earliest Roman town defences of an earth rampart and external ditch in *c.*AD 180. A single small hearth and post hole positioned at the probable tail (rear) of the rampart also appear to date to this period.

The defensive rampart appears to have been characterised by a substantial, exceptionally dense wedge-shaped dump or deposit of dull red clay with Mercia Mudstone inclusions [65] measuring 1.9m+ wide, 0.9m deep and 0.85m+ thick identified in the northeast corner of the excavation trench. Although heavily truncated by a 19th pipe trench, it was clearly characterised by a distinct fall in its thickness and slope towards the northwest. The clay produced pottery dating to *c.*AD 120-160. Excavation demonstrated that the clay formed the fill of a 1.1m deep cut feature (222) (Figure 44) cutting a sequence of probable Roman stratigraphy. If the clay does represent rampart material, this feature may represent an attempt to stabilise the rampart clay and to maintain its stability.

A secondary, identical clay deposit [118] was observed a short distance to the west beyond the pipe trench as a 0.1m thick strip measuring 2.9m east-west and 0.8m north-south on the same northwest to southeast alignment as the timber building(s) (Figure 43). Excavation of the clay indicated that it both sealed and respected the precise line of beam slot 174, with its removal revealing the stake hole line as empty voids. The identification of a single straight break in the clay suggestive of the join between individual turves supports the view that this clay represents rampart material. Although physically separate from clay [65] due to truncation and later disturbance, the close similarity between the two suggests that these both represent rampart material and [118] forms the tail of the bank.

A single oval post hole measuring 0.6m x 0.45m x 0.38m deep (123 [120]) was located between the two clay dumps. Its grey silty sand fill produced probable packing stones and late 1st or early 2nd century pottery.

A single undated hearth (127 [128]) consisting of Roman CBM and granite fragments forming a rectangular base measuring 0.75m x 0.4m appeared to have been inserted at the rear or in the tail of the rampart (Figure 45).

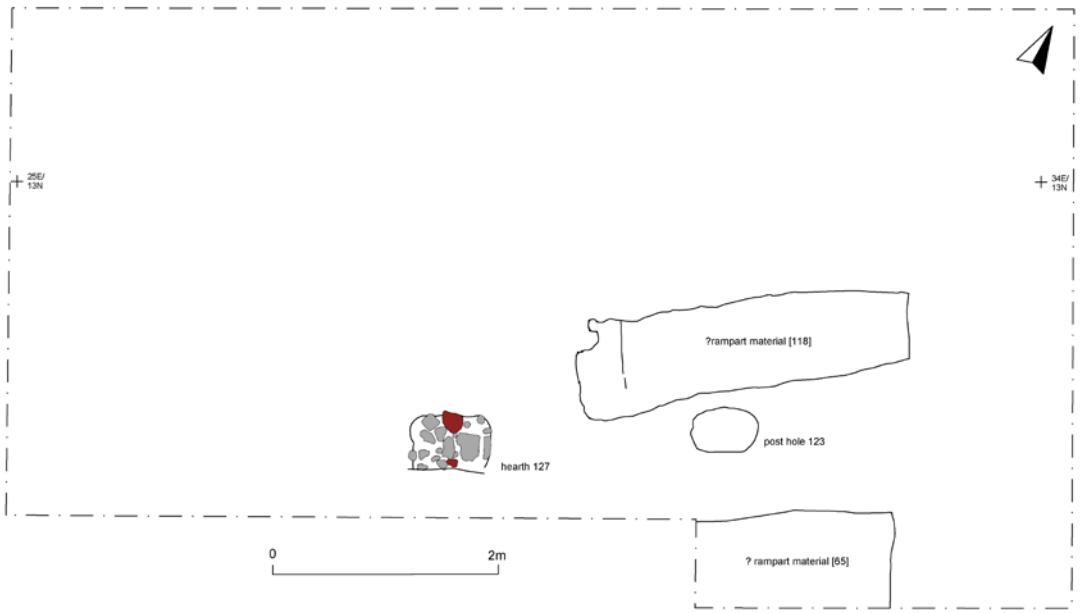

Figure 42: Phase 5 features

Figure 43: Possible rampart material [65/118] with hearth 125 & wall 129 beyond; view northwest

Figure 44: possible rampart material [65] and possible keying-in feature cutting earlier Roman stratigraphy

Figure 45: Hearth 127

Phase 6: Levelling/Makeup Episode

Dumps [94/82, 113]
Yard(s)[54/56 & 112]
Occupation spreads [55/87]
?Mortar floor remnant [108]
Feature 101 [88, 89]
Pit 173 [162]
Pit 168 [169]
?Pit 74 [73] cutting [94]

(Figure 46 & Figure 47)

Phase 6 was characterised by the deposition of large quantities of material across the area to the rear of the town defences in a probable ground levelling operation prior to the setting out of an external yard area and/or construction of the Phase 7 masonry building.

Dump layers extended across much of the excavation trench, dominated by [94/82], largely sterile 0.4m pale brown clay silt with dull reddish brown clay and coarse sand inclusions and thick mid-red mixed clay containing charcoal, shell and CBM fragments. Pottery recovered included grey wares dating to the later 1st and into the 2nd centuries, with the latest vessel, a Black Burnished ware jar, dating to the 2nd century. The layer also produced a single Neolithic or Bronze Age flint scraper (SF006). [94] was cut by a small oval feature, 74 [73] measuring 0.85m x 0.4m x 0.35m deep and with a single clay silt fill with CBM, mortar and charcoal content,

possibly representing a localised levelling repair prior to the setting down of the metalled surface. The feature produced later 1st-early 2nd century pottery.

[94/82] was overlain by patchy, discontinuous gravel metalled surfaces, [54/56 & 112], likely representing a crude external yard surface, over which a probable combination of occupation and/or further makeup material had been dumped/accumulated. [56] contained a later 1st/ 2nd century shelly ware jar.

A small patch (0.25m x 0.2m x 5mm thick) of compacted off-white lime mortar cutting metalling [94] provided the only possible evidence for an internal floor surface [108], but heavy truncation and an absence of associated structural features prevented further interpretation. This may, alternatively, have been a surface repair, as is possible for 101 [88, 89], a small linear feature, or else a heavily truncated, shallow gully.

[55/87] consisted of a mid-brown silty clay with charcoal and mortar inclusions and with a greenish tinge likely denoting organic content, whilst the more extensive [113], a grey sandy clay silt and further organic content, was situated adjacent to the Phase 9 medieval ditch. Pottery from the latter consisted of grey ware type pottery and an amphora sherd dating from the mid-1st to early 2nd century.

Although they produced no datable finds, two small Roman pits are stratigraphically likely to date from this phase. Pit 173 [162] occupied the southeast corner of the trench and was subsequently cut by the Phase 8 gully 106. The feature had been backfilled with compact, dull red clay with gravel and Mercia Mudstone [162] comparable to the Phase 5 possible rampart material. Pit 168 [169], an oval feature measuring 0.85m x 0.3m with a pale grey-brown clay silt fill [169] lay on the southern side of the excavation and was cut by the north-south Victorian pipe trench.

Feature 101 was an olive green sandy silt-filled shallow linear feature 1.6m x 0.2m x 0.15m deep of unknown function, but may represent a wheel rut in the gravel metalled surface [94] or, alternatively, a heavily eroded beam slot or drip gully. 74 [73] (0.85m x 0.4m 0.35m deep) may represent a repair to the aforementioned metalling.

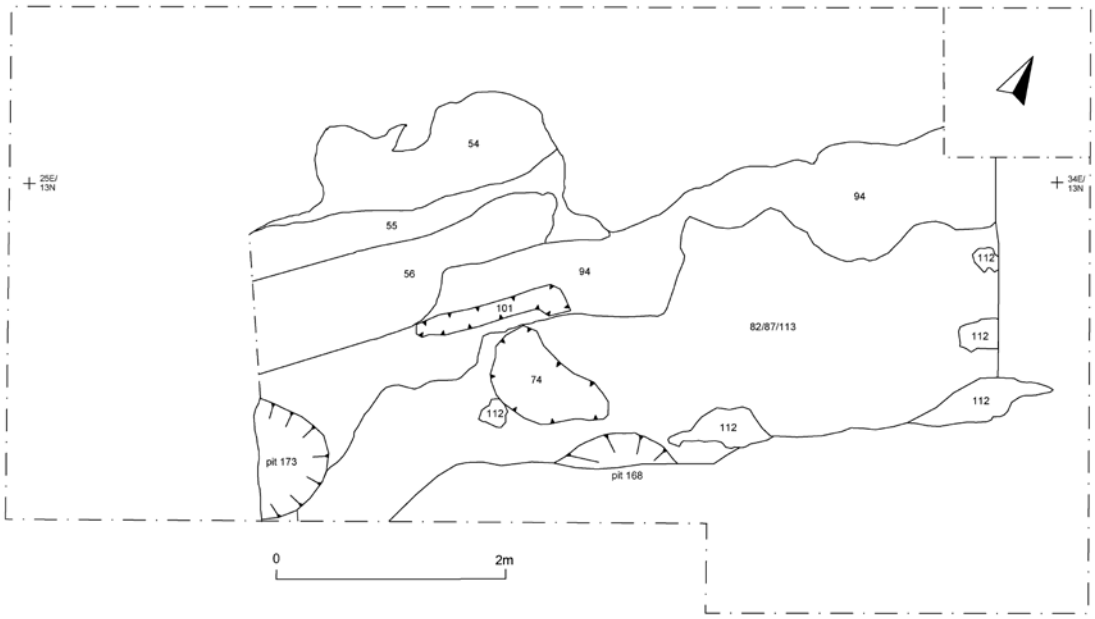

Figure 46: Phase 6 features

Figure 47: Later Roman dumps/make-up layers prior to excavation of intrusive medieval features; view northeast

Phase 7: Masonry Building (Later Roman)
(Figure 48, Figure 49)

Wall 129 [110]

Phase 7 consisted of a single substantial granite-built wall likely representing a masonry building positioned at the rear of the earthen defensive rampart. The wall cut Phase 4 hearths and was itself badly disturbed by the cess or rubbish pits of Phase 8. The wall comprised a single surviving course of roughly dressed angular granite blocks bonded with a pale yellow-brown sandy mortar. This overlay a 0.7m deep foundation of randomly placed substantial granite blocks set in a pebble and loam matrix. The structure measured 0.9m+ wide and 4m+ in length with a broad northeast-southwest alignment, with the hint of a right angled return at its southern end. Coupled with the absence of associated flooring, this would suggest that the structure lay to the west, beyond the trench limits, and hence that it was located to the rear (east of) the tail of the rampart.

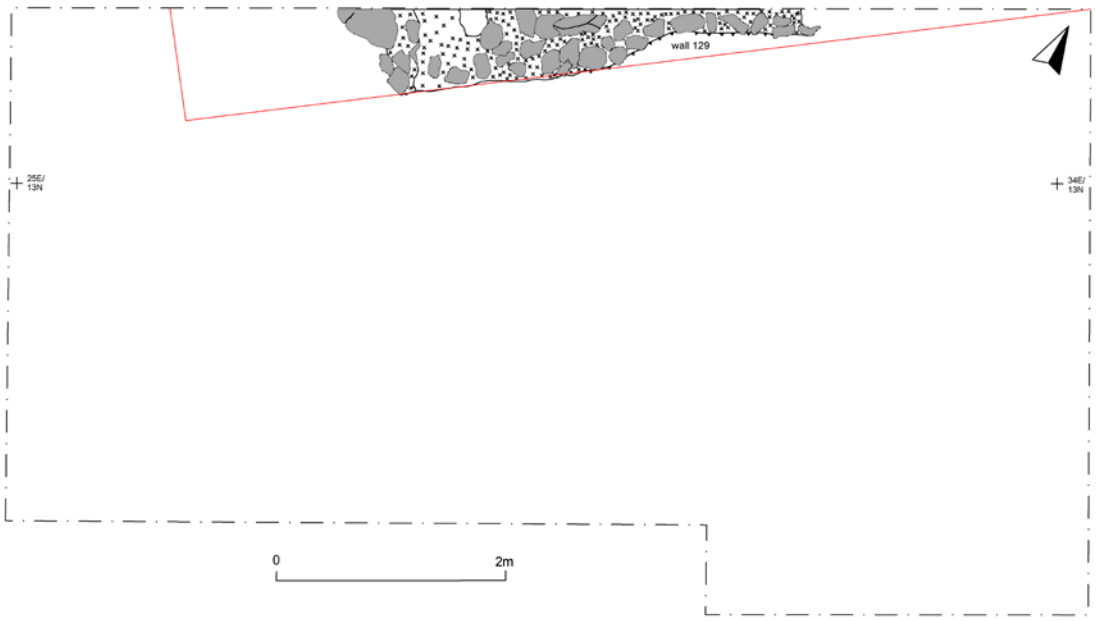

Figure 48: Phase 7 wall 129 with possible angled turn

Figure 49: Wall 129; view southwest

Unphased Roman features

(Figure 50)

Pit 86 [83, 84] (AD 150+)
Pit 103 [104], posthole 98 [97]
Pit 109 [111]; undated but cut by wall 129

Three small, truncated cess or rubbish pits located in the southwest trench corner but could not be securely phased due to their isolation from the main stratigraphic sequence and an absence of dating evidence. Hence these features are detailed separately from the main phase narrative.

Pit 86 (1.3m x 1m x 0.3m deep), cut by the Phase 9 pitting, produced pottery dating to AD 150 or later from its pale grey clay silt secondary fill [84]. Animal bone from the same feature included a sawn large mammal scapula, possibly indicative of craft activity (Browning, this volume). 86 cut pit 103 [104], *c.*2m in diameter and 0.4m deep; its single mid grey clay silt fill [104] produced no finds. 1m to the north, and also cut by the Phase 7 building and Phase 9 pitting, pit 111 (1.3m x 0.4m+ x 0.45m+ deep pit containing Roman CBM a mortar fragments in its brown sandy silt fill. No pottery was recovered from the pit.

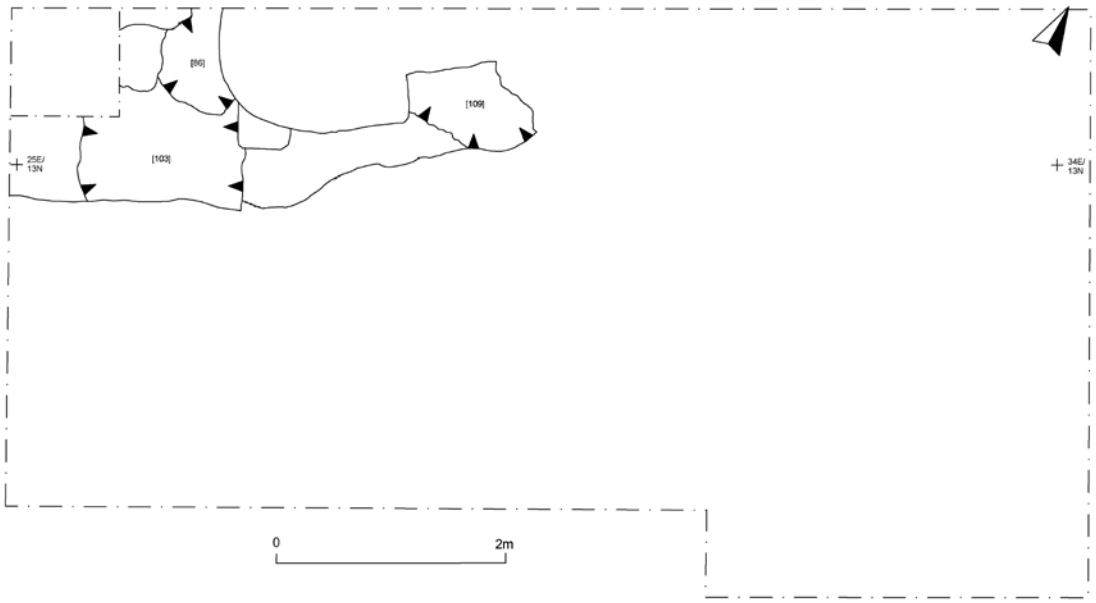

Figure 50: Unphased Roman features

Phase 8: Gully/Ditch (c.AD 900-1050)
(Figure 51, Figure 52)

Gully/small ditch 106 [105]

Phase 8 consisted solely of a short length of gully or small ditch situated in the southwest corner of the excavation. The linear feature, measuring 1.2m in length, 0.7m in width and *c.*0.25m deep, had an open U-shaped profile with 20°-30° sides and a flattish base. Although only a short length had survived due to cellar disturbance, it did appear to share the same northwest-southeast alignment as the Roman phase linear features. The absence of the feature north of the cellar cut may indicate an angled turn to the south. The single mid brown silty fill [105] contained two pottery sherds dating to the Saxo-Norman period, *c.*AD 900-1050+) and a residual Roman coin (SF004). Animal bone recovered from the ditch included cattle and pig as well as golden plover (Browning, this volume).

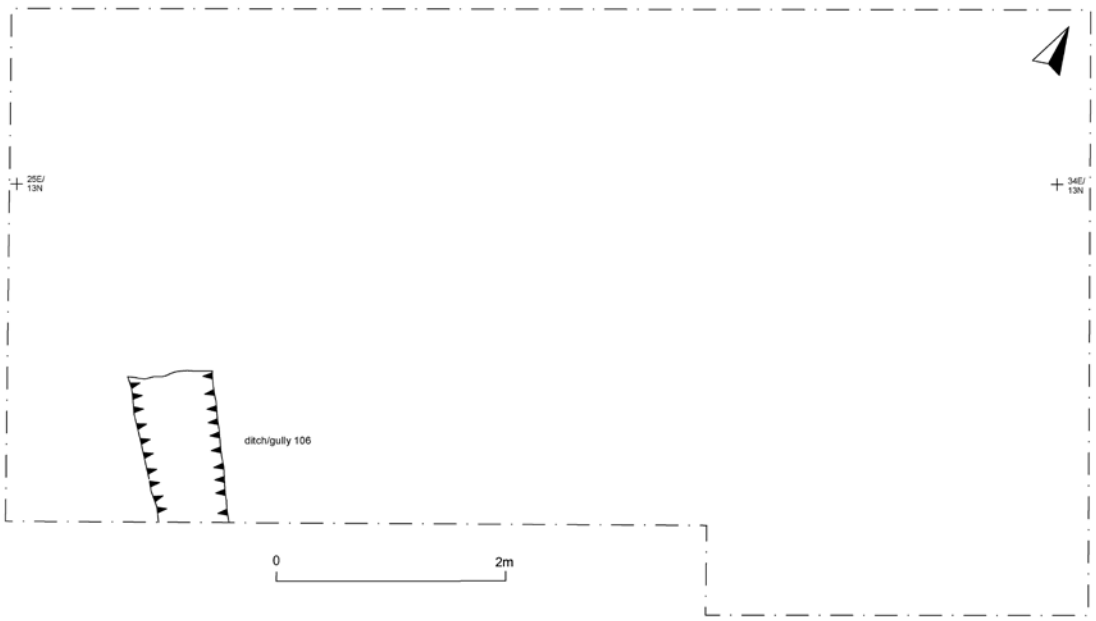

Figure 51: Phase 8 features

Figure 52: Saxo-Norman ditch/gully 106 excavated; view southeast

Phase 9: Ditch & Cess/Rubbish Pits (Earlier Medieval c.1100-1250)
(Figures 53-58)

Ditch 75 [63/66, 78, 79]
Pits 70 [51, 71], 81 [59], 90 [91], 190 [191]

Phase 9 comprised a sizeable ditch and several accompanying cess or rubbish pits. Ditch 75 [63/66, 78, 79] was located at the north end of the excavation trench, its 3.5m+ western edge running parallel with the trench edge on an approximate north/northwest – south/southeast alignment. Whilst its eastern side lay beyond the excavation limits, the partial profile exposed, including its base, indicated a sizeable ditch measuring 3m+ wide and 1.5m+ deep, with 35°-45° sides and a flattish base.

The three clay silt fills [63/66, 78, 79] contained quantities of patches of clay and probable Roman CBM and mortar fragments. The substantial character of the fills coupled with the absence of silty fills point to the feature having been open for a short period prior to deliberate backfilling with demolition and/or refuse material. Finds evidence supports this short lifespan, with a range of pottery types, including Stamford and Potters Marston wares, indicating a date for the feature of *c.*1100-*c.*1250.

Possible function(s) of this feature will be discussed later, but the proximity of the Roman and medieval town defences as well as the Norman castle is likely to be significant.

The ditch was flanked to the west by several pits, two of which (70 & 81) cut into the top and side of the fabric of the probable late Roman Phase 7 wall in a likely attempt to trace the wall and rob its masonry (Figure 58). The two pits measured 2.15m x 1.35m x 0.9m deep and 2.25m+ x 0.2m+ x 0.9m respectively. Both contained single fills similar in character to those of the ditch, namely containing CBM and granite rubble and with an apparent absence of cess. Both pits produced pottery dating to *c.*1100-1250, matching that forthcoming from the ditch.

Environmental analysis of one of the fills [71] of Pit 70 identified numerous fly puparia, established its function as a cess pit, and containing pollen and fruit stone evidence for consumption of a range of fruits including plum, cherry and possibly elder. The presence of opium poppy may indicate its use as a food flavour. The pit also produced evidence domestic waste from food preparation in the form of charred cereal remains, predominately oats, with bread wheat and barley as additional cereal types.

The two remaining smaller pits lay to the west, 90 & 190, measuring 1.2m x 0.75m x 0.5m and 0.6m x 0.6m x 0.3m respectively. Both had suffered disturbance from the Phase 11 cellars and both contained dark grey clay silt fills. Fill [91] of pit 90 produced pottery *c.*1100-1250 in date.

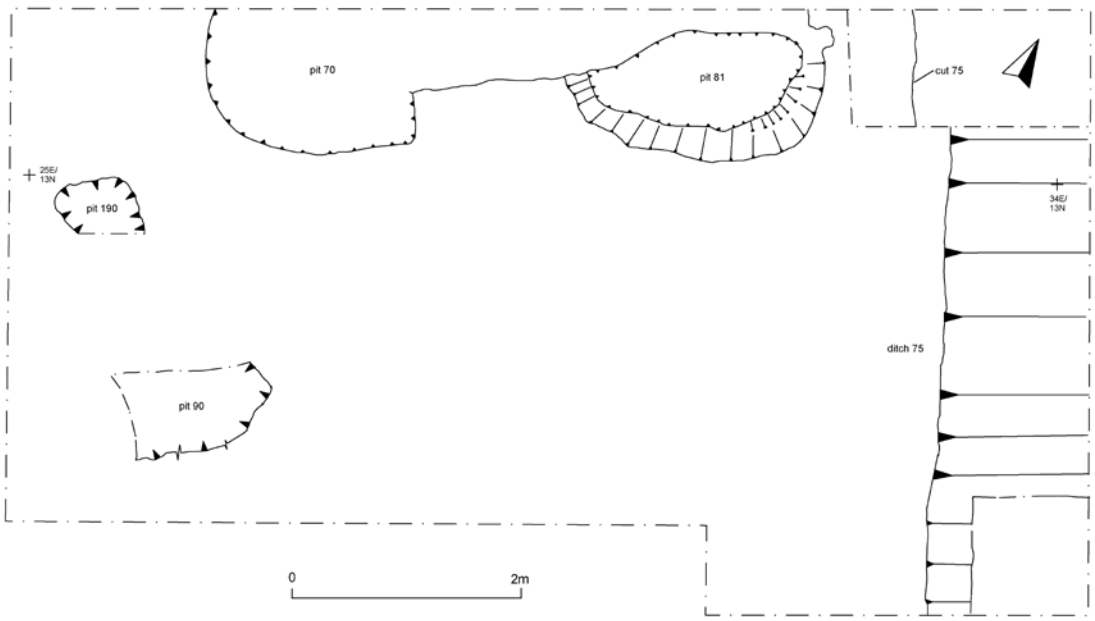

Figure 53: Phase 9 features

Figure 54: Medieval ditch 75 (foreground) cutting Roman phases; view northwest

Figure 55: Ditch 75; view north

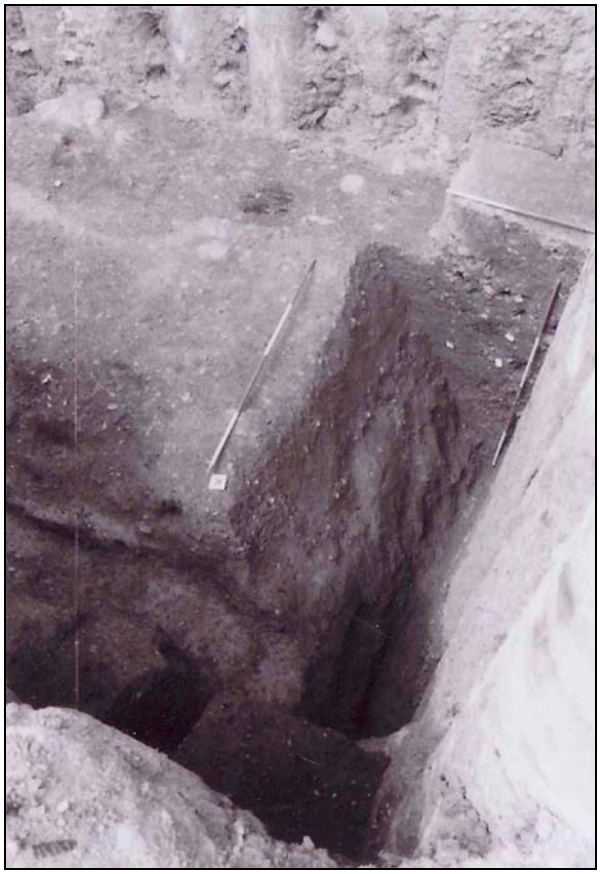

Figure 56: Ditch 75; view west

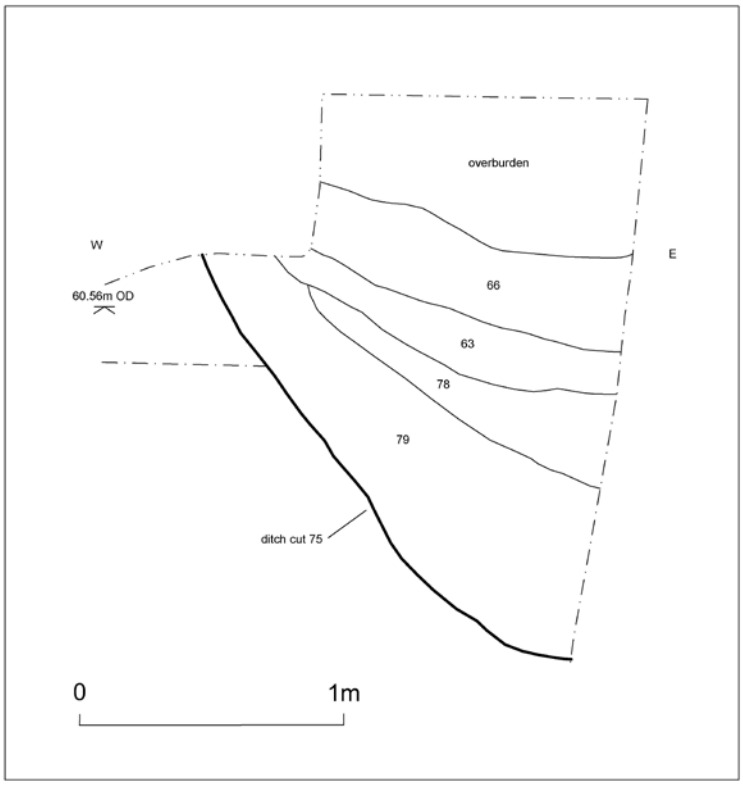

Figure 57: Ditch 75 south-facing section

Figure 58: Medieval pits 70 & 81 and Roman wall 129; view west

Phase 10: Medieval (c.1250-1400)
(Figure 59)

Pit 102 [92, 93]
Spreads/layers [57, 58, 61, 64, 99, 107]

Phase 10 comprised a single pit (102) in the southeast corner of the trench, measuring 1m x1.25m x 0.5m deep with near-vertical sides and a flat base. Its fills [92 & 93] produced pottery dating to *c*.1250-1350/1400. The pit was associated with two small spreads or layers [99, 107] of red clay with gravel and mortar fragments and dark grey brown silty clay respectively.

Further clay silt occupation spreads or dump layers containing mortar, slate and charcoal fragments were situated towards the north end of the trench [57, 58, 61 & 64. [64] produced late medieval Midland Purple ware pottery, dating to *c.*1400-1550).

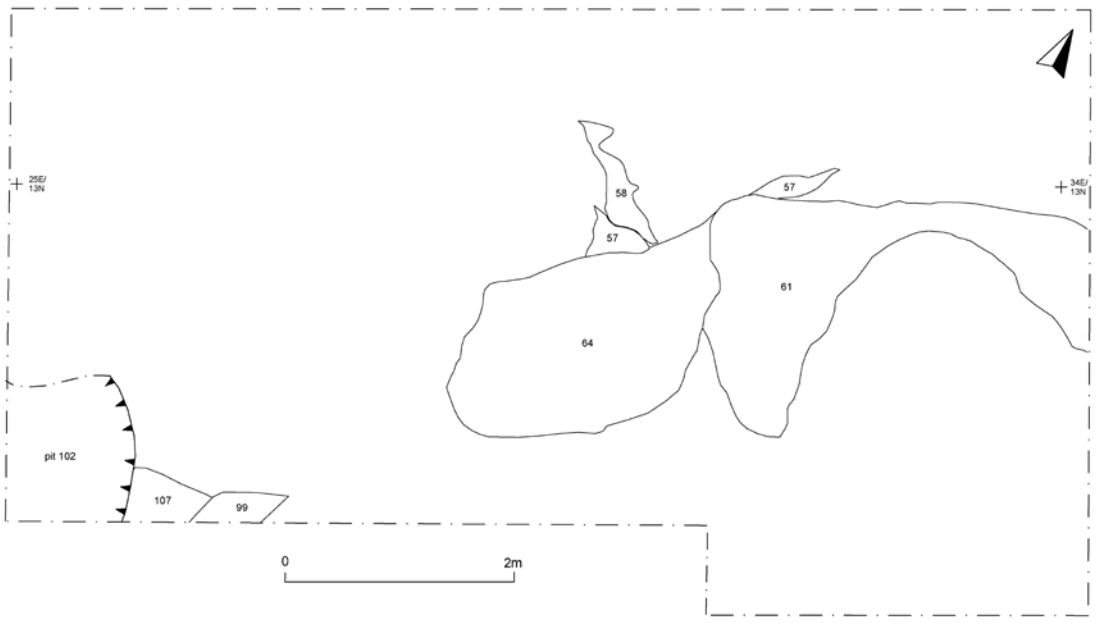

Figure 59: Phase 10

Phase 11: Late Post-Medieval (1650-1750) or later
(Figures 60 & 61)

Walls 76 [77], 85, 95[69], 96

Phase 11 comprised several fragmentary walls or wall foundations, all aligned northwest-southeast. Although only one produced direct dating evidence, these are likely to belong to late post-medieval or later buildings and/or cellars on properties fronting Southgates.

Wall 76, a small, unbonded masonry stub, was located alongside the northeast edge of the excavation trench, cutting the upper fill of the Phase 9 ditch and sealed by modern overburden. The wall measured 0.8m x 0.3m and consisted of a single, loose course of roughly shaped, unbonded granite blocks. A similarly unbonded fragmentary wall stub in the southwest corner (85) measuring 0.35m x 0.45m cut the non-phased Roman pit 86.

Two further more substantially preserved walls (95 & 96) lay *c.*2m to the south in the corner of the trench (Figure 61), measuring 1.5m x 0.25m and 1.2m x 0.4m respectively. Wall 95 [69] was of roughly shaped and coursed mortared granite block build surviving to three courses; the wall fabric produced pottery dating to *c.*1660/20-*c.*1720. Wall 96 contained the single unbonded sandstone and granite block construction contained predominately mid or later 13th century pottery and a single Staffordshire Slipware sherd probably dating from *c.*1660/70 to *c.*1720.

Finally in the developmental sequence, the preliminary watching brief and machine removal of overburden from the trench involved the removal of modern brick walls and flooring likely associated with the public house and domestic housing known to have occupied the site until its clearance in the 1960s. Fragments of these were encountered during the excavation, notably a length of 19th century wall in the

southeast corner of the trench, removal of which provided a valuable 'keyhole' through the full archaeological sequence.

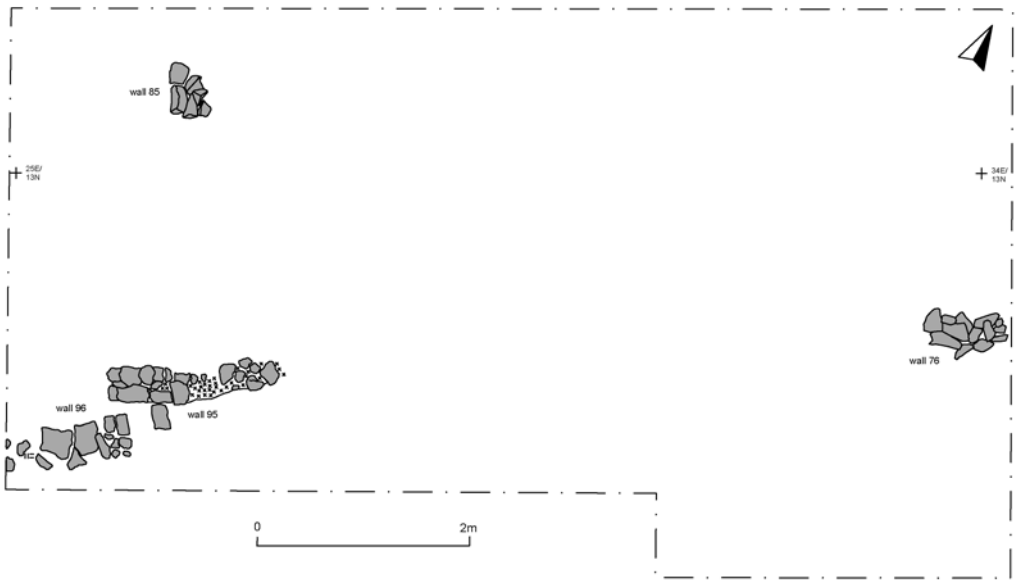

Figure 60: Phase 11 features

Figure 61: Walls 95 & 96; view north

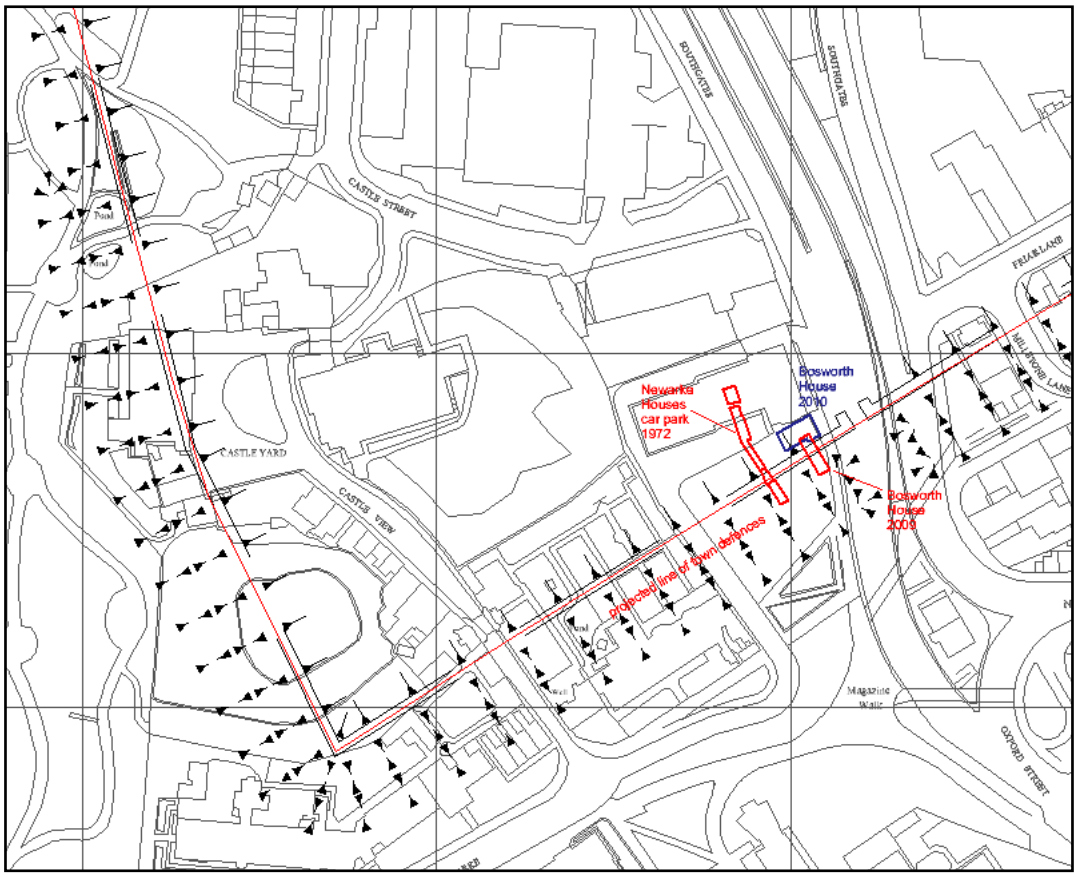

Figure 62: Newarke Houses 1972 & Bosworth House 2009/10 excavations in relation to the town defences

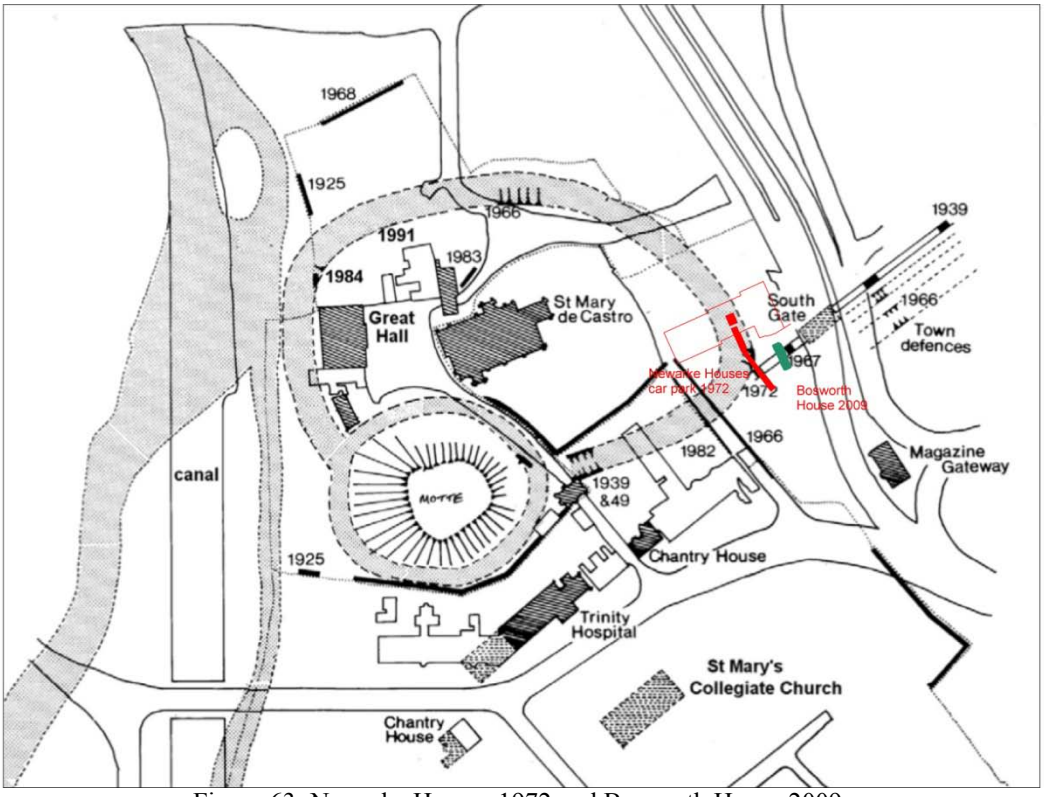

Figure 63: Newarke Houses 1972 and Bosworth House 2009 excavations plus pre-1991 interventions in the castle area

Discussion: The Roman Archaeological Sequence

Structural Evidence

Early Roman activity revealed at Bosworth House appears to broadly mirror the results of excavations from elsewhere in the Roman town, firstly regarding the presence of a thin, possibly truncated sandy subsoil and an apparent absence of topsoil or turf, suggesting land clearance prior to the setting out of the street grid, as was observed to the north at Vine Street (Morris forthcoming: 3).

A single gully or truncated ditch constituted the earliest Roman feature, and one with a clearly different more pronounced north-south alignment than that of the slightly later Roman timber structures. As such, this mirrors evidence from other excavations in this, the western area of the Roman town, for occupation pre-dating the Roman street grid from shortly after the Conquest (*ibid*).

Although the area of excavation was of insufficient size to detect complete structural arrangements or patterns of property divisions, the early date of activity is noteworthy, likely due in large part to the proximity of the site to the Tripontium road, a major north-south route predating construction of the town defences. Hence this must have been a prime residential and/or commercial location, and a site where activity is likely to appear from an early date – as is evident here.

The comparatively short but complex character of the timber occupation phases at Bosworth House is noteworthy. Although the imprecision of pottery dating made for difficulties in terms of discerning particular nuances of phase, namely as to which features were contemporary, a minimum of two and possibly three clear episodes of timber construction could be determined, the first of which was likely either a simple post-built structure or, alternatively, a fence line. The latter scenario would be indicative of emerging property divisions, a phenomenon observed at other sites from the mid-2nd century.

The constructional details of the main timber phase structure are problematic, representing a type building type not previously observed in Roman Leicester, but are clearly indicative of a well-constructed and substantial timber building. However, it is possible to make some speculative suggestions regarding this structure. The primary element was (were) a series of substantial beam slots, indicated by their square profiles and an absence of mortar or stonework. These features were accompanied by sizeable internal postholes, presumably forming vertical supports for the building superstructure. It was not possible, however, to establish the relationship between these posts and the beams, but it is likely that the posts were by some means set into the horizontal beams. More functionally problematic are the series of large stake holes positioned irregularly along the lengths of the beam slots, but they may have performed a secondary, infilling role to the post in the manner of medieval wattle and daub-construction walls. The stake holes had survived as hollow voids, preserved beneath the rampart clay, suggesting their having decayed in situ whereas the posts appear to have been removed during the subsequent building demolition/dismantling process. Typologically, the building would appear to bear similarities to Claudio-Neronian examples from Colchester, Verulamium and, notably, Cannon Street in London. The walls of the latter structure consisted of logs

mortice-jointed vertically into base-plates, with wattle and daub panels forming infill (Roskams 2002: 88).

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Evidence of flooring or other internal arrangements was absent, suggesting that the structure had a raised (timber) floor, although these may have been lost through later disturbance. The gap between the two principal beam slots suggests a doorway or similar opening to the adjacent yard, which was characterised by patchy surfaces and occupational trample and a number of hearths, an arrangement observed at other sites around the early Roman town, such as Vine Street and Sanvey Gate to the north (*ibid*: 5).

Defences
Previous archaeological interventions in close proximity to the Bosworth House excavations provided evidence for the castle and both the Roman and medieval town defensive sequences. Excavations in 1967 immediately to the east in 1967 (Buckley and Lucas 1987, Site 1, A1100.1967) revealed the Roman rampart and wall. It appears that, as was anticipated, the Bosworth House excavation revealed the tail of the 2nd-century rampart, sealing the timber building phases.

Discussion: The Medieval Archaeological Sequence

The Castle
As regards the medieval period, the desk-based archaeological assessment suggested that the development was located in the vicinity of the former bailey ditch of Leicester Castle, the line of which has been traced by excavation to the west on the former Newarke Houses Car Park site (Buckley and Lucas 1987, 45; A263.1972).

Possible rubble from demolition of the castle curtain wall was revealed within the bailey ditch excavated within the Newarke Houses Gardens, to the west of the development area (Clarke 1952) and elsewhere on the circuit. However, and significantly, a re-examination of results from the nearby 1972 Newarke Houses excavation indicated that the projected line of the medieval castle bailey ditch was likely to run some distance west and hence that the proposed development was unlikely to impact upon the medieval ditch.

The Bosworth House excavation confirmed that the medieval bailey ditch did indeed not extend as far east as the present development. The archaeological intervention did, however, reveal a substantial V-shaped ditch which appeared, from an absence of silting coupled with the ceramic evidence suggests it to have been open for a limited period (*c.*110-1250) prior to its deliberate backfilling. The location of the feature a short distance east of the Norman castle, close to and running south to the western flank of the South Gate, suggests a short-term defensive measure. The dating suggests its having been filled in shortly after the Sack of Leicester in 1173 and the consequent slighting of the castle and town defences (R. Buckley, pers. comm.).

Property Boundaries

The excavations in 1972 immediately to the west (A263.1972) also revealed evidence for a series of medieval burgage plots, presumably relating to properties fronting on to Southgates. The small area of the Bosworth House excavation, coupled with the possibility of 18th and 19th century cellared properties having destroyed any evidence for medieval property boundaries mitigates against such survivals. However, the identification of medieval pits along a Roman wall line suggests the perpetuation of Roman property boundaries into the medieval period, a phenomenon identified on other intramural excavations in Leicester.

Environmental evidence from the pits suggest that brewing was being undertaken on or in the vicinity of the site during the 12th and 13th centuries. The limited range of later high medieval and late medieval pottery may indicate the decline in occupation in this part of the medieval town once the castle had been constructed, (D. Sawday, pers. comm.).

Concluding Remarks

The archaeological excavation undertaken at Bosworth House revealed a well-preserved and largely undisturbed stratified archaeological sequence dating from the early Roman to modern periods. These results were dominated by a sequence of early Roman timber structures and town defences in addition to a substantial medieval ditch probably linked to the southern town and/or castle defences.

The site archive (A17.2009), consisting of pottery sherds, animal bone, ceramic building material fragments, chemical and environmental samples, paper and photographic records and site drawings, will be housed with Leicester City Museum Service.

The archive (including the evaluation stage) consists of:

- Pottery sherds (1 box)
- Animal bone (1 box
- 11 x small finds
- Ceramic building material fragments (1 box)
- 6 x environmental samples
- 155 x chemical testing samples
- 221 x single context record sheets (8 x evaluation, 176 x excavation)
- 24 x A3 drawing sheets (3 x evaluation, 21 x excavation)
- 277 x digital photographs (72 x evaluation) (205 x excavation)
- 9 x monochrome (film) photographs (1 x evaluation & 8 x excavation)
- A risk assessment form

Publication

A version of the excavation summary (see above) will appear in due course in the *Transactions of the Leicestershire Archaeological and Historical Society*.

Acknowledgements

Dr. Roger Kipling and David Parker of ULAS undertook the archaeological evaluation on behalf of De Montfort University. The project was managed by Richard Buckley.

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Oasis Information

Project Name	An Archaeological excavation on Land to the south of Bosworth House, Southgates, Leicester NGR SK 424 023
Project Type	Excavation
Project Manager	Richard Buckley
Project Supervisor	Roger Kipling
Previous/Future work	Lift/staircase block building extension
Current Land Use	Car parking
Development Type	University building project
Reason for Investigation	PPG16
Position in the Planning Process	Assessment for Scheduled Monument Consent.
Site Co ordinates	NGR SK 583 041
Start/end dates of field work	26th July and 13th September 2010
Archive Recipient	Leicester City Council
Study Area	56m²

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Appendix One: The Romano-British Pottery *Elizabeth Johnson*

Assemblage Size and Condition

An assemblage comprising 174 sherds (3.838kg) of Romano-British pottery was retrieved from the excavations along with 58 sherds (963g) of re-deposited material. The average sherd weight of 22g suggests good levels of preservation.

Methodology

The pottery was classified using the Leicestershire Fabric Series (Pollard 1994) and quantified by sherd count, weight and estimated vessel equivalents (EVEs using rims) as shown in the catalogue below. Vessel forms were also assigned where diagnostic sherds allowed.

Catalogue

Cont	Fabric	Form	Sherds	Weight (g)	Diam (cm)	EVEs	Dating
56	Shelly	Jar	1	10			late1st-2ndC
65	Black Burnished	Bowl	1	43	24	0.075	c.AD120+
65	Shelly	Jar	2	126			late1st-2ndC
65	Grey	Misc	1	3			2ndC+
65	Samian	Bowl	1	1	18	0.03	late1st-2ndC
65	Grey	Misc	1	2			
73	White	Flagon	1	36			late1st-mid2ndC
73	Shelly	Jar	1	62	22	0.07	late1st-mid2ndC
80	Black Burnished	Jar	2	13			c.120+
80	Grey	Jar	3	19	9	0.175	2ndC+
80	Grey	Misc	3	9			2ndC+
83	Black Burnished	Bowl	1	10			c.120+
83	Grey	Jar	1	12			2ndC+
89	White	Misc	1	4			late1st-2ndC
94	White	Bowl	1	37	26	0.08	late1st-mid2ndC
94	Grey	Jar	1	47	23	0.1	late1st-mid2ndC
94	Samian	Misc	1	2			early-mid2ndC
94	Grey	Jar	2	11			mid1st-early2ndC
94	Grey	Jar	1	9			mid1st-early2ndC
94	Grey	Beaker	1	7	11	0.07	late1st-mid2ndC
94	Grey	Jar	2	43			later1st-2ndC+
94	Grey	Misc	1	4			later1st-2ndC+
94	Grog-temp	Jar	1	10			later1st-2ndC
94	Black Burnished	Jar	1	5			c.AD120+
110	White	Misc	1	6			late1st-2ndC
113	Amphora	Amphora	1	89			mid1st-early2ndC
113	White-slipped	Bowl	1	17			late1st-2ndC?
Cont	**Fabric**	**Form**	**Sherds**	**Weight (g)**	**Diam (cm)**	**EVEs**	**Dating**
113	Grey	Lid	1	25	17	0.125	later1st-2ndC
113	Grey	Jar	2	31			mid1st-early2ndC
113	Grey	Jar	3	25			mid1st-early2ndC
113	Grey	Jar	3	9			mid1st-early2ndC

113	Grey	Jar	1	13	18	0.07	2ndC?
113	Grey	Jar	1	10			2ndC+
113	Grey	Misc	2	5			2ndC+?
118	Grey	Jar	1	16			mid1st-early2ndC
120	Grey	Misc	1	7			2ndC+?
131	Grey	Jar	1	19			late1st-2ndC
135	Grog-temp	Jar	4	161	40	0.11	late1st-early2ndC
135	Grog-temp	Jar	5	116	36	0.1	late1st-early2ndC
135	Grog-temp	Jar	3	68			late1st-early2ndC
135	Grey	Jar	9	44			mid1st-early2ndC
135	Samian	Bowl	2	11			mid1stC?
135	White	Bowl	4	9			late1st-mid2ndC
135	Sandy	Misc	1	1			mid-late1stC
135	Grey	Jar	2	5			late1st-2ndC
135	Grey	Jar	2	32			late1st-2ndC
135	Grey	Jar	1	9			late1st-early2ndC
135	Grey	Jar	3	69			late1st-2ndC
136	Amphora	Amphora	2	366			later1stC+
136	Sandy	Misc	1	7			later1stC
149	Grey	Jar	2	21			later1stC+
149	White	Bowl	5	11			late1st-mid2ndC
150	Samian	Bowl	3	23	18	0.09	later1stC+
150	Shelly	Jar	14	123			later1stC+
150	Oxidised	Misc	1	1			later1stC+
150	Grog-temp	Jar	2	51	32	0.05	late1st-early2ndC
150	Sandy	Jar	1	18			late1stC
151	Amphora	Amphora	1	289			later1stC+
151	Samian	Platter	1	5			mid-late1stC
151	Grey	Jar	2	76			later1stC
151	Grey	Cup	1	7	12	0.075	later1stC
152	Samian	Plate	1	3	16	0.025	mid-late1stC
152	Samian	Bowl	1	8	23	0.05	c.AD50-70
153	Grog-temp	Jar	2	13			late1st-early2ndC
153	Grog-temp	Jar	1	14			late1st-early2ndC
154	Grog-temp	Jar	1	132			mid-late1stC
157	Samian	Cup	1	2			1stC
157	Samian	Cup	1	1	6	0.09	c.AD50-70
157	Grog-temp	Jar	1	19			1stC
161	Samian	Bowl	1	7			c.AD50-70
165	Grey	Jar	3	19			1stC
167	Samian	Bowl	1	7			c.AD50-70
167	Shelly	Jar	1	10			1stC+
167	Grey	Jar	1	5	12	0.1	
167	Grey	Jar	1	1			1stC
172	Grey	Jar	1	9			later1st-2ndC+
172	Grey	Jar	1	14	22	0.07	later1st-2ndC+
Cont	**Fabric**	**Form**	**Sherds**	**Weight (g)**	**Diam (cm)**	**EVEs**	**Dating**
183	Mortarium	Mortarium	2	96	30	0.05	late1st-mid2ndC
195	Grey	Jar	1	9			late1st-2ndC
195	Grey	Jar	1	4	17	0.075	late1st-2ndC
195	Grey	Jar	1	2			late1st-2ndC

197	Samian	Bowl	6	157	23	0.08	c.AD50-70
197	Samian	Bowl	2	38			c.AD50-70
197	Grog-temp	Jar	3	237			mid1stC
197	Mixed-gritted	Jar	2	90			mid1stC
197	Shelly	Jar	1	13			mid1stC+
197	Grey	Jar	1	55			mid1stC+
197	Grog-temp	Jar	2	365	44	0.05	mid1stC+
207	Grey	Jar	2	39			mid1st-early2ndC
220	Grey	Bowl	2	80	27	0.14	late1st-early2ndC
220	White	Flagon	1	27			late1st-2ndC
220	Grey	Jar	3	29			late1stC
220	Grey	Jar	1	9			late1stC+
220	Lead-glazed	Misc	1	4			mid1stC?

Stratified Features

Phase 1 Early Roman Subsoils

Eight sherds (520g) of pottery were recovered from contexts (151), (152) and (154) dating to the mid and later 1st centuries. The samian ware comprises a Drag. 15/17 platter, Drag. 18 plate and Drag. 29 bowl, all from South Gaul. The platter and bowl date to the middle of the 1st century c.AD50-70, whilst the plate could be Flavian (Webster 1996, 30; 35; 40-41; 74-76). The grey wares comprise two jars, and a cup of Gallo-Belgic Terra Nigra style comparable to a vessel found at Vine Street in Leicester suggesting a date towards the last quarter of the 1st century (Johnson 2009, 37). A grog-tempered storage jar dates to the mid-late 1st century. One sherd from a Dressel 20 olive oil amphora was also found, dating from the later 1st century onwards (Peacock and Williams 1986, 136; Pollard 1994, 74-75).

Phase 2 Ditch/Gully

Sixteen sherds (955g) were recovered from Ditch (197) dating to the mid-late 1st century. The range of fabrics comprises transitional grog-tempered, mixed-gritted and shelly wares along with a grey ware jar and a samian ware Drag. 29 bowl. The samian ware bowl is the same vessel as that recovered from (152), whilst a large grog-tempered storage jar is comparable to vessels found at Vine Street and Bath Lane in Leicester, dating to the mid-late 1st century (Clamp 1985, 57-58; Johnson, 2009, 36). So-called transitional wares were mostly replaced by grey and oxidised wares by the end of the 1st century suggesting a date within the 1st century for this group (Pollard 1994, 74-75). The presence of a vessel join and comparable dating of the pottery from this group with that in Phase 1, suggests the material originates from the Early Roman subsoils disturbed by the cutting of this ditch in Phase 2.

Phase 3 Primary Timber Building Phase

Only three sherds (15g) of pottery were recovered from pit/posthole complex (195) in sub-phase 3.1. The sherds are all grey wares including one necked jar, probably dating from the later 1st century into the 2nd.

Phase 4 Principal Timber Building, External Yard and Hearths

The features in Phase 4 produced the most pottery, with 124 sherds (3.060kg) accounting for the majority of the assemblage.

Beamslots (153), (161)

One sherd from a samian ware Drag. 29 bowl dating to c.AD50-70 was found in (161). Two grog-tempered ware jars dating to the later 1st or possibly early 2nd century were recovered from (153).

Hearths (150), (172), (183)

The pottery recovered from (150) comprises a range of grog-tempered, sandy, shelly and oxidised ware jars dating to the later 1st century along with a samian ware Drag. 30 bowl dating to the later 1st or possibly early 2nd century (Webster 1996, 43). Two grey ware jars most likely dating to the later 1st or early 2nd century were recovered from (172). A single sherd from a mortarium was found in (183); the origin is unknown at present, however the form indicates a date before AD150 (Pollard 1986, 4).

External Surfaces (136), (149)

Ten sherds (405g) were recovered from the external surfaces, comprising a sandy ware bowl or jar, a Dressel 20 olive oil amphora, a grey ware jar and a white ware bowl. The white ware is decorated with red painted circles and barbotine dots dating to the late 1st or early 2nd century.

Occupation Spread (135), (80)

Forty-four sherds (566g) were recovered from an occupation spread, most of which came from (135). The pottery from (135) comprises a range of grog-tempered necked storage jars and grey ware jars with rusticated and fine roulette decoration dating to the late 1st or early 2nd century. A white ware bowl with red painted and barbotine dot decoration is the same vessel as that from the external surface (149) above. Finally, a sandy ware jar and samian ware Drag. 29 bowl date to the mid-1st century and may well be residual in this group. The small amount of pottery from (80) is slightly later, comprising two grey ware jars and a Black Burnished ware jar with acute lattice decoration. The grey wares could date to the later 1st-early 2nd century along with the material from (135), however the Black Burnished ware jar is unlikely to date before c.AD120 (Tyres 1996, 185).

Peripheral Beamslot (220)

Eight sherds (149g) comprising a grey ware reeded rimmed bowl, white ware flagon, two grey ware jars and a lead-glazed ware vessel were found in beamslot (220). The jars are probably later 1st century and include a carinated form, whilst the flagon and bowl date to the later 1st or early 2nd century. Lead-glazed wares are extremely rare in Leicester and no fabric match has been found as yet. The sherd has white barbotine striped decoration underneath the glaze and is presumably mid-late 1st century or very early 2nd century at the latest (Pollard 1994, 51-54).

Additional Postholes, Gullies and Pits (167), (207), (83), (131), (157)

Two grey ware jars and a shelly ware with combed decoration dating to the later 1st century were found in a posthole (167). A rusticated grey ware jar dating from the mid-1st to the early 2nd century was recovered in a gully (207), whilst a grey ware jar base, probably dating from the later 1st century into the 2nd, was found in another gully (131). A possible drip gully (157) contained three vessels comprising two samian ware cups and a grog-tempered jar. The Drag. 27 cup dates to the later 1st century whilst the Drag. 24/25 cup is slightly earlier, most likely dating to c.AD50-70. The grog-tempered jar also dates to the later 1st century. Finally two sherds were recovered from a pit (83) comprising a grey ware jar and Black Burnished ware bowl. Only the base of the bowl is present which hampers accurate dating, however, it would not date before c.AD120-150 which is later than the material from the posthole and gullies.

Phase 5 Earthen Town Defences

Six sherds (175g) of pottery were recovered from material possibly associated with the rampart known to have formed Leicester's defences in the later 2nd century. The latest pottery is a Black Burnished ware flat rimmed bowl with lattice decoration, which dates sometime from c.AD120-150 to the end of the 2nd century (Holbrook and Bidwell 1991, 108-109). The remaining pottery comprises grey and shelly ware jars, most likely dating within the 2nd century and a South Gaulish samian ware decorated bowl dating to the later 1st or early 2nd century. The remaining pottery in this phase comprises a rusticated grey ware jar dating from the mid-late 1st century into the early 2nd from a clay layer (118) and a grey ware jar, most likely dating to the 2nd century, from a posthole (120).

Phase 6 Levelling/make-up Episode

Layer (94)

Twelve sherds (175g) were recovered from a layer (94). The grey wares include rusticated and everted rim jars, along with a globular beaker suggesting a date from the later 1st century into the 2nd, as does a grog-tempered jar. A white ware reeded rimmed bowl and Central Gaulish samian ware indicates an early to mid-2nd century date. Again, the latest material is a Black Burnished ware jar with lattice decoration. This could date from c.AD120-150 onwards, but the acute lattice decoration would suggest a date still within the 2nd century (Ibid, 96).

Pit (74)

Pit (74) cuts layer (94) above. Two sherds (98g) of pottery were retrieved from the fill comprising a white ware flagon and a shelly ware ledge rimmed jar suggesting a later 1st-early 2nd century date. The material could easily be contemporary with most of the pottery from the layer as it also dates to the later 1st-early/mid 2nd century.

Spread (113)

A further 15 sherds (224g) was recovered from a spread (113). Most of the pottery is grey ware comprising a lid and jars including some with rusticated decoration and a ledge rimmed vessel suggesting a date from the later 1st to the early 2nd century. A white-slipped ware flanged bowl also most likely dates from the later 1st to the early 2nd century. Finally a sherd from a Cam 186 amphora was present. These are associated with the importation of fish sauce and in Britain date from the mid-1st century into the early 2nd century (Peacock and Williams 1986, 120-121).

Phase 7 Masonry Buildings and Yards

Only three sherds (20g) were recovered from three features in this phase. A white ware flagon was recovered from a wall (110); a shelly ware jar with combed decoration was retrieved from a yard surface (56) and another sherd of white ware was recovered from (89). All this material dates from the later 1st into the 2nd century. It should be noted that the features from this phase overlay the features in Phase 4, and the small amount of pottery recovered would easily fit in with the material from Phase 4. It is possible therefore that these three small sherds have found their way into later features as a result of disturbance of the features in Phase 4.

Discussion

Overall, the evidence for stratified Roman features suggests activity from the mid-1st century to possibly the end of the 2nd century. Phases 1 and 2 suggest Early Roman activity during the mid-late 1st century, whilst the first timber buildings in Phase 3 probably appeared during the later 1st or early 2nd century. Most of the material evidence appears in Phase 4, when a second phase of building seems to take place along with the appearance of a yard and hearths. Again, most of the pottery seems to suggest activity during the later 1st-early 2nd century, however during this phase slightly later material clearly dating into the 2nd century is present for the first time. The latest datable material found anywhere on the site is Black Burnished ware, which appears in small quantities in Phases 4, 5 and 6. Even though these vessels suggest an earliest date of c.AD120-150, the forms present need not go beyond the end of the 2nd century. Finally, the pottery evidence for the phase of masonry buildings is virtually non-existent, and as mentioned above, it is highly likely that the sherds present are a result of disturbance of the occupation layers in Phase 4 during construction of the masonry wall.

Although the stratified Roman features would suggest activity no later than the 2nd century, a scan of the re-deposited pottery reveals evidence for later Roman activity. Most notable is the presence of Nene Valley colour coated wares including beakers, dishes and bowls dating to the 3rd and 4th centuries. There are also later Black Burnished ware forms dating to the 3rd century and some later 2nd century samian ware.

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Appendix Two: The Post-Roman Pottery *Deborah Sawday*

The Pottery and Tile

The medieval and post medieval pottery, 103 sherds, weighing 2089 grams, and two fragments of medieval ridge tile, weighing 91 grams, were catalogued with reference to the ULAS fabric series (Sawday 1989), (Davies and Sawday 1999). The results are shown below (tables 1 and 2).

The Stratigraphic Record

The earliest pottery: three sherds of coarse Stamford ware dating from *c*.900-1050 and weighing 44 grams and a fragment of the oxidised Sandy ware OS1, thought to date from the late 11th or 12th century, were possibly intrusive in the fill of the beam-slot [106]. Twenty nine sherds, weighing 370 grams were recovered from the back–fill of the ditch [75], which contained a typically Saxo Norman and early high medieval assemblage of Stamford, Potters Marston, Coarse Shelly, Splashed and Reduced and Oxidised Sandy wares and which, in the absence of any obviously later medieval sandy wares, may be dated from *c*.1100 to *c*.1250. A further 31 sherds, weighing 639 grams were recovered from the pits [70], [81], [90] and [102] which had been heavily truncated by later activity. All the assemblages shared a similar date to the above, save [102], which dated from the later 13th or possibly the 14th or early 15th century.

The seven sherds from the layer (64) included two fragments of late medieval Midland Purple ware as well as residual material, whilst another layer (69) contained predominantly mid or later 13th century pottery and a single sherd of highly decorated Staffordshire Slipware probably dating from *c*.1660/70 to *c*.1720 (Barker 2008). Residual medieval pottery and ridge tile was found in the spread (8), together with seventeen sherds of post medieval pottery dating from the mid 17th to the mid 18th centuries.

The Finds Record

The bulk of the pottery by both sherd numbers and weight is Saxo Norman or early high medieval in date, and typically Stamford and Potters Marston are the most common pottery types. Indeed the range of fabrics and wares present is similar to that found throughout the Leicester at this date. The presence of the late Saxon Stamford fabric ST3, and of the Reduced Sandy and Oxidised Sandy wares, RS and OS1, which are not closely dated, also hints at early occupation in this the north west quarter of the medieval town. Not surprisingly perhaps, the relatively low average sherd weight suggests that much of this Saxo Norman or early high medieval material had been subjected to several episodes of deposition and redeposition. However a large Potters Marston jar rim in the ditch [75] and another jar in a Coarse Shelly in the pit [70] may have been originally dumped as rubbish close by, as both vessels had an above average sherd weight.

The range of later high medieval and late medieval pottery is more limited, perhaps reflecting the decline in occupation in this part of the medieval town once the castle had been constructed, and is restricted to thirteen sherds of Chilvers Coton, Medieval

Sandy, Midland Purple and Cistercian wares. Of note were a highly decorated jug body sherd in the Medieval Sandy ware MS1 and a unique vessel form in Cistercian ware, a shallow carinated dish, with a flared profile. The relatively high average sherd weight for this group of pottery of just over 39 grams may reflect the fact that at least some of this material had been deposited in the backfill of the pit [102].

Table 1: The post Roman pottery totals by fabric, sherd numbers and weight (grams).

Fabric	Common Name	Nos.	Gr	% sherds	% weight	Av. Sherd weight
Saxo Norman/Early High Medieval						
ST3	Coarse Stamford ware	4	55			
ST2	Fine Stamford ware	8	82			
ST1	Very Fine Stamford ware	9	54			
ST	Stamford ware	1	19			
RS	Reduced Sandy wares 1/3	7	28			
PM	Potters Marston	34	578			
OS1	Oxidised Sandy ware 1	1	8			
OS2	Oxidised Sandy ware 2	1	29			
SP3	Splashed ware 3	1	10			
CS	Coarse Shelly	6	172			
Sub-total		72	1035	69.9	49.5	14.3
Later High Medieval/Late Medieval						
CC1	Chilvers Coton 1	3	53			
MS1/2	Medieval Sandy 1/2	3	100			
MP2	Midland Purple 2	3	40			
CW2	Cistercian ware 2	4	316			
Sub-total		13	509	12.6	24.3	39.1
Post Medieval						
MY	Midland Yellow	12	437			
EA1	Earthenware 1	3	95			
EA6	Earthenware 6	1	1			
EA7	Slipware	2	12			
Sub-total		18	545	17.4	26.0	30.2
Totals		103	2089	99.9	99.8	20.2

An interesting group of post medieval pottery was found in the spread 8, including a range of Midland Yellow jar and bowl fragments. This context and the spread (69) also produced two wheel thrown hollow ware vessels in Slipware, probably from Staffordshire, one decorated with vertical applied clay strip and the other with combed slip producing a marbled effect.

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Table 2: The post Roman pottery by fabric, sherd numbers and weight (grams) and context.

Context	Fabric/Ware	N.	Gr.	Comments
MEDIEVAL & LATER POT				
8 spread	RS – Reduced Sandy ware	1	6	Wheel thrown, ?Saxo Norman/early medieval
8	CW2 – Cistercian ware 2	1	45	Profile shallow dish, max external diameter 120mm, height c.27mm, carinated/flared. Unique vessel form in this fabric. Late medieval *c*.1450+
8	CW2	3	271	Base & body fragments, minimum 2 vessels, *c*.1450+
8	MY – Midland Yellow	2	95	Jar rim, *c*.1500-1725
8	MY – Midland Yellow	5	214	Bowl rims, 16th C+
8	MY – Midland Yellow	5	128	Misc. body fragments, 16th C+
8	EA1 – Earthenware 1	3	95	2 oxidised with brown glaze on interior, the other reduced. 16th – 17th C.
8	EA6 - Blackware	1	1	c.1650-1750
8	EA7 - Slipware	1	2	Wheel thrown hollow ware with vertical applied red clay strip decoration, 17C+
8	Terminal date – mid/later 17th C or early/mid 18th C			
51 [70] pit	ST3 – Coarse Stamford ware	1	11	Convex base, sooted/burnt externally.
51	ST2 – Fine Stamford ware	2	33	Flat base, sooted/burnt externally, body lightly sooted externally
51	ST1 - Very Fine Stamford ware	1	7	Body, heavily trimmed & transparent leads glaze spots externally, *c*.1100-*c*.1250
51	PM – Potters Marston	9	129	Body/base fragments, 7 heavily sooted externally, 6 sooted/burnt internally, *c*.1100-1400
51	CS – Coarse Shelly ware	6	172	One pot a jar, wheel finished slightly convex base, residue internally, sooting pattern on exterior suggests stood on a trivet over a wood fire, *c*.1100-1400.
51	Absence of med sandy wares suggests a pre 1250 date, ie *c*.1100-*c*.1250			
59 [81] pit	PM	1	30	Flattish base sooted externally, *c*.1100-1400.
59	RS1 – Reduced Sandy 1	1	7	Thin walled, hand-made, moderate sub angular quartz, sooted externally, residue internally. Shallow incised horizontal line decoration.

59	Absence of med sandy wares suggests a pre 1250 date, ie *c.*1100-*c.*1250			
63 [75] ditch	ST2	1	3	Very thin pale yellow lead glaze externally
63	ST2	1	13	Convex base, trimmed & thin pale green/yellow glaze externally
63	ST1	2	6	Body, one trimmed both externally sooted, *c.*1100-1250.
63	ST1	2	12	Thin pale yellow lead glaze externally
63	ST1	1	2	2 incised lines, yellow green lead glaze
63	RS3 – Reduced Sandy 3	1	9	Reduced black throughout, hand-made, large sub-rounded & sub-angular quartz , sooted post deposition
63	PM	4	60	Body/base all externally sooted, *c.*1100-1400.
63	Absence of med sandy wares suggests a pre 1250 date, ie *c.*1100-*c.*1250			
64 layer	ST2	2	11	One with incised horizontal line decoration.
64	PM	3	32	Body & base sherds
64	MP2 – Midland Purple 2	2	33	Metallic brown/purplish glaze, *c.*1375-*c.*1550.
64	Probably late medieval *c.*1400-1550			
69 layer	ST – Stamford ware	1	19	Form 4 collared jar, sooted ext rim, unusually large quartz & possibly iron stone inclusions, but fine matrix, possibly ST1, residual in this context.
69	RS1	4	6	Hand-made fragments
69	CC1 – Chilvers Coton 1	1	47	Convex base, trimmed & sooted ext, internally yellow green glaze, a bowl fragment, *c.*1250+
69	CC1	1	3	Green glaze *c.*1250+
69	CC1	1	3	Upright collared jug rim & diagonally stabbed/slashed strap handle, hard fired/reduced, olive green glaze, early/mid 14th C.
69	EA7 - Slipware	1	10	Wheel thrown hollow-ware – white bodied with combed brown slip producing a marbled yellow and brown decoration on the exterior wall (broken post processing!). Peak production of this pottery type at Stafford *c.*1660/70 – *c.*1720, (Barker 2008).
69	Late Post Med *c.*1660/70 – *c.*1720			

78 [75] ditch	ST1	1	4	Sooted and trimmed externally *c.*1100-1250
78	PM	5	100	Simple everted shouldered jar rim & neck, *c.*1100-1400.
78	PM	1	64	Simple everted cylindrical jar rim
78	PM	2	17	Body, flattish base.
78	Absence of med sandy wares suggests a pre 1250 date, ie *c.*1100-*c.*1250			
79 [75] ditch	ST2	2	22	Collared jar rim – Kilmurry form 4, sooted externally
79	ST1	1	15	Body, necked vessel a jar or possibly a jug/tubular spouted pitcher.
79	PM	5	43	Body/base sherds, sooted externally – links with context 78.
79	Absence of med sandy wares suggests a pre 1250 date, ie *c.*1100-*c.*1250			
91 [90] pit	PM	3	46	Convex base fragments, sooted post deposition, *c.*1100-1400.
91	SP3 – Splashed ware 3	1	10	Upright. Flat topped & externally thickened jar rim, reduced grey internally, sooted post deposition, *c.*1100-*c.*1250
91	OS2 – Oxidised Sandy ware 2	1	29	Flat base & wall, wheel thrown, sooted & abraded externally, *c.*1100-*c.*1250.
91	Absence of med sandy wares suggests a pre 1250 date, ie *c.*1100-*c.*1250			
92 [102] pit	ST1	1	8	Thin lead glaze
92	PM	1	57	Convex base, abraded. Mortar adhering to one edge of break, possibly re-used as building rubble post deposition?
92	MS2 – Medieval Sandy ware 2	1	40	Part of thumbed jug handle base, bright green glaze, abraded. Possibly a coarse Nottingham green glazed ware, *c.*1200/1250-*c.*1350.
92	MS2	1	42	Body, heavily knife trimmed externally, suggesting a later medieval date, sub-angular quartz & organic inclusions.
92	MS1 - Medieval Sandy ware 1	1	18	Hard fired, decorated with curvilinear iron rich strip & pad, exterior firing brown & olive green under transparent lead glaze. Similar decoration is found on jugs in contexts dating *c.*1250 + at Chilvers Coton, but

				this may be later medieval, possibly Warwickshire fabric SQ51, 14th C+.
92	Terminal date later 13th – 14th C+?			
105 [106] Beam slot	ST3 – Coarse Stamford ware	3	44	Fine bodied examples of fabrics A/E?, one glazed (?glaze 1) and knife trimmed externally which becomes more common in 11th C, fabrics dated generally *c*.900-1050+
105	OS1 – Oxidised Sandy ware 1	1	8	Convex basal angle, sooted ext, hand-made, dated *c*.1100+.
U/S	MP2 – Midland Purple	1	7	c.1375-1550
CERAMIC BUILDING MATERIAL				
8	SP3 – Splashed ware 3	1	54	Medieval ridge tile, early – mid 13th C.
8	CC1 – Chilvers Coton 1	1	37	Medieval ridge tile, c.1250

Appendix Three: The Animal Bone *Jennifer Browning*

Introduction

This report presents the results of analysis of the faunal remains recovered from Roman, medieval and post-medieval levels during excavations at Bosworth House, Southgates, Leicester (NGR SK 583 041). A total of 130 bones were recovered during hand-excavation, from 21 archaeological deposits.

Methodology

Specimens were identified with reference to comparative modern and ancient skeletal material held at the School of Archaeology and Ancient History, University of Leicester. Information was compiled directly into a spreadsheet with facility for recording data on species, bone element, state of epiphysial fusion and completeness to elicit information on species proportions, skeletal representation, age and condition. Where possible, the anatomical parts present for each skeletal element were recorded using the 'zones' defined by Serjeantson (1996), with additional zones ascribed to mandibles based on Dobney and Reilly (1988) and a simple system applied to skulls by the author (four commonly found recordable points were defined on each side of the skull to make assessment of zones present rapid and comparable: pre-maxilla; upper and lower orbit; and occipital condyle). Condition was assessed on a subjective scale ranging from 'excellent' through 'good', 'medium', 'poor' to 'very poor', where 'excellent' denotes a bone surface with no cracking or flaking and 'very poor' indicates that the fragment is disintegrating into splinters. Joining fragments were re-assembled and the resulting specimen counted as a single fragment. The location and nature of modifications such as burning, gnawing and pathologies were also recorded. Butchery marks were located by zone, where feasible, categorised, using simple codes, and described. Measurements were taken, as appropriate, following von den Driesch (1976), Payne (1969) for sheep/goat metacarpals and Payne and Bull (1988) for pigs. The assemblage was not of sufficient size to support analytical techniques such as the construction of age profiles or analysis of skeletal elements.

Where a positive identification could not be made, the bone was characterised as large mammal (likely to belong to cattle or possibly horse or red deer) or medium mammal (sheep or pig size) based on features such as size and cortical thickness. All fragments were counted.

Results

Condition and Taphonomy

The assemblage was fragmented, whole bones were rare and both old and modern breaks were present. The bones were predominantly in good condition (61% see table 1). While most surfaces were well-preserved, enabling examination for butchery and other modifications, a small number of bones had cracked and exfoliated surfaces. Gnawing was very rare, observed on just two bones, which suggests that rubbish was rapidly buried and not available to dogs. Phase 9 (c.1100-1250) produced the largest number of bones, however fewer than 10 bones were recovered from most phases (table 2).

Condition	N	%
Excellent	12	9
Good	79	61
Average	33	25
Poor	6	5
Total	**130**	**100**

Table 1: Condition of the assemblage

Phase	Dates	Main Archaeological event	Number of bones	*% Assemblage*
2	Mid-later 1st centuryAD	Ditch/gully	2	*2*
3	Later 1st/early 2nd AD	Primary timber building phase	1	*<1*
4	Later 1st/early 2nd century AD	Principal timber building phase	19	*15*
6	Early-mid 2nd century AD	levelling episode	8	*6*
Roman	Unphased Roman features		7	*5*
8	c.900-1050	Gully/ditch	21	*16*
9	c.1100-1250	Ditch and rubbish pits	67	*51*
10	c.1250-1400	Pits and layers	3	*2*
11	1650+	wall	2	*2*
Total			**130**	**100**

Table 2: Phase composition of the assemblage

Phase 2: Ditch/gully

Part of a pig skull and a butchered humerus fragment from a large mammal were recovered from the fill of a ditch (197) [196].

Phase 3: Primary timber building phase

A butchered rib fragment from a large mammal was recovered from the fill of a beam slot (220) [221].

Phase 4: Principal timber building phase

The bones from Phase 4 were recovered from layers and spreads associated with occupation (80), (135) and (150). In addition to several large and medium mammal ribs and shaft fragments a few bones (n=6) consisting of cattle, pig and domestic fowl were identified. A juvenile domestic fowl humerus was present but a fused pig metatarsal belonged to an animal over the age of 27 months (Silver 1969, 286) and a cattle phalanx was also fused. A post hole [166] (167) produced two undiagnostic medium mammal shaft fragments.

Phase 6: Levelling/make-up episode

Bones of pig, sheep/goat and goose were retrieved from contexts (56), (94) and (113), associated with the levelling episodes. The presence of butchered ribs of both medium and large mammals also suggests occupational rubbish.

Roman

A pit, which was not closely dated [86], contained seven bones including evidence for cattle, sheep/goat and horse. A large mammal scapula had been sawn. The saw is usually a tool associated with craft rather than butchery waste (Grant 1987, 55).

Phase 8: c.900-1050

All the bones in this phase were recovered from a beam-slot [106] (105). Most of the fragments were large or medium mammal shaft and rib fragments, however, cattle, pig and golden plover were identified in the assemblage.

Phase 9: c.1100-1250

	Ditch		**Pits**					
Cut	**75**		**70**		**81**	**72**	**90**	
Context	**79**	**63**	**51**	**71**	**59**	**66**	**91**	**Total**
cattle	2	4	4	2	5			17
sheep		1	1					2
sheep/goat		5	2		1			8
pig		1	1					2
red deer					1			1
dog		1						1
horse			1		1			2
hare			1					1
domestic fowl				2				2
goose			2					2
Total identified								*38*
large mammal	2	7	5		5	1	1	21
medium mammal		2	4	1			1	8
Total	**4**	**21**	**21**	**5**	**13**	**1**	**2**	**67**

Table 3: Animal bones from Phase 9 features

Phase 9 contained the largest proportion of the assemblage. Overall, cattle were the most common species, occurring in most features. Elements from the head, feet and shoulder were most common. Sheep/goat bones were the next most frequent and included bones from the axial skeleton, such as skull and pelvis, as well as the limbs and feet. Where the distinction could be made, the bones appeared to belong to sheep rather than goat.

Part of a femur from a large dog was recovered from ditch fill (63). Domestic fowl bones, a humerus and femur, were recovered from pit fill (71). The shaft of the femur was almost filled with medullary bone, indicating that the bird was in egg-laying condition (Serjeantson 2009, 49). Two goose bones, a furcula and a carpo-metacarpus, were identified in a different context of the same pit (51). A butchered red deer pelvis from a pit [81] (59) indicated hunting and consumption of game. A hare pelvis from pit [70] was broken through the pubis, probably during preparation for cooking. A bone off-cut was recovered from context 51 and consisted of a triangular piece of smoothed cortical bone, with indentations on both sides of the

apex, possibly marking where a hole was to be bored. Two horse bones, including a humerus with a cut mark, were recovered from different pits.

In total, 27 % (n=18) of the bones in this phase were butchered, with marks observed on cattle, deer, sheep/goat, horse and hare bones. These were usually chopped with a heavy blade, such as an axe or cleaver.

Phase 10: c.1250-1400

A cattle horncore retrieved from a spread had a length measurement of 150mm, placing it into the shorthorn category (Sykes and Symmons 2007, table 1). Two well-preserved goose carpo-metacarpi were also recovered from a pit of this phase. Such bones are sometimes associated with the utilisation of feathers (Serjeantson 2009, 200).

Phase 11: 1650+

A domestic fowl radius and fragment of large mammal vertebra were retrieved from a context (69) associated with a wall.

Conclusion

The faunal remains from Bosworth House, Southgates, Leicester, constitute a small sample of fairly well-preserved animal bones. The site is located within the Roman and medieval town and partly within the precinct of Leicester Castle. In most phases the range of species, coupled with the butchery evidence, are generally indicative of occupational debris from cooking and consumption. No groups of material were recovered which might suggest large-scale specialised activities. Although the presence of horncores, sawn bones and goose wing bones in small quantities in the medieval phases could suggest small-scale craft activities, the sample is simply too small to draw any conclusions. In the Roman period only domestic species are represented but a small number of wild species were noted in medieval features. This observation is consistent with work on larger assemblages in Leicester, where an increased prevalence of wild species in the medieval period has been observed. This small assemblage appears to confirm the domestic nature of the occupation and has demonstrated typical range and variety.

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Appendix: Measurements taken

Record	Phase	Context	Bone	Species	GL	Bp	Bd	SD	Dd
26	9	51	metacarpal	cattle	183.8	49.4	51.9	29.6	29.2
27	9	51	metatarsal	cattle	202	41	48.7	24.5	27.3
71	9	63	femur	dog				15.2	
80	4	80	metatarsal	pig	92.4		17		
28	9	51	metatarsal	s/g	142		25.3	15	15.7
2	9	59	tibia	s/g		37.8			
60	9	63	radius	s/g		26.3			

Record	Phase	Context	Bone	Species	GL	Bp	Bd	SC	Dd	Did
49	9	71	humerus	domestic fowl	62	16.6	13.6	6		
50	9	71	femur	domestic fowl		13.7	12.9		10.6	
101	11	69	radius	domestic	65.8		7.4			

				fowl						
104	4	150	humerus	domestic fowl						
105	4	150	radius	domestic fowl	59.1		6.2			
108	8	105	carpo-metacarpus	golden plover	30.7	7.7				4.7
95	10	92	carpo-metacarpus	goose	93.6					10.7
96	10	92	carpo-metacarpus	goose	92.2	21				10.7
102	6	94	tarso-metatarsus	goose	71.4	14.7	14.1	5.3		
23	9	51	carpo-metacarpus	goose						11

Record	Phase	Context	Bone	Species	Length	max basal D	min basal D	Basal circumference
79	10	64	horncore	cattle	150	45.8	35.4	135
19	9	51	horncore	sheep		25.2	18.5	

Appendix Four: The Small Finds *Siobhan Brocklehurst & Nicholas J. Cooper*

Roman Finds

Category 1: Objects of personal adornment or dress

Beads
SF002: (59) Small annular bead in blue-green glass. Central perforation 2mm diameter. External diameter 7mm. Similar examples from Colchester (Crummy 1983, 32-33, fig.33) dated throughout the Roman period.

SF010: (150) Light blue glass frit melon bead fragment. Length 18mm, estimated diameter 14mm. Similar bead fragment found at Causeway Lane (Cooper 1999, 259-260, fig.124.62), and a complete example of the same type at Colchester (Crummy 1983, 30-32, fig.32.520) dated to 1st-2nd centuries.

Category 5: Objects used for recreational purposes

Counters
SF011: (195) Opaque, black, round glass counter of plano-convex section. Diameter 15mm. A white example came from 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) dated to AD250-300.

Category 4: Household Utensils and Furniture

Roman Glass
SF009: (117) Ribbed or pillar moulded bowl in pale blue-green glass. Diameter 150mm. Closely paralleled by example for Stansted (Price and Cottam 1998, 19, Plate 3.1; 45, fig7. a(i)) dated 43-end of 1st century AD.

Category 18: Objects the function or identification of which is unknown or uncertain

Cu Alloy
SF001: (063) Cu Alloy sheet fragment, unidentifiable. 30mm x 20mm

Later Prehistoric Flint

Lynden Cooper
A small group of rather undiagnostic flint was recovered dating from the Neolithic or Bronze Age.

SF006: (94) Flint scraper.

(94) Flint secondary flake.

(151) Flint secondary flake.

(151) Flint tertiary flake.

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Appendix Five: The Environmental Evidence *Angela Monckton*

Bosworth House DMU, Leicester: charred and mineralized plant remains

Angela Monckton (Dec 15th 2010)

Introduction.

During the excavation of a trench for a new lift shaft, deposits were investigated by ULAS directed by Roger Kipling and samples were taken from selected features of Roman and medieval date. The samples were processed for the recovery of plant remains, such as seeds and cereal grains, which may provide evidence of diet, environment or activities in the past. Few charred plant remains were recovered from Early Roman contexts, but numerous remains from a medieval pit included mineralized seeds together with charred cereal grains and seeds. It was hoped that evidence from these remains would contribute to the interpretation of the deposits on the site, and add to the evidence from excavations of other sites in the town and suburbs of Leicester.

Methods

A total of 13 environmental samples from six contexts were processed from features selected by the excavators.

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 but little was present. This work was carried out by Anita Radini at ULAS. During analysis the flotation fractions (flots) were all examined and part of each sample was sorted using a stereo microscope at x10-30 magnification. The plant remains were identified by comparison with modern reference material at the University of Leicester Archaeological Services. The plant remains from the samples were counted, recorded and summarised (table 1), the plant names follow Stace (1991) and are seeds in the broad sense unless described otherwise.

Roman plant remains

The Roman samples produced small numbers charred plant remains (table 2). The cereals found were wheat, which included evidence for glume wheat either emmer or spelt, probably spelt (*Triticum spelta*) confirmed by some fragments of spelt chaff (glumes) showing this cereal was used, together with barley grains (*Hordeum vulgare*). The weed seeds found were of large grasses (Poaceae) including brome grass (*Bromus* sp.), fat-hen (*Chenopodium* sp.), docks (*Rumex* sp.) which are known as weeds of arable or disturbed ground. In addition cleavers (*Galium aparine*) was found in one of the samples, this is characteristic of autumn sown cereals such as spelt. A few seeds of sedges (*Carex* sp.) were plants of damp ground. Similar plant

remains have been found in Roman samples elsewhere in Leicester such as at Causeway Lane (Monckton 1999).

The samples with the most remains were the hearth and the spread associated with the hearth, both contained chaff of spelt and grains in single numbers with a few weed seeds, as waste from small cereal cleaning, possibly from food preparation. The gully contained a little of the same type of waste. The buried soils contained only traces of charcoal as small flecks with occasional broken cereal grains and seeds in (151) with a few fragments of fire ash. Context (208) was mainly roots with few flecks of charcoal.

The small amount of cereal remains suggest that waste from food preparation is present in the Roman samples, this also shows the cereals present with their weeds. Possibly only as scatter of charred remains from nearby occupation. These results add to the known distribution of Roman plant remains in Leicester.

Table 1: ***Summary of remains from samples***

Samp	Cont	Feat Type	Samp Vol. Litre	Flot Vol. mls	Cf	Gl	Se Ch	Se un	Oth	Chc	Comments
RB											
149	196 2 pts	Gully	15	45	-	1	2	9	1s	++	A spelt glume, seeds of large grasses,a stem frag. Uncharred seeds including elder and Chelidonium majus.
153	151 2 pts	Soil	14	17	1	-	2	+	-	Fl	A cereal grain frag, seeds frags, ash and charcoal flecks. Un elder frags.
154	208 2 pts	Soil	12	10	-	-	-	-	-	Fl	All roots, a few tiny charcoal flecks, nothing.
151	151 1 pt	Hearth	7	30	1	1	7	2	-	++	A spelt glume, a wheat grain, seeds of brome grass and sedge. Density = 1.3 items/litre. Eggshell frags.
150	150 3 pts	Spread	21	55*	6	-	6	-	1	++	One part* 6 litres, of the sample sorted. Four barley grains, a wheat grain. Seeds of cleavers and a large grass seed. An awn frag. Density = 2.2 items/litre. Eggshell frags. Other sample parts similar.
MED											
147	71 3 pts	PIT	22	45*	89	1	26	43m	2Fs	+	One part* 7 litres of the sample sorted, Fruitstones of plum and cherry, mineralized seeds of opium poppy and elder, fly puparia. Charred oat grains, bread wheat and barley with charred weed seeds.

Key: Gr = grain, Cf = chaff (glume bases), Se = seed, ch = charred, un = uncharred ,
Oth = other charred items, s = stem, Fs = fruitstone, m = mineralised, Chc = charcoal; fl = flecks.
+ = present, ++ = moderate amount, +++ = abundant.

Medieval plant remains (AD c.1100-1250)

A layer, context (71) from a medieval pit was sampled in three sample parts, of which one was sorted because the remains were quite numerous. The remains included some preserved by mineralisation which is mineral replacement by calcium phosphates and this occurs in such conditions as are found in cesspits where sewage was dumped. These remains include fruit stones and pips from fruit consumed.

Plants which may had been consumed are represented by stones of a stone of plum (*Prunus* sp.) of a small variety, and a stone of cherry as found in cesspits at recent excavations at DMU (Radini 2009) and elsewhere in the town (Monckton forthcoming). A seed of opium poppy (*Papaver somniferum*) represented a plant used for food flavouring or for medicinal use. A fruit whch may have been collected and consumed was elder (*Sambucus nigra*) represented by 31 pips in the sample. A few other seeds were also mineralized including field gromwell (*Lithospermum arvense*), goosefoots and sedges which may have been weeds of the locality. The deposit also contained numerous small insect puparia of flies which were breeding in the sewage, such remains were found at Causeway Lane (Skidmore 1999) and in other cesspits in the town associated with food remains and confirm this feature as a cesspit.

Charred plant remains were also found in the pit probably as domestic waste dumped in the pit. Charred cereals were quite numerous and included four barley grains (*Hordeum vulgare*) of a hulled form and a some wheat (*Triticum* sp.) was present as nine free-threshing wheat grains with a fragment of chaff probably of bread wheat (*Triticum aestivum* s.l.). An additional cereal found was oats (*Avena* sp), was the most numerous in the sample with a total of 62 grains, mainly as larger grains of cultivated type with a few smaller grains present. Some 29% of the oat grains had evidence of germination, either as traces of the impressions of the cereal sprouts or as sunken grains where the starch had been digested during germination. This was insufficient to suggest malting in this context but the mixture of oats with other grains has been found in other medieval deposits in the town and is typical of the period in Leicester (Monckton forthcoming).

Charred seeds were fewer than the grains and a total of 26 seeds were mainly those of arable or disturbed ground including stinking mayweed (*Anthemis cotula*) which is a plant of heavy soils, large grasses (Poaceae) including brome grass (*Bromus* sp), black-bindweed (*Fallopia convolvulus*) and corn cockle (*Agrostemma githago*), all of which are known as weeds of the crops, the latter being associated with autumn sown cereals. Other weeds of disturbed ground included goosefoots (*Chenopodium* sp) and docks (*Rumex sp*), some of the plants of damp ground such sedges (*Carex* sp.) and spike-rush (*Eleocharis* 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.

The samples from the medieval pit shows that it was certainly a cesspit with evidence of fruits consumed including plum, cherry and possibly elder, opium poppy was found

as a possible food flavour. Numerous fly puparia were present as in other cesspits in the town. The pit also contained charred cereal remains mainly oats with bread wheat and barley as probably domestic waste from food preparation.

Charcoal

A single small fragment of charcoal was recovered (context [105]) and identified as oak, with three annual rings visible.

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Appendix Six: Written Scheme of Investigation for Archaeological Excavation of Proposed Basement Area, Bosworth House, Leicester

NGR ***SK 583041***
Leicester Castle, Scheduled Ancient Monument No. 17127
Client: ***De Montfort University***
Planning Authority: ***Leicester City Council***

1 Introduction

1.1 *Definition and scope of the specification*

1.1.1 In accordance with Planning Policy Guidance Note 16 (PPG16, Archaeology and Planning, para. 30), this specification provides a written scheme of investigation for partial mitigation of the effects of development proposals on buried archaeological remains at Bosworth House, Southgates, Leicester. The scheme addresses the impact of a proposed extension to the south side of the building which will provide lift access to all floors and provides details of a programme of work comprising monitoring of pile installation, excavation and sampling of archaeological deposits which will be affected by the proposals.

1.2 *Archaeological and Historical Background*

1.2.1 The desk based assessment (Meek 2001) has shown that the site lies within the walls of Roman and medieval Leicester, and partly inside the Scheduled Ancient Monument of Leicester Castle.

1.2.2 An Iron Age ditch found in the Newarke Houses Garden excavation in 1939 (Clarke 1952) is the only feature of pre-Roman date within the vicinity of the assessment area (HER Ref. LC393). Excavations at Mill Lane(Finn 2002) produced numerous sherds of Iron Age pottery, although these were in residual (later Roman) contexts. The Elfed Thomas site (Cooper 1996) produced a single Celtic coin, (LC872). A few sherds of Iron Age pottery were recovered from the northern part of the open plaza between the site of the former James Went Building and the Hawthorn Building during a watching brief of water mains renewal in the area (Warren 2000, sections 28 and 38).

1.2.3 Excavations just to the south in 1967 (Buckley and Lucas 1987, site 1, A1100.1967) revealed late 1st-early 2nd century activity, including the remains of a masonry structure. Post-dating these levels was a fragment of rampart relating to the towns earthen defences (LC54) constructed in the late 2nd century. A massive stone wall, over 3m wide with surviving superstructure, was also discovered and almost certainly represents the town wall, probably added to the front of the rampart in the 3rd century. The proposed development area may clip the tail of the 2nd century rampart and may also contain evidence for domestic and commercial occupation of the Roman period.

1.2.4 The proposed development area may encroach slightly on the projected line of the former outer bailey ditch of Leicester Castle (fig.3), believed to have been constructed initially in *c*. 1068. The ditch has been traced by archaeological excavation to the west on the former Newarke Houses Car Park site (Buckley and Lucas 1987, 45; A263.1972). Sandstone possibly relating to the demolition of the former curtain wall that stood on the inside of this ditch was revealed within the bailey ditch fill on the site excavated within the Newarke Houses Gardens, to the west of the development area (Clarke 1952) and elsewhere on the circuit. It is possible that nationally important archaeological remains relating to the former castle and its

destruction during the 1173 sacking of Leicester exist in this part of the assessment area.

1.2.5 The excavations in 1972 immediately to the west (A263.1972) also revealed traces of the town's southern defences. The Roman town wall had been robbed, possibly before the castle bailey ditch was cut, indicating an early demise for the town defences in this area. The site also produced evidence for a series of medieval burgage plots, presumably relating to properties fronting on to Southgates. Hence the proposed development area has the potential to impact upon the castle bailey ditch, town wall and domestic activity of the medieval period.

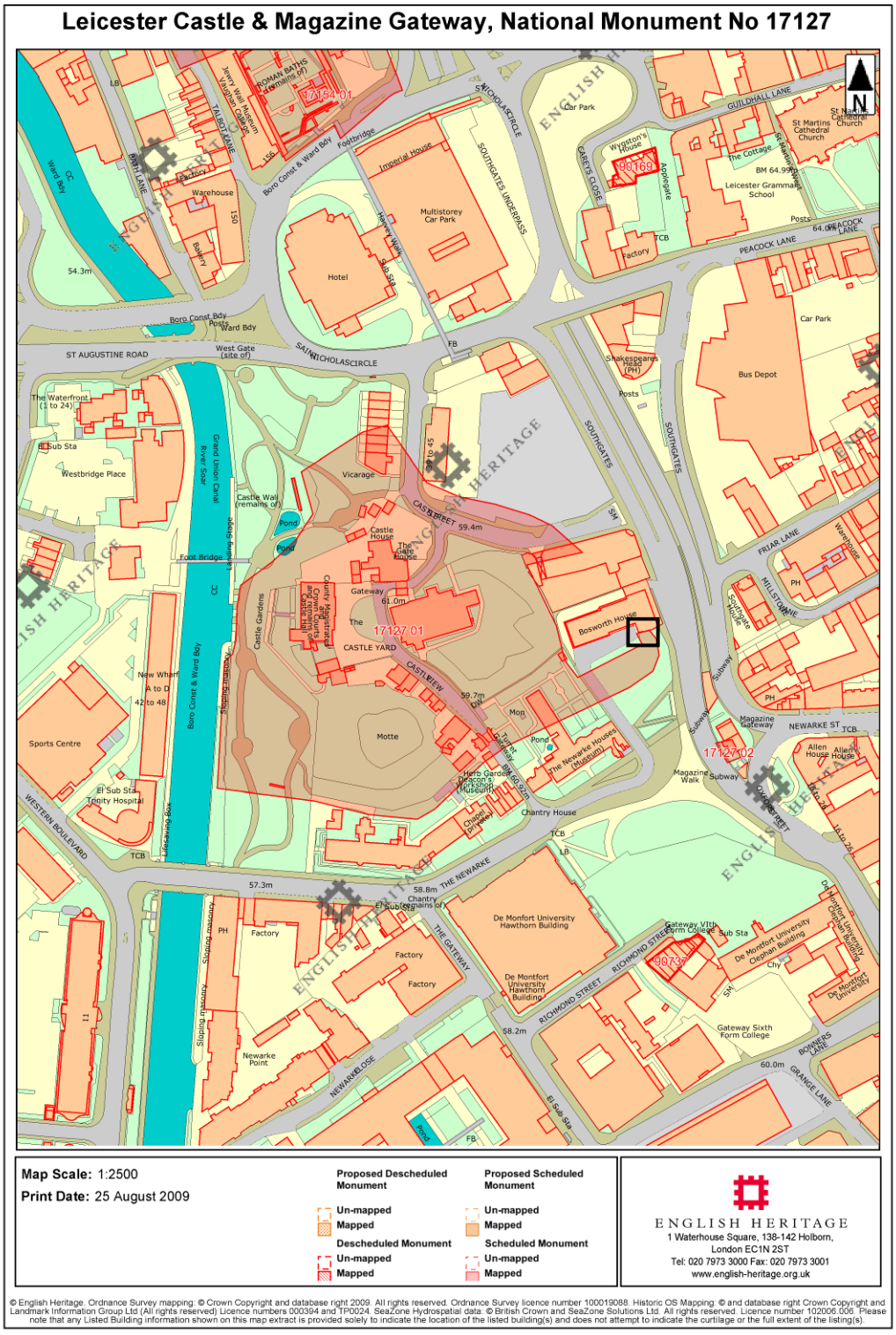

Fig. 1 Leicester Castle and Magazine Gateway, National Monument 17127 showing approximate location of proposed development area (not to scale). © English Heritage

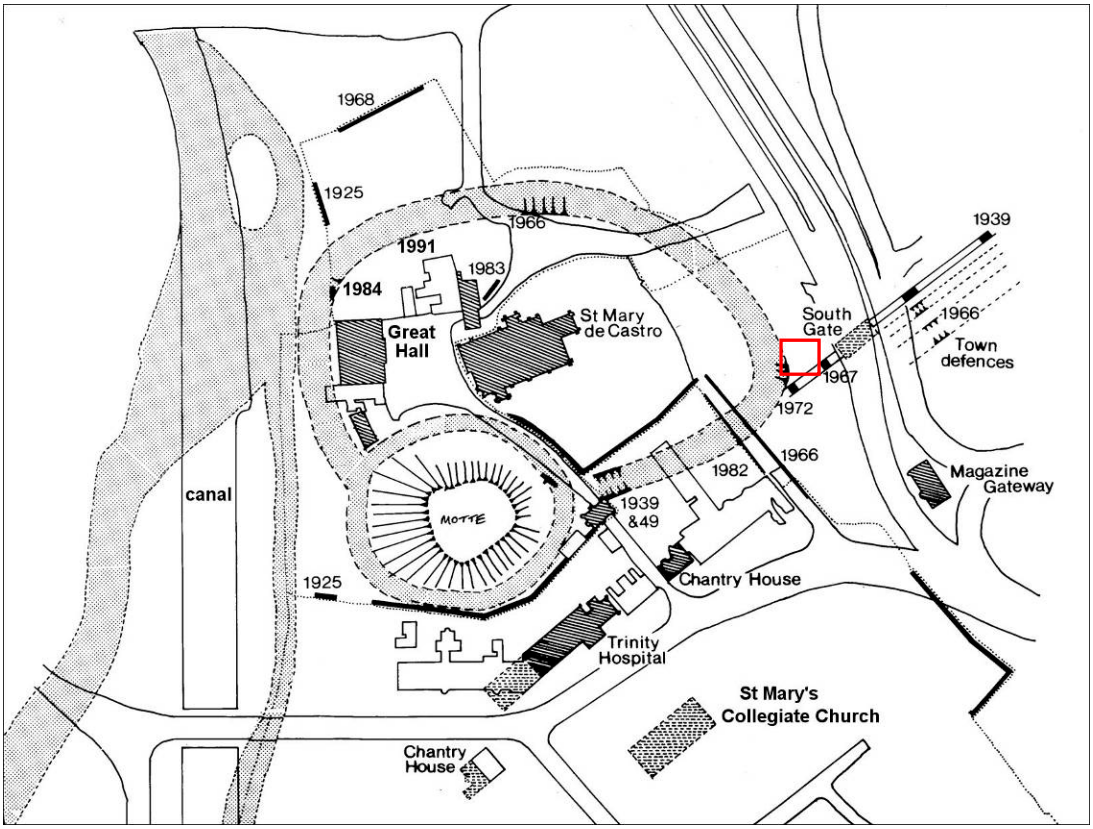

Fig. 2 Excavations and observations in the Leicester Castle area (up to 1991)

1.3 ***Results of Archaeological Field Evaluation***

1.3.1 A trial trench measuring 3.5m x 12m at present ground level, and 1.6m x 8m at base (top of archaeological levels) was examined by ULAS in December 2009 in order to evaluate the nature, extent, date and significance of any archaeological deposits which might be present. (Kipling 2010) This work was required by the Planning Authority and English Heritage in order that an assessment could be made of the impact of the proposals on buried archaeological remains which might potentially be of national importance, relating to the Scheduled Monument of Leicester Castle.

1.3.2 Machine removal of the present-day tarmac car park surface revealed a 1.80m-2.00m accumulation of garden soils and bands of brick demolition rubble deposits and service pipes and cabling associated with the demolition of 19th-century buildings which occupied the site until its clearance in the 1960s. Beneath this, there was evidence for *c*. 0.8-1.0m of well-preserved archaeological deposits of Roman and medieval date, the former potentially relating to the rampart of the late 2nd-century town defences.

1.3.3 A re-examination of archaeological interventions previously undertaken in the locality of the Bosworth House evaluation taken in combination with results from the latter strongly suggest that these pertain to the southern defensive sequence of the Roman and/or medieval town. Certainly, previous observations of the town wall indicate the projected line as running directly across the Bosworth House trench. Consequently, the undisturbed early Roman stratigraphic sequence identified overlying natural clay and containing quantities of 1st century AD pottery may represent the early Roman earthen defensive rampart known to pre-date the 3rd-

century masonry wall. In the medieval period, the Roman defensive circuit was maintained but there is little archaeological information relating to the short stretch of town wall, rampart and ditches between the south gate and bailey ditch of the castle. Clearly the junction of the town wall and castle bailey ditch would be unsatisfactory in defensive terms and an early demise for the former has been suggested in this area (Buckley and Lucas 1987, 45), coinciding perhaps with the construction of the first castle in *c*.1068. In the evaluation trench, it is possible that the medieval archaeological deposits banked against the southern edge of the putative Roman rampart represent a backfilled robber trench targeting the medieval town wall. Consequently the present development has the potential to provide invaluable information regarding the relationship of castle and town defences.

1.3.4 It should, however, be emphasised that a re-examination of previous archaeological interventions in the vicinity of Bosworth House, notably the 1972 Newarke Houses car park excavation, has indicated that, whilst the proposed development falls within the limits of the Scheduled Monument area relating to the castle, the site is clearly located some distance east of the area of the castle and its bailey ditch. Hence further archaeological investigation at the present location should not be viewed as having the potential to jeopardise the integrity of this archaeological sensitive area.

2. Project Aims and Objectives

- To provide further clarification of the nature and extent of surviving archaeological remains on the site.
- To characterise more fully the date range and significance of any archaeological deposits to be affected by the development proposals
- To excavate and record significant archaeological deposits which will be destroyed or damaged by groundworks associated with the construction of the new building,
- To excavate and record significant archaeological deposits whose future integrity may be compromised by groundworks associated with the construction of the new building.
- To assess the impact of piling on adjacent archaeological deposits
- To produce an archive and report of the results.

3. Draft Research Themes

3.1 *Academic research themes*

The results of the initial evaluative works within the existing basements have indicated that the excavation in this area may have the potential to address the following general academic research themes:

- The chronology of Roman and medieval Leicester (the growth of the Roman/post-Roman town, periods of prosperity and decline, artefact dating)
- Land-use, town planning and settlement patterns (early activity, public buildings and public works, character of land-use and changes over time, zones of occupation)
- The built environment (building plans – typology and dating, constructional techniques, building materials, interior decoration)
- Evolving social conditions in Roman/post-Roman Leicester (food and drink, health, wealth and social status)
- Trade and industry (the town and its hinterland, commerce, raw materials, crafts, industries, trading links)

- Periods of transition: The fourth century and later (the decline of Roman Leicester, transition to Anglo-Saxon period); Saxo-Norman Leicester

3.2 ***Specific research themes for the site***

3.2.1 *Defences of the Roman and medieval town*

- Dating – establish a dating sequence for this section of the town defences
- Construction/character – identify the component parts of this section of the defences, and, in conjunction with dating evidence, develop a phased appreciation of their construction and character.
- Post-Roman use – abandonment, utilisation/repair(?), and robbing/dismantling of this section of the defences. Was this stretch of the Roman town wall still maintained after the construction of the castle in c.1068?

3.2.2 *Development of the Iron Age settlement*

- Evidence for the proto-urban, pre-Roman settlement, its extent and character. Did it extend this far south?
- Dating, character, environment, etc.

3.2.3 *Development of the Roman town*

- Evolution of the pre-civitas 'town', beginning with the relationship between the late Iron Age and early Roman settlements. Weere there timber structures in the 1st century AD this far south?
- Establishment of the civitas capital, effect upon the local landscape.
- What effect did the establishment of the defences in the late 2nd century have on pre-existing settlement?

3.2.4 *Medieval town*

- Post-Roman use/disuse, etc.
- Evidence for medieval settlement – burgage plots extending west from the Southgates frontage
- Evidence for industry and other activity

3.2.5 *Effects of piling*

- The physical effects of piles on archaeological deposits. How will the installation of a contiguous pile wall impact upon neighbouring deposits in terms of deformation of strata? How will it affect the moisture content of adjacent deposits?
- Leaching of concrete into adjacent archaeological deposits. What chemical effects will the cast concrete piles have on adjacent archaeological deposits and to what distance from the pile will this occur?

3.3 ***Regional Research Agenda*** (Cooper *et al* 2006)

3.3.1 *Roman* (Taylor 2006 154-159)

- Chronology
- The Late Iron Age Landscape and the strategy and consequences of conquest
- Urbanism – Origins, Growth and Development, Roles
- Communications and new geographies of power

- Artefact production, exchange and consumption
- Ritual, Religion and identity

3.3.2 *Medieval* (Lewis 2006 210-216)

- Urbanism – pre-Norman towns, Towns in the Post Conquest period
- Industry

3.3.3 *Post Medieval* (Courtney 2006, 232-235)

- Urban – survival patterns, development of urban industries; changing social space of towns; material culture of urban classes; towns as trading centres; regional marketing systems
- Industry and communications
- Material Culture

3.4 *Post fieldwork and reporting objectives*

- To create an ordered and fully documented archive to a recognised standard for storage in perpetuity.
- To present the results in sufficient detail to enable an assessment to be made of the archaeological impact of future development proposals without recourse to the site archive.
- To produce a report interpreting the significance of the results in a local, regional and national context to a high academic standard.
- To document the potential impact of contiguous piles on surrounding deposits
- To disseminate the results through publication in an appropriate academic journal.

4 Monitoring and standards

4.1. All work will follow the Institute of Field Archaeologists (IFA) Code of Conduct and adhere to their *Standard and Guidance for Archaeological Excavation and Standard and Guidance for Archaeological Field Evaluations.* The project will also be undertaken in accordance with *Guidelines and Procedures for Archaeological Work in Leicester.*

4.2. Staffing, Recording systems, Health and Safety provisions and Insurance details are provided.

4.3. Unlimited access to monitor the project will be available to both the Client and his representatives, the Planning Archaeologist and English Heritage representatives subject to the health and safety requirements of the site.

4.4. All monitoring shall be carried out in accordance with Institute of Field Archaeologists Guidelines.

4.5. The on-site works will be monitored internally by the ULAS project manager to ensure that project targets are being met and professional standards are being maintained. Provision will be made for external monitoring meetings with The City Archaeologist, representatives of the Planning Authority, English Heritage and the Client.

5 Methodology

5.1 *Monitoring of installation of installation*

An archaeological watching brief will be maintained during the installation of the contiguous piles and the process will be recorded by photographs and description in order that it may be related to the subsequent excavation, analysis and sampling. The archaeologist will also monitor the works to ensure that no unnecessary damage

occurs to buried archaeological remains should any obstructions be presence which may impede the piling. Should such a situation arise, the archaeologist shall liaise with the contractor, client and City Archaeologist to discuss potential ways forward to minimise damage.

5.1 ***Supervised machine stripping***

5.1.1 Following the installation of a contiguous pile wall surrounding the trench, the overburden inside it will be removed by a 360 degree machine (or similar) under the supervision of a senior archaeologist to the top of archaeological levels. Three baulks of undisturbed overburden adjacent to the west, south and east pile walls will be left temporarily in position in order that the sections may be photographed, recorded and sampled for chemical testing (see below). Due to the instability of the strata, baulks will be no deeper than 1m and will be removed after recording/sampling. If it is necessary to excavate the overburden in more than one spit, baulks will be re-established as necessary on the same line.

5.1.2 Large modern features such as pits or service trenches may be emptied in order to further characterise and establish depths of deposits.

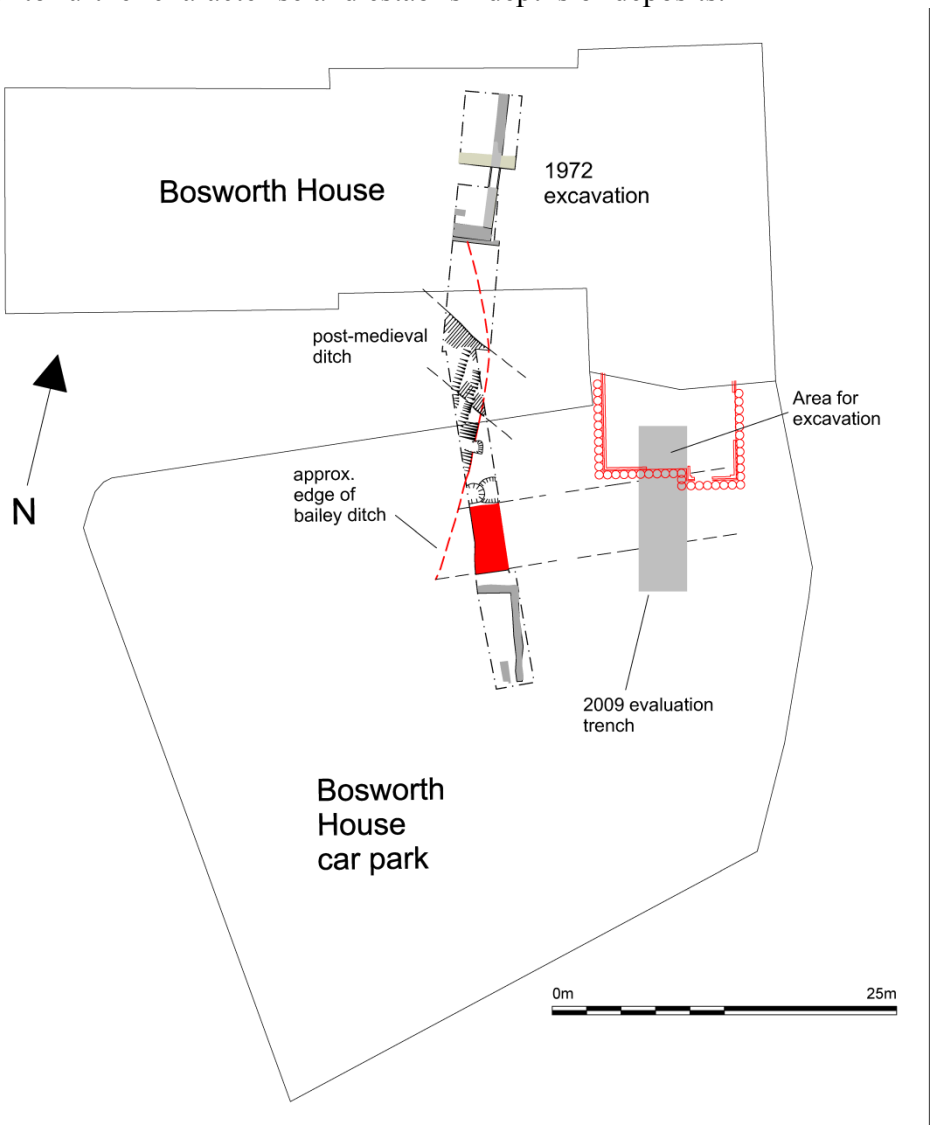

Figure 3 Area of proposed excavation in relation to evaluation trench and 1972 excavation.

5.2 ***Excavation***

5.2.1 Following the initial clean up of the site, including the removal of modern intrusions and the preparation of a plan, hand excavation will proceed to the full depth of proposed formation to address the development impact. The strategy for the excavation of the site as a whole shall be subject to continual review and modification as necessary in the light of emerging archaeological results and any modifications to the proposed foundation strategy.

5.2.2 Baulks will again be established adjacent to the west, east and south pile walls, projecting for a maximum distance of 1.2m to facilitate sampling for chemical testing of the effects of piles. Baulks will be on the same lines as those through the overburden and where possible, will be left in situ to a maximum depth of 1.0m. However, subject to the nature of the stratification (given that the principal objective of the project is to excavate and record archaeological deposits which will be destroyed or damaged) it may be necessary to remove baulks from time to time and then re-establish the lines for subsequent sampling.

5.2.3 All archaeological deposits will be hand excavated, save for larger homogeneous deposits or layers that can be justifiably removed by machine at the discretion of the site director.

5.2.4 Any archaeological deposits located will be planned at 1:20 scale and sample-excavated by hand as appropriate to establish the stratigraphic and chronological sequence. Where possible, modern intrusions will be initially excavated to provide a 'window' through stratified deposits in order to determine their nature, date and depth.

5.2.5 All finds will be retained, except for unstratified material of the 19th century or later. The strategy for the retention or otherwise of specific groups of building materials located on the site will be agreed with the Senior Curator of History and Archaeology, Jewry wall Museum. All plans will be tied into the Ordnance Survey National Grid. Section drawings will be made at a scale of 1:10 of any smaller excavated archaeological features and at 1:20 for large area sections, such as along the edges of the excavation area. All sections will be levelled and tied to the Ordnance Survey Datum. Spot heights will be taken as appropriate.

5.2.6 Archaeological deposits will be recorded using standard ULAS procedure.

5.2.7 Where turf lines are found present, pollen samples may be taken from them for analysis. This will be done in consultation with the ULAS Environmental Specialist. Buried turf lines beneath buried soil horizons may also be analysed for pollen and also potentially soil micromorphological samples will be taken.

5.3 ***Recording Systems***

5.3.1 The ULAS recording manual, fully compatible with the Leicester City Museums archives, will be used as a guide for all recording.

5.3.2. Individual descriptions of all archaeological strata and features excavated will be entered onto prepared pro-forma recording sheets. Archaeological deposits that are exposed but unexcavated will only be assigned context numbers and described where the full feature/deposit is observed.

5.3.3 A site location plan based on the current Ordnance Survey 1:1250 map (reproduced with the permission of the Controller of HMSO) will be prepared. This will be supplemented by a trench plan at 1:200 (or 1:100) which will show the location of the areas investigated in relationship to the investigation area and OS grid.

5.3.4 Some record of the full extent in plan of all archaeological deposits encountered will be made on drawing film, related to the OS grid and be at a scale of

1:10 or 1:20. Sections including the half-sections of individual layers of features will be drawn as appropriate. The OD height of all principal strata and features will be calculated and indicated on the appropriate plans.
5.3.5 An adequate photographic record of the investigations will be prepared. This will include black and white prints and colour transparencies illustrating in both detail and general context the principal features and finds discovered. The photographic record will also include 'working shots' to illustrate more generally the nature of the archaeological operation mounted.
5.3.6. This record will be compiled and fully checked during the course of the excavations. A copy of the ULAS recording manual is lodged with Leicester City Museums Service.

5.4 ***Environmental Sampling***
5.4.1 Where significant archaeological features are subject to excavation, the sampling strategy will include the following:
i. A range of features to represent all feature types, areas and phases will be selected on a judgmental basis. The criteria for selection will be that deposits are datable, well sealed and with little intrusive or residual material.
ii. Any buried soils or well-sealed deposits with concentrations of carbonised material present will be intensively sampled taking a known proportion of the deposit.
iii. Spot samples will be taken where concentrations of environmental remains are located.
iv. Waterlogged remains, if present, will be sampled for pollen, plant macrofossils, insect remains and radiocarbon dating provided that they are uncontaminated and datable. Consultation with the specialist will be undertaken.
5.4.2 Wet sieving with flotation will be carried out using a York Archaeological Trust sieving tank with a 0.5mm mesh and a 0.3mm flotation sieve. The small size mesh will be used initially as flotation of plant remains may be incomplete and some may remain in the residue.
5.4.3 The residue > 0.5mm from the tank will be separated into coarse fractions of over 4mm and fine fractions of > 0.5-4mm. The coarse fractions will be sorted for finds. The fine fractions and flots will be evaluated and prioritised; only those with remains apparent will be sorted. The prioritised flots will not be sorted until the analysis stage when phasing information is available.
5.4.4 Flots will be scanned and plant remains from selected contexts will be identified and further sampling, sieving and sorting targeted towards higher potential deposits.

5.5 Sampling for chemical analysis
5.5.1 A sample of cement will be requested from the contractors.
5.5.2 The baulks described in paragraph 4.22 above will be recorded following normal archaeological practice (section drawing, photograph, context descriptions).
5.5.3 In each baulk, soil samples of 10 grams in size will be taken from each discrete context at distances of 0-5cm, 5-10cm, 15-20cm and 25-30cm from the contiguous piles; positions will be recorded on the section drawings. Tubes will be used for the taking of samples to standardise sample collection.
5.5.4 The baulk will be sampled at several levels where appropriate contexts are found
5.5.5 Compaction of deposits sampled will be estimated, probably using a Dynamic Cone Penetrometer.

5.5.6 The site sampling will be monitored by an academic adviser from the Department of Geology, University of Leicester.
5.5.7 Proposals for scientific analysis of the samples will be formulated upon completion of the fieldwork phase, however it is anticipated that a range of chemical tests will be employed including:

i) XRF Major element component oxide analysis for SiO2, TiO2, Al2O3, Fe2O3, MnO, MgO, CaO, Na2O, K2O, P2O5, Sulphate SO3 and LOI @ 950^{o}C or any other temperature between 750^{o}C and 1400^{o}C
ii) XRF pressed powder pellet trace element analysis for ;-

As, Ba, Ce, Co, Cr, Cs, Cu, Ga, La, Mo, Nb, Nd, Ni, Pb, Rb, Sb, Sc, Se, Sn, Sr, Th, U, V, W, Y, Zn and Zr. Plus if there is need/interest potentially Cd, Ag, Bi & Au although probably not at levels sufficiently low to generate usable information in non-mineralised uncontaminated sections

iii) XRD mineralogical analysis to give quantitative estimates of mineral proportions and allow identification of clay minerals present. The actual clay minerals will have a major effect on the reactivity of the system
iv) pH determination
v) Electrical conductivity

5.5.8 During discussion with the academic scientific advisers (Dept. of Geology, University of Leicester), a number of issues were raised which may have a significant effect on the likelihood of achieving meaningful results from the analysis. These include:
(i) the fact that concrete can take several months to cure, during which time leaching into adjacent deposits may continue. Hence it is possible that no significant changes will be observed due to the short duration of the investigation and the fact that many samples will be taken immediately after the installation of the pile wall.
(ii) in free draining soils chemical traces are likely to be extremely diluted
(iii) the presence of lime mortar in urban deposits
(iv) Propensity for water in Leicester to be alkaline, potentially acting as a break on leaching.
(v) Extent of leaching (both from concrete and water) will depend on the permeability of deposits
In view of these caveats, it is proposed to ensure that a robust sampling strategy is adopted, sufficient to enable, if considered appropriate, setting up a controlled experiment, replicating site conditions in a test pit.

5.6 *Finds and Samples*

5.6.1. The IFA Guidelines for Finds Work will be adhered to.
5.6.2 All antiquities, valuables, objects or remains of archaeological interest, other than articles declared by Coroner's Inquest to be subject to the Treasure Act, discovered in or under the Site during the carrying out of the project by ULAS or during works carried out on the Site by the Client shall be deemed to be the property of ULAS provided that ULAS after due examination of the said Archaeological Discoveries shall transfer ownership of all Archaeological Discoveries unconditionally to Leicester City Museums Service for storage in perpetuity.
5.6.3 Before commencing work on the site, a Museums accession number will be obtained from the Keeper of Archaeology, Jewry Wall Museum, and Leicester City Council's terms and conditions for deposition of the finds and archive will be adhered to.

5.6.4 During the excavations different sampling strategies may be employed according to the perceived importance of the strata under investigation. Close attention will always be given to sampling for date, structure and environment.
5.6.5 All identified finds and artefacts are to be retained, although certain classes of building material will, in some circumstances, be discarded after recording with the approval of the Planning Archaeologist. The IFA Guidelines for Finds Work will be adhered to.
5.6.6 All finds and samples will be treated in a proper manner. Where appropriate they will be cleaned, marked and receive remedial conservation in accordance with recognised best-practice. This will include the Site code number, finds number and context number. Bulk finds will be bagged in clear self sealing plastic bags, again marked with Site code, finds and context numbers and boxed by material in standard storage boxes (340mm x 270mm x 195mm). All metal objects will be x-rayed and then selected for conservation. All materials will be fully labelled, catalogued and stored in appropriate containers

6. Report and archive

6.1 A report will be produced within 6 months of the completion of the archaeological excavation. This report will be in A4 format and copies will be dispatched to the Client (2 copies), Leicester City Museums (2 copies), Leicester City Archaeologist (1 copy), Leicester City Historic Environment record (1 copy), English Heritage (2 copies) and the planning authority (1 copy).
6.2 The assessment report will include consideration of:-

- The aims and methods adopted in the course of the evaluation.
- The nature, location, extent, date, significance and quality of any structural, artefactual and environmental material uncovered.
- The anticipated degree of survival of archaeological deposits.
- The anticipated archaeological impact of the current proposals.
- Appropriate illustrative material including maps, plans, sections, drawings and photographs.
- Summary.
- The location and size of the archive.
- A quantitative and qualitative assessment of the potential of the archive for further analysis leading to full publication, following guidelines laid down in *Management of Archaeological Projects* (English Heritage).

6.3 A full copy of the archive as defined in *The Guidelines For The Preparation Of Excavation Archives For Long-Term Storage* (UKIC 1990), and *Standards In The Museum: Care Of Archaeological Collections* (MGC 1992) and *Guidelines for the Preparation of Site Archives and Assessments for all Finds* (other than fired clay objects) (Roman Finds Group and Finds Research Group AD 700-1700 1993) will usually be presented to within six months of the completion of fieldwork. This archive will include all written, drawn and photographic records relating directly to the investigations undertaken.
6.4 ULAS is participating in the Archaeology Data Service and National Monuments Record OASIS project and will complete the appropriate OASIS forms upon completion.

7 Publication and Dissemination of Results

7.1 It is possible that the results of the archaeological excavation at the site will be published in *Transactions of the Leicestershire Archaeological and Historical Society.*

7.2 A summary of the work will be submitted initially to the *Transactions of the Leicestershire Archaeological and Historical Society* for publication in 'Archaeology and Leicestershire 2010'.

8. Copyright

8.1 The copyright of all original finished documents shall remain vested in ULAS and ULAS will be entitled as of right to publish any material in any form produced as a result of its investigations.

9 Acknowledgement and Publicity

9.1 ULAS shall acknowledge the contribution of the Client in any displays, broadcasts or publications relating to the site or in which the report may be included.

9.2 ULAS and the Client shall each ensure that a senior employee shall be responsible for dealing with any enquiries received from press, television and any other broadcasting media and members of the public. All enquiries made to ULAS shall be directed to the Client for comment.

9.3 University of Leicester Archaeological Services is the local archaeological unit for Leicester and the counties of Leicestershire and Rutland. ULAS is heavily committed to disseminating archaeological information to the general public.

9.4 ULAS often contributes articles to the local county archaeological journal, T*ransactions of the Leicestershire Archaeological and Historical Society*.

9.5 Archaeological sites, excavated by ULAS, have often received and encouraged media coverage, as seen by recent BBC Radio Leicester interviews and television coverage during the St. Nicholas Place evaluation, Radio Leicester interviews regarding the recent Cossington barrow excavation and Abbey Park evaluation. Articles have regularly appeared in the Leicester Mercury regarding ULAS archaeological work, such as at Leicester Abbey, 9 St. Nicholas Place, Husbands Bosworth, Huncote and Hemington Quarry. Within the last few years, world wide media coverage has occurred after Palaeolithic findings at Glaston in Rutland and the discovery of the east Leicestershire hoard. It could be seen as good publicity for both the Client and ULAS for such media attention to be encouraged during the archaeological evaluation.

10. Timetable

- 10.1 It is estimated that a period of approximately 4-6 weeks with a team of 3 archaeologists will be required to excavate the area of basements using the methodologies laid out in this design specification.
- 10.2 The work is scheduled to commence in April 2010.
-

11. Health and Safety

11.1 ULAS is covered by and adheres to the University of Leicester Archaeological Services Health and Safety Policy and Health and Safety manual with appropriate risks assessments for all archaeological work. A draft Health and Safety statement for this project is attached as Appendix 1. The relevant Health and Safety Executive guidelines will be adhered to as appropriate. The HSE has determined that archaeological investigations are exempt from CDM regulations.

11.2 A Risks assessment form will be completed prior to work commencing on-site, and updated as necessary during the site works.

11.3 The location of the majority of services on the site is known. Clarification of the location of services and excavation areas will need to be made.

11.4 The site will be enclosed with Heras fencing.

12 Insurance

12.1 All employees, consultants and volunteers are covered by the University of Leicester public liability insurance, £20m cover with St. Paul Travellers (policy no. UCPOP3651237). Professional Indemnity Insurance is with Lloyds Underwriters 50% and Brit Insurance 50%, £10m cover (policy no. PUNIO3605). Employer's Liability Insurance is with St. Paul Travellers, cover £10m (policy no. UCPOP3651237).

13. Monitoring arrangements

13.1 Unlimited access to monitor the archaeological project will be available to both the Client and his representatives and the Planning Archaeologist subject to the health and safety requirements of the site. At least one week's notice will be given to the City Archaeologist before the commencement of the archaeological excavation in order that monitoring arrangements can be made.

13.2 All monitoring shall be carried out in accordance with the IFA *Standard and Guidance for Archaeological Field Evaluations.*

13.3 Internal monitoring will be carried out by the ULAS project manager.

14. Contingencies and unforeseen circumstances

14.1 In the event that archaeological discoveries of such quality or significance beyond that which could be anticipated by the evaluation stage of works, are made during the excavation, ULAS shall inform the site agent/project manager, the City Archaeologist and Planning Authority and prepare a short written statement with plan detailing the archaeological evidence. Following assessment of the archaeological remains by the City Archaeologist, the Archaeological Contractor shall, if required, implement on behalf of the client a contingency scheme for excavation of the affected archaeological deposits.

15 Bibliography

Buckley, R. J. and Lucas, J., 1987 *Leicester Town Defences Excavations 1958-74* Leicestershire Museums, Art Galleries and Records Service

Kipling, R., *An Archaeological Evaluation on Land to the south of Bosworth House, Southgates, Leicester [NGR SK 583 041]* Unpub. ULAS Report 2010-004

Meek, J., 2001*An Archaeological Desk Based Assessment of the DMU Leicester City Campus Developments, Leicester (centred on NGR SK 583 040)* ULAS Report 2001-164

Appendix 1

The Project team

Project Manager: Director, ULAS

Richard Buckley BA MIFA FSA

BA (Hons) Archaeology University of Durham 1979; Hon Museums Research Fellow Leicester University (1992-3), Hon Research Fellow De Montfort University (1994); MIFA, FSA

Richard Buckley was a Field Officer with Leicestershire Archaeological Unit from 1980-1995, and formed ULAS with Patrick Clay in 1995. Between 1980 an 1989 he worked mainly in the field as director/asst. director of a number of excavations of various periods, and co-directed the Shires Excavations, a major urban project in Leicester. During this period he also carried out post-excavation analysis on Leicester urban backlog excavation projects and on finds such as Roman painted wall plaster, Roman coins and medieval roofing furniture. His publications include *Leicester Town Defences* (with J. Lucas, 1987), *Leicester Castle Hall* (with N.W. Alcock, 1987) and *Roman and Medieval Occupation in Causeway Lane, Leicester* (with A. Connor 1999) along with a number of interims and notes in *Transactions of the Leicestershire Archaeological and Historical Society,* a journal which he has edited since 1990. He has also written two articles on the archaeology of Leicester abbey, published in 2006.With the advent of PPG16, his role changed to that of Project Manager, mainly of urban projects from initial desk-study through the stages of evaluation, excavation and post-excavation. The sites managed have varied in scale, the largest being the Causeway Lane excavation in 1991 (team of 50). He has also been involved in survey, interpretation, evaluation and recording of historic buildings through PPG15 legislation, and has attended an English Heritage one-week master class on the Conservation and Recording of Historic Buildings (1996). As both a consultant and contractor, he has been a member of the project team for two major schemes for the display and interpretation of Scheduled Ancient Monuments - Leicester Abbey and Leicester Castle. He has also acted as a consultant and expert witness for clients at two public enquiries. He is currently managing a number of large-scale urban projects in the City of Leicester.

Site Director:
Dr Roger Kipling BA MA PhD
Field Officer

After gaining an HND in Practical Archaeology at the Dorset Institute of Archaeology in 1981, Roger worked throughout the 1980s with archaeological field units in Hampshire, principally on multi-period excavations in Winchester and Southampton, and in Lincolnshire as a site photographer and supervisor. He has been based at the University of Leicester since 1991 when he commenced a BA (Hons.) degree in 'Archaeology', following which he gained an MA (with a distinction) in 'Landscape Studies'. In April 2000 he completed a Doctoral Research Studentship on the subject of urban development in England, Gaul, Ireland and Scandinavia between c.AD 300-1050. Throughout this period he also undertook supervision of teams of Birmingham and Leicester undergraduates on archaeological fieldwork projects in Britain, France and Italy.

Roger joined ULAS full-time in 2000, subsequently undertaking a wide range of urban and rural archaeological projects across the East Midlands, since 2003 in the capacity of Field Officer. Most recently, his special interest in urban archaeology resulted in his direction of significant excavations at St. Nicholas Place and Bath Lane in Leicester, the former constituting one of the largest excavation projects undertaken in the city for the last thirty years. Desk-based projects have included joint authorship of the project design for the Urban Archaeological Database (UAD) for Leicester, jointly funded by English Heritage and Leicester City Council, and he is currently involved in the preparation of a number of backlog excavations from the city for publication as part of the Highcross post-excavation project.

Finds Officer: Roman Pottery
Nick Cooper BA (University of Leicester)
Nick Cooper took his degree at Leicester in 1984, followed by a graduate diploma in Post-Excavation Studies in 1985. Since then he has been a Research Assistant here working on Roman post-excavation projects. Since 1997 he has been Finds Officer for ULAS and continues to teach for the School on both undergraduate and postgraduate courses. His specialisms are in Roman pottery and smallfinds and his research interests include the Romanization of material culture and the Roman to Anglo-Saxon transition. Currently he is co-ordinator of the East Midlands Archaeological Research Framework project.

Saxon and Medieval Pottery Consultant
Deborah Sawday B.A. Dip.Ed
Debbie Sawday has been working on medieval pottery for the last twenty years and has a particular expertise in local small scale pottery industries in the East Midlands. She has considerable knowledge of the eastern counties industries including Bourne, Lincoln and Stamford. She has worked on many large urban assemblages from Leicester, including the Forum sites (A302.1971 and A295.1973), The Shires excavations (A39.1988 and A40.1988) and has co-authored a substantial specialist report on the Post Roman pottery from the Causeway Lane site (With S. Davies, 1999). She has published widely on a ceramic theme, and also produced the successful popular account of the Shires excavations - *Peepholes to the Past*.
Debbie Sawday has been working on medieval pottery for the last twenty years and has a particular expertise in local small scale pottery industries in the East Midlands.

Environmental: Plant remains
Angela Monckton BSc(Hons) Botany (University of Leeds)
Leicester University Extra Mural Advanced Certificate in Archaeology.
AIFA (Associate Member of the Institute of Field Archaeologists)
A.E.A Member of the Association of Environmental Archaeologists
Angela began work in field archaeology in 1985, she worked on various excavations throughout Leicestershire in various roles, including supervisor and site environmentalist. From 1989 she specialised in the environmental aspects of archaeological excavation and was Environmental Supervisor on a number of sites including the major urban excavations at the Shires and Causeway Lane in the centre of Leicester. Angela has a number of current roles, these include her main role as Unit Environmentalist which is to co-ordinate the sampling and processing strategies for sites and to make a contribution of her specialist knowledge to all the stages of excavation and post-excavation, including the preparation of site research aims, assessment reports and aims for analysis. She is also working towards the publication of the environmental work for a number of sites, including the Shires and Causeway Lane, as part of this work she co-ordinates reports from external environmental specialists, as well as contributing reports on her own specialist knowledge of carbonised plant remains and land and marine molluscs. Angela has published in Transactions of the Leicestershire Archaeological and Historical Society and has a number of reports pending publication.

Environmental: animal bone

Jennifer Browning BA (Hons) Archaeology (University of Sheffield) 1994, MA (Post Excavation Studies) University of Leicester
Jennifer has over five years field experience and has worked for Carlisle Archaeological Unit, University of Durham, Nottingham City Museums, University of Sienna and the Crickley Hill project before joining ULAS in 1996. She has directed evaluations and numerous watching briefs and has a particular expertise in animal bones. She also has experience in geophysical survey, EDM survey and PC based data processing software. Analysis of the animal bone would be supervised by Dr Annie Grant BA, MA, Ph.D, FSA, a leading expert on animal bones having produced major reports on nationally important assemblages notably Danebury Iron Age hillfort.

Academic Advisers

Dr Neil Christie
School of Archaeology and Ancient History, University of Leicester

Reader in Archaeology
B.A., Ph.D. (Newcastle)
Prior to joining the Archaeology and Ancient History team at the University of Leicester way back in 1992, I was both undergraduate and doctoral student in Archaeology at Newcastle Upon Tyne; subsequently I had a Rome Scholarship at the British School at Rome and then was employed there to prepare a major excavation report (Santa Cornelia). I returned to Newcastle as Sir James Knott Fellow, and then held a British Academy Postdoctoral Research fellowship with the Institute of Archaeology, Oxford.

Dr Jan Zalasiewicz
Dept of Geology, University of Leicester
Senior Lecturer
Palaeobiology Group

Research interests
Mudrock processes, including element fractionation during diagenesis and low-grade metamorphism.
Early Palaeozoic and Quaternary stratigraphy and sedimentology; graptolite morphology and distribution.
Chair, Stratigraphy Commission of The Geological Society

Appendix 2:
ULAS Staff structure
Director
Professor Colin Haselgrove BSc (Sussex), MA, PhD (Cantab) FBA FSA FSAS
Directors
Patrick Clay BA, Phd, FSA, MIFA
Richard Buckley BA, MIFA, FSA
Project Officers
Matthew Beamish BA
Lynden Cooper BA
Neil Finn
Susan Ripper BA
Vicki Priest BA
John Thomas BA

Field Officers
Tim Higgins
Jon Coward
Wayne Jarvis BA MA
Roger Kipling BA, MA, PhD, AIFA
Jennifer Browning BA, MA
Sophie Clark BA

Finds Specialists
Deborah Sawday BA DipEd (post-Roman pottery and tile)
Nicholas Cooper BA, MA FSA (Roman pottery and small finds)
Environmental Specialist
Angela Monckton BSc, AIFA
Project Academic adviser
Dr Neil Christie, School of archaeology & Ancient History

Appendix 3

Draft Project Health and Safety Policy Statement

Bosworth house, Southgates, Leicester

NGR ***SK 583041***

Leicester Castle, Scheduled Ancient Monument No. 17127

Client: ***De Montfort University***

Planning Authority: ***Leicester City Council***

1. Nature of the work

1.1. The work will involve machine excavation by wheeled mechanical excavator during daylight hours to reveal underlying archaeological deposits. The trench will be shored with walls of contiguous piles before commencement of machine excavation. Spoil will be stockpiled no less than 1.5 m from the edge of the excavation. Remaining works will involve the examination of the exposed surface with hand tools (shovels, trowels etc) and excavation of archaeological features. Deeper features will be fenced with lamp irons and hazard tape, and shored where necessary. Two-three staff will be used on the evaluation.

1.2. All work will adhere to the University of Leicester Health and Safety Policy and follow the guidance in the Standing Committee of Archaeological Unit Managers manual, as revised in 1997, together with the following relevant Health and Safety guidelines.

HSE Construction Information Sheet CS8 Safety in excavations.

HSE Industry Advisory leaflet IND (G)143 (L): Getting to grips with manual handling.

HSE Industry Advisory leaflet IND (G)145 (L): Watch Your back.

CIRIA R97 Trenching practice.

CIRIA TN95 Proprietary Trench Support Systems.

HSE Guidance Note HS(G) 47 Avoiding danger to underground services. HSE Guidance Note GS7 Accidents to children on construction sites

2. Risks Assessment

2.1. Working on an excavation site

Precautions. Spoil will be kept 1.5m away from the edge of the excavated area to prevent falls of loose debris. Loose spoil heaps will not be walked on. Protective footwear and hard hats will be worn at all times. A member of staff qualified in First Aid will be present at all times. First aid kit to be kept in site accommodation. Mobile phone to be kept on site in case of emergency.

Staff welfare will be catered for by the provision of rooms and toilets in the adjacent Bosworth House building.

A ULAS project risk assessment form will be completed on-site prior to the commencement of the evaluation.

2.2. Working with plant

Precautions. Archaeologists experienced in working with machines will supervise topsoil stripping at all times. Hard hats, protective footwear and hazard jackets will be worn at all times. Machine driver to be suitably qualified and insured. If services or wells are encountered machining will be halted until extent has been established by hand excavation or areas where it is safe to machine have been established. Machines will normally be supervised by two archaeologists. Particular attention will be paid to ensuring that the machinery does not work too close to the edge. A barrow hoist may be used to remove spoil for the site.

2.3. Working within areas prone to waterlogging

If waterlogging occurs on site preventing work continuing it is proposed to excavate a sump, suitably fenced and clearly marked to enable the water to drain away. If this is insufficient a pump will be used. The sump will be covered when not in use and backfilled if no longer required. Protective clothing will be worn at all times and precautions taken to prevent contact with stagnant water which may carry Vialls disease or similar.

2.4. Working with chemicals

If chemicals are used to conserve or help lift archaeological material these will only be used by qualified personnel with protective clothing (i.e a trained conservator) and will be removed from site immediately after use.

2.5. Other risks

Precautions. If there is any suspicion of unforeseen hazards being encountered e.g. chemical contaminants, unexploded bombs, hazardous gases, work will cease immediately. The client and relevant public authorities will be informed immediately.

2.6. Other constraints

No other constraints are recognised over the nature of the soil, water, type of excavation, proximity of structures, sources of vibration and contamination.

Contact Details

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University of Leicester
Archaeological Services

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