

A ROMAN CEMETERY IN CLARENCE STREET, LEICESTER

Rhodri Gardner

*with contributions from Ian Baxter, Nina Crummy, Andrew Fawcett, Phil Mills
and Tony Waldron. Illustrations by Amy Goldsmith.*

The Clarence Street site lies *c.* 300m east of the Roman town defences in an area identified with Roman cemetery activity. Excavation revealed stratified archaeological deposits dating from the late 1st/early 2nd century to the medieval period. Early Roman activity includes domestic and industrial components. An inhumation cemetery was established in the early 3rd century and this site is located on its eastern boundary. A total of 91 graves were excavated. The cemetery was characterised by a consistent burial rite that involved west-east orientation of supine inhumations, lacking grave goods, often in nailed timber coffins.

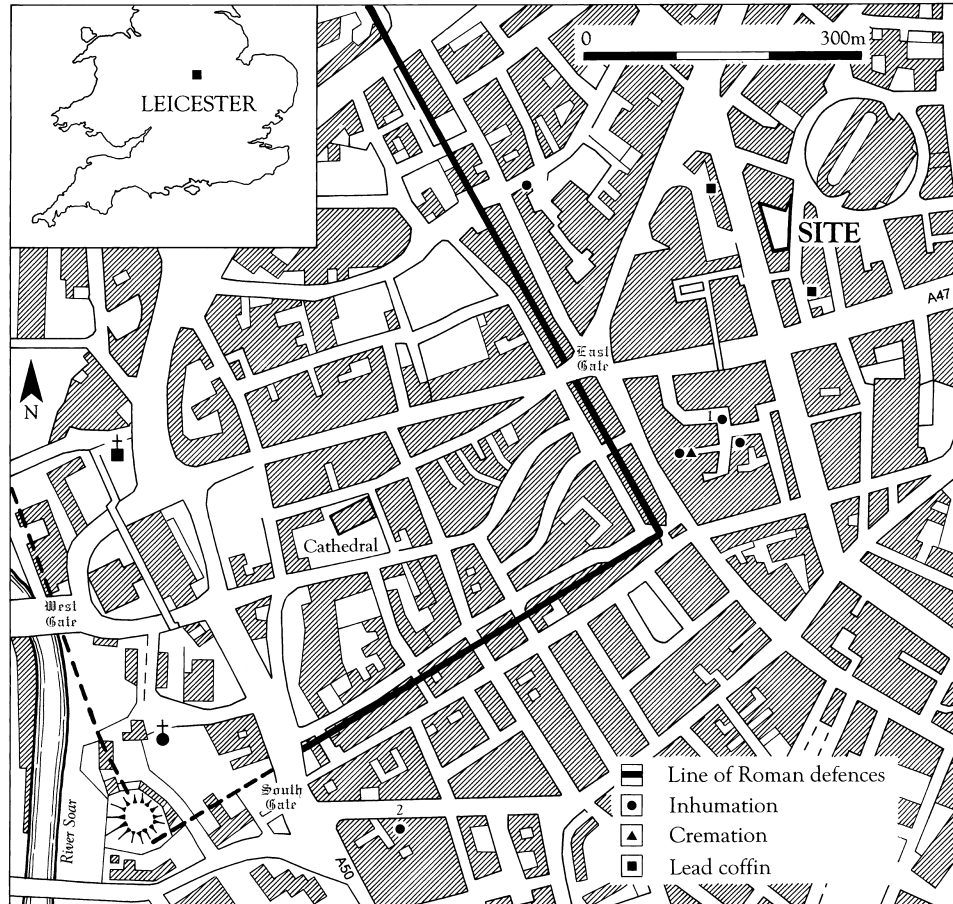
INTRODUCTION

The proposed redevelopment of Wilkinson's store (Charles Street) led to a series of archaeological investigations commissioned by Wells Associates on behalf of Fara Estates as part of a planning condition required by the Archaeology Section, Leicester Museums Service (LCMS). These investigations comprised a desk-based assessment (Prosser 2000) and an evaluation (Doel 2000), which confirmed the presence of Roman features, including inhumation burials. Subsequently, the LCMS Archaeology Section issued a brief for excavation which was followed by a specification prepared by Hertfordshire Archaeological Trust (HAT, now Archaeological Solutions Ltd.).

The excavation was undertaken in May and June 2001. It revealed two principal phases of Roman activity, the second comprising 58 graves containing 62 skeletons (Crank 2001). The remains of several inhumations extended beyond the limits of the excavation and could not be recovered given the requirements of health and safety. As a result LCMS requested that, in accordance with the initial brief, all significant remains be recorded. A second phase of excavation was undertaken in October 2001 (O'Brien & Crank 2001) and revealed 33 further graves.

Site location, geology and topography

The site is located *c.* 300m east of the projected line of the Roman town's eastern defences (illus. 1) in an area where comparatively little archaeological fieldwork has been carried out. It lies in a block delineated by the four modern streets of Charles Street to the west, Clarence Street to the east, Kildare Street to the south and Lower Hill Street to the north, covering approximately 1300m² (illus. 2). The natural subsoil is variable but is predominantly yellowish-red sand with



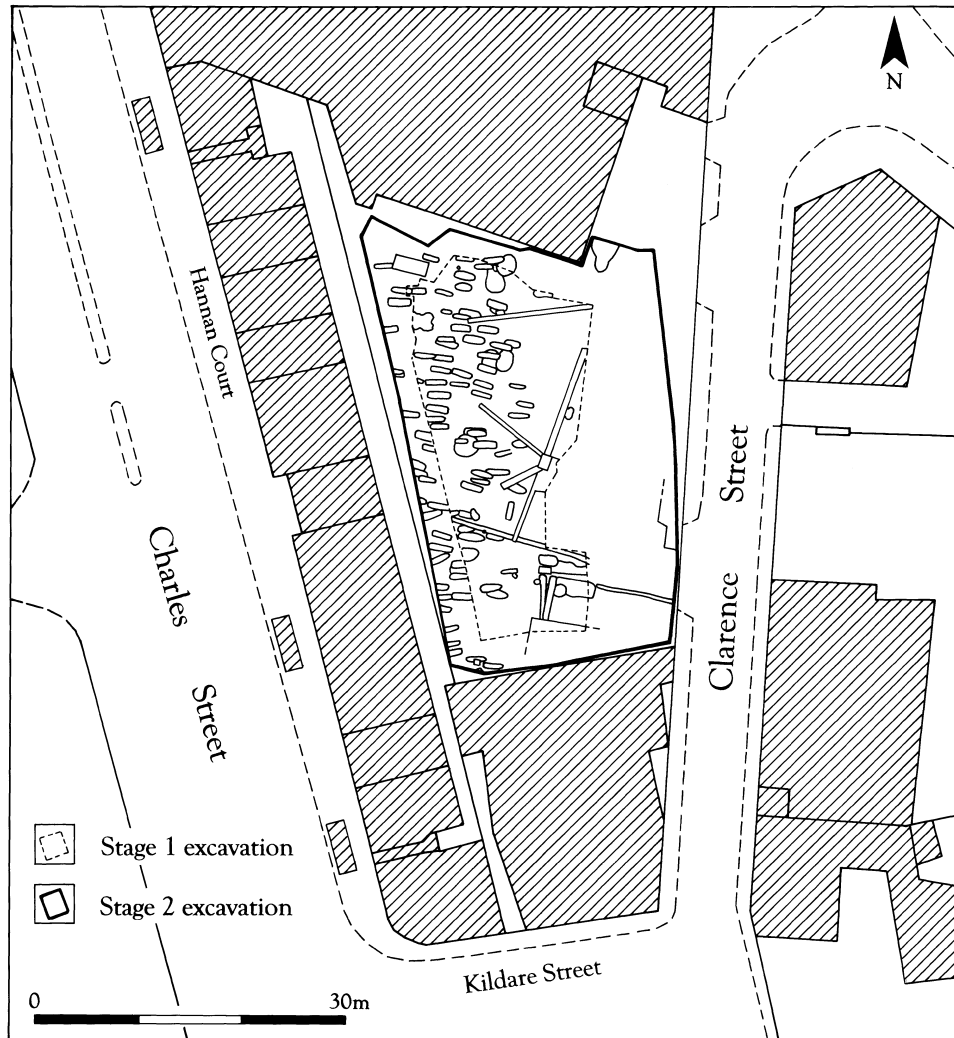
1. Site location plan showing relevant sites in the vicinity.

1. Haymarket Towers site
2. Newarke Street site

occasional patches of yellowish-brown silty clay and pockets of pebbles. Substantial modern disturbance was evident and overburden derived from the demolition of Victorian housing occurred up to 0.80m below ground level. Where truncation due to cellaring did not destroy deposits a buried, probably medieval, cultivation soil was observed in a layer up to 0.30m thick. This sealed archaeological features and overlay the natural subsoil.

Archaeological background

The initial urban occupation of Leicester dates to late 1st century B.C., with a small Iron Age settlement on the west bank of the river Soar. Following the Roman conquest, limited evidence suggests that a small military installation was established



2. Detailed site location plan showing the limits of stages 1 and 2 of the excavation.

to control the river crossing outside the later west gate (Clay & Pollard 1994, 46). The Roman town gradually expanded to the east. A street grid appears to have been formalised in the early 2nd century. The town was probably established as the *civitas* capital of *Ratae Coritanorum* at this time (Connor & Buckley 1999, 6). A substantial programme of public and private building was undertaken in the middle and later 2nd century, including the baths complex at Jewry Wall and the forum and basilica complex. At the end of the 2nd or perhaps in the early 3rd century the town defences were constructed, initially in the form of a rampart and ditch with a wall probably added in the later 3rd century (Buckley & Lucas 1987).

The Clarence Street site lies beyond the defences (illus. 1). Extra mural activity

in Roman towns is typically characterised by villas, farmsteads, roads, and cemeteries. Previous discoveries in the vicinity of the Clarence Street site clearly indicate the presence of a cemetery. The nature and reliability of this evidence is variable, often being based on chance finds or antiquarian observations (Prosser 2000). Roman cemeteries are known to have existed outside all four gates although excavation has tended to reveal only a relatively small sample of burials, as at Free Lane (Lucas 1991) or Newarke Street (Cooper 1996). The Clarence Street excavations therefore presented an opportunity to examine one of Leicester's Roman cemeteries in more detail.

Evidence for 4th century activity is generally sparse. Some decline in urban occupation has been suggested due to evidence for the illegal extraction of silver from coins (Wacher 1974, 353) and for street metalling being dug into at Redcross Street (Clay & Pollard 1994, 48). Activity in the north-eastern quarter of the town is almost entirely represented by stray finds from the 4th century.

Evidence for the Saxon period is even sparser. The only early Saxon occupation occurs some 250m outside the southern wall. True urban occupation at this time is, as yet, unknown. Similarly, despite becoming a Mercian bishopric around A.D. 670, there is little evidence of Late Saxon settlement in or around the town.

Major redevelopment and stone building occurred in the 12th century, accompanied by some robbing of earlier Roman structures. Intensive backyard activity and deposits of 'garden soils' have been recorded in the north-eastern quarter of the medieval town at Causeway Lane (Connor & Buckley 1999, 8).

Site methodology

The evaluation revealed significant remains in the west of the site but not in the east. The initial excavation area (stage 1) was agreed upon following the findings of the evaluation. This excavation area was extended to the west (stage 2) when significant remains were found to beyond the western limits of the initial excavation area (illus. 2 & 3). Mechanical soil stripping was undertaken under close archaeological supervision, followed by manual cleaning of the exposed archaeological features. Subsequent excavation was undertaken by hand and deposits were recorded using a single context recording system, drawn to scale and photographed as appropriate. A metal detector was used to check excavated spoil for finds throughout the excavation.

THE EXCAVATION

Rhodri Gardner

Phase 1: Second century A.D.

Summary Evidence of extra-mural occupation was found including an abandoned well and a number of pits. Several pits indicate that there was some small-scale industrial activity as well as domestic refuse disposal (illus. 3).

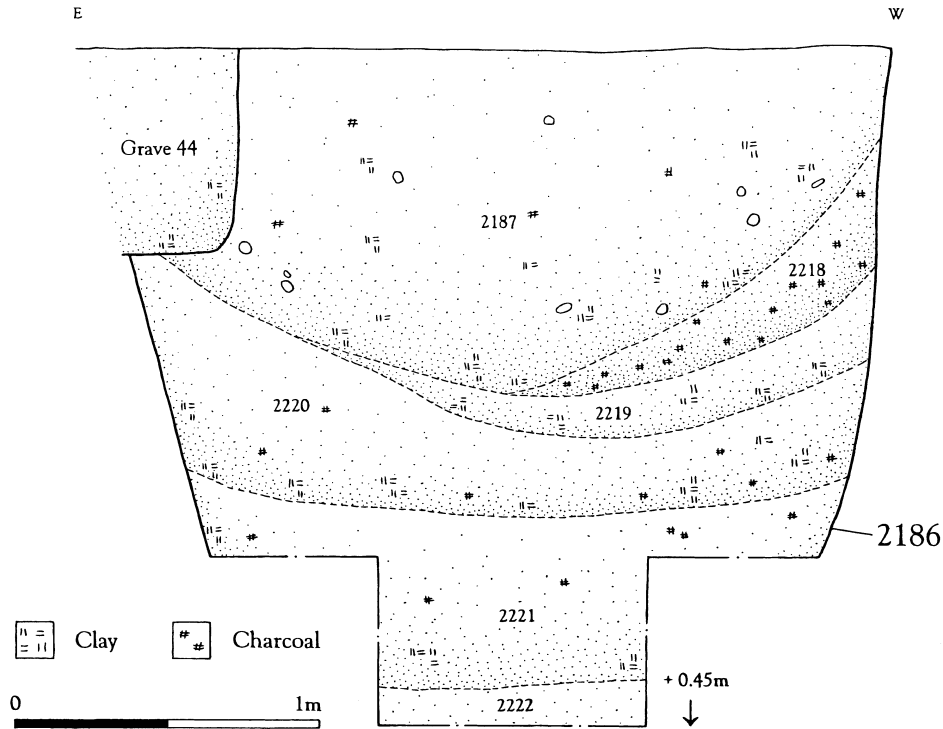
The most substantial feature in this phase was a large sub-circular pit [2186] (illus. 4). The uppermost fill was cut by four graves. Health and safety

A ROMAN CEMETERY IN CLARENCE STREET, LEICESTER



3. Site plan.

32 RHODRI GARDNER



4. Section through well 2186.

requirements prevented full excavation and the final depth of the feature (4.65m+) was determined by auger. It contained six distinct fills, although only two contained significant dateable material, the others representing gradual silting. It is interpreted as a well, which went out of use in the early 2nd century, when it was periodically back-filled with rubbish. Similar examples of early Roman wells back-filled in the 2nd century are known from Causeway Lane (Connor & Buckley 1999, 56). This feature appeared to delineate a boundary between two distinct types of Phase 1 activity.

To the north of the well, Phase 1 was characterised by largely isolated pits although some inter-cutting was recorded. Two features, [2018] and [2020], were shallow (<0.15m) and contained no finds. The remaining features were all substantial (average depth 0.77m) and yielded significant quantities of finds, particularly early to mid 2nd century pottery, animal bone and tile. All except [2360] contained a single fill. Three of its six fills contained dateable finds, interspersed with deposits indicating periodic abandonment and silting. Three of the pits, [2193], [2360] and [2006], contained animal bone assemblages typical of industrial activity such as horn working (see Baxter, below). Pit [2008] is notable as the earliest of an intercutting group of three pits in the central northern part of the site which contained the earliest dated find from the excavation, a pre-Flavian and possibly even pre-Conquest brooch (see Crummy, below).

To the south of the well, Phase 1 activity is dominated by a complex of intercutting features in the south-eastern corner of the excavation. Two isolated pits, [2210] and [2202], yielded no finds but have been tentatively allocated to this phase. In the southeast corner pit [2245] was heavily truncated by two later ditches and did not produce any finds. Feature [2229] was a short ditch, partly truncated by modern activity. It was aligned E–W and contained pottery dated from A.D. 120 to the later 2nd century. The western edge of [2229] was cut by pit [2223] which was sub-rectangular in plan and *c.* 1.40m deep. This had five fills, most of which were sterile and could represent periods of abandonment and silting. However, the uppermost fill was rich in dateable finds indicating disuse by the early to mid 2nd century. Immediately to the south of [2229] another broad linear feature [2243] of similar alignment and depth was revealed. It contained a small amount of animal bone and late 1st to mid 2nd century pottery. Feature [2243] was cut by a pit [2241], which was shallow and contained no finds, and a ditch [2237]. This ditch was shallow and contained a single fill yielding late 1st to mid 2nd century pottery. A second north–south aligned gully [2235] was located immediately west of [2237] although this was shallower (0.12m deep) and yielded no dateable finds. The final feature in this component of Phase 1 was a small rounded pit [2239] which was again very shallow and lacked dateable finds.

Gully [2368] was aligned ESE–WNW and although it did not yield any finds and superficially may appear to be related to the Phase 3 ditch [2174] (see below).

Feature	Depth (m)	Fill (s)	Finds
Pit 2006	0.72	2007	Pottery, tile, animal bone
Pit 2008	0.61	2009	Pottery, tile, animal bone
Pit 2010	0.65	2011	Pottery
Pit 2018	0.12	2019	–
Pit 2020	0.05	2021	–
Pit 2147	0.60	2148	Pottery, tile, animal bone
Pit 2149	0.40	2150	Pottery, animal bone
Well 2186	2.45+	2222, 2221, 2220, 2219, 2218, 2217, 2187	Pottery, tile animal bone
Pit 2193	0.90	2194	Pottery, tile, animal bone
Pit 2202	0.22	2203	Animal bone
Pit 2210	0.48	2211	–
Pit 2223	1.40	2224, 2225, 2226, 2227, 2228	Pottery, tile, animal bone
Ditch 2229	0.44	2230	Pottery
Ditch 2235	0.12	2236	–
Ditch 2237	0.22	2238	Pottery, brick, animal bone
Pit 2239	0.13	2240	Pottery
Pit 2241	0.10	2242	–
?Ditch 2243	0.34	2244	Pottery, animal bone
Pit 2245	0.20	2246	–
Pit 2360	1.50	2361, 2362, 2363, 2364, 2365, 2366, 2367	Pottery, brick/tile, animal bone

Table 1. Phase 1 feature data.

it has been assigned to this phase on the basis of its fill. This was a sterile, sandy silt, which contrasts sharply with that of ditch [2174], which contained frequent inclusions of rounded pebbles.

Phase 2: Mid 3rd to mid 4th century (illus. 3 & 5–15)

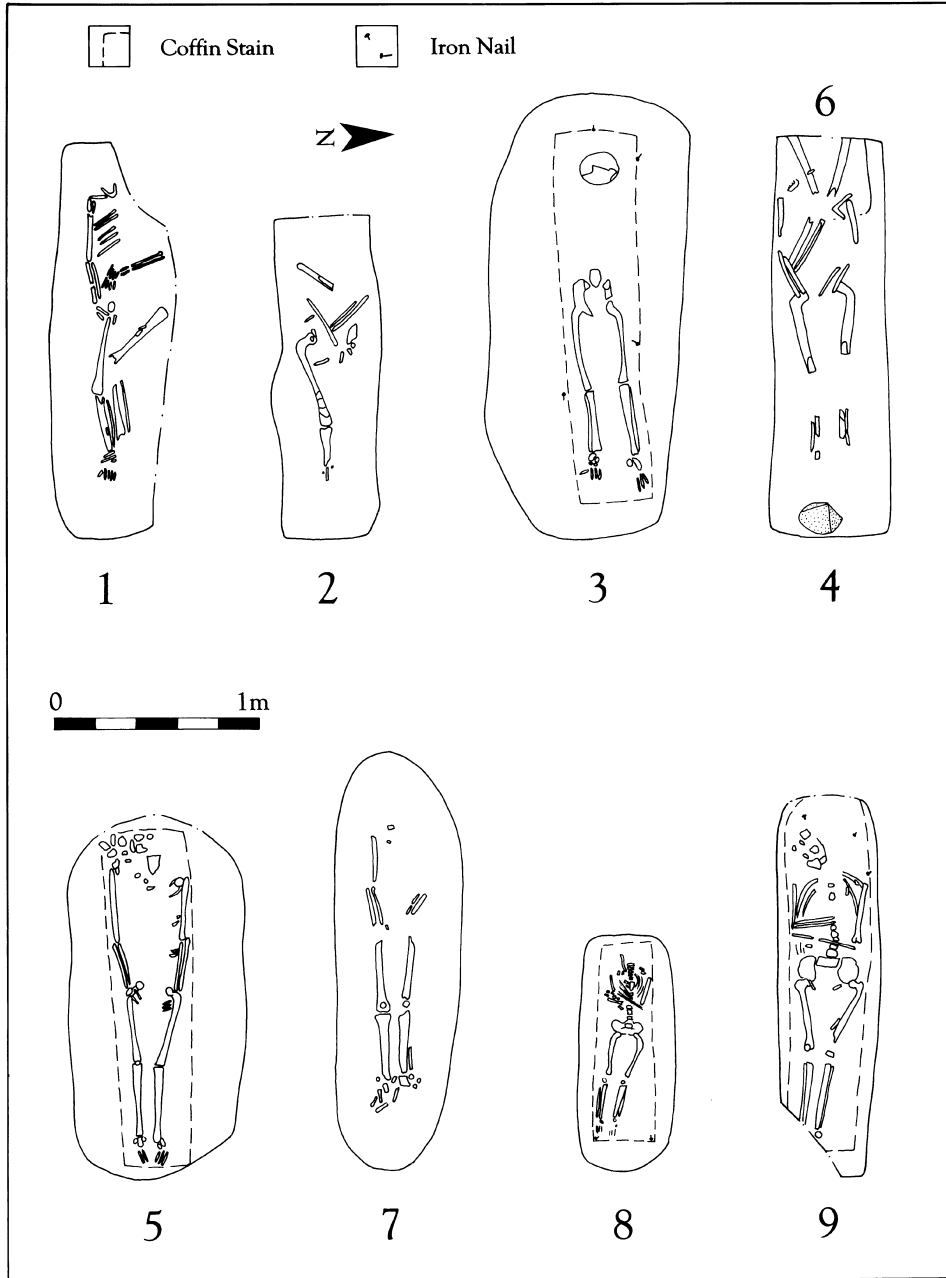
Summary Part of Leicester's eastern Roman cemetery, comprising 91 inhumations and part of the eastern boundary of the cemetery has been identified.

The inhumations recorded at Clarence Street are the most significant features encountered in terms of regional and national research priorities. Descriptive detail is contained in the grave inventory (Appendix 1) and the illustrations (illus. 5–15). Each grave is numbered individually, with the cut number following in square brackets and the skeleton number in parentheses to facilitate comparison with the osteology report. In all cases, the orientation of the skeleton accorded with that of the grave, so only the grave orientations are described. Where orientation is mentioned it follows the convention of Viner and Leach (1982, 76), so that a grave described as west–east indicates that the head is to the west (the first cardinal point of the pair denoting the position of the head). A uniform position was noted for all the recorded skeletons: supine and extended with arms either placed alongside the body or occasionally flexed, with the hands over the thorax or abdomen. There was limited evidence for the deliberate deposition of grave goods, with only two graves containing poorly preserved fragments of copper alloy objects. No 'plaster' burials were recorded, and the few stone objects recovered from graves are discussed below.

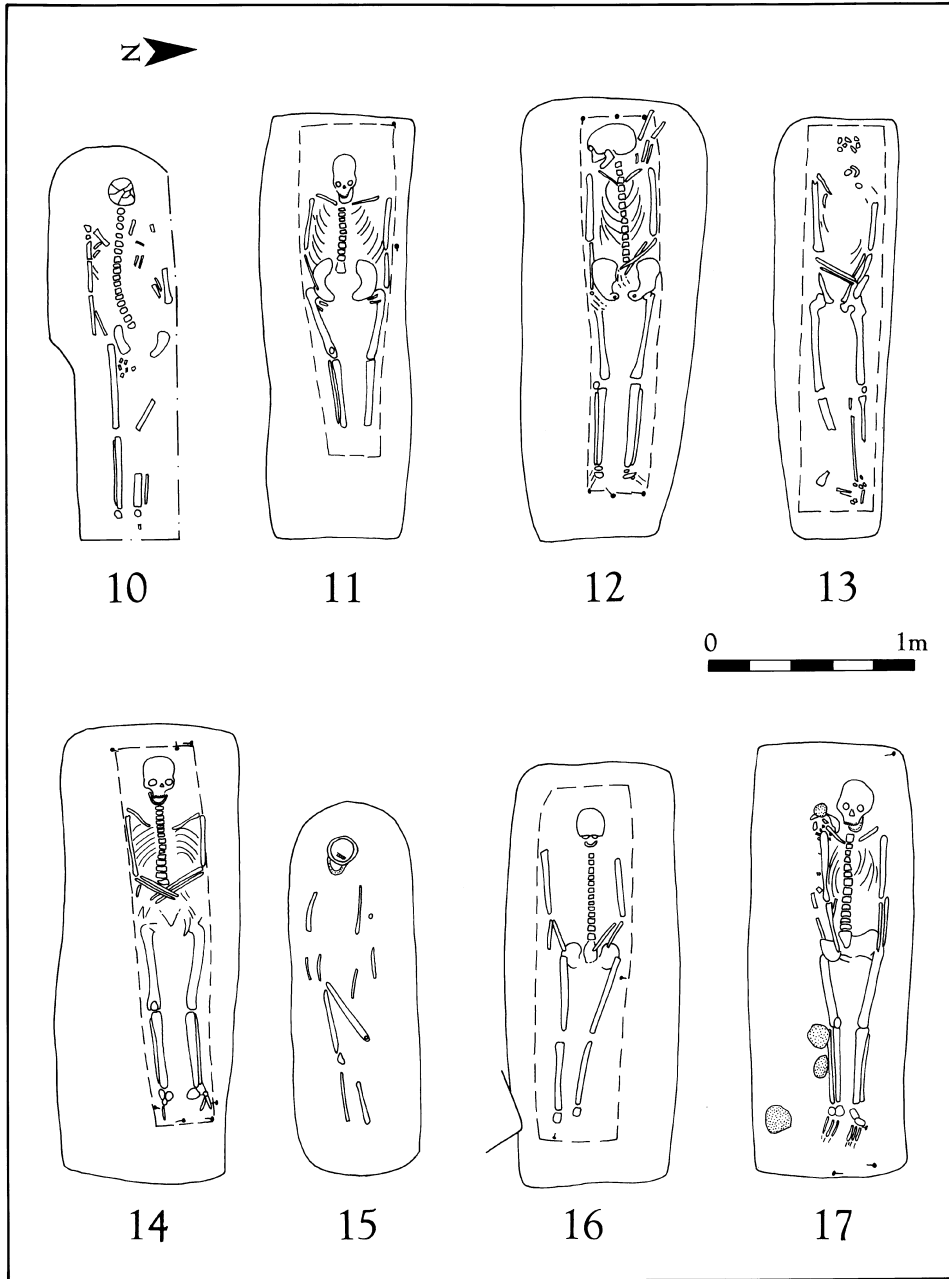
All the grave pits were rectangular/sub-rectangular with vertical or near vertical sides and flat bases. The level of the original Roman ground surface could not be determined due to truncation caused by medieval ploughing (Doel 2000). An average depth of 0.30m was recorded with a range of 0.04m (G6) to 0.90m (G9). No significant distribution pattern could be discerned in relation to depth. The shallow depth of some graves and the identification of plough damage indicated that other graves might have been lost to truncation. All graves were of dimensions appropriate to the corpse they contained. Overall, the grave pits are directly comparable to other examples observed in Leicester (Cooper 1996, 20–21; Cooper 1998, 8).

No evidence for stone linings or cists was recorded. Only three graves (G4, G17 and G30) contained small quantities of stone packing. Similarly, no evidence for above ground markers was observed. It is likely that graves would have remained visible as mounds for some time, as has been suggested at Newarke Street (Cooper 1996, 23). However, medieval ploughing and later truncation may have obliterated evidence of mounds or markers.

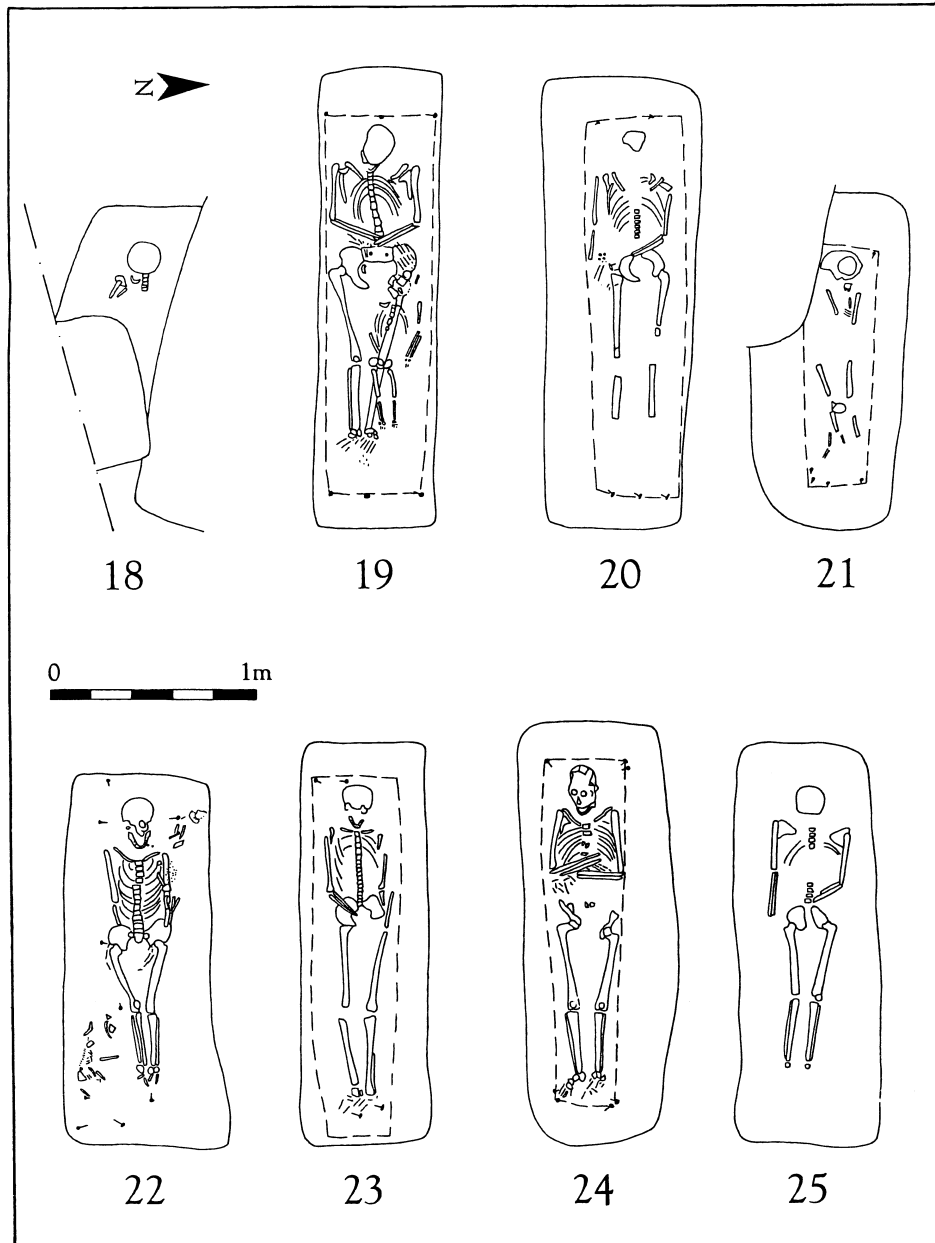
No evidence of a deliberately-constructed cemetery boundary was encountered. The burials continued beyond the area of excavation to the west, north and partly to the south. However, a marked reduction in the concentration of graves was recorded to the east of the site. The substantial truncation caused by Victorian cellars along the Clarence Street frontage does not appear to have been



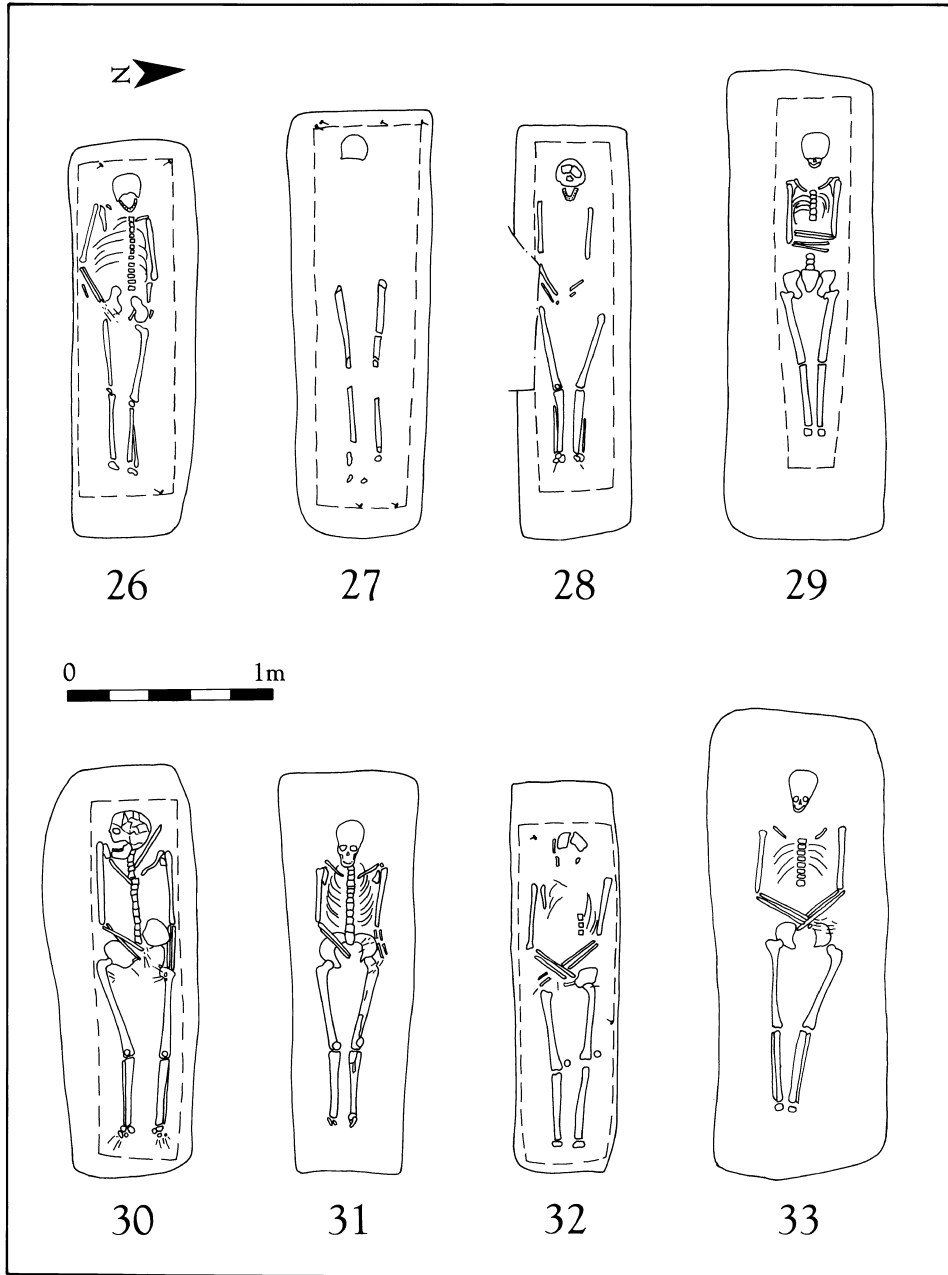
5. Graves 1-9.



6. Graves 10-17.

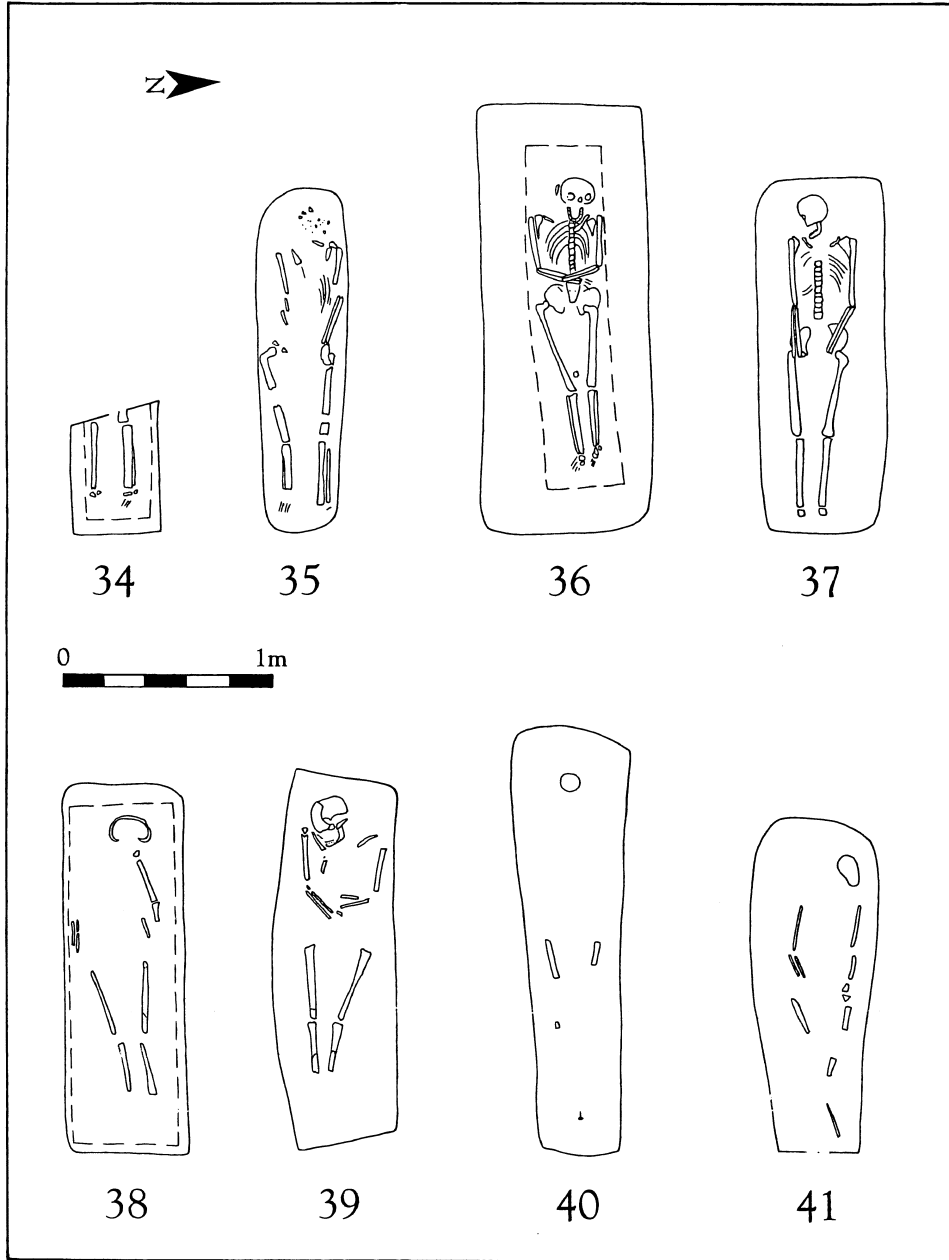


7. Graves 18-25.



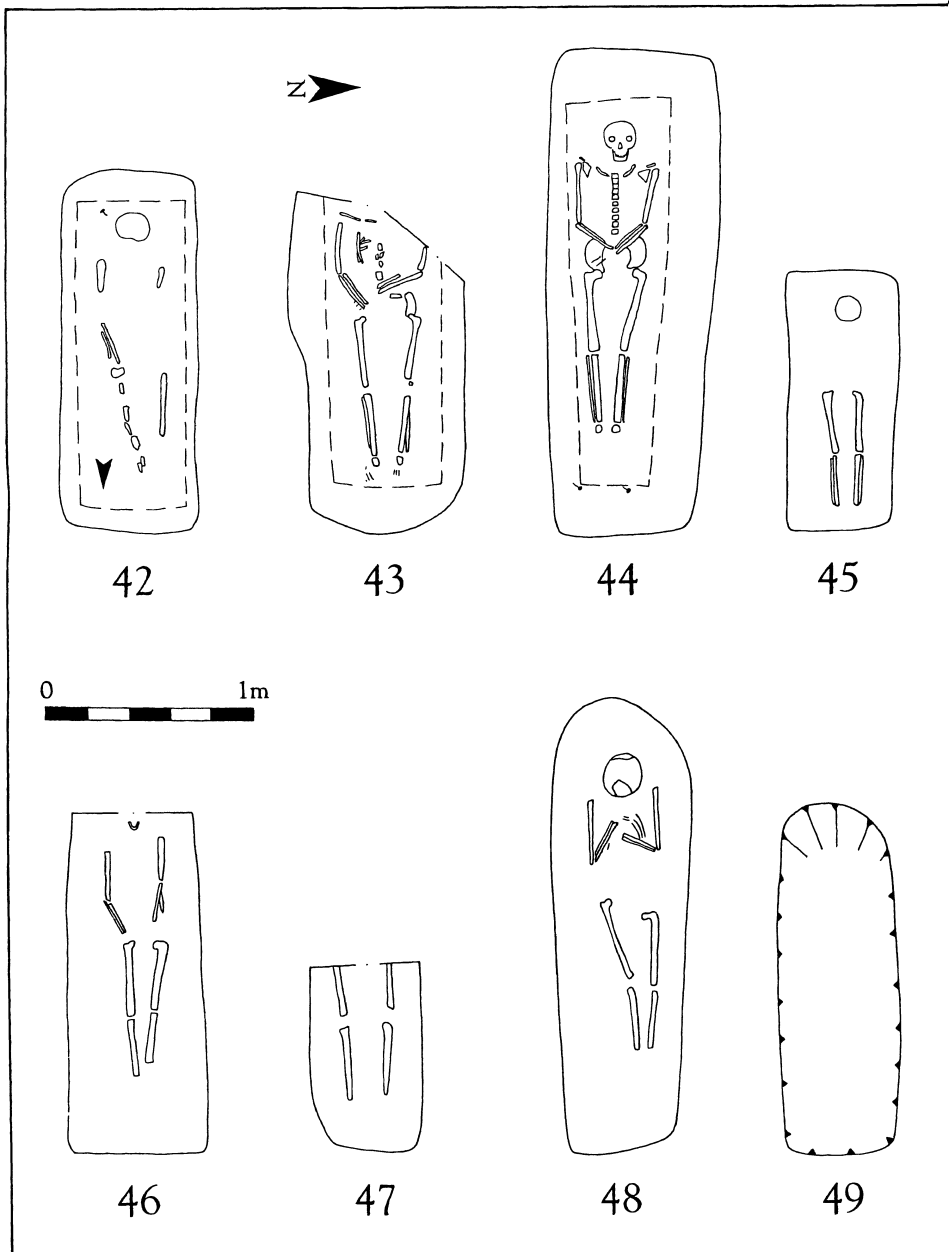
8. Graves 26-33.

A ROMAN CEMETERY IN CLARENCE STREET, LEICESTER

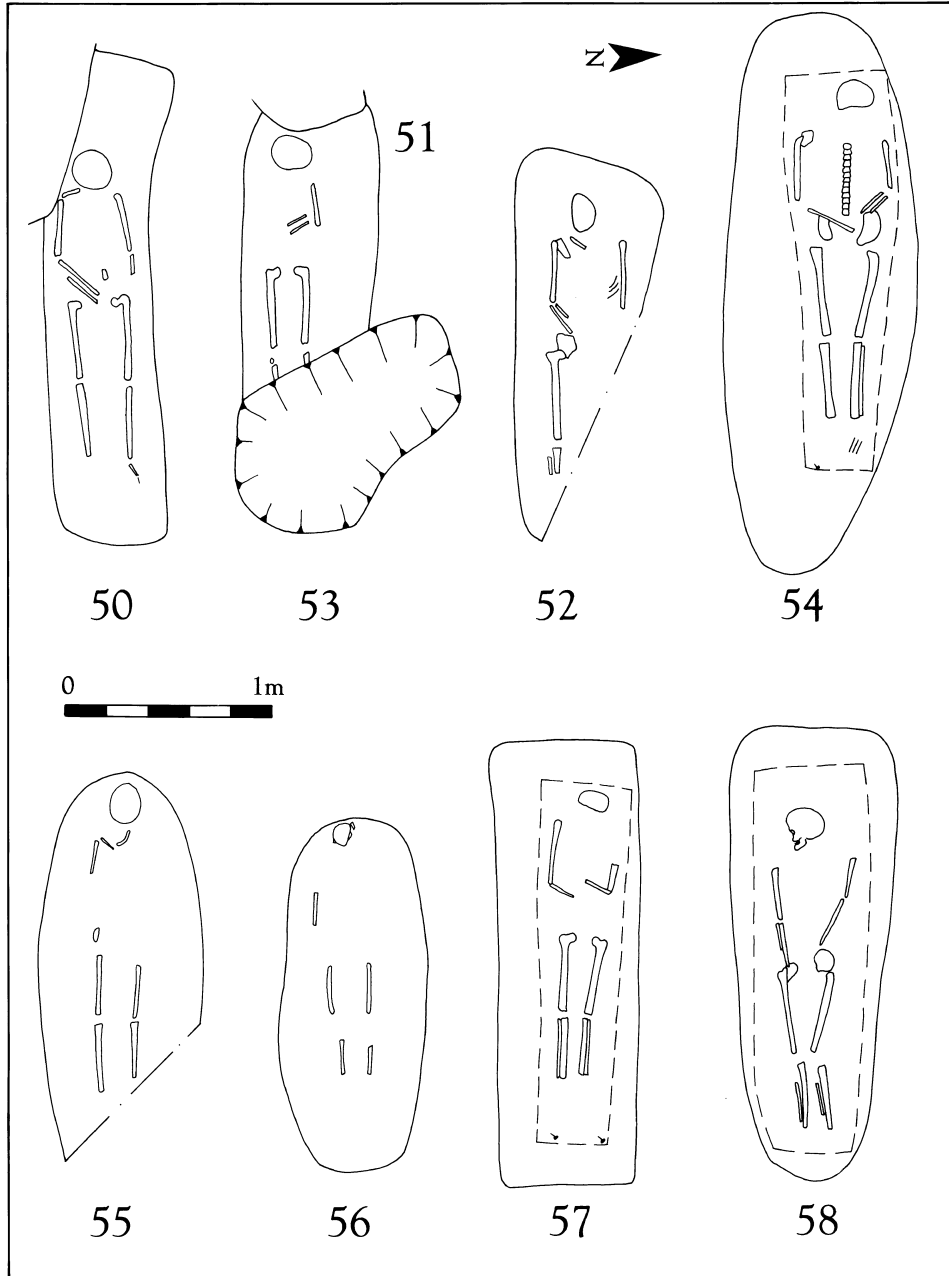


9. Graves 34-41.

40 RHODRI GARDNER

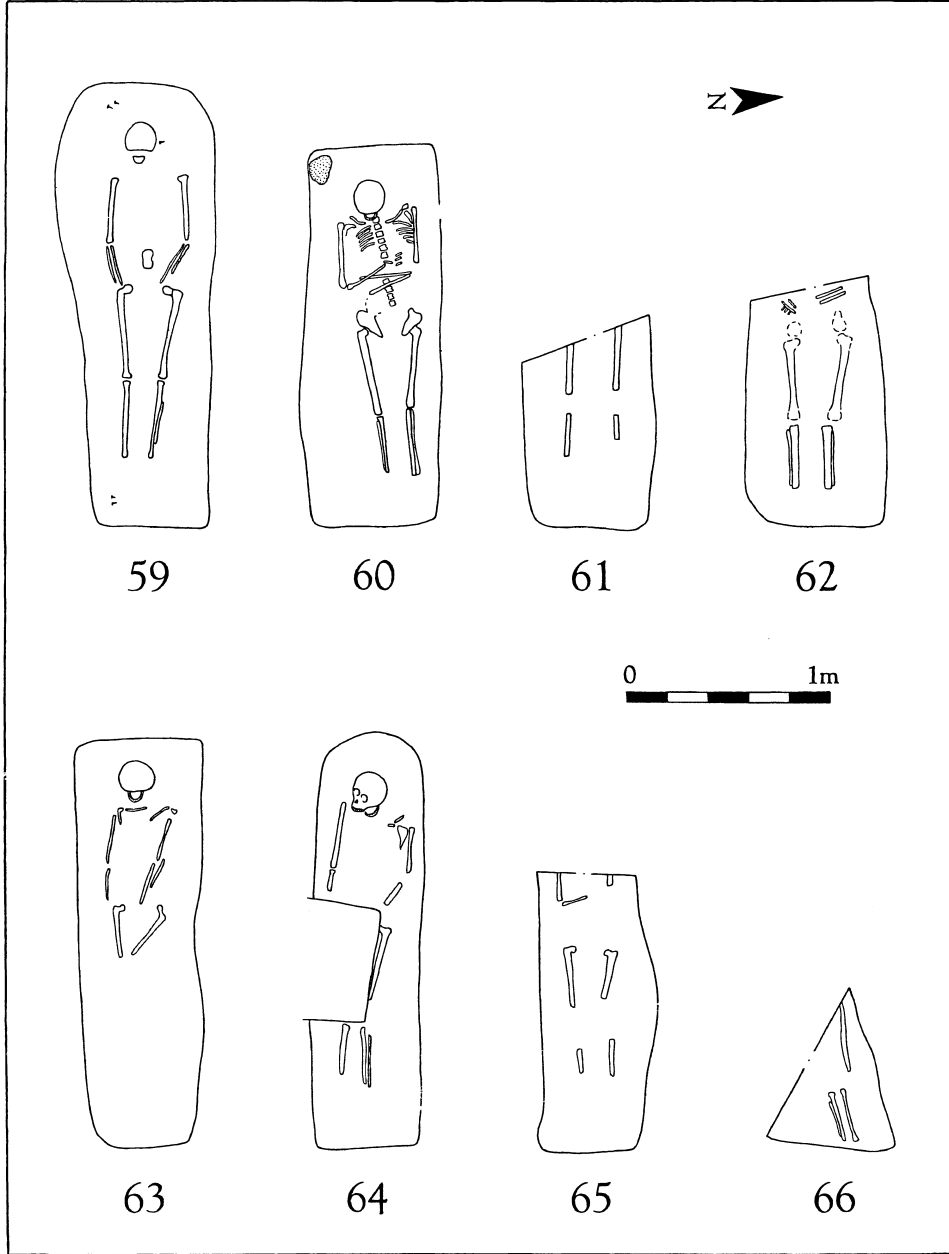


10. Graves 42-49.

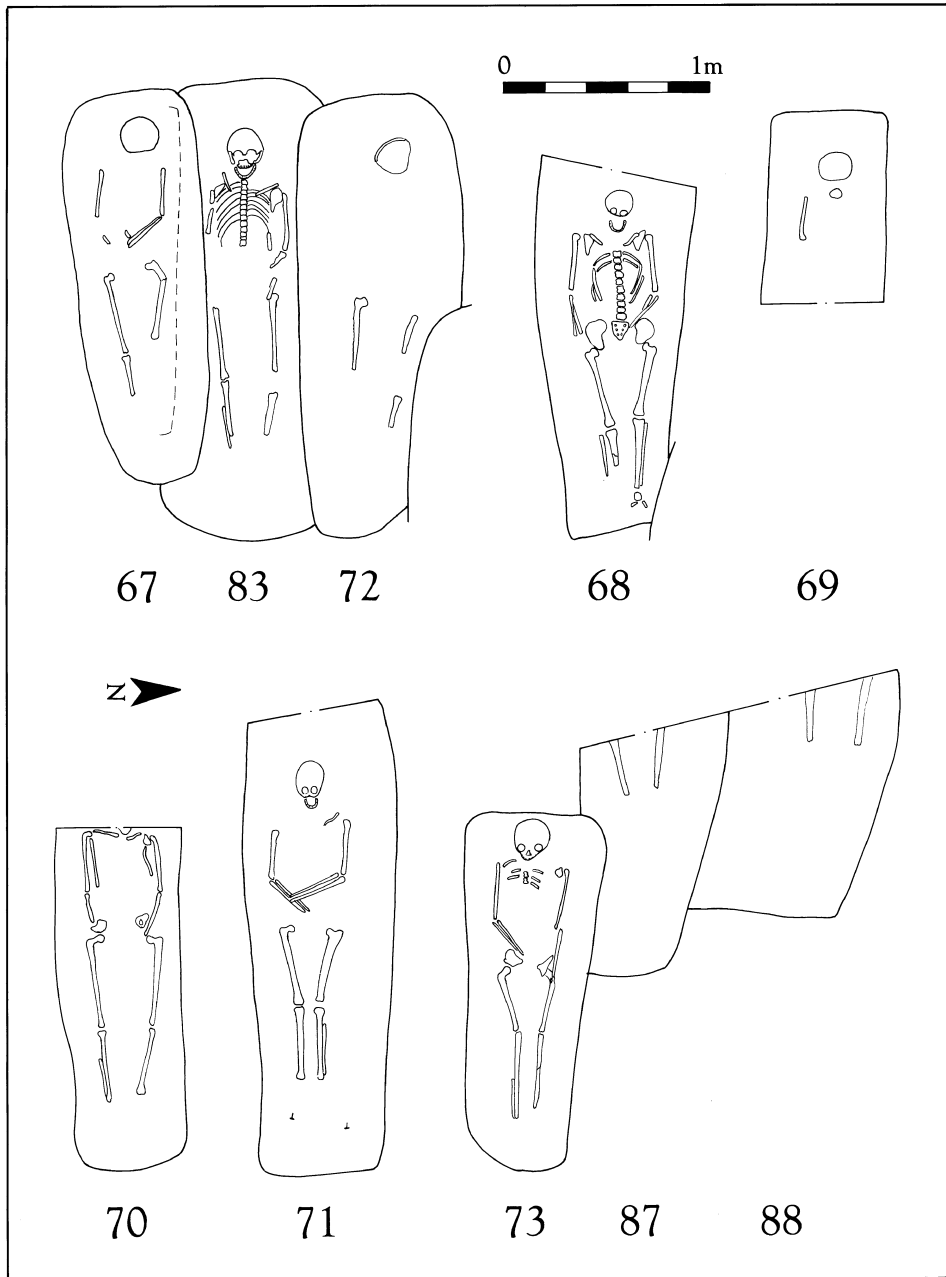


11. Graves 50-58.

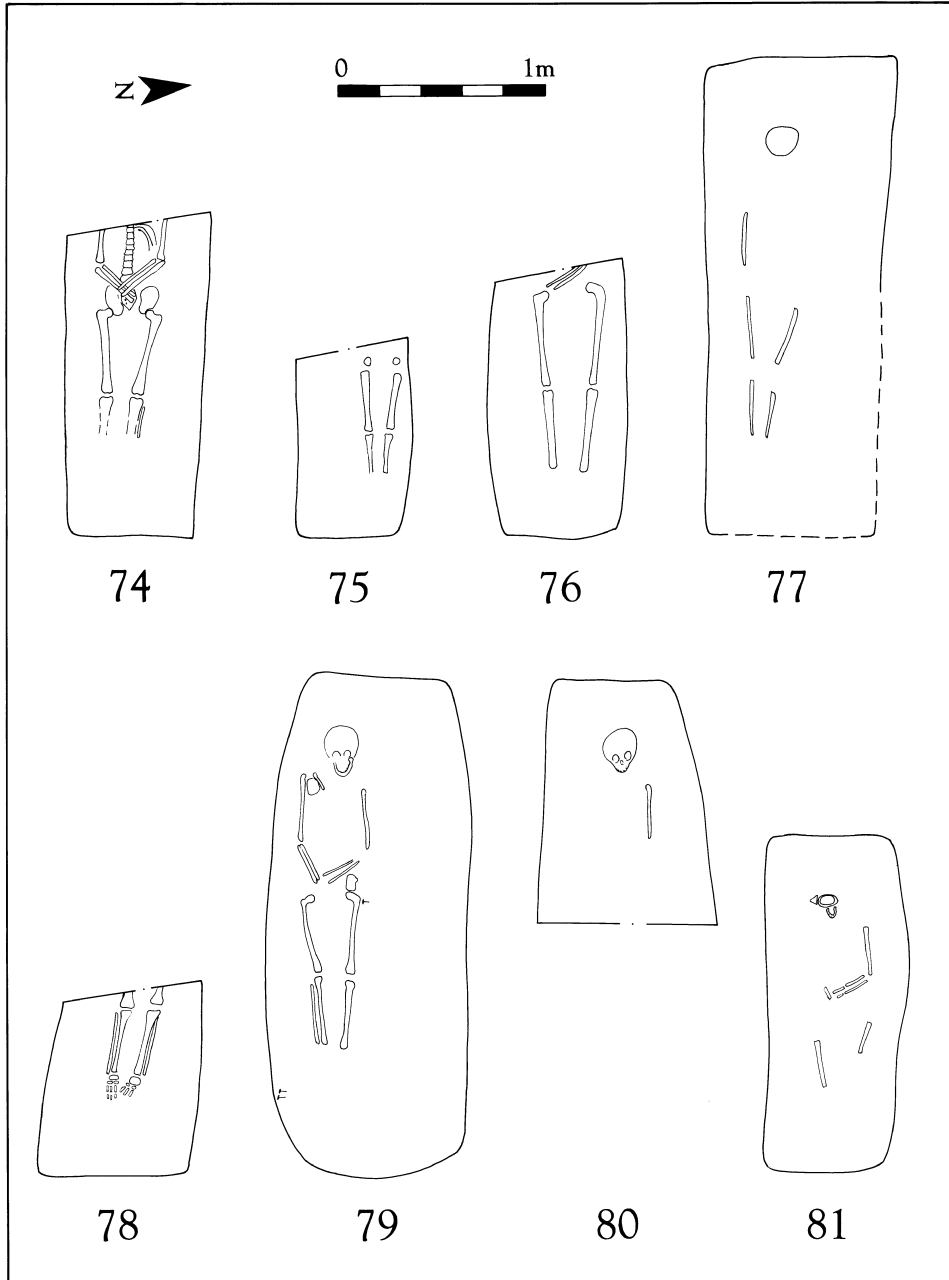
42 RHODRI GARDNER



12. Graves 59-66.

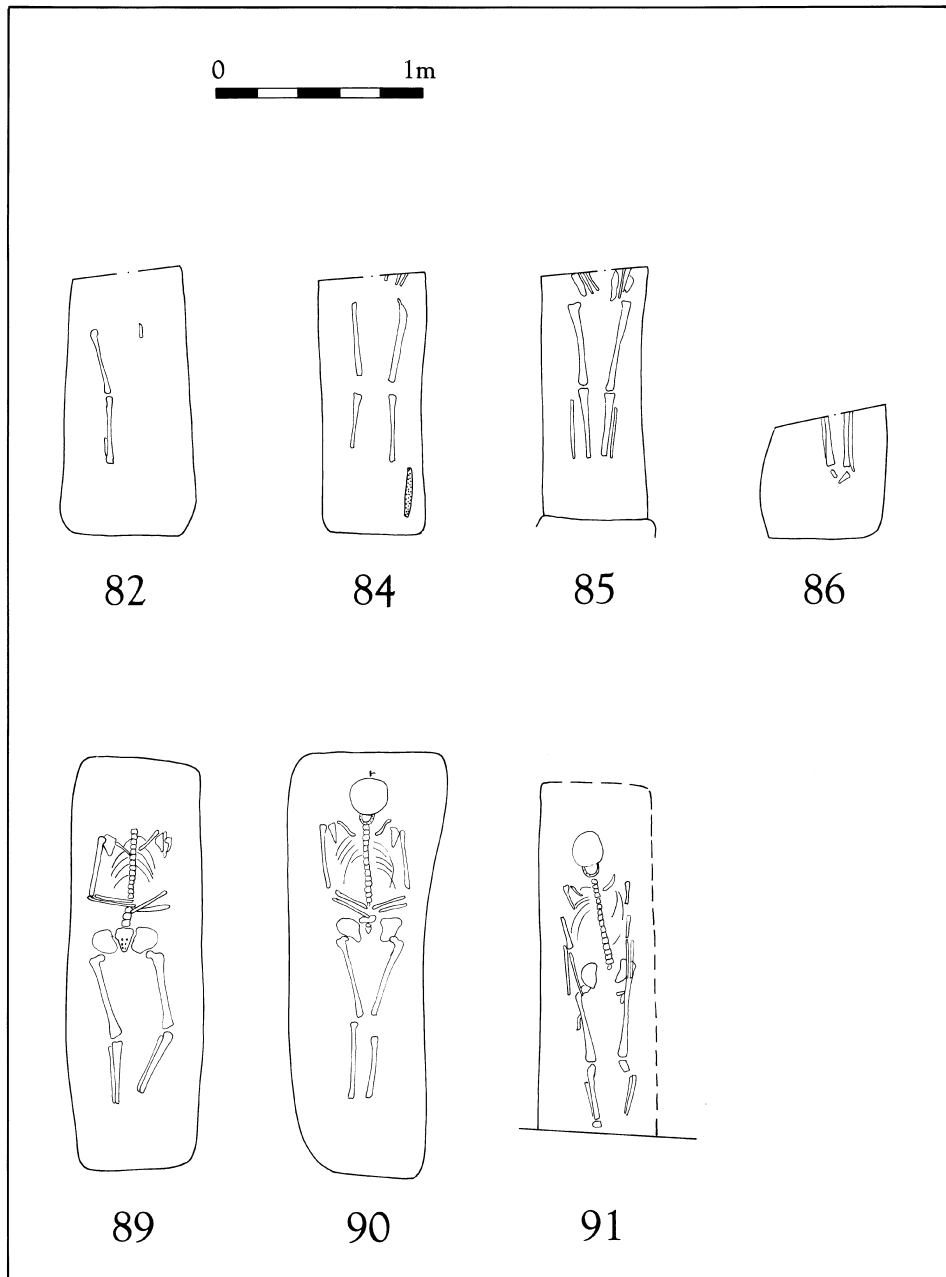


13. Graves 67-73, 83, 87 & 88.



14. Graves 74-81.

A ROMAN CEMETERY IN CLARENCE STREET, LEICESTER



15. Graves 82, 84-86 & 89-91.

46 RHODRI GARDNER

responsible, as trial trenches in that area revealed a buried medieval soil sealing graves in the west of the site (Doel 2000). Although further burials (a lead coffin and possible cremation) have been noted *c.* 30m to the southeast (see discussion and illus. 1) the current evidence suggests that this is the eastern boundary of the cemetery.

Soil conditions precluded the physical survival of coffin timbers, though coffins were identified in the form of regular dark stains surrounding skeletons. *In situ* nails were also present in a number of cases. Neither type of evidence significantly correlated with the surviving grave depth. Thirty-one graves yielded evidence for coffins. Of these, one was inferred from the presence of nails only (G22), 11 from the presence of stains only (G5, G13, G17, G28, G29, G30, G34, G36, G38, G43 and G67) and the remainder by the presence of both stains and nails (G3, G8, G9, G11, G12, G14, G16, G19, G20, G21, G23, G24, G26, G27, G32, G42, G44, G54 and G57).

Phase 3: Later 4th century (illus. 3)

Summary A single gully with a post hole set into it cut several graves of the Phase 2 cemetery. Precise dating was difficult as the gully contained few finds.

Some 14m north of the southern limit of the excavation, a shallow (0.24m deep) drainage gully [2174] crossed the site for *c.* 13.5m on an ENE-WSW alignment and cut graves G47, G52 and G53. A small post hole [2198] was cut into the southern edge of the gully and yielded no finds. The gully contained some Roman tile and a small quantity of mid-2nd to early 5th century pottery.

Phase 4: High medieval (12th to 14th century) (illus. 3)

Summary The principal evidence is a medieval cultivation soil and one pit.

A layer interpreted as a medieval cultivation soil sealed the Roman features. During the excavation, this yielded a small quantity of 12th to 14th century pottery and much residual 2nd century material. In evaluation trenches closer to the Clarence Street frontage where there was less Roman activity, this layer contained 12th to 14th century pottery without residual Roman material. A single cut feature, pit [2166], is assigned to this phase as it contained a mixed pottery assemblage with Roman and medieval dated material and cut grave G51.

A note on the two-stage excavation strategy

Logistical requirements dictated that the excavation be carried out in two stages (see 'background', above). It can be seen (illus. 2 & 3) that there is a variation in the preservation of features at the junction between the two stages of excavation. This was particularly marked at the western edge of the site where the inhumation burials were concentrated. In some cases only the extreme ends of features are obscured by the junction and it is perhaps not unreasonable for there to have been difficulties in recovering such fragmentary evidence. However, a larger proportion

of some features is absent, for example, graves G34, G47 and G72. Of particular significance is the apparent cessation of ditch [2174]. While it is possible that this feature may terminate at the point of the junction, the difficulties apparent in recovering information between the two stages of excavation mean that this cannot be asserted with certainty. It is also notable that evidence for coffins appears less abundant in the second stage. The depth of overburden and very narrow strip (c. 2–3m) involved in the second stage at the western limit of the excavation meant that machine clearance was carried out under difficult conditions which may have resulted in the loss of some information.

SPECIALIST REPORTS

THE ROMAN POTTERY

Andrew Fawcett

INTRODUCTION

The investigations at Clarence Street, Leicester revealed 70 features containing pottery, which came from 75 contexts. A total of 822 sherds weighing 13620g, with a total r.e.v. of 16.01 were recorded (of which 16 sherds with a weight of 109g and a r.e.v. of 0.29 recovered during the evaluation). The majority of features were grave fills, and a small number of pits were also present. The pottery from the pits is the best preserved, with data from the grave fills being more variable.

METHODOLOGY

This report provides a date range for activity on the site and through the identification of form and fabric alongside quantitative techniques. All of the pottery has been examined at $\times 20$ magnification and the specific detail is contained in the site archive. The fabric codes employed are based on both the Leicester and national systems (Tomber & Dore 1998). The form codes are adapted from those initially developed for the Shires report (Pollard unpub). Form matches use a variety of Leicester sites, including Causeway Lane (Clarke 1999), West Bridge (Pollard 1994), Newarke Street (Pollard 1996) and Jewry Wall (Oswald 1948).

FABRIC DESCRIPTIONS

LGF SA La Graufesenque samian ware. *Description* Tomber & Dore 1998, 28–29. *Date* A.D.40 to c. 110/120. *Source* La Graufesenque, southern Gaul. *Occurrence* 2001, 2009, 2017, 2101, 2131, 2143, 2175, 2182, 2187, 2220, 2238. *Form* Drg27, ?Drg18, Drg18/31 Drg37.

MON SA Montans samian ware. *Description* Tomber & Dore 1998, 29. *Date* Mid 1st to c. A.D.180. *Source* Montans, southern Gaul. *Occurrence* 2001, 2009, 2017, 2081, 2182, 2187, 2363. *Form* 18/31, 18/31R, Drg37. Stamp SOLLEM.

LMV SA Les Martres-de-Veyre samian ware. *Description* Tomber & Dore 1998, 30–31. *Date* A.D. 100 to 120/5. *Source* Les Martres-de-Veyre, central Gaul. *Occurrence* 2187, 2238, 2251, 2363. *Form* Drg27.

LEZ SA 2 Lezoux samian ware (category 2). *Description* Tomber & Dore 1998, 32–33. *Date* c. A.D. 120 to later 2nd century. *Source* Lezoux, central Gaul. *Occurrence* 1011, 1013, 1058, 2001, 2005, 2007, 2009, 2057, 2173, 2178, 2187, 2194, 2197, 2224, 2230, 2363. *Form* Drg27, Drg30, Drg18/31, Drg31, Drg33.

ARG SA Argonne samian ware. *Description* Tomber & Dore 1998, 48. *Date* c. A.D. 150 to 200. *Source* Argonne, eastern Gaul. *Occurrence* 2364. *Form* Drg31/31R.

BLW SA Blickweiler samian ware. *Description* Tomber & Dore 1998, 35. *Date* Early to mid 2nd century A.D. *Source* Eastern Gaul. *Occurrence* 2148, 2182. *Form* Drg37.

HGB SA Heiligenberg samian ware. *Description* Tomber & Dore 1998, 37. *Date* c. A.D. 117 to 192. *Source* Heiligenberg, eastern Gaul. *Occurrence* 2025, 2096, 2238, 2276. *Form* Drg31/31R, Drg36, Drg37.

RHZ SA Rheinzabern samian ware. *Description* Tomber & Dore 1998, 39. *Date* A.D. 138 to 260. *Source* Rheinzabern, eastern Gaul. *Occurrence* 2364, 2367. *Form* Drg31, Drg36.

TRI SA Trier samian ware. *Description* Tomber & Dore 1998, 41. *Date* A.D. 138 to early 3rd century. Examples dated to the early and mid 3rd century are not present. *Source* Trier, eastern Gaul. *Occurrence* 2100, 2367. *Form* Drg31. —UNS Drg31

CNG GL 1 Central Gaulish glazed ware, category 1 (LG1). *Description* Tomber & Dore 1998, 52–53. *Date* Mid to late 1st century. *Source* Allier Valley and Lezoux, Gaul. *Occurrence* 2001. *Form* A single small and abraded sherd represents this fabric.

KOL CC Cologne colour coated ware (C2). *Description* Tomber & Dore 1998, 57; Tyers 1996, 146–148. *Date* c. A.D. 69 to mid 3rd century. *Source* Cologne, Germany. *Occurrence* 2067. *Form* Only one beaker body sherd is present.

LNV CC Lower Nene Valley colour coated ware (C2, C3, 17). *Description* Perrin 1999; Tomber & Dore 1998, 117–118. *Date* A.D. 150 to 410. *Source* Lower Nene Valley. *Occurrence* 1013, 1017, 2001, 2034, 2038, 2048, 2057, 2086, 2137, 2175, 2194, 2224, 2244, 2364, 2367. *Form* VO2, IXF2. A number of body sherds represent indented beakers as well as rouletted types.

OXF RS Oxford red/brown slipped ware (C13). *Description* Tomber & Dore 1998, 176. *Date* A.D. 240 to 410. *Source* Oxford. *Occurrence* evaluation 1005.

UNS CC Unsourced colour coated ware (C5, 7, 11 & 17). *Description* Pollard 1994, 112. *Date* Roman. *Source* Probably local and regional. *Occurrence* 2001, 2005, 2007, 2067, 2076, 2367. *Form* C5.

UNS MD Romano-British mica dusted ware (MD5). *Description* Pollard 1994, 113. *Date* Late 1st to early/mid 2nd century A.D. *Source* ?Local, regional or national. *Occurrence* 2111, 2187, 2206, 2244. *Form* Drg27 ?copy, IXC.

LNV WH Lower Nene Valley white ware (M06). *Description* Tomber & Dore 1998, 119; Perrin & Hartley 1996, 191–204. *Date* A.D. 110 to 400. *Source* Castor-Stibbington area in the lower Nene Valley. *Occurrence* 2350. *Form* The single sherd is from a mortaria.

MAH WH Mancetter-Hartshill white ware (M04, WW4). *Description* Tomber & Dore 1998, 189. *Date* A.D. 100 to c. 350. *Source* Mancetter and Hartshill on the Leicestershire-Warwickshire border. *Occurrence* 1013, 2005, 2089, 2187, 2224, 2367. *Form* A small number of mortaria sherds are present.

VER WH Verulamium region white ware (WW5). *Description* Tomber & Dore 1998, 154; Davies *et al.* 1994, 41–59. *Date* Mid 1st to at least to the end of the 2nd

century. Most common in Leicester from the late 1st to the early 2nd century A.D. *Source* Various sites centred around Verulamium and Greater London. *Occurrence* 2007, 2165, 2220, 2238. *Form* The only diagnostic sherd is from a mortaria.

UNS WH Unsourced white ware (WW2, 4, 7). *Description* Pollard 1994, 113. *Date* Roman. *Source* Nene Valley and the Midlands. *Occurrence* U/S, 2001, 2089, 2100, 2111, 2165, 2180, 2187, 2220, 2224, 2273. *Form* XIV.

UNS WS Unsourced white slipped ware (WS2 & 8). *Description* Pollard 1994, 113. *Date* At Clarence Street late 1st to 2nd century. *Source* Regional. *Occurrence* 2182, 2187, 2220. *Form* IC4.2 0.25.

UNS OX Unsourced oxidised ware (OW2/3, 3 & 5). *Description* Pollard 1994, 113–114. *Date* Roman. *Source* Local and regional. *Occurrence* 1017, 1019, U/S, 2001, 2007, 2009, 2047, 2067, 2081, 2148, 2165, 2173, 2187, 2192, 2194, 2220, 2224, 2230, 2238, 2240, 2244, 2363, 2367. *Form* IXD 0.11, IX 0.35, IX 0.14, IX 0.14. All of the diagnostic elements belong to beakers. The oxidised wares have a wide distribution across the site, but they are sparse.

UNS FO Unsourced fine oxidised ware (OW1, 2, 6 & 7). *Description* Pollard 1994, 113–114. *Date* Roman. *Source* Local and regional. *Occurrence* 2025, 2052, 2170, 2187, 2363. *Form* IIIF, XA3.5.

DOR BB 1 (South-east) Dorset black burnished ware category one (BB 1). *Description* Tomber & Dore 1998, 127; Holbrook & Bidwell 1991. *Date* Mid 1st to A.D. 410. In Leicester it arrives during the early 2nd century AD. *Source* The Wareham/Poole harbour area in Dorset. *Occurrence* 1058, 2001, 2007, 2009, 2072, 2076, 2081, 2084, 2100, 2148, 2150, 2165, 2167, 2173, 2201, 2224, 2230, 2233, 2273, 2350, 2363, 2364, 2367. *Form* IIIH1, IIIH1.5, VIA1, VIA1.3/4, VID1, VID2 VIE/F.

UNS BW Unsourced black surfaced or Romanising grey ware (MG1 & 2, 3 & some SW). *Description* Pollard 1994, 114; Fawcett forthcoming a; Waugh 1999, 93; Going 1987, 9. *Date* These fabrics may be described as the post-conquest continuation of the grog tempered fabrics. Its prevalence varies from region to region however they were certainly more common from the late 1st to mid 2nd century. For instance, in London they die out around the Trajanic period (Davies *et al.* 1994, 186–205) whereas in Essex they continue in numbers to at least A.D. 175 (Going 1987, 106–113). The fabric is gradually replaced by the true sandy grey wares during the 2nd century. *Source* Local and possibly regional. *Occurrence* 1013, U/S, 2001, 2005, 2007, 2009, 2029, 2064, 2067, 2072, 2076, 2081, 2084, 2086, 2100, 2105, 2111, 2115, 2128, 2143, 2146, 2148, 2153, 2165, 2175, 2182, 2187, 2194, 2201, 2215, 2220, 2224, 2230, 2233, 2238, 2244, 2251, 2323, 2350, 2367. *Form* ILY3, IIID/E, IIIE/F, IIIF, IIIF3, IIIF3/4 IIIH?3, IIIM, IIIM1, VD2.1, VI, VIA, IX, X.

UNS FR Unsourced fine reduced wares (GW3, 5 & 8). *Description* See UNS RE (*below*). *Date* Throughout the Roman period. *Source* Local and regional. *Occurrence* U/S, 2009, 2017, 2067, 2076, 2100, 2148, 2150, 2165, 2173, 2180, 2182, 2187, 2251. *Form* IIIF, IIIF4.7, V/VI.

UNS RE Unsourced sandy grey wares (GW6 & 9, 10). *Description* Pollard 1994, 114. *Date* Throughout the Roman period, becoming more common from the 2nd century onwards, replacing UNS BW to become the dominant fabric. *Source* Local and regional. *Occurrence* U/S, 2001, 2005, 2007, 2009, 2017, 2055, 2064, 2067, 2076, 2084, 2086, 2089, 2100, 2111, 2131, 2134, 2139, 2148, 2150, 2153, 2165, 2173, 2175, 2182, 2187, 2194, 2201, 2220, 2224, 2230, 2233, 2238, 2244, 2251, 2311, 2363, 2367. *Comment & Form* III, IIIE, IIIE2, IIIF, IIIF4.6, IIIM, IIIM1, IIIM2, VF4, VIF, IXJ2, X.

UNS BB Unsourced black burnished ware (GW1). *Description* Pollard 1994, 114. *Date* As with the true BB1 fabric at Leicester, this more likely dates from the early 2nd century. *Source* Local and regional. *Occurrence* U/S, 2001, 2009, 2014, 2064, 2067, 2076, 2084, 2121, 2178, 2182, 2206, 2224, 2356, 2363, 2364, 2367. *Form* IIIE1, IIIH1, IIIH2/3, IIIH2/3, IIIM1/2, VID1.1, VID1/2.

HAR SH Harrold shell tempered ware (CG1, 1A). *Description* Tomber & Dore 1998, 115 & 212; Brown 1994. *Date* Throughout the Roman period. *Source* Harrold (Beds), however other sources are likely. *Occurrence* 1013, 2007, 2009, 2014, 2034, 2076, 2084, 2089, 2100, 2150, 2165, 2170, 2182, 2187, 2220, 2341, 2367. *Form* IIID2, IIID/E, IIIE1, III?M, IIIM3, V/VI, VI.

UNS SH Unsourced shell tempered ware (CG2, 3). *Description* Pollard 1994, 114. *Date* Throughout the Roman period. *Source* Unknown, but more likely to originate from Rutland (Lincs) or other sources in the Midlands. *Occurrence* 2076, 2194, 2238, 2244, 2363. *Form* No diagnostic elements are noted in this small assemblage.

SOB GT Southern British grog tempered ware (GT3, 4). *Description* Tomber & Dore 1998, 214; Thompson 1982. *Date* Late 1st century B.C. to at least A.D. 70. *Source* Local. *Occurrence* 2187, 2251. *Form* III, IIID1.

BAT AM 1 & 2 Baetican *amphorae* fabric (AM9A & AM9B). *Description* Tomber & Dore 1998, 84–86; Tyers 1996, 87–89. *Date* Early/mid 1st century to A.D. 260. *Source* The Guadalquivir valley in southern Spain. *Occurrence* 1013, 1038, 2007, 2009, 2011, 2187, 2363. *Form* None of the sherds are diagnostic.

GAL AM Gaulish *amphorae* fabric (AM12). *Description* Tomber & Dore 1998, 93–95; Tyers 1996, 94–96. *Date* Early/mid 1st century to c. mid 3rd century A.D. *Source* Mostly *Gallia Narbonensis*. *Occurrence* 2009, 2364. *Form* G4. The rim is complete, with a portion of neck.

LIP AM Liparian *amphorae* fabric (AM16). *Description* Tomber & Dore 1998, 99. *Date* Early 1st century A.D. to c. A.D. 220. *Source* Lipari. *Occurrence* 2009. *Form* A single fragment accounts for this fabric.

DESCRIPTION OF THE EVIDENCE

Late 1st to early 2nd century A.D.

(51 sherds (361g) with a r.eve of 0.88.

Grave Fills 2012, 2015, 2108, 2129, 2141, 2151, 2204. Gully 2237. Pit 2243.)

There is no evidence for any activity before the late 1st century A.D. In fact, pottery dated from the late 1st century cannot be separated from that dated up to the early 2nd century. The low average sherd weight (7g) reflects the poor condition of the assemblage, which displays varying degrees of abrasion. Apart from a pit and gully, most of the assemblage was recovered from grave fills.

Only a small number of samian sherds are present, mainly from La Graufesenque with single examples from Montans and Les Martres-de-Veyre (the Heiligenberg sherd is a residual Drg36 rim). Both of the diagnostic sherds belong to the Drg27 cup form. Just three sherds of mica dusted ware (MD6) account for Romano-British finewares, a beaker being the only form present (see illus. 17.1).

With the exception of a single sherd from Harrold and from Verulamium, the entire coarseware assemblage is probably sourced to the local or regional area. The majority of these fabrics are in the mix gritted and greyware categories, with only a few oxidised fabrics present. Few of the sherds are decorated, the most popular

style being ring and dot designs with occasional rustication. Finally, the form assemblage is poor, comprising two jars (M1/2 & E types), one dish, a beaker (C type) a Drg27 copy and a lid (A5.4). Almost all of these occur in reduced wares.

Early to mid 2nd century A.D.

(Grave fills: 2023, 2073, 2079, 2171, 2181, 2200, 2231. Pits 2006, 2008, 2147, 2186. Layer 2089)

This is the largest assemblage, mostly derived from three pits (2006, 2008 & 2186). The remaining pottery is from grave fills and a layer. The general condition of the pottery is good, especially that from the pits, with an average sherd weight of 17.5g. Around 14% of the assemblage is samian ware. Both southern Gaulish production centres are present (La Graufesenque and Montans) as are those from central Gaul (Les Martres-de-Veyre and Lezoux). There is also a small contribution from eastern Gaul (Blickweiler and Heiligenberg), whose products arrived from the Hadrianic period onwards. The form range is fairly restricted, composed mainly of plate/dishes (Drg18/31), bowls (Drg37) and two cup types (Drg27 & 33). The best example is an almost complete decorated Drg37 bowl from pit 2186 (illus. 17.13). From the same feature has the only stamp recovered from the excavation, 'Sollem' (illus. 17.8). Also arriving from the continent are a limited number of *amphorae* sherds from Baetica, Gaul and a single small Liparian sherd, displaying distinctive volcanic glass.

The presence of Romano-British finewares within this assemblage is very low (3%). Virtually all of the examples are unsourced colour coats (C17), nonetheless a whole flagon (IC5) paralleled at both Causeway Lane and Verulamium is of interest (see illus. 17.2). Within the coarseware assemblage BB1 from Dorset is the furthest traveled. This fabric accounts for 6% by weight and is made up of dishes in the VID2 style and jar types IIIH1 (illus. 17.3).

The only Verulamium white ware sherd present is a fragment of stamped mortaria. Although only two characters survive in retrograde AR (illus. 17.7) they are consistent with other stamps recorded by the potter Arentus (Ver 41 & 101: Hartley 1972 & 1984. *Legions Way 5: Fawcett forthcoming c*) dated A.D. 100–140. The only other *mortaria* fabric represented in this phase are a small number of Mancetter-Hartshill white ware sherds exhibiting the earlier trituration grits. Finally, sherds from the 'Harrold' industry stand at 5%. Except for one unclear dish type all of the diagnostic sherds relate to jars and in particular IIID ledge rim types (illus. 17.6 & 12).

The unsourced coarseware group is dominated by jars IIIF and IIIM in mix gritted and greyware fabrics (illus. 17.9, 10 & 11). Two jar types (IIIE & H) are present in the local copy of BB1 (GW1). The three beakers present in this group are all in the same style (see illus. 17.4 & 5) similar to those noted at West Bridge (Pollard 1994: No 311). They are decorated extensively with rouletting and were most common during the Antonine period. Finally an unsourced white slipped flagon (illus. 17.14) has a basic parallel at both Jewry Wall and Verulamium (Oswald 1948 fig. 28 & Wilson 1972 No. 566). The fabric, classed as WS2 probably originates from the West Midlands around Mancetter-Hartshill.

52 RHODRI GARDNER

Fabric	Sherd count	%	Weight (g)	%	R.EVE	%
LGF SA	9	2	83	1	0.27	3
MON SA	7	2	253	3	0.11	1
LMV SA	6	1	5	Pres	-	-
LEZ SA 2	7	2	73	1	0.23	2
BLW SA	2	1	25	Pres	0.10	1
HGB SA	1	Pres	22	Pres	0.02	Pres
UNS SA	34	8	425	6	1.00	10
ROB MD	1	Pre	1	Pres	-	-
UNS CC	12	3	243	3	1.00	10
VER WH	1	Pres	27	Pres	-	-
UNS WH	6	1	62	1	-	-
UNS WS	4	1	161	2	0.25	3
UNS FO	3	1	13	Pres	-	-
UNS OX	20	5	279	4	0.35	4
DOR BB 1	26	6	422	6	1.41	15
UNS BB	3	1	34	Pres	0.16	2
UNS BW	93	22	1351	19	3.00	31
UNS FR	30	7	252	3	0.22	2
UNS RE	131	32	3160	43	1.14	12
HAR SH 1	18	4	378	5	0.28	3
UNS SH	1	Pres	15	Pres	-	-
TOTAL	415		7284		9.54	

Not included in the quantification are VER WH 1-27g-0.06, MAH WH 3-107g, HAR SH [St] 4-212g-0.11, UNS GT 1-39g-0.05, BAT AM 1 4-375g, GAL AM 1 2-117g, LIP AM 1-5g, UNS AM 1-6g.

Table 2. Early to mid 2nd century A.D.

Decorative styles are fairly minimal consisting of mainly grooving, cordons, lattice patterns, rilling and rouletting and barbotine dots. Analysis of the form assemblage demonstrates that although cups, beakers, flagons, mortaria, bowls and lids are present they only occur singly or in pairs. By contrast, jars and dishes account for 70% of the total.

Mid to later 2nd century A.D.

(42 sherds (901g) with a r.eve of 0.57.

Grave fills 2003 & 2056. Pits 2193 & 2360)

Only a small number of features can be clearly dated to this period and it is likely that it is slightly under-represented. The largest and most consistent group comes from the basal fill of pit 2360. The average sherd weight of the assemblage is relatively high (18g). Samian ware from Lezoux is the most common continental fineware and all of the diagnostic elements occur within this fabric. These include dish Drg31, cup Drg33 and bowl Drg37. Only two later Baetican sherds represent amphorae fabrics. The Romano-British fineware presence is similarly poor with a scatter of colour-coated sherds, mainly from the Nene Valley.

Around 84% of the assemblage is coarseware. With the exception of 'true' BB1, it is composed of unsourced fabrics, probably of local or immediate regional origin. Just

three forms are recognised, IIIE, IIIM and IIIH2. The latter is a typical local BB1 copy.

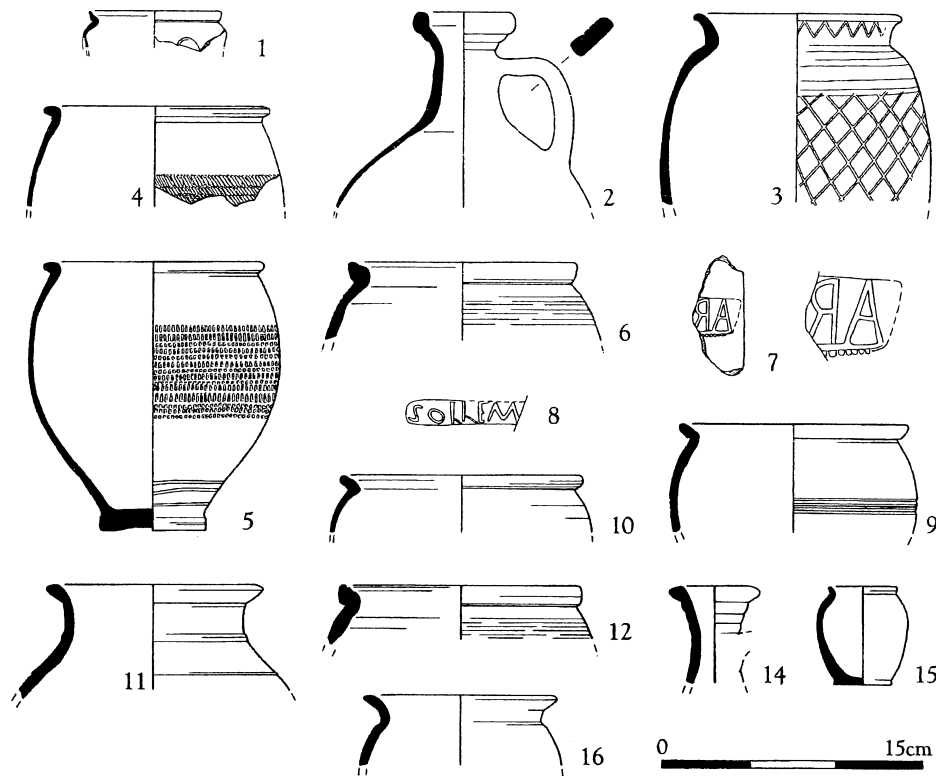
Early to later 2nd century A.D.

(85 sherds at 675g with a r.eve of 1.23.

Grave fills 2069, 2092, 2146, 2163, 2178, 2195, 2274, 2348, 2354. Pit 1010, 1012, 1057, 2229)

This assemblage draws together the 2nd century material that could not be placed in the previous periods. Again, this assemblage is mostly from grave fills. The average sherd weight of 7g reflects its redeposited nature and abraded condition. Alongside the data already recorded, it emphasises the predominantly earlier 2nd century date of the site. There is little change in the fabric or form range. The small quantity of samian ware contains examples of cup Drg27, bowl Drg37, transitional dish Drg18/31 and dish Drg31. No diagnostic sherds are noted in the Roman-British fineware assemblage.

Again, the coarsewares contain a small BB1 element as well as its local copy. However, unsourced greywares and mix gritted fabrics dominate, with the same



17. Roman pottery
Stamp (8) scale 1:1

limited range of jars. Nonetheless, there is a significant contribution of dishes in the VID2 style, mostly in BB1 type fabrics. Of particular interest is a miniature (IY3) in 1012 (illus. 17.15).

Late 2nd to early 3rd century A.D.

(Grave fills 2066, 2097, 2328. Pit 2360 (2367 & 2364).)

Virtually all of this pottery is derived from the upper two fills of pit 2360. However it is mostly in good condition with an average weight of 14g. Due to the limited number of finewares and form types, identification of the early 3rd century is tentative, and most is securely dated to the later 2nd century. Early 3rd century dates are derived from the samian ware and Nene Valley funnel neck rims and indented decoration (Perrin 1999, 94). This phase saw a marked change in the samian supply with east Gaulish production centres dominating. Argonne, Rheinzabern and Trier all make a similar contribution. Only two form types are noted, dishes Drg31 and Drg36. A single sherd of Cologne colour coated ware is also present. One sherd representing a Gaulish amphora is the only other import.

This period also saw an increase in colour coats from the Nene Valley. Apart from a IXF2 beaker rims a number of body sherds are indented and also rouletted. However, as noted in the previous phases, the fineware element as a whole is fairly low.

The coarseware assemblage, in terms of source, exhibits little change except a possible decrease in shell tempered wares. Otherwise, with the exception of Dorset BB1 and Mancetter-Hartshill white ware, the fabrics are all local or from the immediate regional area. Unfortunately, there are few clearly identifiable form types. Only two jar types are recorded, a IIIE2 and a transitional IIIH2/3

Fabric	Sherd count	%	Weight (g)	%	R.EVE	%
ARG SA	1	1	6	1	0.10	7
RHZ SA	2	3	141	14	0.07	5
TRI SA	2	3	20	2	—	—
UNS EG SA	2	3	23	2	0.13	9
KOL CC	1	1	3	Pres	—	—
LNV CC	6	8	89	9	0.30	22
UNS CC	9	13	186	18	—	—
UNS WH	1	1	10	1	—	—
UNS OX	5	7	91	9	0.28	21
DOR BB 1	8	11	59	6	0.08	6
UNS BB	5	7	89	9	0.20	15
UNS BW	10	14	156	15	0.05	4
UNS FR	5	7	20	2	—	—
UNS RE	11	15	98	10	0.08	6
HAR SH	3	4	32	3	0.07	5
MAH WH	2	—	18	—	—	—
GAL AM 1	2	—	326	—	1.00	—
Total	71		1023		1.36	

Table 3. Late 2nd to early 3rd century A.D.

(illus. 17.16) in the Dorset BB 1 fabric. Other forms include the dish type VIE/F and a beaker in a similar style to the West Bridge rouletted type (Pollard 1994 No 311).

DISCUSSION

The ceramic evidence indicates that most activity at Clarence Street occurred between *c.* A.D. 100/120 and the later 2nd century. However, within this period it is the first half of the 2nd century A.D. that accounts for the larger part of the ceramic assemblage. This coincides with a major period of the development of Leicester, which saw the construction of the forum and basilica and shortly thereafter the Jewry Wall bath complex (Hebditch & Mellor 1973, 1–83; Wachter 1983, 342). The clearest 2nd century evidence is present in all of the pit features and the layer. The ceramics from these features are generally in the best state of preservation. Virtually all grave fills contained residual pottery dated to this period, although this part of the assemblage is more variable in date and especially in condition and size.

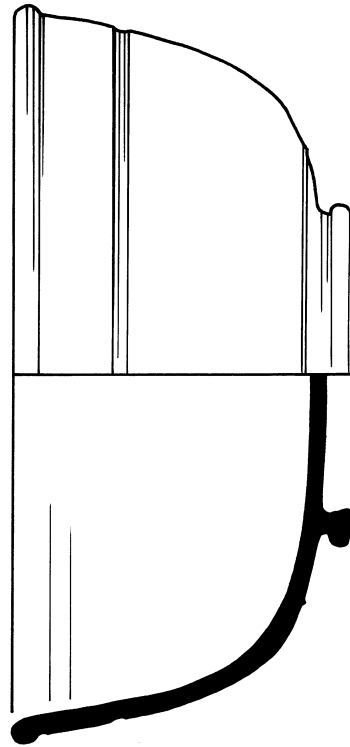
Material from the grave fills is particularly difficult to date, due to its sparseness and the high proportion of coarsewares. The sparseness of the pottery is demonstrated by an analysis of sherds per fill: 85% contain six or less (60% of these are between one and two sherds), 6% had six to nine, and finally 9% had 13 to 18 sherds. Secondly, a large part of the ceramic evidence comprises long-lived, non-diagnostic coarsewares, and this is a particular problem in fills with nine sherds or less. However, fills yielding larger assemblages also seldom provided refined dating evidence, due to the lack of diagnostic evidence, finewares and the often uniform condition of the ceramic record. When evidence for later activity is apparent it often consists of single sherds mixed with 2nd century material.

The evidence, if somewhat tentative, does indicate some later activity in the 3rd and 4th century. Nonetheless, the extent and nature of this activity is unknown. The inhumations probably date from around the mid 3rd to 4th century AD. Certainly, the geographical location outside the later city defences and dating evidence from other known inhumations elsewhere from Leicester, such as Granby St, Newarke St (Cooper 1996) and the Haymarket (Cooper 1998) suggest this.

The pre-cemetery activity was at its most intense during the early 2nd century, which also saw the most cohesive ceramic evidence. This assemblage relates to unspecified domestic activity, with generally low proportions of specialised types (mortaria, flagons and beakers). All of the bowls, cups and to a certain extent, dishes, are recorded within the samian category. However coarseware jars are dominant, although interestingly, storage jars are virtually absent.

Many of the single sherds associated with the graves are Nene Valley colour-coats (2035, 2036, 2046, 2085, 2135). This industry started around AD150 but significant numbers did not arrive in Leicester until around the early 3rd century. Although the industry continued production until the end of the Roman period, the later forms and fabrics are virtually absent. Most of the Nene Valley sherds

56 RHODRI GARDNER



18. Samian bowl decoration (13)

from the graves are 3rd century. A similar date is assigned to a Drg36 dish with a beaded rim (early to mid 3rd century A.D.). This occurs in gully 2237 where the pottery is dated from the late 1st to early 2nd century A.D. There are only two cases of 4th century forms (pit 2223 and grave 2250), both associated with 2nd century material. There is no 4th century material and scant evidence for the 3rd century material from unstratified contexts.

Although the form range is standard, the continental element derived from a range of samian production centres. Similarly, the amphorae range is fairly standard, the Baetican and Gaulish types being the most prolific on British sites. However, more significant is the very low frequency of Romano-British finewares. Although it is difficult to form conclusions based on such a small assemblage, these proportions may reflect competition with an adequate supply of continental samian ware. Certainly, the origin of the coarseware assemblage was mostly local and from the immediate regional areas. The only exception to this is Dorset BB 1, the odd fragment from Verulamium and 'Harrold' shell-tempered ware. In the latter case, more than one source is likely, and sources nearer to Leicester cannot be ruled out.

ILLUSTRATED POTTERY (illus. 17 & 18)

Illus. 17.1 (2244) UNS MD IXC WB92 A.D. 70–130 r.eve 0.24

Illus. 17.2 (2007) UNS CC IC5 CL141/VER1928 early-mid 2nd century A.D. r.eve 1.00

Illus. 17.3 (2007) DOR BB 1 IIIH1 CL87 A.D. 100–150/60 r.eve 1.00

Illus. 17.4 (2007) UNS BW IX WB311 *c.* A.D. 138–192 r.eve 0.82

Illus. 17.5 (2007) UNS BW IX WB311 *c.* A.D. 138–192 r.eve 0.86

Illus. 17.6 (2007) HAR SH 1 IIID2 CL 113 late 1st to mid 2nd century A.D. r.eve 0.12.

Illus. 17.7 (2007) VER WH Mortaria stamp: retrograde AR ... Arentus A.D. 100/110–140

Illus. 17.8 (2187) MON SA stamp: Sollem

Illus. 17.9 (2187) UNS BW IIIF WB88 late 1st/early to mid 2nd century A.D. r.eve 0.51

Illus. 17.10 (2187) UNS FR IIIF JWf20.20 late 1st/early 2nd to mid 2nd century A.D. r.eve 0.15

Illus. 17.11 (2187) UNS RE IIIM JWf25.18/46.23 late 1st to early/mid 2nd century A.D. 0.53

Illus. 17.12 (2187) HAR SH 1 IIID/E WB108 late 1st to early/mid 2nd century A.D. 0.12

Illus. 17.14 (2220) UNS WS IC4.2 VER566/JWf28 A.D. 120–180 r.eve 0.25

Illus. 17.15 (1012) UNS BW IIY3 CL102 late 1st to 2nd century A.D. r.eve 0.21

Illus. 17.16 (2367) UNS BB IIIH2/3 CL352 mid to late 2nd century A.D. r.eve 0.20

Illus. 18 (2187) Samian bowl Drg 37 r.eve 1.00

CERAMIC BUILDING MATERIAL

*Phil Mills***Introduction and methodology**

A total of 217 fragments weighing a total of 10.2kg were recovered from 38 stratified contexts. The material was associated with phases with date ranges from the Roman to modern eras. The fragments of ceramic building material recovered from the site were examined under a 20× hand lens. A fabric series was established. All stratified material was catalogued in terms of its fabric, form where possible and any markings. Fragments of like fabric and form were grouped together, weighed and counted. The number of corners was also recorded. Complete dimensions were measured in mm. Unidentified forms were recorded as 'B/T'. Unstratified material, and machine cut contexts, was rapidly scanned for unusual fabrics, forms or marks. Digital record shots were taken of the marked tiles.

Fabrics

Two CBM fabrics were identified:

LEC01 A red (Munsell: 2.5YR5/6) hard fabric with a sandy feel, irregular fracture, and with inclusions of abundant well-sorted fine rounded mica, abundant moderately-sorted medium sub angular quartz, moderate moderately-sorted coarse sub angular lime and sparse moderately-sorted coarse sub angular grog. This fabric was probably manufactured locally at Leicester from the 1st century A.D. It was used for tegula, imbrex and roman bricks.

LEC02 A red fabric with pale brown bands (Munsell: 10YR7/3 and 10R5/6) with very hard granular feel, irregular fracture and inclusions of abundant well-sorted fine rounded mica, moderate moderately-sorted coarse angular grog and moderate moderately sorted medium sub angular quartz. This is a fairly typical post medieval fabric with the forms recognized using it being bricks.

Forms

The majority of the material was too small to identify clearly. However, a number of imbrex, tegula and Roman brick fragments were identified, all in fabric LEC01. No complete dimensions were recorded. Tegula flanges showed the usual range of morphology. Fragments from grave G22 and pit [2008] may be from the same tile or tiler, which illustrates difficulties encountered due to the high degree of residuality. The Roman bricks were too fragmentary to identify further, but were probably of lydion type. Fragments of signatures, probably of two or three concentric semicircles applied with the end of a stick, were observed on a brick and a tegula. Also of note was a fragment of tile that had apparently been recut into a triangular shape, from one of the fills of well [2186].

Two fragments of post medieval or modern material were catalogued. They came from a modern drain and the uppermost fill of pit [2360].

DISCUSSION

The material from this assemblage is very small and fragmentary. The Roman material is probably residual from the first two centuries A.D., possibly representing waste material subsequently disturbed by grave digging.

SMALL FINDS

Nina Crummy

COPPER ALLOY OBJECTS

Though very few in number, the copper-alloy finds span almost the whole Roman period. The earliest object is a well-preserved Nauheim derivative brooch, a type that belongs to the pre-Flavian period and may even be pre-conquest and the latest is an unstratified coin of Constans. The other items cannot be closely dated. They include fragments of chain, probably from a necklace, a possible earring, and a long-handled toilet spoon. Where appropriate, illustrated small finds outlined below are preceded by the following information; illustration number, small find number, fill context number (parentheses), feature context number (square brackets) or grave number.

SF 4. Unstratified. Coin of Constans, *HK* as 636 (Hill & Kent 1989), mint of Rome, details of mint-mark illegible, A.D. 341–6.

Illus. 16.1 SF 3. (2009). Fill of pit [2008] Nauheim derivative brooch with four-coil spring and inferior chord, narrow square-section bow with a single curve tapering to a knife-edge foot, and solid blunt-ended catchplate. Only the tip of the pin is missing. Length 45mm. Nauheim derivative brooches occur in Late Pre-Roman Iron Age contexts, but are particularly common in the Claudian-Neronian period. They occur only in iron in the King Harry Lane cemetery, Verulamium, where there is one example from a Phase 2 and one from a Phase 3 grave (Stead & Rigby 1989, Type T).

Illus. 16.2 SF 7. (2076). Fill of Grave 17. Six fragments of fine wire chain with a fragment of a ring and part of a possible clasp. Two types of wire link are present, each double thickness. Both are figure-of-eight-shaped, with one loop turned at right-angles to the other, but one type an elongated central section, the other is simply 8-shaped. The shorter type is 8mm long, the longer 15mm. The possible clasp fragment has a single loop with a complex wrapped or knotted join beneath it. The ring is made of round-section wire and is about 16mm in diameter internally. The short form of double-wire figure-of-eight link occurs on precious metal chain necklaces, such as that (in gold) with wheel and crescent amulets from the Backworth hoard (Johns 1996, fig. 5.5). It is likely that these fragments also derive from a necklace, with the ring perhaps used to suspend a larger ornament, perhaps a bead or amulet. Being the same thickness all round, the ring is unlikely to be part of a crescent.

Illus. 16.3 SF 2. (2009). Fill of pit [2008]. Two fragments of a ring of round-section wire. The larger piece tapers to one side, and the smaller is of narrower

60 RHODRI GARDNER

diameter, suggesting that these are from a simple penannular earring of Allason-Jones's Type 1 (1989, fig. 1, 1). Diameter approximately 20 mm, section ranges from 2 mm to 1 mm in diameter. Associated is a small amorphous fragment, 10 by 5 by 3 mm.

Illus. 16.4 SF 1. (2187). Fill of well [2186]. Long-handled toilet spoon with small round cupped scoop. There is a short band of spiral grooving on the shaft just above the scoop. The shaft is bent. Length (straight) approximately 110mm. Scoop 5mm in diameter. Long-handled spoons of this type were probably used to extract cosmetic powders or unguents from long-necked bottles.

Illus. 16.5 SF 5. (2034). Fill of grave G7. Small flat-headed stud with square-section shank. An oval hole in the head may be deliberate. Diameter 14mm, length 8mm. The end of the shank is not riveted, suggesting that this stud was used on wood rather than leather.

(2150). Fill of pit [2149]. Fragment of sheet, probably cladding or tubing, as there is a crisp angle along the length of the piece, which otherwise appears slightly crumpled. Maximum dimensions 33 by 21mm, 0.5mm thick.

BULK STONE

Most of these stone fragments probably come from quarries with the East Midlands region but also present is a small fragment of a quernstone made from Mayen lava, from the Eifel Hills of Germany. These querns first arrived in Britain with the Roman army in A.D. 43, and are most commonly found in 1st and 2nd century contexts. Selected examples are discussed below.

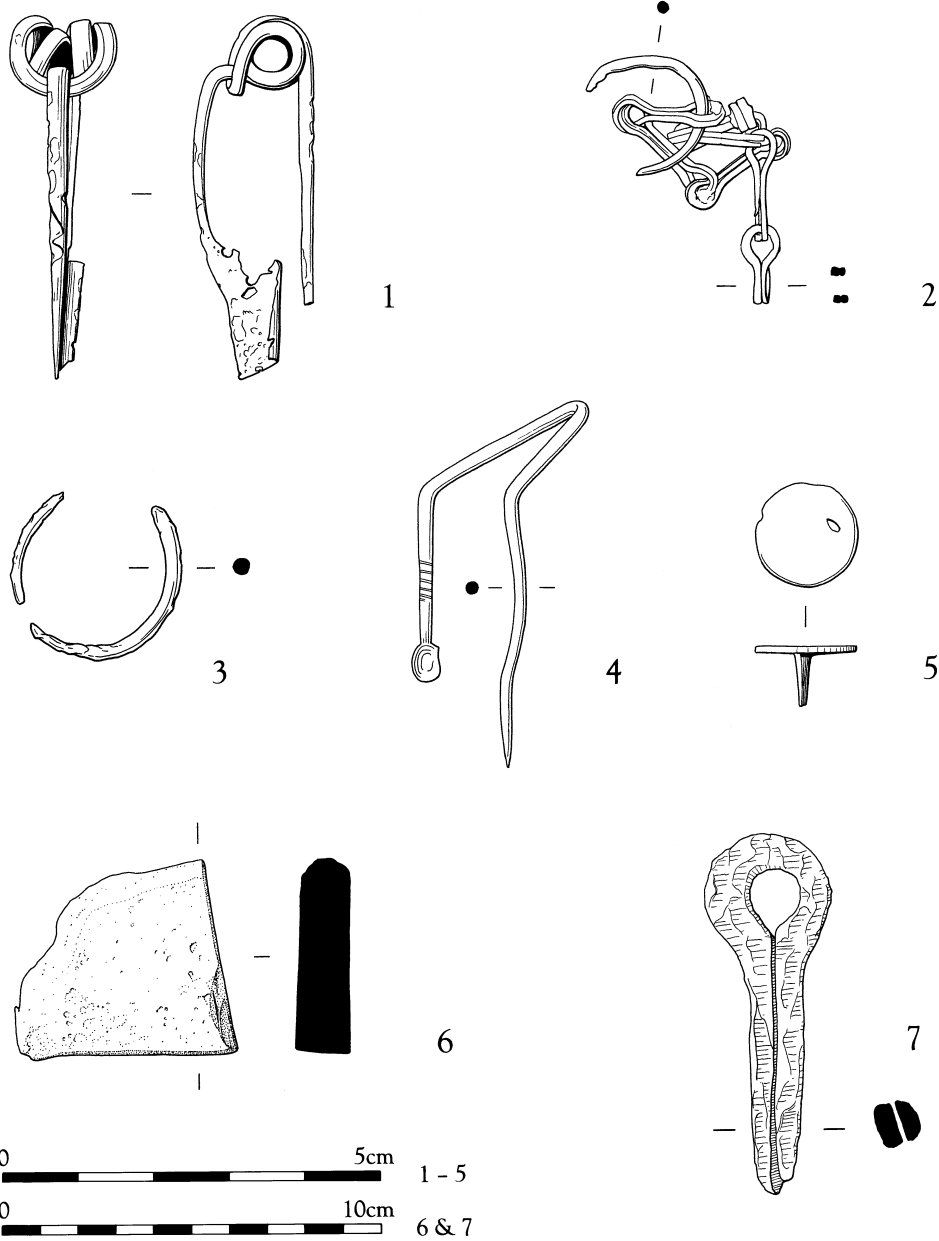
Illus. 16.6 (2238). Fill of gully [2237]. Small slab of weathered shelly limestone veneer, probably from a source in the East Midlands. Two contiguous edges, set at an angle of about 85°, are original. Maximum dimensions 51 by 54mm, 14mm thick.

(2014). Fill of grave G2. Small fragment of weathered lava quern, with one surface probably original. Weight 10g.

(2064). Fill of grave G14. Fragment of a block of ?chalk, weathered from pale grey to brown, with occasional flecks of haematite inclusions. One face is worn slightly concave on both axes and may have been used as a rubbing surface. The two long edges are parallel and original, one short edge retains part of a bevelled edge. Possibly reused building stone. Maximum dimensions 96 by 60mm, 34mm thick.

(2363). Fill of pit [2360]. Two fragments of slate, probably from roof-slates. On each piece one edge may be original. 1) 107 by 120mm, 20mm thick; 2) 59 by 60mm, 17mm thick.

A ROMAN CEMETERY IN CLARENCE STREET, LEICESTER



16. Small finds.
1-5 Copper alloy
6 Limestone
7 Iron

The bulk ironwork

Most of the items are very encrusted with iron-enriched soil, sometimes not fully penetrated on the X-rays. Moreover, not all nails were X-rayed. The presence or absence of a head on a nail shank is therefore not always clear, and lengths are often approximate. Apart from a split-spike loop from a pit, all the objects were nails. Most derived from coffins, though some were probably residual in the grave fill and others came from pits.

SPLIT-SPIKE LOOP

Illus. 16.7 (2364). Fill of pit [2360]. A large split-spike loop, both arms more or less complete. Length 96mm. Split-spike loops can be used in pairs to form a hinge, or to attach other fittings.

NAILS

Most of the nails are of Manning's Type 1b (1985, 134), with a more or less flat circular or sub-rectangular head, the length varying considerably, with one complete example measuring 35mm, another 79mm, and another 115mm. In general the heads of those nails directly associated with coffins were of quite large diameter, up to about 30mm.

A few of the less corroded shanks had a coating of mineral-replaced wood. Roman coffins were usually made from oak, though one out of a sample of more than 100 from the Butt Road cemetery, Colchester, was made of willow or poplar (Crummy & Crossan 1993, 120). The wood on these nails is most often visible at the lower end of the shank, with the longitudinal grain running parallel to it, as would be expected where two planks are nailed together at right angles. One shank tip, from grave G19, has the grain running across it, suggesting it came from two overlapping planks. The plank thickness of the coffin in grave G23 was shown by a nail that had wood grain passing transversely across it at the upper end, and parallel to it at the lower end, with the junction between the two planks clearly defined. The thickness of the transverse wood was about 35mm; a precise measurement was not possible because of the corrosion below the head. Similar deposits on a nail from grave G22 gave a plank thickness of 45mm. Both sizes are within the range for the planks from the Butt Road coffins (*ibid.*).

The nails from each coffin were usually much the same size, but some grave fills, for example, graves G22, G25 and G44 also produced much smaller nails, which may have been residual. Similarly, where only one or two small nails were found in a grave, as in grave G43, they may also be residual. There is one example of a Type 8, a short form with a hollow domed head, probably used on upholstery (Manning 1985, 136). This derived from a grave and must be residual.

HUMAN BONE

Dr Tony Waldron

The human remains from this site consisted of inhumations that were generally in an extremely poor state of preservation. The majority were incomplete and had suffered considerable post-mortem damage, which greatly limited the amount of useful information that could be gleaned from their study.

In the examination of the skeletons the usual procedures were followed. An attempt was made to determine the sex and age of each skeleton, an estimation of height was made from long bone lengths where possible and any pathological changes were noted and diagnosed.

AGE AND SEX

Of the 92 skeletons that were examined, 80 were adults and 12, infants or juveniles. Three inhumations had infant or juvenile intrusions, in one case a single bone from a foetus of between 32 and 36 weeks gestation. Of the adults, 29 could not be assigned either an age or a sex. In a further 16 cases a sex but not an age was determined, and there are four in which an age but not a sex was assigned. This reflects the very poor state of the assemblage. The sex ratio of the adults was unity, which suggests that the sexing techniques – where they could be used – were reliable. A higher proportion of the females died relatively young which may reflect the hazards of childbirth in the past.

Sex was determined on the basis of primary morphological changes, particularly those that affect the pelvis, and secondary changes to the morphology in the skull. In the absence of the pelvis or skull, sex was identified on the basis of certain measurements, especially those of the maximum diameter of the heads of the femur and humerus and on the maximum length of the clavicle. Where such measurements could not be taken, identification was based on the general morphology (robust or gracile) of the skeleton, although this method is not generally reliable.

The age at death of juvenile skeletons was determined, where possible, from the state of dental formation and eruption, by the pattern of closure of the epiphyses of the long bones or from long bone lengths. Ageing of adult skeletons relied on dental wear and on age-related changes in bone morphology. Adult ages have been given in ten year bands (Fazekas & Kosa 1978; Maresh 1955; Scheuer & Black 2000; Stein & Rowe 2000; Ubelaker 1989).

Age	Male	Female	Unknown	Total
Infant			8	8
Juvenile			4	4
15 –	1	4		5
25 –	5	3	1	9
35 –	3	4	0	7
45+	7	4	3	14
Unknown	7	9	29	45
Total	23	24	45	92

Table 4. Age and sex distribution of skeletons at Clarence Street, Leicester.

THE SUB-ADULTS

The ages of the sub-adults are shown in Table 5 where it can be seen that most had died before the age of three. There were four foetuses all aged about 40 weeks of gestation indicating that they were either still-births or peri-natal deaths. Such a high proportion of foetuses of the same age among the juveniles is unusual and raises the possibility of infanticide.

Case number	Age at death
1	40 weeks gestation
2	40 weeks gestation
3	40 weeks gestation
4	40 weeks gestation
5	6 months
6	6 – 12 months
7	12 – 18 months
8	2 – 3 years
9	6 – 8 years
10	7 – 8 years
11	10 – 15 years
12	13 – 15 years

Table 5. Age at death of infants and juveniles at Clarence Street, Leicester.

HEIGHT

Nineteen adult skeletons were sufficiently well preserved to permit the necessary measurements to be made (Trotter 1970), 11 males and eight females. The male heights ranged from 1.59–1.76m and the female, from 1.53–1.65m. The respective means were 1.67 ± 0.05 and 1.58 ± 0.04 m. The mean heights of this assemblage are lower than pooled data from other Romano-British sites (Waldron 2001) but rather than suggesting that the present population were less well nourished than was the norm for the time, the difference is much more likely to be a statistical artefact due to the small numbers involved.

PATHOLOGY

Any pathological changes were noted and classified to most probable cause (Ortner & Putschar 1985; Rogers & Waldron 1995). Dental disease was the largest single category, but there were some cases of osteoarthritis, trauma, and a small number of other conditions, including one of hyperostosis frontalis interna. Overall there was less pathology in the assemblage than might have been expected. This was probably due to the very damaged state of the bones, the amount of pathology found in any assemblage being directly related to the state of preservation.

Dental disease There were 40 adult skeleton in which the teeth were sufficiently well preserved to permit for a pathological examination (in which at least a quarter of the dentition was available for study). Overall, the dental health was poor, with 17 cases of dental caries and 17 having suffered ante-mortem tooth loss, both often occurring in the same individual. In some cases dental caries was

very extensive but there was only a single case of dental abscess. It is usually presumed that ante-mortem tooth loss is the result of caries or primary gum disease but it is not possible to distinguish tooth loss from these causes from others, including trauma, deliberate removal or scurvy.

Enamel hypoplasia There were four cases with enamel hypoplasia. There are a number of causes of enamel hypoplasia, both genetic and environmental. There is a variety of hereditary disorders in which enamel hypoplasia may be present and some genetic causes result in all the teeth having the condition. Other causes include trauma to the teeth and jaws, infections during pregnancy and infancy, poor pre-natal and post-natal nutrition, hypoxia and exposure to toxic chemicals (Brook, Fearn & Smith 1997; Seow 1990). It is impossible to determine the cause of enamel hypoplasia in a skeletal assemblage.

Retention of deciduous second molar A male aged 25–35 at death was found with the left second deciduous molar in place. This is an uncommon finding and is usually due to agenesis of the underlying permanent premolar. The retained teeth generally remain in good condition and do not have any untoward effects on the permanent dentition (Ith-Hansen & Kjaer 2000).

OSTEOARTHRITIS

Osteoarthritis is invariably the most common disorder found in the skeleton of past populations (Rogers & Waldron, 1995). There were six cases of osteoarthritis, three affecting the hands, two the facet joints of the spine, two the hip and one the feet.

Osteoarthritis of the spine and the hands is common in past populations although the spine is invariably more commonly affected than the hands. It is very unusual to find no cases in which the acromio-clavicular joint is affected since this joint is involved at least as frequently as the spine, and the lack of any cases here can only be attributed to the poor condition of the skeletons. The larger joints tended to be rather better preserved than the smaller and this may explain why osteoarthritis of the hip is represented by two cases. There were no cases of osteoarthritis of the knee and this may provide some further evidence for the observation that in pre-medieval populations osteoarthritis of the hip was more common than of the knee, whereas in the post-medieval period (and up to the present day) the converse is the case (Waldron 1995).

Trauma There were four skeletons with fractures. In one, a small fragment of rib was present with a healed fracture probably resulting from a fall or a blow. There was a single case in which fractures were noted in the end plates of the eleventh and twelfth thoracic vertebrae and this was almost certainly the result of a fall from a height. Fractures in the vertebrae may be a complication of osteoporosis but there was no evidence that this was the cause in this elderly (45+) male.

The other two fractures were found in extremely fragmented skeletons. In one the humerus had a fracture which seemed to have healed in good alignment. The

cortex of the bone was abraded and in poor condition and it was possible to determine the precise nature of the fracture, which might have allowed some speculation as to its cause. The fourth fracture involved the neck of the right femur. Again, the condition of the bone precluded detailed study but the woman had survived for some years following the accident. She would have been considerably disabled, however, and would certainly not have been able to walk unaided.

Head-wound The final case of trauma was found in a male who died between the ages of 25 and 35. There was a hole in the left frontal bone just above and lateral to the left eye. The hole tapered from outside to inside, measuring 15.4×9.3 mm in the external table and 12.5×8.5 mm in the inner table. The edges of the hole showed no signs of healing and were of the same colour as the rest of the skull making it almost certain that it had been made during life by a tapering weapon or tool. The absence of any remodelling indicates that the individual had not survived long after receiving the wound and it was almost certainly the cause of his death.

Other conditions There were cases with marginal osteophyte around the cervical or lumbar vertebrae, or with Schmorl's nodes in the lower thoracic or lumbar vertebrae, conditions found universally in skeletal assemblages and generally of no clinical significance.

There was a single case of cribra orbitalia in an immature female. Although this is often taken to be indicative of iron-deficiency anaemia there is no clinical evidence to substantiate this suggestion and it is best looked upon as a normal variant unless and until some validation for its relation to iron-deficiency anaemia is forthcoming. This young woman interestingly also showed considerable asymmetry between her left and right arms and shoulder girdles, the left being much smaller than the right and may be seen from Table 6. The difference in the size of the arms would most probably have arisen from damage to the nerves of the brachial plexus; this could have been caused by trauma or as the result of poliomyelitis.

	Left	Right
Glenoid length	27	34
Width of acromion	23	26
Diameter of head of humerus	37	40
Maximum length of humerus	317	332

Table 6. Asymmetry in skeletons (measurements in mm). Arms and shoulder girdle.

Another example of asymmetry, this time in the mandible, was found in woman aged between 25 and 35. As may be seen from Table 7, the left side was underdeveloped compared with the right. The teeth on the right side of the jaw were much more worn than on the left, so that she must have chewed much more on the right than the left. Mandibular asymmetry may result from infection or trauma and it may also follow upon facial paralysis in early childhood (Cohen 1995).

	Left	Right
Gonial angle	~110°	~130°
Width of base of ramus	20	27
Width at level of third molar	16	10

Table 7. Asymmetry in skeletons (measurements in mm). Mandible.

Pathology in an infant The shaft of the single extant humerus of a six-month old infant was extremely porotic and much thinner than normal. This may have resulted from a prolonged period of inactivity, suggesting that the child may have had a chronic illness that preceded their death.

Diffuse idiopathic skeletal hyperostosis (DISH) In modern populations DISH is related to obesity and the development of diabetes and in the past it seems to be particularly common among those of high social status (Rogers & Waldron 2001). DISH occurrence increases with age and the only case here was in a male at least 45 years old. The typical signs were present in the few thoracic vertebrae that had survived but the rest of the skeleton was too badly damaged to detect any of the extra-spinal manifestations. DISH is often asymptomatic and it is likely that this individual was unaware of the condition.

Hyperostosis frontalis interna (HFI) There was a single case in a female of unknown age. HFI is a benign condition that occurs in approximately 1% of the normal population, about 95% of cases in women over 40. It is easily recognised in the skeleton as a symmetrical, uneven thickening of the inner table of the frontal bone. The condition is usually benign but there may be some cognitive impairment if the thickening is sufficient to produce pressure on the frontal cortex of the brain (du Zubicaray *et al.* 1997). There have been very few cases of HFI described in past populations; this may simply be due to the fact that it can only be recognised in an intact skull by radiography or endoscopy, but careful studies using such techniques have confirmed its low frequency in the past (Herskovitz *et al.* 1999). It is not clear at when the disease actually became more common, or whether there was a gradual increase or a sudden jump in its prevalence, and this is a matter that would repay further study. It has been postulated that the increase is related to increased fat metabolism in recent times, with a concurrent higher level of leptin, an amino acid that is involved in the regulation of total body fat and which has also effects on bone metabolism (Ruhli & Henneberg 2002).

CAUSES OF DEATH

The cause of death is seldom discovered from the examination of the skeleton. However, the cause of death was reliably established, in the case of the young man with a head wound caused by a pointed tool or weapon. There was an inhumation of a young woman in which a single bone from a 32 to 36 week old foetus was found. Assuming that the two belonged together, it seems reasonable to suppose

68 RHODRI GARDNER

that the woman died as a complication of childbirth, perhaps because of a bleed or an intra-uterine infection.

Comment

This assemblage showed a few unusual features, such as the relatively large number of full-term fetuses and the single case of HFI. The distribution of osteoarthritis was also unusual but probably an artefact of preservation. The amount of information that could be gained from the skeletons was greatly diminished by their very poor state of preservation, which resulted in a considerable reduction in the amount of the skeletal material and in much post-mortem damage.

ANIMAL BONE

Ian Baxter

Introduction

Animal bone with a total weight of 11kg amounting to 94 'countable' fragments (see below) were recovered from the site. Most of the animal bones derived from *c.* 2nd century A.D. refuse pits pre-dating the establishment of the cemetery, particularly pits 2006, 2360 and 2193. A smaller quantity of bone was residual to the grave fills. Bone preservation ranged from good to poor but most bones were in fairly good condition.

Method

All of the animal bone was hand-collected. Consequently an under-representation of bones from the smaller species is to be expected. The mammal bones were recorded following a modified version of the method described in Davis (1992) and Alberalla and Davis (1994). In brief, all teeth (lower and upper) and a restricted suite of parts of the postcranial skeleton was recorded and used in counts. These are: horncores with a complete transverse section, skull (zygomaticus), atlas, axis, scapula (glenoid articulation), distal humerus, distal radius, proximal ulna, carpal 2+3, distal metacarpal, pelvis (ischial part of acetabulum), distal femur, distal tibia, calcaneum (sustenaculum), astragalus (lateral side), centrotarsale, distal metatarsal, proximal parts of the 1st, 2nd and 3rd phalanges. At least 50% of a given part had to be present for it to be counted.

The presence of large (cattle/horse size) and medium (sheep/pig size) vertebrae and ribs was recorded for each context, although these were not counted. 'Non-countable' elements of particular interest were recorded but not included in the counts. The separation of sheep and goat was attempted on the following elements: dP₃, dP₄, distal metapodials (both fused and unfused), and distal tibia using the criteria described in Boessneck (1969), Kratochvil (1969), and Payne (1969 & 1985). The shape of the enamel folds (Davis 1980; Eisenmann 1981) was used for identifying equid teeth to species. Wear stages were recorded for all P₄s

and dP_4s as well as for the lower molars of sheep/goat, both isolated and in mandibles. Tooth wear stages follow Grant (1982).

With the exception of cattle horncores, measurements taken are retained on the Access database. These in general follow von den Driesch (1976). Humerus HTC and BT and tibia Bd measurements were taken for all species as suggested by Payne and Bull (1988) for pigs. The state of the epiphyseal ends of bones was also recorded and is retained on the Access database.

Frequency of species

CATTLE

The assemblage consists exclusively of the remains of domestic species. Cattle are by far the most frequent taxon, accounting for 76% of the total. The most significant element of the cattle assemblage is the horncores recovered from pits 2006, 2360 and 2193. These comprise 44% of the cattle bone recovered from the three features. With the exception of the measurements, descriptions are qualitative and based on criteria published by Armitage and Clutton-Brock (1976) and Armitage (1982). Consequently there is an appreciable margin of error, particularly in the attribution of sex. This has caused problems for other specialists, e.g. O'Connor (1988; 1989). As a general rule the cores of oxen (castrates) are easier to identify than the other sexes due to their more massive size and thinner walls. Entire male (bull) cores should be shorter, more solid and more oval in cross-section than those of cows. However, all attributions of sex must be considered tentative. All the cores recovered derive from shorthorned beasts, with the exception of two particularly large ox horncores, which may be mediumhorned. The present author has previously noted this tendency among oxen from shorthorned herds from both Iron Age and Romano-British sites (Baxter unpublished a; b; c; d). The observed sex ratio at Clarence Street, from 20 sexable horncores, is 40% bulls, 35% oxen and 25% cows. Suggested ages are: 20% young adults (3–7 years), 45% adults (7–10 years) and 35% old adults (10+ years). The horns of bulls and cows are forward and downward curving while some belonging to oxen appear to curve upward in similar fashion to the illustrations in Armitage and Clutton-Brock (1976, Fig. 11).

The cattle horncores appear to fall into two types, smooth cores similar to those found on Iron Age sites and generally longer and more rounded grooved cores not seen in Britain until the Roman period. This distinction was noted by Gidney at Causeway Lane, Leicester (1999, 310–313, Plates 16–17) although she could find no metrical distinction between the morphotypes and concluded that the differences were probably due to sexual dimorphism within a single population. The present author disagrees with this interpretation and considers that they most probably represent two distinct types or 'breeds' (*senso latu*) found in Roman Britain, with the grooved core type representing an import from continental Europe (Baxter unpublished c and d). Although this sample is of small size, some support for this is provided by a plot of the maximum and minimum

basal dimensions, where, with a few exceptions, the grooved cores tend to be relatively wider in the minimum dimension (W_{min}) and therefore have a rounder cross-section. The larger cores in both cases belong to castrates (oxen).

Elements from all parts of the cattle skeleton were present at the site, with the exception of mandibles retaining teeth, and cattle sized vertebrae and ribs were also widespread. All of the postcranial bones recovered had fused epiphyses, with the notable exception of a partial skeleton found in pit 2360 belonging to a calf aged around 10–18 months (Amorosi 1989). The few teeth recovered derive from rather older adult beasts, tending to confirm the horncore evidence that adult beasts comprise the majority of the assemblage. Two bones suitable for calculating withers heights were recovered: a metacarpal from pit 2006 and a metatarsal from pit [2147]. These came from animals approximately 102 cm and 120 cm high at the shoulder based on the multiplication factors of Matolcsi (1970). These values are typical for the period.

An interesting aspect of cattle butchery at the site is the occurrence of split cattle bones, humeri, radii, tibiae and particularly metatarsals, probably residue from marrow extraction. These split bones were found in pits 2006, 2360, 2193 and the fill of grave G24.

SHEEP/GOAT

Sheep remains comprise the next most frequent taxon and include a number of mandibles together with postcrania, particularly from the hindquarters. Sheep-sized rib fragments are present but are relatively scarce and no sheep sized vertebrae or horncores were recovered. Of specimens that could be identified to species, almost half, all belong to sheep and nothing attributable to goat was seen. The number of ageable mandibles is small, six specimens, but suggest a high mortality rate, probably natural, amongst animals aged less than two months with other animals surviving to at least four years (Table 4). The Romano-British sheep economy is known from other sites to have been a generalised one in which milk, meat, wool and manure were all of importance. The few measurable sheep bones include a metatarsal from an individual 55cm high at the withers based on the multiplication factors of Teichert (1975).

PIG

Pig remains are scarce, comprising a maxilla from pit 2006 and a scapula from the fill of grave G3.

HORSE AND OTHER SPECIES

Horse remains include a P^3 from [2243] and a P^4 from the fill of grave G3. These came from animals aged approximately 9 and 11 years respectively based on the wear curves for similarly sized New Forest ponies published by Levine (1982). A complete metatarsal from pit 2360 came from a pony-sized animal 134cm or $13\frac{1}{2}$ hands high at the shoulder, based on the multiplication factors of Kiesewalter (1888). A proximal femur fragment (uncounted) from pit 2360 came from either a fox (*Vulpes vulpes*) or a fox-sized domestic dog (*Canis familiaris*).

Discussion

As noted above, most of the animal bones derive from refuse pits with a much smaller proportion residual in the later grave fills. Many of the bones appear to derive from possible industrial and primary butchery activities occurring outside the environs of the Roman city prior to the establishment of the cemetery. The deposits of cattle horncores in pits 2006, 2360 and 2193 may represent waste from the activities of horners. A similar deposit was found in a ditch pre-dating the cemetery at Newarke Street (Baxter 1996, 84). Noisome industrial activities such as tanning and horning were customarily located in the suburbs of Roman towns. Although none of the horn-cores from Clarence Street have cut marks, this is not unusual and there seem to have been methods of extracting the horn that would leave no visible trace on the core (MacGregor 1985). The split cattle bones may also derive from industrial processes connected with the extraction of marrow. They resemble much larger concentrations of cattle bone fragments found at Augst (*Augusta Raurica*) which were interpreted as debris from the manufacture of glue (Schmid 1972, 48, fig. 10). A similar assemblage is also known at Carlisle, where they have been considered evidence of the boiling of bones to extract bone grease, oils and marrow fats (Rackham 1994, 58–9). The Clarence Street fragments do not resemble waste and blanks from bone working, in which the ends of bones are sawn off and shafts split to manufacture pins and needles etc. Similarly chopped horse bones (medieval) from Causeway Lane, Leicester have been interpreted as possibly fragmented for marrow extraction or stock (Gidney 1999).

Summary and conclusion

Although only a tiny assemblage, the animal bone adds to our knowledge of the industrial activities conducted in the eastern suburbs of the Roman town. At Clarence Street these would primarily appear to involve cattle horn and cattle bone grease, oils and marrowfats. In common with other sites of similar period, both in Leicester and elsewhere in the Midlands, two distinct types or 'breeds' of cattle would seem to be present, one of which was possibly imported from the continental empire. Sheep and pigs were also kept on a smaller and less economically important scale and horses would have been used as mounts and pack animals.

DISCUSSION

Phase 1: Domestic refuse disposal and industrial processing

Phase 1 is characterised by dispersed and often isolated features, resulting in few clear stratigraphic relationships. Dating depended largely on the ceramic evidence, which defined a relatively broad phase of 'pre-cemetery' activity. A more detailed discussion of the ceramic dating evidence is presented (see

Fawcett above). In summary, the assemblage is dominated by 2nd century material (predominantly early to mid 2nd century) with possible late 1st and early 3rd century components – these only occur as extremes of the date ranges for some material.

The well [2186] in the centre of the site seems to have been used for a relatively short duration. It may have been abandoned and subsequently backfilled in the early to mid 2nd century. Although the closely-packed features to the south of the well generally date to the 2nd century, they may represent the earliest activity on the site as [2243] and [2237] are dated to the late 1st to early 2nd century A.D. The function of these features is more difficult to interpret as, with the exception of [2229] and [2223], they are shallow and poorly preserved. Gullies [2235] and [2237] and pit [2239] may represent beam slots and a posthole, though the evidence is weak and an interpretation of these features as a series of pits and gullies is favoured here. It is likely that the Phase 1 activity would have been associated with nearby structures but the evidence suggests that these lay beyond the limits of excavation.

A number of pits are concentrated in the northern half of the site. The majority, with the exception of [2360], had single fills. Three [2006], [2193] and [2360] contained assemblages that indicate industrial activity, most likely horn working or the extraction of oils and greases. The rest are more typical of domestic waste disposal. Phase 1 activity here was relatively short-lived, with most backfilling taking place in the early to mid 2nd century. Notably, two of the horn-working rubbish pits may be slightly later, with [2360] going out of use in the early 3rd century and [2193] in the later 2nd century. Pit [2360] may represent a pit initially excavated for small-scale quarrying, abandoned and then later filled with industrial waste. Similar quarry pits backfilled in the late 1st to early 2nd century have been recorded elsewhere in Leicester, for example at Causeway Lane (Connor & Buckley 1999, 19). These were generally filled with domestic rather than industrial waste.

Phase 1 saw mixed domestic and small-scale industrial activity, beginning perhaps as early as the end of the 1st century and continuing to as late as the early 3rd century, though generally concentrated in the early to middle 2nd century. Faunal evidence for horn working and bone grease or oil extraction is concentrated north of the well [2186]. The central portion of the site may have contained a boundary between two areas of different land use. However, it is also possible that this pattern indicates a change of land use over time within Phase 1, with the slightly earlier activity in the southern part of the site gradually giving way to small-scale industrial activity to the north.

Phase 1 activity corresponds with the formalisation of the Roman street grid in the early 2nd century (Connor & Buckley 1999, 6). It supports the prevailing picture of rapid expansion of the town at this time, with evidence for industrial activity beyond the line of the later defences. The end of Phase 1 activity in the late 2nd or early 3rd century corresponds well with the currently accepted date for the establishment of the town defences (see 'Archaeological Introduction' above).

Phase 2: Leicester's eastern cemetery

Ninety-one graves containing the remains of 95 individuals were recorded during the Clarence Street excavations, making it the largest sample of Leicester's Roman burials excavated to date.

Phase 1 did not include any significant boundary features and there is no evidence to suggest that earlier land-use affected the establishment or subsequent layout of the cemetery. The location of the site and the development of the Roman town provide the clearest explanation for the dramatic change in land-use between Phases 1 and 2. Expansion was rapid after the early 2nd century and buildings aligned with the street grid are known to lie beneath the town defences to the north and east (Buckley & Lucas 1987), suggesting a sprawling early town. The Phase 1 evidence at Clarence Street confirms this. It was not until the late 2nd or early 3rd centuries that the defences were established, and it is likely that area of the site was only then formally recognised as extra-mural. According to Roman law, burials were not permitted inside settlement boundaries, so the cemetery was probably established only after the formalisation of the defences.

The dating and chronology of individual graves proved difficult to determine as, in common with many late Roman cemeteries, many of the graves were isolated and did not contain grave goods. Much of the pottery recovered from grave fills is residual, deriving from Phase 1. The latest Phase 1 activity corresponds with the formalisation of the defences in the late 2nd or early 3rd century. Most other Roman inhumation burials in the area (illus. 1) date to the 4th century date (Cooper 1998) and although the Clarence Street cemetery may have been established by the mid 3rd century, a 4th century date seems more likely.

The only stratigraphic evidence that post-dates the cemetery are ditch [2174] and pit [2166] and these features proved difficult to date. There is little 4th century material evidence, with only a few intrusive pottery sherds in Phase 1 and an unstratified coin of A.D. 341–6 (see Crummy, above). The lack of deliberately deposited grave goods has also limited the potential for accurately dating the cemetery. The scant evidence suggests that the cemetery was probably abandoned towards the end of the 4th century.

Phase 3: Post-cemetery features

While drainage gully [2174] clearly post-dates a number of the Phase 2 graves the finds assemblage it produced did not enable it to be accurately dated. The presence of such a feature sealed by the medieval cultivation soil does indicate a land use change, which most likely corresponds to the abandonment of the cemetery. Given the paucity of Saxon evidence in the northeastern quarter of the town a late Roman date sometime toward the end of the late 4th century for Phase 3 is favoured here.

Phase 4: Medieval arable agriculture

With the exception of a single insecurely dated pit, the medieval evidence is confined to a partly truncated medieval cultivation layer. The small ceramic

assemblage recovered from this deposit dates it to the 12th to 14th century. There is some evidence for a decline in the town in the late 12th/early 13th centuries (Connor & Buckley 1999, 8), though it has not been possible to place the limited Clarence Street medieval evidence either before or after this.

Spatial analysis of the late Roman cemetery

Excavations revealed the largest area yet observed of the eastern cemetery of *Ratae*, permitting spatial analysis of the site. There is clear evidence for rows indicating managed layout, particularly in the north-western corner of the site. Such rows have been observed in late Roman inhumation cemeteries such as Poundbury (Dorset) (Farwell & Molleson 1993) and Lankhills in Winchester (Hants) (Clarke 1979). Similar patterns were observed in smaller interventions at Haymarket Towers *c.* 200m to the south (Cooper 1998) and in the southern cemetery at Newarke Street (Cooper 1996). Clusters were observed in some parts of the site (e.g. graves G67, G72 and G83). These have been taken to suggest family groupings at Butt Road, Colchester (Essex) (Crummy *et al.* 1993, 93). However, the skeletal assemblage from Clarence Street did not display any traits suggesting family relationships.

The spatial layout does not suggest any overcrowding leading to intercutting of graves, which has been suggested in areas of the eastern cemetery of *Londinium* (Barber & Bowsher 2000). At Clarence Street, the few intercutting graves appear to have been placed directly above or adjacent to earlier graves, either deliberately, or because earlier graves eventually became less visible, leading to unintentional disturbance. The relatively low density of graves at Clarence Street indicates a relatively short period of use, which suggests that truncation was deliberate rather than accidental (see below).

Grave orientation was largely uniform. With one exception (G42) all the graves were aligned west–east. The interred remains respected the alignments of the graves. A mean alignment of 277° was observed (SD 9.75°) and the west–east graves lay within a total arc of 63°. This compares with an arc of 26° in the 39 Newarke Street burials (Cooper 1996) and 58° in the 258 west–east burials in the eastern cemetery of Roman London (Barber & Bowsher 2000). West–east alignment is well-documented in late Romano-British cemeteries and has often been associated with Christianity (though this interpretation is much debated – see below). West–east burials also tend to become more prevalent over time and many cemeteries show this alignment almost exclusively by the end of the 4th century (Philpott 1991, 222–228). Notably, the small number of burials from nearby Haymarket Towers (Cooper 1998) exhibited a wide range of orientations and head positions, even though they predominantly 4th century. Mixed alignments were also present in London (as were graves that respected the layout of topographical or other obstructions) where only a slight correlation of orientation with chronology could be discerned (Barber & Bowsher 2000). The variation in alignment seen at Clarence Street is not significant and suggests that west–east burial was deliberately chosen but perhaps not rigorously carried out.

Coffin construction and grave markers

The evidence for burial in coffins was restricted to the occurrence of coffin stains and/or the presence of *in situ* nails. It could be suggested that this evidence was more prevalent to the north, but it is not clear whether this reflects a variation in the burial rite or differential deposit survival (see 'note on two-stage excavation strategy', above). Coffin stains took the form of simple rectangular boxes. Coffin size was related to the individual corpse, with no evidence for standardised sizes suggesting that they would have been constructed in an *ad hoc* manner, rather than selected from a stock of pre-prepared examples. Nails were not employed symmetrically, suggesting that they were not the primary means of fixing. Coffins probably had wooden joints with nails occasionally used for reinforcement. Cooper (1996) mentions a well-preserved timber coffin found at Great Holme Street in 1976, constructed using treenails. Such coffins would not survive in some soil conditions. Therefore, although there is good evidence for coffins in some graves at Clarence Street, the likely all-wood construction and prevailing soil conditions means that the absence of evidence for a coffin in a grave does not indicate that a coffin was not used.

No evidence for true stone linings was observed and only three graves contained stone packing. The use of stone is well documented in other late Roman cemeteries. MacDonald (1979, 428) has suggested a symbolic function (an imitation of the tomb of Christ), while Viner and Leech (1982, 95) suggest a functional explanation (supporting coffins). A further explanation, that of 'grave surface markers' and 'coffin/corpse markers', was suggested at Butt Road, Colchester (Crummy & Crossan 1993, 93–104). Although no surface markers were found at Clarence Street, coffin markers, described as attempts to 'prevent further disturbance of the coffin/corpse or to facilitate its location for the insertion nearby of a related burial' (Crummy & Crossan 1993, 101–102) may be relevant to the Clarence Street burials. All three examples recorded here; grave G4 (which cuts an earlier burial; illus. 5), G17 (which contains a 'marked' adult burial with an infant coffin burial placed on top; illus. 6) and G30 (which also cuts an earlier grave; illus. 8) are part of apparently deliberate multiple burials. This leads to a tentative interpretation of the packing as having a marker function in this case. At Butt Road and notably, at Newarke Street (Cooper 1996), such packing was also observed in the final graves of multiple sequences. However, a much larger proportion of the Newarke Street graves (56%) contained stone packing. Whether family or wider social groups were meant to be identified in such a way is unclear. There were 14 examples of intercutting graves without packing. These varied from examples where one grave just clipped another to where two graves were almost superimposed (e.g. graves G30 and G36). It is more difficult to say whether these are chance occurrences or deliberate, as is suggested with the 'marked' graves. However, where it does occur, it is significant that the underlying bodies themselves are always undisturbed, which could be seen as additional evidence for the positioning of later burials near known, identifiable graves.

Burial practice and religious identity

The graves were characterised by a uniform burial practice: supine, extended burial in west–east orientated grave cuts that are predominantly undisturbed by other graves, sometimes in timber coffins and without grave goods. None of the ceramic material showed signs of being deliberately deposited and only two graves contained fragmentary remains of small finds (G7 and G17).

These characteristics, along with others such as the absence of ‘headless’ burials, the presence of plaster/chalk burials, and the equal treatment of the very young have been considered by Watts (1991), with a view to assessing the religious beliefs that influenced burial activity. While a full review of the scoring system developed in Watts’ study is not included here, it has been applied for the ‘internal evidence’ (the circumstances of the burial itself) and a result of 77 was recorded. When compared with the twenty-nine cemeteries in Watts’ original study and the score of 86 recorded for the Newarke Street burials in the southern cemetery of Leicester (Cooper 1996) such a score could be considered strong evidence for significant Christian influence.

However, in the absence of any *in situ* evidence for Christianity the arguments put forward in Watts’ study, using an only partly objective list of characteristics, are difficult to sustain. For example, one of the most commonly assumed characteristics of Roman Christian burial, that of west–east burial, is unconvincing when considered in isolation. Philpott’s (1991) review of Romano-British burial practices suggests that there is nothing particularly distinctive about the burial of Christians in *Britannia*. It is perhaps more likely that the traditional pattern of ‘Christian’ burial often ascribed to late Roman cemeteries is largely due to the adoption of a prevailing fashion for a uniform burial rite that had gradually evolved by the late 4th century.

There is a lack of definitive evidence for Christianity in Roman Leicester (Cooper 1996, 27). This is paralleled at other towns such as *Londinium*, where the diversity of burial practices has been interpreted as having a social, rather than a chronological or religious explanation (Barber & Bowsher 2000, 333). It is not yet clear whether difficulties in identifying religious belief through burial practice is a true reflection of the Roman population’s lack of religious belief or its expression, or is more related to the current unsuitability of archaeological methods in identifying such expression.

Social status, meaning and archaeological visibility

Another archaeological theory is that the status of individuals can be deduced from the burial practices and can be used to comment on wider social organisation. This has not proved straightforward and many reports do not consider the subject in any detail. The Lankhills report states that: ‘even if social status can be defined in archaeological terms, its social meaning is far from clear’ (Clarke 1979, 191). Status may have been more visibly demonstrated in funerary rites such as processions, rather than burial practice. Such evidence is rarely archaeologically visible.

Indicators of status also include osteological evidence (see Waldron above), burial goods, containers for the dead and the location of burials in relation to structures such as mausolea. There is no evidence for burial goods or structures at Clarence Street. Coffins appear to be simple and wooden, though a number of lead coffins are known from the area of the eastern cemetery (illus. 1). Overall, the excavated evidence permits no conclusion about status.

The wealthy may have been buried nearer to major roads (Barber & Bowsher 2000, 328). In Leicester, such a pattern has been inferred in Leicester's southern cemetery (Esmonde-Cleary 1987, 104; Cooper 1996, 27–28). Connor and Buckley (1999, 6–7) have speculated that the north-eastern quarter of the town might have been something of a 'backwater', with the wealthier districts concentrated around the major public buildings to the west. The burials at Clarence Street can shed no further light on this theory, as there is no evidence to suggest that either poor or rich are interred in (or excluded from) this part of the eastern cemetery. Ultimately, inferring social organisation from cemetery evidence is fraught with difficulties, particularly considering the nature of the 'anonymous' burial practices observed at Clarence Street. As Hodder has concisely put it: 'In death people often become what they have not been in life' (1980, 168).

Cemetery management and commercial supply

A seldom-considered factor in many Roman cemetery excavations is contemporary cemetery management. The spatial organisation of the graves at Clarence Street and the evidence for deliberate intercutting of graves without disturbing the corpse suggests some degree of control. Planning was probably involved from the outset, following the establishment of the town defences. Such organisation could have been along municipal lines, following the continental model. A useful review of literary and epigraphic evidence for this is given in Barber and Bowsher (2000, 330). This situation was complex, with the municipal senate, families, patronage and *collegia* all playing a role. Though the literary evidence is principally concerned with Rome and Pompeii at the heart of the empire, it is likely that such a fundamental part of Roman culture would have been imported, along with other traditions, into the provinces. However, in the absence of significant literary or epigraphic sources, how such organisation might be interpreted from the British archaeological record has yet to be fully explored.

Beyond this purely administrative aspect of cemetery management, a commercial element was often involved, such as grave digging and coffin supply/construction. At Clarence Street, the coffin evidence suggests that they were simple and built to order, but this does not necessarily preclude the presence of an organised system of prefabricated manufacture and supply. It has also been suggested that some items could have been specially manufactured for use as grave goods in some cemeteries, such as bone fittings, which are thought to imitate more expensive copper alloy examples (Barber & Bowsher 2000, 331).

These factors should be considered with the suggested character of

contemporary Romano-British municipal management, involved in 'initial choice of sites, allocation of plots' and displaying 'a degree of small-minded fussiness about order, arrangement and alignment' (Thomas 1981, 232). Ultimately, it is clear that to view Romano-British cemeteries in terms of simple binary divisions between pagan and Christian or rich and poor is to ignore the complicating factors that, unless addressed by future research, may continue to obscure some fundamental aspects of Romano-British society.

Conclusions

In concluding this discussion of the cemetery evidence it is necessary to set the cemetery as a whole in its national and regional context. The Clarence Street cemetery post-dates the late 2nd to early 3rd century. This correlates with a generally consistent change in the burial rite throughout the Roman Empire, which occurred around the middle of the second century A.D. (Hope 1999, 55–57). However, some British cemeteries seem to lag behind this movement. At Butt Road, Colchester, inhumation was not uniformly established until *c.* 320–340, when it was accompanied by improvements in cemetery organisation (Crummy & Crossan 1993). At Trentholme Drive, York, inhumations appeared in the mid 2nd century but co-existed with cremations until the end of the 3rd century, by which time inhumation dominated (Wenham 1968). At *Londinium's* eastern cemetery, inhumations co-existed with cremation from the late 1st to 4th century, though inhumation was slightly more frequent from the mid 3rd century (Barber & Bowsher 2000). In Leicester, the Newarke Street burials, dated to the 4th century (Cooper 1996), share many similarities with those from Clarence Street, though the abundance of stone linings in the former is significant. Burials at Haymarket Towers exhibited a variety of orientations and also contained more grave offerings, also thought to be 4th century (Cooper 1998). Also, the burials recorded by Dare in 1927 at 30–36 Granby Street and originally dated to A.D. 80–300 have since been re-evaluated and assigned a mid to late 4th century date (Cooper 1996).

It can be seen from these typical examples that the comparative study of this site in a regional or national context does not serve to clarify its chronology, as the assumption of a province-wide adoption of consistent burial practices typified by sites such as Clarence Street may be unfounded. Inconsistency with continental trends is frequently observed, possibly due to factors such as a sense of regional or even civic identity that may have played a part in the development of a variety of differing burial practices in Roman Britain. For example, the prolonged survival of cremation in the eastern cemetery of *Londinium* defies the general chronological trend, possibly due to the city's unique *de novo* foundation. Perhaps such influences should be given more emphasis in the consideration of Leicester's Roman cemeteries, rather than attempting to 'fit' them into an assumed province-wide burial tradition.

This leads to a consideration of the distribution of cemeteries in Leicester. For example, the Clarence Street, Haymarket Towers and Newarke Street burials have

similarities, but also significant differences. It is just as likely that these may also be explained by factors other than religious belief systems or chronological development. Such approaches may prove fruitful avenues for future research into Leicester's Roman cemeteries.

ACKNOWLEDGEMENTS

The Trust is grateful to Fara Estates for their co-operation and funding of the archaeological excavation, and also their agents, Wells Associates, for their assistance (in particular Mr. Simon Griffiths-Baker). The logistical support of Messrs. Keith Winzar (based at Epic House) and Tom Keville (of Keville Construction) during the execution of the field work is gratefully acknowledged.

The excavations were managed by Jon Murray and directed by Nick Crank. The finds were managed by Hannah Firth. Edited by Leonora O'Brien.

Thanks are also due to Mr. Brian Kimberley for undertaking the metal detector survey of the site and Mr Lynden Cooper of ULAS for information relating to the Free Lane and Newarke Street cemeteries. The Trust is also pleased to acknowledge the input and advice of Messrs. Richard Clark and John Lucas of Leicester City Museums Service.

ARCHIVE

The archive is deposited with the Leicestershire Museums, Arts and Records Service.

BIBLIOGRAPHY

- Albarella, U & Davis, S. J. M., 1994 *The Saxon and Medieval Animal Bones Excavated 1985–1989 from West Cotton, Northamptonshire*. London: English Heritage AML Report 17/94.
- Allason-Jones, L., 1989 *Earrings in Roman Britain*. Oxford: BAR British Series 201.
- Amorosi, T., 1989 *A Postcranial Guide to Domestic Neo-Natal and Juvenile Mammals*. Oxford: BAR International Series 533.
- Armitage, P. L., 1982 'A System for ageing and sexing the horn cores of cattle from British post-medieval sites (17th to early 18th century) with special reference to unimproved British Longhorn Cattle', in R. Wilson, C. Grigson and S. Payne (eds) *Ageing and Sexing Animal Bones from Archaeological Sites*. Oxford: BAR British Series 109, 37–54.
- Armitage, P. L., and Clutton-Brock, J. 1976 'A system for classification and description of the horn cores of cattle from archaeological sites', *Journal of Archaeological Science* 3, 329–48.
- Barber, B., and Bowsher, D., 2000 *The Eastern Cemetery of Roman London. Excavations 1983–1990*. MoLAS Monograph 4.

- Baxter, I. L., 1996 'Animal bone'. In L Cooper 'A Roman cemetery in Newarke St., Leicester', *TLAHS* 70, 79–84.
- Baxter, I. L., Unpublished a. (1998) '*Landwade Road, Fordham: Report on the mammal, bird and amphibian bones*', Report prepared for Cambridgeshire County Council Archaeological Field Unit.
- Baxter, I. L., Unpublished b. (1999) '*Greenhouse Farm, Fen Ditton. Report on the mammal, bird, amphibian and fish bones*', prepared for Cambridgeshire County Council Archaeological Field Unit.
- Baxter, I. L., Unpublished c. (2000) '*Report on the mammal and bird bones from Haddon Lodge Farm, Cambridgeshire*', prepared for Cambridgeshire County Council Archaeological Field Unit.
- Baxter, I. L., Unpublished d. (2001) '*Report on the mammal, bird and amphibian bones from Tunbridge Lane, Bottisham, Cambridgeshire*', prepared for Hertfordshire Archaeological Trust.
- Boessneck, J., 1969 'Osteological differences between sheep (*Ovis aries Linne*) and goat (*Capra hircus Linne*)', in D. R. Brothwell and E. Higgs (eds) *Science in Archaeology*. London: Thames and Hudson, 331–359.
- Boyer, P., unpub *A Pottery Typology of Romano-British Greywares from Kilns at Ravenstone, Leicestershire*. Unpublished MA Thesis, Leicester University Library, 1–24.
- Brook, A. H., Fearn, J. M., and Smith, J., 1997 'Environmental causes of enamel defects', *Ciba Foundation Symposium*, 205; 212–221.
- Brown, A., 1994 'A Romano-British shell-gritted pottery and tile manufacturing site at Harrold, Bedfordshire', *Bedfordshire Archaeological Journal* 2, 19–107.
- Clarke, G., 1979 *The Roman Cemetery at Lankhills, Winchester Studies 3, Pre-Roman and Roman Winchester*, Part II. Oxford: Clarendon.
- Clark, R., 1999 'The Roman pottery', in A. Connor and R. Buckley (eds) *Roman and Medieval Occupation in Causeway Lane, Leicester*. University of Leicester Archaeological Services, Leicester Archaeological Monograph 5, 95–164.
- Cohen, M., 1995 'Perspectives on craniofacial asymmetry. III. Common and/or well-known causes of asymmetry', *International Journal of Oral and Maxillofacial Surgery* 24, 127–33.
- Connor, A. and Buckley, R. (eds), 1999 *Roman and Medieval Occupation in Causeway Lane, Leicester*. University of Leicester Archaeological Services, Leicester Archaeological Monograph 5.
- Cooper, L., 1996 'A Roman cemetery in Newarke Street, Leicester', *TLAHS*, 70, 1–90.
- Cooper, L., 1998 *An Archaeological Watching Brief and Archaeological Recording at Haymarket Towers, Leicester (planning app. 95/0891/5)*. University of Leicester Archaeological Services. Unpublished report 98/146.
- Crabtree, P., 1989 *West Stow, Suffolk: Early Anglo-Saxon animal husbandry*. East Anglian Archaeology 47.
- Crank, N. A., 2001 *Land at Clarence Street, Leicester: An interim site narrative*. HAT Report 895, Hertfordshire Archaeological Trust.
- Crummy, N., and Crossan, C., 1993 'Excavations at Butt Road 1976–79, 1986 and 1988', in N. Crummy *et al.* *Excavations of Roman and Later Cemeteries*,

- Churches and Monastic Sites in Colchester, 1971–85.* Colchester Archaeological Report 9.
- Davies, B., Richardson, B., and Tomber, R., 1994 *A Dated Corpus of Early Pottery from the City of London. The Archaeology of Roman London Vol 5*, CBA Research Report 98, York.
- Davis, S. J. M., 1980 'Late Pleistocene and Holocene equid remains from Israel', *Zoological Journal of the Linnean Society* 70 (3), 289–312.
- Davis, S. J. M., 1992 *A Rapid Method for Recording Information about Mammal Bones from Archaeological Sites.* London: English Heritage AML Report 19/92.
- Doel, P., 2000 *Extension to Wilkinson's Store, Epic House, Charles Street, Leicester: An archaeological evaluation.* HAT Report 680, Hertfordshire Archaeological Trust.
- Driesch, A. von den, 1976 *A Guide to the Measurement of Animal Bones from Archaeological Sites.* Peabody Museum Bulletin 1, Cambridge Mass., Harvard University.
- u Zubicaray, G. I., Chalk, J. B., Rose, S. E., Semple, J., and Smith, G. A., 1997 'Deficits on self ordered tasks associated with hyperostosis frontalis interna', *Journal of Neurology, Neurosurgery and Psychiatry* 63, 309–314.
- Eisenmann, V., 1981 'Etude des dents jugales inférieures des Equus (Mammalia, Perissodactyla) actuels et fossiles', *Palaeovertebrata* 10, 127–226.
- Faerman, M., Filon, D., Kahila, G., Greenblatt, C. L., Smith, P., and Oppenheim, A., 1995 'Sex identification of archaeological human remains based on the amplification of the X and Y amelogenin alleles', *Gene* 167, 327–32.
- Farwell, D. E., and Molleson, T., 1993 Poundbury. Vol 2. The cemeteries. *Dorset Natural History and Archaeological Society Monograph Series* 11.
- Fawcett, A. R., 2002 'The Roman pottery from Thorley', in *Two Prehistoric & Roman Sites in East Hertfordshire: Thorley and Dunmow Road, Bishops Stortford.* Herts Archaeological Monograph forthcoming
- Fawcett, A. R., (forthcoming a) 'The Roman pottery from Sandridge,' in *Two Rural Romano-British Settlements in Hertfordshire: Turners Hall Farm & Sandridge.* Herts Archaeological Trust Monograph forthcoming
- Fawcett, A. R., (forthcoming b) 'The Roman pottery from Turners Hall Farm', in *Two Rural Romano-British Settlements in Hertfordshire: Turners Hall Farm & Sandridge.* Herts Archaeological Trust Monograph forthcoming
- Fawcett, A. R., (forthcoming c) 'The Roman pottery', in D. Fell *A Roman Site at Legions Way, Bishop's Stortford, Hertfordshire.* Herts Archaeological Trust forthcoming.
- Fazekas, I. G., and Kosa, F., 1978 *Forensic Fetal Osteology.* Akademia Kiado, Budapest.
- Gidney, L., 1999 'The animal bones: animal bones from the Roman phases', in A. Connor and R. Buckley *Roman and Medieval Occupation in Causeway Lane, Leicester: excavations 1980 and 1991.* Leicester Archaeology Monographs No. 5. Leicester: University of Leicester Archaeological Services, School of Archaeological Studies, University of Leicester and Leicester City Museum Service for the Inland Revenue, 310–18.

- Grant, A., 1982 'The use of tooth wear as a guide to the age of domestic ungulates', in R. Wilson, C. Grigson and S. Payne (eds) *Ageing and Sexing Animal Bones from Archaeological Sites*. Oxford: BAR British Series 109, 91–108.
- Hebditch, M., and Mellor, J., 1973 'The Forum and Basilica of Roman Leicester', *Britannia* 4, 1–83.
- Hershkovitz, I., Greenwald, C., Latimer, B., Dutour, O., Jellema, L. M., and Wish-Baratz, S., 1999 'Hyperostosis frontalis interna: an anthropological perspective', *American Journal of Physical Anthropology* 109, 303–25.
- Hill, P. V., and Kent, J. P. C., 1989 *HK 'Part 1: The bronze coinage of the House of Constantine'*, in R. A. G. Carson, P. V. Hill and J. P. C. Kent, *Late Roman Bronze Coinage*. New York: Sanford J Durst.
- Hodder, I., 1980 'Social structure and cemeteries: a critical appraisal', in P. Rahtz *et al.*, *Anglo Saxon Cemeteries 9*. 1997 Oxford: BAR 82, 161–9.
- Holbrook, N., and Bidwell, P. T., 1991 *Roman Finds from Exeter*. Exeter Archaeological Report 4.
- Hope, V. M., 1999 'The Iron and Roman ages: c. 600 BC to AD 400'. In P. C. Jupp and C. Gittings, *Death in England: an Illustrated History*. Manchester University Press.
- Ith-Hansen, K., and Kjaer, I., 2000 'Persistence of deciduous molars in subjects with agenesis of the second premolars', *European Journal of Orthodontics* 22, 239–43.
- Johns, C., 1996 *The Jewellery of Roman Britain*. London.
- Jupp, P. C., and Gittings, C. (eds), 1999 *Death in England. An illustrated history*. Manchester University Press.
- Kiesewalter, L., 1888 *Skelettmessungen an Pferden als Beitrag zur theoretischen Grundlage der Beurteilungslehre des Pferdes*. Dissertation. Leipzig.
- Kratochvil, Z., 1969 'Species criteria on the distal section of the tibia in *Ovis ammon* F. aries L. and *Capra aegagrus* F. hircus L', *Acta Veterinaria (Brno)* 38: 483–90.
- Levine, M. A., 1982 'The use of crown height measurement and eruption-wear sequences to age horse teeth', in R. Wilson, C. Grigson and S. Payne. (eds) *Ageing and Sexing Animal Bones from Archaeological Sites*. Oxford, BAR British Series 109, 223–50.
- Lucas, J., 1991 *An Archaeological Evaluation in Free Lane, Leicester*. Unpublished report, University of Leicester Archaeology Service, Leicester.
- MacDonald, J. L., 1979 'Religion', in G. Clarke *The Roman Cemetery at Lankhills, Winchester Studies 3, Pre-Roman and Roman Winchester, Part II*. Oxford: Clarendon.
- MacGregor, A. 1985 *Bone, antler, ivory and horn. The technology of skeletal materials since the Roman period*. London: Croom Helm.
- Manning, W. H., 1985 *Catalogue of the Romano-British Iron Tools, Fittings and Weapons in the British Museum*. London: British Museum Press.
- Maresh, M. M., 1955 'Linear growth in long bones of extremities from infancy through adolescence', *American Journal of Diseases of Children* 89, 725–42.

- Matolcsi, J., 1970 'Historische Erforschung der Körpergröße des Rindes auf Grund von ungarischem Knochenmaterial', *Zeitschr. f. Tierzüchtg. U. Züchtungsbiol., Hamburg* 87, 89–137.
- Meyer, E., Wiese, M., Bruchhaus, H., Claussen, M., and Klein, A., 2000 'Extraction and amplification of authentic DNA from ancient human remains', *Forensic Science International* 11, 87–90.
- O'Brien, L., and Crank, N. A., 2001 *Land at Clarence Street, Leicester: Archaeological monitoring and recording and archaeological excavation*. HAT Report 991, Hertfordshire Archaeological Trust.
- O'Connor, T. P., 1988 *Bones from the General Accident Site, Tanner Row*. The Archaeology of York 15/2. London: Council for British Archaeology.
- O'Connor, T. P., 1989 *Bones from Anglo-Scandinavian Levels at 16–22 Coppergate*. The Archaeology of York 15/3. London: Council for British Archaeology.
- Ortner, D. J., and Putschar, W. G. J., 1985 *Identification of Pathological Conditions in Human Skeletal Remains*. Washington: Smithsonian Institution Press.
- Oswald, F., 1948 'The Samian and coarse pottery', in K. M. Kenyon (ed.) *Jewry Wall Site Leicester*. Reports of the Research Committee of the Society of Antiquaries of London 15, Society of Antiquaries, London, 43–213.
- Payne, S., 1969 'A metrical distinction between sheep and goat metacarpals', in P. Ucko & G. Dimbleby (eds) *The Domestication and Exploitation of Plants and Animals*. London: Duckworth, 295–305.
- Payne, S., 1985 'Morphological distinctions between the mandibular teeth of young sheep, *Ovis*, and goats, *Capra*', *Journal of Archaeological Science* 12, 139–47.
- Payne, S., and Bull, G., 1988 'Components of variation in measurements of pig bones and teeth, and the use of measurements to distinguish wild from domestic pig remains', *Archaeozoologia* 2, 27–65.
- Perrin, J. R., and Hartley, K. F., 1996 'The mortaria', in D. F. Mackreth, *Orton Hall Farm: A Roman and Early Anglo-Saxon Farmstead*. East Anglian Archaeology 76, Nene Valley Archaeological Trust, Manchester.
- Perrin, J. R., 1999 *Roman Pottery from Excavations at and near to the Roman Small Town of Durobrivae, Water Newton, Cambridgeshire, 1956–58*. Journal of Roman Pottery Studies 8.
- Pollard, R., 1994 'The Late Iron Age and Roman pottery', in P. Clay and R. Pollard *The Iron Age and Roman Occupation in the West Bridge Area, Leicester, Excavations 1962–1971*. Leicestershire Museums, Arts and Records Service, 51–114.
- Pollard, R., 1996 'The Roman pottery', in L. Cooper 'A Roman Cemetery in Newarke Street Leicester'. *Transactions of Leicestershire Archaeological and Historical Society* 52, 51–62.
- Pollard, R., unpub *Leicester Form Type Series*. (based on the Shires Assemblage).
- Prosser, L., 2000 *Extension to Wilkinson's Store, Epic House, Charles Street, Leicester: An archaeological desk based assessment*. HAT Report 662, Hertfordshire Archaeological Trust.
- Rackham, D. J. 1994 *Animal Bones*. London: British Museum Press.

- Rahatz, P., Dickinson, T., and Watts, L. (eds), 1980 *Anglo Saxon Cemeteries 1979*. Oxford: BAR 82.
- Rogers, J., and Waldron, T., 1995 *A Field Guide to Joint Disease in Archaeology*. Chichester: John Wiley and Sons.
- Rogers, J., and Waldron, T., 2001 'DISH and the monastic way of life', *International Journal of Osteoarchaeology* 11, 357–65.
- Ruhli, F. J., and Henneberg, M., 2002 'Are hyperostosis frontalis interna and leptin linked? A hypothetical approach about hormonal influence on human microevolution', *Medical Hypotheses* 58, 378–81.
- Scheuer, L., and Black, S., 2000 *Developmental Juvenile Osteology*. London: Academic Press.
- Schmid, E., 1972 *Atlas of Animal Bones for Prehistorians, Archaeologists and Quaternary Geologists*. Amsterdam, London & New York: Elsevier.
- Schour I., and Poncher, H. G., 1937 'Rate of apposition of enamel and dentine, measured by the effect of acute fluorosis', *American Journal of Diseases of Children* 54, 757–76.
- Seow, W. K., 1991 'Enamel hypoplasia in the primary dentition: a review', *ASDC Journal of Dentistry for Children* 58, 441–52.
- Stead, I., and Rigby, V., 1989 *Verulamium: the King Harry Lane site*. English Heritage Archaeological Report 12.
- Stein, P. L., and Rowe, B. M., 2000 *Physical Anthropology*. Boston: McGraw Hill.
- Teichert, M., 1975 'Osteometrische Untersuchungen zur Berechnung der Widerristhöhe bei Schafen'. In A. T. Clason (ed.) *Archaeozoological Studies*, 51–69. Amsterdam & Oxford: North-Holland/ New York: Elsevier.
- Thomas, C., 1981 *Christianity in Roman Britain to AD 500*. London.
- Thompson, I., 1982 *Grog-Tempered 'Belgic' Pottery of South-Eastern England*. British Archaeological Reports (British Series) 108, Oxford.
- Trotter, M., 1970 'Estimation of stature from intact limb bones', in T. D. Stewart (ed.) *Personal Identification in Mass Disasters*. Washington: Smithsonian Institution Press.
- Tyers, P., 1996 *Roman Pottery in Britain*. London.
- Ubelaker, D. H., 1989 *Human Skeletal Remains: Excavation, analysis, interpretation*. Washington: Taraxacum.
- Viner, L., and Leech, R., 1982 'Bath Gate cemetery, 1969–76', in A. McWhirr *et al.* (eds), *Cirencester Excavations II: Romano-British cemeteries at Cirencester*. Cirencester Excavation Committee.
- Wacher, J., 1983 *The Towns of Roman Britain*. London, Batsford.
- Waldron, T., 1995 'Changes in the distribution of osteoarthritis over historical time', *International Journal of Osteoarchaeology* 5, 385–89.
- Watts, D., 1991 *Christians and Pagans in Roman Britain*. London and New York: Routledge.
- Waugh, K., 1999 'Roman Coarse Pottery', in C. J. Going and J. R. Hunn, *Excavations at Boxfield Farm, Chells, Stevenage, Hertfordshire*. Hertfordshire Archaeological Trust Report 2, 84–135.

A ROMAN CEMETERY IN CLARENCE STREET, LEICESTER 85

- Wenham, L. P., 1968 *The Romano-British Cemetery at Trentholme Drive, York.* London: HMSO.
- Webster, P., 1996 *Roman Samian Pottery in Britain*, Council for British Archaeology, Practical Handbook in Archaeology 13, York.
- Wilson, M. G., 1972 'Catalogue of the pottery', in S. Frere *Verulamium Excavations Vol 1*, Reports of the Research Committee of the Society of Antiquaries of London 28, London, 265-364.
- Wilson, M. G., 1983 'Catalogue of the pottery'. In S. Frere *Verulamium Excavations Vol II*, Reports of the Research Committee of the Society of Antiquaries of London 41, London, 294-341.
- Wilson, M. G., 1984 'The other pottery', in S. Frere *Verulamium Excavations Vol III*, Oxford University Committee for Archaeology Monograph 1, Oxford, 200-66.

APPENDIX 1. CATALOGUE OF BURIAL CHARACTERISTICS

Grave	Feature	Skeleton	Orientation	Sex	Age	Length/ breadth (m)	Depth (m)	Coffin	Findings
1	2003	2004	W-E, 276°			2.0 × 0.5	0.12	-	Pottery (mid/late 2nd C), iron fragments
2	2012	2013	W-E, 286°			2.2 × 0.55	0.2	-	Pottery (mid 2nd C), lava quern
3	2015	2016	W-E, 286°			2.2 × 0.9	0.3	Strain (1.70 m × 0.37 m), 2 <i>in situ</i> nails	Pottery (late 1st to mid 2nd C), tile, animal bone, iron nails
4	2023	2024	W-E, 276°			1.98 × 0.54	0.25	-	Pottery (AD 117 – 155), unworked granite block, iron nail
5	2026	2028	W-E, 286°			1.8 × 0.9	0.22	Strain (1.82 m × 0.40 m)	Pottery (mid 1st to 2nd C), animal bone, iron nail
6	2030	2031	W-E, 276°			0.7 × 0.45	0.04	-	None
7	2035	2033	W-E, 272°			1.93 × 0.57	0.08	-	Pottery (mid 2nd C), iron nail, SF5 (Cu alloy stud), iron nails
8	2036	2037	W-E, 276°			1.1 × 0.42	0.1	Strain (0.95 m × 0.30 m), 2 <i>in situ</i> nails	Pottery (mid 2nd to 3rd C), iron nails
9	2042	2043	W-E, 278°			1.83 × 0.51	0.18	Strain (1.70 m × 0.38 m), 3 <i>in situ</i> nails.	Unidentified iron fragments, nails
10	2046	2047	W-E, 282°			1.9 × 0.6	0.1	-	Pottery (mid 2nd to 3rd C), animal bone, iron fragments
11	2049	2051	W-E, 274°			2.1 × 0.68	0.53	Strain (1.60 m × 0.45 m), 2 <i>in situ</i> nails	Pottery (late 1st to 2nd C), tile, iron nail
12	2053	2055 2065	W-E, 283°			2.12 × 0.84	0.32	Strain (1.80 m × 0.37 m), 6 <i>in situ</i> nails	Iron fragments, nails
13	2056	2058	W-E, 278°			2.05 × 0.57	0.2	Strain (1.85 m × 0.38 m)	Pottery (A.D. 120 to late 2nd C), tile, animal bone
14	2061	2063	W-E, 282°			2.20 × 0.85	0.5	Strain (1.85 m × 0.38 m), 7 <i>in situ</i> nails	Tile, animal bone, iron nails
15	2066	2068	W-E, 276°			1.80 × 0.60	0.14	-	Pottery (early to mid 3rd C), animal bone
16	2069	2071	W-E, 292°			2.04 × 0.85	0.45	Coffin (1.75 m × 0.45 m), 2 <i>in situ</i> nails	Pottery (A.D. 120 to late 2nd C), animal bone, iron nails
17	2073	2077, 2075	W-E, 281°			2.10 × 0.80	0.63	Infant coffin (0.80 m × 0.20 m). Adult – none	Pottery (early to mid 2nd C), tile, animal bone, iron fragments, SF7 Cu alloy necklace

A ROMAN CEMETERY IN CLARENCE STREET, LEICESTER

87

18	2079	2080	W-E, 292°	0.60 × 0.50	0.15	-	Pottery (early 2nd C), tile, animal bone, iron nails
19	2082	2101, 2102	W-E, 278°	2.26 × 0.60	0.6	Both adult and juvenile in same coffin. Stain (1.85 m × 0.55 m), 6 <i>in situ</i> nails	Pottery (A.D. 120 to late 2nd C), animal bone, iron nails
20	2085	2087	W-E, 287°	2.25 × 0.79	0.27	Stain (1.90 m × 0.50 m), 5 <i>in situ</i> nails	Pottery (mid 2nd C), iron nails
21	2092	2094, 2095	W-E, 284°	0.85 × 0.40	0.08	Both adult and partial neonate in same coffin (1.22 m × 0.38 m), 5 <i>in situ</i> nails	Pottery (mid 1st C to A.D. 120), iron nails
22	2097	2112, 2098, 2099	W-E, 288°	1.85 × 0.80	0.54	Nails only recorded in case of sk. 2097 and 2099	Tile, animal bone, iron nails
23	2104	2106	W-E, 281°	2.04 × 0.63	0.39	Stain (1.80 m × 0.45 m), 4 <i>in situ</i> nails	Animal bone, iron nails
24	2108	2109	W-E, 283°	2.15 × 0.75	0.48	Stain (1.75 m × 0.40 m), 7 <i>in situ</i> nails	Pottery (A.D. 69 to mid 2nd C), brick, animal bone, stone, iron nails
25	2113	2114	W-E, 292°	2.05 × 0.70	0.45	-	Iron nails
26	2116	2118	W-E, 284°	1.95 × 0.60	0.35	Stain (1.60 m × 0.45 m), 3 <i>in situ</i> nails	Iron fragments, nails
27	2120	2122	W-E, 276°	2.02 × 0.69	0.16	Stain (1.85 m × 0.52 m), 6 <i>in situ</i> nails	Pottery (AD 120+), iron nails
28	2123	2124	W-E, 286°	2.0 × 0.55	0.27	Stain (1.70 m × 0.37 m)	None
29	2126	2127	W-E, 277°	2.25 × 0.75	0.45	Stain (1.80 m × 0.35 m)	Iron fragments, nails
30	2129	2130	W-E, 277°	2.0 × 0.70	0.15	Stain (1.75 m × 0.42 m)	Pottery (mid 1st C to AD 120), slate ?pillow
31	2132	2133	W-E, 290°	1.90 × 0.72	0.66	-	Pottery (Roman)
32	2135	2136	W-E, 282°	1.90 × 0.52	0.27	Stain (1.65 m × 0.45 m), 3 <i>in situ</i> nails	Pottery (mid 2nd to 4th C), iron nails
33	2138	2139	W-E, 283°	2.25 × 0.85	0.6	-	Pottery (Roman), iron nails
34	2141	2142	W-E, 282°	0.64 × 0.43	0.26	Stain (0.55 m × 0.32 m)	Pottery (mid 1st to A.D. 120), iron fragments
35	2144	2145	W-E, 281°	2.00 × 0.45	0.05	-	Pottery (early 2nd C)
36	2151	2152	W-E, 278°	2.10 × 0.82	0.63	Stain (1.65 m × 0.37 m)	Pottery (Roman), tile iron nails

37	2154	2155	W-E, 277°	1.75 × 0.65	0.25	-	None
38	2157	2158	W-E, 286°	1.85 × 0.59	0.6	Stain (1.67 m × 0.50 m)	None
39	2160	2161	W-E, 283°	1.80 × 0.50	0.07	-	None
40	2163	2164	W-E, 276°	2.15 × 0.55	0.15	-	Pottery (A.D. 120 to late 2nd C), animal bone
41	2168	2169	W-E, 262°	1.48 × 0.60	0.17	-	Pottery (Roman), animal bone
42	2171	2172	S-N, 192°	1.80 × 0.65	0.12	Stain (1.52 m × 0.55 m), 1 <i>in situ</i> nail	Pottery (A.D. 117 – 192), iron fragments
43	2176	2177	W-E, 298°	2.05 × 0.95	0.2	Stain (1.40 m × 0.55 m)	Pottery (A.D. 117 to late 2nd C), animal bone, iron nails
44	2179	2234	W-E, 275°	2.40 × 0.85	0.7	Stain (1.90 m × 0.50 m), 2 <i>in situ</i> nails	Pottery (A.D. 69 – 117), tile, animal bone, stone, iron fragments
45	2181	2212	W-E, 275°	1.30 × 0.55	0.75	-	Pottery (A.D. 70 – 120), tile, animal bone, iron nails
46	2183	2184	W-E, 275°	1.70 × 0.65	0.55	-	Animal bone, iron fragments, knife tang with traces of wood
47	2188	2189	W-E, 265°	0.80 × 0.60	0.24	-	None
48	2195	2196	W-E, 288°	2.25 × 0.70	0.55	-	Pottery (A.D. 120 to later 2nd C), iron fragments
49	2200	-	W-E, 267°	1.76 × 0.60	0.16	-	Pottery (A.D. 120 – late 2nd C), animal bone, iron fragments
50	2204	2205	W-E, 272°	2.35 × 0.46	0.18	-	Pottery (A.D. 69 to mid 2nd C), tile
51	2207	2208	W-E, 285°	2.25 × 0.55	0.75	-	Iron fragments
52	2213	2214	W-E, 266°	1.90 × 0.65	0.11	-	Pottery (Roman), tile
53	2216	-	W-E, 283°	1.60 × 0.60	0.13	-	None
54	2231	2232	W-E, 278°	2.70 × 0.80	0.56	Stain (1.92 m × 0.55 m), 1 <i>in situ</i> nail	Pottery (A.D. 120 to late 2nd C), iron
55	2249	2248	W-E, 273°	1.80 × 0.80	0.1	-	None
56	2250	2252	W-E, 276°	2.20 × 0.90	0.22	-	Pottery (2nd to 3rd/4th C), tile, iron fragments
57	2253	2254	W-E, 292°	2.15 × 0.70	0.7	Stain (1.75 m × 0.45 m), 2 <i>in situ</i> nails	Iron fragments, nails
58	2256	2258	W-E, 268°	1.90 × 0.55	0.12	-	None
59	2259	2260	W-E, 268°	2.15 × 0.55– 0.75	0.4	-	Iron nails
60	2262	2263	W-E, 270°	1.88 × 0.68	0.47	-	Iron nails

A ROMAN CEMETERY IN CLARENCE STREET, LEICESTER

89

61	2265	2266	W-E, 275°	1.05 × 0.65	0.26	None
62	2268	2269	W-E, 274°	1.20 × 0.68	0.15	None
63	2271	2272	W-E, 270°	2.06 × 0.55	0.13	None
64	2274	2275	W-E, 270°	2.10 × 0.54	0.4	Iron nails
65	2279	2280	W-E, 272°	1.38 × 0.57	0.18	None
66	2282	2283	W-E, 235°	0.80 × 0.60	0.1	None
67	2285	2286	W-E, 270°	1.93 × 0.67	0.15	None
68	2288	2289	W-E, 268°	1.90 × 0.75	0.1	Tile, iron nails
69	2291	2292	W-E, 280°	1.00+ × 0.6	0.9	None
70	2294	2295	W-E, 283°	1.65 × 0.60	0.2	None
71	2297	2298	W-E, 278°	2.35 × 0.75	0.58	Iron nails
72	2300	2301	W-E, 282°	2.20 × 0.84	0.12	None
73	2303	2304	W-E, 275°	1.70 × 0.58	0.2	None
74	2306	2307	W-E, 292°	2.04 × 0.85	0.45	None
75	2309	2310	W-E, 265°	0.98+ × 0.55+	0.15	Pottery (Roman)
76	2312	2313	W-E, 292°	0.60 × 0.50	0.15	Iron nails
77	2315	2316	W-E, 269°	2.25 × 0.97	0.1	Iron nails
78	2318	2319	W-E, 255°	0.95 × 0.75	0.25	None
79	2321	2322	W-E, 270°	2.40 × 0.95	0.2	Pottery (Roman), iron nails
80	2324	2325	W-E, 286°	1.15+ × 0.87	0.08	Iron nail
81	2328	2327	W-E, 260°	1.63 × 0.70	0.15	Pottery (mid/late 2nd C to A.D. 260), iron nails
82	2330	2331	W-E, 283°	2.15 × 0.75	0.48	None
83	2333	2334	W-E, 292°	2.24 × 0.87	0.36	Iron nails
84	2336	2337	W-E, 284°	1.25+ × 0.50	0.2	None
85	2339	2340	W-E, 276°	1.25+ × 0.50	0.1	Pottery (late 1st to late 2nd C)
86	2342	2343	W-E, 286°	0.70+ × 0.65	0.45	Iron nails
87	2345	2346	W-E, 277°	1.30 × 0.73	0.29	Iron nails
88	2348	2349	W-E, 277°	1.27 × 0.85	0.35	Pottery (A.D. 110 – 400)
89	2351	2352	W-E, 250°	2.00 × 0.68	0.12	Iron nails
90	2354	2355	W-E, 270°	2.90 × 0.65	0.1	Pottery (A.D. 120 to late 2nd C), iron nails
91	2357	2358	W-E, 283°	1.70+ × 0.50+	0.1	None

