# EXCAVATIONS ON THE SITE OF THE NEW POLICE STATION, CASTLE STREET, WORCESTER

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With contributions from Ian Baxter, Elizabeth Pearson and Fiona Roe

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# 1 March 2002

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Project 1591 Report 962 WCM 100358 and 100414

# Excavations on the site of the New Police Station, Castle Street, Worcester

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# Summary

The development site of the new Police Station in Castle Street, Worcester, was excavated in 1998 and followed by further investigation work in 1999-2000. The site lies within the northern extent of the Roman small town, but outside the medieval suburbs, and the excavation was focused on Roman deposits.

The best-preserved Roman deposits lay in the south-eastern corner of the excavation. The corner of a boundary ditch was located, together with structural evidence. Further ditches were located, as well as a small pit and further postholes. Investigation between the cellars on Castle Street produced the largest quantity of artefacts, although a restricted area was excavated. Other fieldwork during the construction programme located scattered Roman remains over the remainder of the development site. These included burnt features as well as ditches. Preservation was less good, as all the features had been truncated by later land use.

There were very small quantities of abraded medieval pottery in soil layers of later date, reflecting the agricultural use of the area. Late post-medieval deposits were not identified in the project design as being of particular significance, although there were structural and other deposits present. The finds assemblage from a series of large deep pits is of interest, and has potential for future study.

Overall, the results of the project indicated that the Police Station site was peripheral to an area of Romano-British occupation within the Roman small town. This area of occupation has subsequently been excavated at the adjacent Magistrates' Court site.

## Introduction

A programme of archaeological investigation and recording took place on an area of land north of Castle Street in Worcester between July 1998 and September 2000 (**Fig 1**). The site was subsequently developed as a new Police Station for Worcester. The archaeological work was carried out by Worcestershire County Archaeological Service, with additional fieldwork undertaken by James Dinn (Worcester City Council Archaeological Officer). The agents for the development were Hereford and Worcester County Council Technical Services (Worcestershire County Council from April 1998). The site was developed by West Mercia Police Authority, who funded the fieldwork. The archaeological response to the planned re-development of the site has a complex history, and comprised stages of evaluation, excavation and watching brief (detailed in Edwards 2001).

The excavation in 1998 involved the investigation of a large area, but revealed that Roman deposits were less extensive than anticipated on the basis of the evaluation. Six stages of watching brief were carried out during the construction work, including during alterations to buildings on Castle Street (1998), the main construction phase (1999), groundworks for service trenches (1999), construction of ancillary buildings (2000), and other building works in 2000.

Following the fieldwork reported on here, the site immediately to the east was excavated by Archaeological Investigations Ltd, in advance of construction of a new Magistrates' Court. This revealed an extensive area of stratified Roman structures and deposits. The results of this work will be the subject of a future report.

#### Location

The site is situated north-west of the historic core of Worcester, at NGR SO 8471 5541 (Fig 1). The site lies at a height of 23.5m OD on the terrace above the River Severn and its floodplain. The soils within the built-up area of Worcester are not mapped. The underlying drift geology consists of

Terrace Deposits of the Second (Worcester) Terrace of the River Severn. This overlies solid geology of the Mercia Mudstone Group (British Geological Survey 1993).

# Archaeological and historical background

#### Romano-British period

The development site lies within the extent of the Roman small town of Worcester. Knowledge of the layout and extent of the settlement has developed rapidly in recent years. The most recent synthesis emphasised the importance of the Roman iron smelting industry, while noting the relatively limited evidence for the settlement (Burnham and Wacher 1992, 232-4). Fieldwork north of the medieval City Wall in the 1990s led to the recognition of the extent of Roman settlement in this area (Dalwood et al 1994), and Deansway Archaeological Project has also contributed to a new understanding of the small town (Dalwood et al 1992; Dalwood and Edwards 2001). We can now see that the Romano-British settlement at Worcester was extensive (covering a larger area than the medieval city), but that there was little regular planning. The material culture of the inhabitants was comparable to contemporary rural settlements in the local area, rather than Roman towns such as Gloucester or Wroxeter.

A road running in a northerly direction from the centre of Worcester was recorded at Broad Street (Barker 1969) and Blackfriars (Mundy 1985, 1986). This road appeared to form the axis for Roman settlement evidence in this area, which was projected as a strip approximately 200m wide extending northwards towards Britannia Square (Dalwood et al 1994, fig 13). The nature of the occupation along this road varied, and included areas of iron working at Broad Street (Barker 1969) and other industrial activity at Farrier Street and Rea's Timber Yard (Dalwood et al 1994), alongside evidence for domestic occupation. The dating evidence pointed to intermittent occupation areas in the late first to second century, with rather more intensive occupation from the third century (Dalwood et al 1994, 105-7). Archaeological evaluation at the Police Station site in 1990 (also known as the Love's Grove site) recorded soil horizons dating to the Roman period, and a large cobbled yard. Occupation was dated to the third to early fourth century, with no evidence for industrial activity (Edwards 1990; Dalwood et al 1994, 105). Further limited fieldwork at the site in 1993 produced no significant information (Napthan 1993b). The excavation of the western half of this site forms the subject of this report.

Archaeological investigations on the south side of Castle Street in the mid-1990s produced further evidence for this part of the Roman town (Fig 2). An evaluation at the former County Education Offices recorded a ditch and a yard surface. The pottery assemblage included shell gritted ware jars, dating to the late fourth century (Dalwood et al 1997). This evidence for localised occupation in the late fourth century stands out in the context of Worcester, where large areas of the town were abandoned from the early fourth century (Dalwood 2001, 48). Fieldwork at an adjacent site, the Kardonia factory (Fig 2), produced evidence for Roman iron smelting and post-built structures, as well as masonry rubble suggesting a substantial buildings in the vicinity (unpublished; see CAS 1995). Further to the south, further evidence for Roman occupation has been recorded along the Butts (Fig 2; Coates 2000).

The foundations of a Roman building beneath Springfield, in the centre of Britannia Square, were first recognised in 1829 (Fig 2; Allies 1852, 1-2). Stone foundations, tile (including box-flue tiles) and carved masonry blocks recovered in recent watching briefs all suggest a substantial building in this area (Napthan 1992, 1993a). A small part of a building with a mosaic floor has been recorded on the south side of Britannia Square (Fig 2; Dinn 2000, 328-9). Fieldwork in Moor Street and Back Lane South has recorded extensive Roman building debris as further evidence for buildings with mosaic floors and hypocausts (eg Russell 1961; Napthan 1999; Dinn 2000, 328). Despite the clear evidence for substantial domestic buildings, the understanding of Romano-British occupation in the Britannia Square area remains elusive.

Many questions remain about the character and layout of the Roman small town. The area north of the city wall is particularly important because it is not disturbed by medieval and earlier post-

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medieval occupation. The road has not been traced further north than the Farrier Street site, and although there is some negative evidence the actual alignment remains unknown (Fig 2). There is clearly variation in the character of occupation across the area, and the extent and nature of evidence of buildings around Britannia Square may suggest that this is the focus of a villa. The evidence recorded so far points to a large complex. Villas in such 'suburban' situations in relation to small towns are not unknown, but clearly further field evidence is needed to establish the character of these buildings.

#### Medieval and later land use

The development site lay outside the settlement in the medieval and earlier post-medieval period, and west of a linear suburb that originated in the 12<sup>th</sup> century (Fig 2). The site lies next to Castle Street, formerly called Salt Lane, which probably originated as a routeway in the early medieval period. The area was agricultural land in the medieval and early post-medieval periods. The soil build-up over Roman deposits was examined at the Farrier Street site (Macphail 1994), and interpreted as the result of fairly intensive manuring in the medieval and post-medieval periods. This is reflected by medieval and later pottery recovered from sites in the area (Dalwood *et al* 1994, 107). In the late 18<sup>th</sup> century the area was mostly orchards and pasture fields, but Salt Lane and the area north towards Britannia Square were built up by the 1820s (Whitehead 1989, 36-7), and subsequently the whole area north-west of the historic core was rapidly built up.

#### Aims of the fieldwork

The evaluation trenches were situated to allow investigation of the area to be disturbed by construction of the Police Station foundations and basements, and to avoid the area known from previous work to be already disturbed. The focus was on Roman activity, as no evidence of prehistoric activity was known, and the area was under cultivation in the medieval period. Postmedieval deposits were considered to be a low priority, especially as they had been damaged by twentieth-century development and subsequent demolition.

Evaluation Trenches 1, 2 and 4 (Fig 1) revealed a band of gravel overlying natural sand deposits. This was initially interpreted as a Roman yard surface, and the western part of the excavation area was excavated to investigate this in more detail. However, closer examination revealed this to be a natural deposit, and no other Roman features were revealed in the western part. In evaluation Trench 3 a Roman ditch was revealed, which contained considerable amounts of pottery. The eastern part of the excavation allowed this to be examined in greater detail, together with a range of other Roman deposits.

The watching brief aimed to identify and record Roman deposits revealed in service trenches and other small areas of disturbance outside the main construction area.

## Excavation and post-excavation methods

The area was in use as a car park and construction compound for restoration of the listed buildings nos 6-12 Castle Street. Four evaluation trenches were excavated (Fig 1), and selected features were partially excavated. An extensive area was then excavated in two stages, first the western part then the eastern part, as spoil had to be retained within a limited area. Modern and nineteenth century deposits were removed by machine, and the features revealed were excavated by hand. Soils and sediments revealed in the excavation were examined and recorded by David Jordan of Terra Nova. The areas for the Police Station car park and access routes were covered by watching brief during construction. The evaluation, excavation and watching brief were carried out in accordance with Worcestershire Archaeological Service standard practice (CAS 1995b).

A stratigraphic matrix was produced and phased from ceramic spot dates. Following assessment, stratigraphic, artefactual and environmental analysis concentrated on Roman phases of the site, which lay within the eastern part of the excavated area. Deposits from the watching brief were also included within the analysis. Post-excavation has taken into account the results of the excavation of

the adjacent Magistrates Court site, including dating information and the results of preliminary finds and environmental analysis.

# The structural sequence

# Phase 1 Natural deposits

Natural deposits consisted of gravels and sand, contaminated by organic soil from above, and retaining the false bedding of the fluvio-glacial alluvium from which they derived. These were overlain by a silty sand deposit commonly described in Worcester as 'dirty natural'. This was interpreted by David Jordan as undisturbed alluvial sand into which organic soil had filtered down by illuviation from the overlying organic mineral soil.

Across the western part of the site there was a gravel band, which was interpreted as a potential surface during evaluation. This was found to be a natural deflation surface derived from gravel strata within the alluvium.

#### Phase 2 Roman 2<sup>nd</sup> century

The earliest archaeological feature in the excavated area was a ditch, aligned east to west and turning to the south at the western end (contexts 2091, 2077, 2075, 3011, 3013). The ditch had been recut several times, as can be seen from the repeated cuts visible in plan in Figure 3. At the eastern end the recuts changed alignment slightly. The earliest phase of the ditch cut an earlier feature, possibly a posthole (contexts 3014 and 3015). The ditch was interpreted as the north-western corner of a rectilinear enclosure. Finds from the fill indicate that this was a domestic compound, and this interpretation tallies with the evidence from the adjacent Magistrates Court site.

In the watching brief to the north, an irregular shaped cut feature (Fig 4, contexts 5029 and 5030) was cut by the Phase 3 ditch. This was interpreted as a natural feature, possibly a tree bole. The lack of any other features to the north and west of the ditch suggest that this area was in agricultural use, as fields or paddocks.

#### Phase 3 Roman 2nd century

The distinction between Phases 2 and 3 was made on stratigraphic grounds.

The eastern part of the ditch within the watching brief area was recut twice (Fig 5, context 3009, fill 3004, recut 3008), after the Phase 2 ditch had been infilled (contexts 3010 and 3012). To the west, the ditch was infilled (contexts 2022, 2074, 2076, 2090 and 2094).

A line of four features succeeded the earlier ditch line, but to the south, and on a slightly different, though still broadly east to west alignment. These consisted of two substantial square postholes (contexts 2013, 2014, 2096 and 2097); two circular postholes (contexts 2092, 2093, 3006 and 3007), and a cut feature at the very edge of the excavation which contained a burnt clay deposit (contexts 2082, 2083, 2084 and 2085). These were interpreted as a later boundary to the compound; a substantial fence replacing the western part of the ditch. It seems likely that this would have turned south, as the former ditch had done, at the western end. Modern truncation and the edge of the excavated area prevented this from being confirmed.

To the north of the latest phase of the ditch were two smaller postholes (contexts 2064, 2065, 2070 and 2071), possibly associated with a shallow (0.26m deep) circular pit (contexts 2062 and 2063). The function of these features is uncertain.

A number of features were observed in the watching brief to the north (Fig 4). A shallow u-shaped ditch was aligned east to west (context 5027). To the north of this there was a substantial and deep (over 0.50m, not bottomed) circular posthole with post-pipe (contexts 5001, 5002, 5003). A shallow circular posthole (contexts 5005 and 5006; 0.20m deep) lay close to a keyhole shaped elongated feature containing burnt material (contexts 5007, 5008, 5009, 5010, 5020, 5021, 5023). Horizontal

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truncation had removed any contemporary ground surfaces, and any superstructure associated with the burnt feature, which was interpreted as a hearth.

These features indicated another area of occupation, to the north of that in the excavated area. Here too, a compound was bounded by a ditch aligned east to west. Within it the postholes suggested that there may have been a structure of some sort. The function of the hearth could not be determined. There were no large quantities of burnt grain, as would be expected in a corndrier, nor were any industrial or craft residues present. Burnt plant remains from the hearth included a few large fragments of charcoal, charred cereal grains and seeds, and uncharred seeds of fool's parsley, so a domestic interpretation seems most likely.

A burnt clay feature was observed in section during the watching brief on the sewer trench (context 5032, located on Fig 1). There was no opportunity to investigate this, but the pottery recovered from the vicinity indicated that this could also be assigned to Phase 3. The deposit above the burnt clay feature contained a large amount of iron slag, but as this was only seen in section, it was not possible to establish whether the slag was directly related to the feature. This was interpreted as another hearth.

## Phase 4 Roman 3rd century

At the north-west corner of the excavated area there was an irregular shaped pit, 0.3m deep (Fig 6, contexts 2066, 2067 and 2032). The fill contained pottery, iron slag and bone, and although the shape of the cut suggested that this was two or more intercutting features, the fill appeared to be uniform. Finds from the fills indicated that this was a rubbish pit from a domestic area.

A small shallow posthole (0.04m deep, contexts 2057 and 2058) lay close to two other postholes, each of which lay at the end of gullies or slots. The northerly of these (context 2056, fill 2055) was aligned north to south, and truncated to the north by a post-medieval cellar. The other (context 2060, fill 2059) appeared to be aligned north-east to south-west, but extended outside the area excavated and was not observed during the watching brief. These features were difficult to interpret, but probably had a pastoral or domestic function.

Two Phase 4 features cut the fills of the earlier boundary ditch. A posthole (contexts 2086 and 2087) lay on the line of the Phase 2 boundary ditch. A shallow pit (context 3018, fills 3016 and 3017) cut the fills of the Phase 2-3 eastern part of the ditch. The fill of the post pipe (context 2095) of the Phase 3 posthole (context 2097) dated to Phase 4, so the post had rotted away or been removed by this time. The Phase 2 and 3 compound boundary therefore appeared to have gone out of use by Phase 4. Finds from the pit fill suggested domestic activity.

Overall, there was a low level of activity during this phase.

# Phase 5 Roman mid to late 3rd century

There was little activity over much of the site during Phase 5. The exception was the area occupied by nos 6-12 Castle Street. The watching brief carried out between the cellars of two buildings revealed deep deposits of Roman material (Fig 7). These had been truncated to east and west by the cellar construction cuts, and were observed within a confined area measuring 1.0m x 0.8m in plan and over 1.6m deep. North and south edges of the feature (context 512) lay outside the area excavated. Six distinct fills were identified (contexts 508, 509, 513, 515, 516, and 517), and the base of the feature was established at 19.52m OD. The depth of the feature indicated that it may have been excavated as a sand and gravel quarry, but the limited area examined and the extent of truncation means that this interpretation is uncertain. Given the limited area, the feature produced a very large number of finds; a total of 1355 fragments, weighing over 70kg. The pottery finds included a considerable number of residual abraded sherds, indicating that the material was not the product of a single clearance episode. A fragment of box flue tile indicated that some of the material was derived from a high status building. A considerable number of finds showed evidence of burning.

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Three small postholes were the only Phase 5 features within the excavated area (Fig 8, contexts 2015, 2016, 2017, 2018, 2019 and 2020). These were interpreted as agricultural, possibly pastoral, due to the lack of any other features in the area.

## Phase 6 Medieval, post-medieval and modern deposits

Later deposits on the site were not a focus of the project design, but a sequence of activity in the area can be reconstructed.

Roman deposits were overlain by a dark, organic-rich mineral soil homogenised, most probably, by cultivation. Sherds of medieval and post-medieval pottery were present in this layer. Soil micromorphological study was carried out on a similar deposit at Farrier Street, revealing evidence for dumping and waste disposal/manuring in the medieval to post-medieval periods, when the area was used for gardens and orchards (Dalwood *et al* 1994, 84-5).

The foundations and cellars of post-medieval brick buildings were present, as shown on the First edition Ordnance Survey 25" map. Other features included a large (5m x 3m) sub-square pit in the north-eastern part of the excavated area, interpreted as a quarry for sand and gravel. A series of large deep circular pits in the north-western part of the area may also have been quarries. These had been backfilled with industrial, building and domestic materials, including a good assemblage of well-preserved post-medieval pottery in a wide variety of fabrics and forms. The pottery has potential for future study.

#### **Botanical remains**

#### Elizabeth Pearson

#### Methods

The environmental sampling policy was as defined in the County Archaeological Service Recording System (1995 as amended). Samples of 10 to 40 litres were taken from twelve contexts of Roman to post-medieval date.

The samples were processed by flotation followed by wet-sieving using a Siraf tank. The flots were collected on a 300µm sieve and the residues retained on a 1mm mesh. This allowed the recovery of small animal bones, molluscs and seeds.

The residues were scanned by eye and the abundance of each category of environmental remains estimated. The flots were scanned using a low power EMT stereo light microscope and remains identified using modern reference collections housed at the County Archaeological Service.

#### Results

## Excavation (contexts 2067, 2074 and 2090)

Only a few poorly preserved environmental remains were noted in two ditches of Roman date (Contexts 2074 and 2090) and a pit (Context 2067). These included unidentified charred cereal grains, uncharred sedge seeds (Carex sp), presumably preserved in anaerobic conditions, small fragments of burnt bone and terrestrial molluscs.

#### Watching brief, April 1999 (contexts 3004 and 3016)

Samples were taken from a linear feature and a pit, both of Roman date. Only occasional unidentified charred cereal grains and chaff remains (glume bases) were noted in association with a small quantity of animal bone, although this included some identifiable bones and teeth in pit 3016.

#### Watching brief, February 2000 (contexts 5007, 5008, 5009 and 5023)

Although three samples were taken from a burnt feature of Roman date, only a few large fragments of charcoal, charred cereal grains and seeds, and uncharred seeds of fool's parsley (Aethusa

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cynapium) were present. Only one unidentified charred cereal grain was noted in an irregular cut, also of Roman date.

#### Discussion

The samples from the Police Station site were considered in the light of results from the excavations at the adjacent Magistrates Court, from which over 60 environmental samples have been assessed from a wide range of Roman context types and dates (Pearson 2001). Low levels of plant macrofossil remains were recovered, giving an indication of cereal types represented. The samples did not indicate any specialised activity on the site.

On the Police Station site there was a low level of environmental remains. Elsewhere in Worcester, environmental remains were also found in low levels during the Roman period, for example at Condor Buildings, Worcester (Pearson 2000). Here the charred plant remains and degraded animal bone was interpreted as background debris which is common on many urban sites as a result of the reworking of deposits containing domestic or industrial waste over a long period of time. This probably does not relate to any specialised activity that was carried out in situ. Environmental remains such as charred crop waste, were also recovered in low levels from Romano-British phases at Deansway (Moffett 2001).

# Mammal and bird bones

#### Ian Baxter

#### Introduction

A total of 586 fragments of animal bones with a weight of 9kg were recovered from the site by hand-collection. Of this total, 206 fragments were identified to species or higher taxonomic category (**Table 1**). While the assemblage was too small to provide any detailed information regarding the economy and status of the site, combined with evidence from other sites of similar period in Worcester it provided a limited amount of information concerning the domestic animals present in the area.

The animal bones derive from linear features, primarily a boundary ditch, and postholes dating to the Romano-British period, 2<sup>nd</sup> to late 3rd centuries AD. No attempt has been made in this report to distinguish remains from different temporal phases of the Roman period due to the small size of the assemblage. Preservation was generally moderately good although a very small number of poorly preserved and fresh looking fragments were also seen. Dogs had gnawed a few bones.

Taxon	Count
Cattle (Bos f. domestic)	71
Sheep/Goat (Ovis/Capra f. domestic)	38
Sheep (Ovis f. domestic)	(7)
Goat ( <i>Capra</i> f. domestic)	(1)
Pig (Sus f. domestic)	8
Horse (Equus caballus)	91
Large Mammal	49
Medium Mammal	22
Small/Medium Mammal	4
Domestic Fowl (Gallus f. domestic)	5
Total	206
Unidentified	380
Total	586

**Table 1** Castle Street (Police Station site), Worcester. Number of hand-collected mammal and bird bones (NISP).

<sup>&</sup>quot;Sheep/Goat" also includes the specimens identified to species. Numbers in parentheses are not included in the total of the period. 'includes crania, maxillae and teeth belonging to single individuals

#### Methods

All identifiable bone fragments, including vertebrae and ribs that could only be identified as large, medium and small/medium mammal, were recorded on an Access database. The number of unidentifiable fragments was also recorded for each context.

The separation of sheep and goat was attempted on the following elements: dP3, dP4, and distal metapodials (both fused and unfused) using the criteria described in Boessneck (1969) and Payne (1985). Equid teeth were identified on the basis of criteria in Davis (1980) and Eisenmann (1980; 1981).

The few measurements taken were recorded in the Access database. These in general follow von den Driesch (1976). No measurements were taken on teeth except to establish equid crown heights.

# Frequency of species

Although the rather larger assemblage from the Castle Street Magistrates Court site was still at the assessment stage, it had been quantified (Hammon 2001) and it was therefore possible to compare the frequency of the major domesticates at both sites. In general the Police Station site followed a pattern similar to the Magistrates Court site with cattle the most numerous taxon, followed by sheep/goat and then pig (Fig 9). Differences in the relative frequency of taxa at the two sites are more likely to be due to differences in assemblage size and recording methodologies than any significant disparity between the assemblages themselves. Pig was noticeably scarce and equid remains relatively common at both sites. Domestic fowl were present at low frequency at both sites. Domestic dog was recovered from the Magistrates Court site but was absent from the Police Station assemblage.

There were conspicuous differences between the Castle Street sites and those at Deansway. Cattle remains at the latter represented less than 60% of the major domesticates but pig remains constituted 20%, a much higher frequency than the Castle Street sites. This suggests significant differences in occupation between the sites. Also, at Deansway equid remains were significantly less frequent than those of pig in Periods 4–5 (120-400 AD) and there were relatively high proportions of goat in Period 5 (240-400 AD). The Castle Street assemblages indicated civilian occupation and the rearing of domestic livestock in the immediate vicinity.

#### Discussion

#### Cattle

The cattle bones derived from all parts of the skeleton and represented primary and secondary butchery waste. Cattle sized vertebra and rib fragments were widespread throughout the deposits. Most of the available epiphyseal ends of bones are fused and mandibular teeth heavily worn, suggesting that adult beasts comprised the bulk of the assemblage. There is also limited evidence for the presence of infants, juveniles and subadults. Horncores recovered belonged to both the 'Celtic' smallhorned and shorthorned types as defined by Armitage and Clutton-Brock (1976). Cores belonging to cows and oxen (castrates) were identified. No suitable bones were sufficiently complete to calculate the withers heights of the cattle. An M3 (context 3004) has the hypoconulid or third pillar absent. This discontinuous trait was also recorded at the Deansway sites (Nicholson and Scott 2001).

#### Sheep/goat

A goat cranium with both horncores was found in context 515. No other remains could be attributed to goat, although it is possible that the maxillae with large teeth found in the same context belonged to this skull. A total of 18% of the sheep/goat remains were identified as sheep. A high proportion of the sheep/goat teeth recovered derive from young animals and included an unworn dP4 from a perinatal lamb (context 509). Perinatal postcranial bones were present (contexts 508, 515 and 516). Even perinatal sheep/goat bones have butchery marks. The sheep/goat remains

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included elements from all parts of the skeleton and derived from primary and secondary butchery waste. Sheep sized vertebra and rib fragments were also widespread. Only one bone suitable for calculating a withers height was sufficiently complete, a metacarpus from context 3016. Although this was superficially goat-like in its proportions, the relational index between the peripheral trochlea and the verticillus (Boessneck 1969, 355) indicated that it probably belonged to a sheep. This animal would have stood approximately 51 cm high at the shoulder based on the multiplication factors of Teichert (1975).

# Pig

Very few pig remains were recovered from the site. They included juvenile, subadult and adult specimens.

#### Horse

Horse remains were slightly more frequent than those of pigs. With the exception of an axis vertebra fragment (context 516) the horse elements recovered derived exclusively from the head. Fragmentary crania were present (contexts 513, 515 and 2074). Ages calculated from the wear of the teeth based on the methods of Barone (1980) and Levine (1982) ranged from 5 years to over 20 years. The teeth and cranial fragments in contexts 509, 513 and 515 probably belonged to the same animal, a very aged stallion or gelding with teeth worn almost to the roots and exhibiting bit wear (Clutton-Brock 1974) on the P2. All the equid remains from Castle Street were referable to horse or pony and there was no evidence for the presence of any other species.

#### Domestic birds

Three domestic fowl bones, possibly belonging to the same individual, were found in context 515. Isolated chicken bones were also found in contexts 509 and 516.

#### **Conclusions**

There would appear to be no substantive differences between the Romano-British animal bone assemblage recovered from the Police Station site and the larger assemblage from the Magistrates Court site. Both were dominated by the remains of the common domestic mammals with cattle forming the main component, followed by sheep/goat and with very little pig. The animal bones derived from primary and secondary butchery waste with no evidence for industrial or craftworking activities, with the possible exception of horse knackering. Equid remains were frequent at both sites and domestic fowl also occurred at low frequency. At the Police Station site horse remains were exclusively from the head and neck and included some very aged individuals. There was no evidence from this site of the exploitation of wild mammals or birds. The Castle Street assemblages suggest civilian settlement with the rearing of domestic livestock in the vicinity.

# The pottery

#### Introduction

All hand retrieved finds were examined. They were identified, quantified and dated to period. A terminus post quem was produced for each stratified context, which was used for determining the broad date of structural phases. All information was recorded on a Microsoft Access 97 database. Artefacts from environmental samples were examined, but none were worthy of comment and were not quantified. Pottery fabrics were referenced to the fabric reference series maintained by the Service (Hurst and Rees 1992).

Despite the relatively small number of features dating to the Roman period, the associated material formed the bulk of the artefactual assemblage from this site. The assemblage is particularly notable for the occurrence of a newly identified fabric variant and the relatively high number of uncommon

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or specialised forms present. The assemblage as a whole is similar in nature and context to that from excavations at Sidbury (Darlington and Evans 1992).

#### Overview

The Roman pottery assemblage comprised 1,943 sherds, weighing 44.09kg (60% of all pottery recovered). The forms present indicated occupation between the late 1st century and the late 3rd century. In general the assemblage was fairly standard in composition for an urban site in range of fabrics and forms, although a small number of more unusual and specialised forms were identified.

Sherds from all areas of the site, including unstratified layers, displayed little abrasion. This suggested that there was relatively little redeposition of material. In addition the good condition of the sherds indicated that they had not remained in surface rubbish heaps following discard, but had been buried as dumps of domestic rubbish.

Table 2 summarises the Roman pottery from the site. The assemblage was dominated by locally produced coarsewares; primarily Severn Valley wares (fabrics 12, 12.1 12.2 and 12.3). Of these, the oxidised fabrics (12 and 12.2) formed the larger proportion with a variety of forms identified, ranging from the standard storage jars, bowls and tankards to more specialised vessels including a small number of colanders and a funnel. In general, sherds of the organically tempered type (fabric 12.2) were of earlier date (1st-2nd century). Diagnostic forms of this fabric also indicated a higher occurrence of large vessels within this group.

Reduced Severn Valley wares (fabrics 12.1 and 12.3) were significantly smaller in number and consisted of a narrower range of forms, primarily rusticated and common storage jars. The best preserved vessels consisted of three near-complete rusticated jars from the fill of a ditch (contexts 2074 and 3005), dating between the late 1<sup>st</sup> and mid-2<sup>nd</sup> centuries. The organically tempered variant (fabric 12.3) is only thought to have been produced during the earlier Roman period.

In addition to the above reduced wares, a number of sherds were identified as a probable variant of fabric 21, with the forms identified predating those found previously which in general were Black-burnished 1 imitations. A large number of such sherds were also identified within the assemblage from the adjacent Magistrate's Court site (Jeremy Evans pers comm.). All identifiable forms within this fabric were early in date, consisting primarily of rusticated jar and carinated bowl forms of 1st-2nd century date.

Other local wares identified within the assemblage were those of Malvernian origin (fabrics 3, 3.1, 3.2 and 19). However, these were in relatively low frequency in comparison to Severn Valley wares and comprised a narrow range of forms, primarily tubby cooking pot, and imitation Black-burnished ware jars and bowls. However, a small number of sherds from the more unusual slab vessel forms were also identified, parallels of which were present within both the Sidbury and Deansway assemblages (Darlington and Evans 1992, fig.35, 4a-4c; Bryant and Evans 2001). It is not known what these vessels were used for, but they generally date from the 3rd century onwards. A small number of lid sherds were also present. A flange-rimmed bowl in imitation of those produced in Black-burnished ware 1 was also identified and may indicate local potters attempting to compete with the successful large-scale marketing of the south-western product. It has been suggested that the absence of Black-burnished ware lids may also have reflected such competition (Darlington and Evans 1992, 50).

Non-local wares consisted primarily of Black-burnished ware 1 vessels (fabric 22), mainly everted rim jars and plain-rimmed bowls. The majority of these sherds were small, undiagnostic body fragments. However, those that could be dated were generally of 2nd-3rd century date. Other non-local wares, present in small amounts included fragments of Oxfordshire wares (fabrics 29, 30, 33 and 40) and Hartshill/Mancetter mortaria (fabric 32).

Samian ware was present in small amounts with bowl and dish forms predominating and a number of decorated sherds. In addition a single sherd of black samian was identified (context 2067).

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Three spindle whorls formed from the body sherds of discarded pottery were also present (Fig 11: 18-20). The most distinctive was residual in a post-medieval context (2035) and made of Blackburnished ware 1 (Fig 11: 19). The acute lattice decoration on this object dates the vessel to mid-2nd century or earlier. The remaining pieces consist of one made from Severn Valley ware (Fig 11: 20; context 2090) and another of greyware (Fig 11: 18: context 2094).

Fabric no.	Fabric name	Sherd count	Weight (g)
3	Malvernian Metamorphic ware	88	1675
3.1	Slab built Malvernian ware	3	232
3.2	Handmade Malvernian ware	98	1465
12	Severn Valley ware	718	15460
12.1	Reduced Severn Valley ware	124	2432
12.2	Oxidised organic tempered Severn Valley ware	151	7641
12.3	Reduced organic tempered Severn Valley ware	12	498
14	Fine sandy grey ware	2	24
16	Grog tempered ware	3	36
16.2	Handmade grog tempered ware	3	114
17	Mudstone tempered ware	1	16
18	Malvernian derived ware	3	164
19	Wheelthrown Malvernian ware	19	638
21.3	Early micaceous ware	173	4088
22	Black Burnished ware type I	249	3470
29	Oxfordshire red/brown colour coated ware	2	7
30	Oxfordshire white colour coated ware	3	60
32	Mancetter/Hartshill mortarium	2	123
33	Oxfordshire mortarium	2	111
33.1	Oxfordshire white motarium	4	186
33.2	Oxfordshire red mortarium with white slip	2	134
40	Oxfordshire parchment ware	6	21
41	Unprovenanced white ware	1	28
42.1	Dressel 20 amphorae	2	126
42.2	Dressel 2-4 amphorae	1	104
43	Samian ware	59	964
98	Miscellaneous Roman wares	28	1307

Table 2: Quantification of Roman pottery by fabric

# Discussion by phase

#### Phase 2: 1st-2nd century (context 2099)

Only one context (2099) contained pottery. A total of two sherds (weight 6g) were retrieved and identified as oxidised Severn Valley ware (fabric 12). Neither was diagnostic.

# Phase 3: 2nd century (contexts 2003, 2013, 2015, 2022, 2064, 2074, 2090, 2092, 2094, 2096, 3004, 3006 and 3010)

A total of 700 sherds (weight 16.43kg) were retrieved. The fill of a ditch (context 2074) contained large quantities of sherds, many of which were large and relatively unabraded. A number of sherds could be reconstructed as near-complete vessels, including four jars, three of which were rusticated (Fig 10: 5, 7 and 8; fabric 21.3 and fabric 12.1), an imitation of a BB1 jar (Fig 10: 6; fabric 21.3), and a necked and carinated bowl (Fig 10: 9; fabric 21.3).

Locally produced wares dominated, with oxidised Severn Valley wares (fabrics 12 and 12.2) forming the largest proportion of the group, totalling 350 sherds. The forms identified within this fabric consisted primarily of jars, with small numbers of bowls, tankards and flagons also present. The most distinctive diagnostic sherd was the rim of a large flagon (fabric 12.2; context 2074) which could be paralleled with examples from the Newland Hopfields kiln site in Malvern (cf Flagon type 1.3: Evans et al 2000, 27, fig. 19: F5) and dated between the 1st and 2nd centuries. Reduced Severn

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Valley wares were fewer in number than the oxidised fabric, totalling 92 sherds. The most common forms within this group also consisted of jars; in particular the rusticated form common in the earlier Roman period.

The second largest fabric group in Phase 3 consisted of a newly identified reduced fabric (fabric 21.3), totalling 95 sherds. The diagnostic sherds indicated a high proportion of the necked and carinated bowls commonly associated with the earlier Roman period. Other forms included rusticated jars and butt beakers, as well as a small number of everted rim jars which appear to be imitating those of the Black-burnished ware 1 tradition.

Handmade Malvernian ware (fabric 3.2) amounted to 75 sherds. Forms identified consisted entirely of tubby cooking pots (fabric 3.2), many of which displayed evidence of use in the form of blackening and soot deposits. Where visible, decoration was of the most commonly identified type consisting of burnished vertical lines.

Black-burnished ware 1 (fabric 22) totalled 33 sherds. This quantity was most likely due to the dominance of Malvernian cooking vessels (fabric 3, 3.2 and 19) after the 2nd century. The forms identified within this fabric group consisted almost entirely of everted rim jars with acute incised lattice which can be paralleled within the Wessex Archaeology Black-burnished ware type series series as WA types 1 and 2 (Seager-Smith and Davies 1993). Just one bowl and one beaker were the only other forms identified. As in the case of the Malvernian tubby cooking pots, many of these sherds displayed evidence of use in the form of blackening and sooting, with a number of sherds also heavily burnt.

The remaining fabrics were only identified in small amounts and included a screw-necked flagon of Oxfordshire white colour-coated ware (fabric 30, context 2022) and five sherds which could not be attributed to an existing fabric group and were therefore classified as miscellaneous Roman wares (fabric 98).

# Phase 4: 3rd century (contexts 2005, 2006, 2056, 2057, 2059, 2067, 2086, 2095, 3005, 3016, 3017 and 5032)

A total of 442 sherds (weight 8.86kg) were recovered from contexts dated to Phase 4. The features excavated consisted primarily of postholes and this is reflected in the low quantity of pottery. One pit (context 3018) contained two fills (contexts 3016 and 3017), and contained large amounts of residual pottery primarily of 2nd century date.

Oxidised Severn Valley wares formed the largest fabric group amounting to 184 sherds. However, there was a noticeable decline in sherd number of the organically tempered variant (fabric 12.2), which was only produced during the earlier Roman period. All sherds of this fabric are therefore likely to be residual within this phase and no sherds of the reduced version of this fabric (fabric 12.3) were identified within the assemblage. In addition, the occurrence of reduced Severn Valley ware fabric 12.1 was only 16 sherds. Despite never having been produced in the same quantity as its oxidised counterpart, it is possible that production of vessels in this fabric was also in decline after the end of the 2nd century.

Jars dominated the above fabric groups, although there was a greater variety of types present than in previous phases, including the 'pulley rim' form (context 2057) which was only produced from the 3rd century onwards (Webster 1976, fig.3: 9-13). A slight increase in the quantity of bowl forms and flagons was also noted (Fig 10: 4), whilst the number of tankard sherds remained similar to those identified in earlier phases. One sherd with a frilled rim and white slip was identified as a possible tazza (context 3016).

The most unusual sherd within this group was a funnel spout (fabric 12; context 3017). The object was burnished on the exterior surface and appeared to have broken along the join with the bowl section (Fig.10: 3). The sherd can be paralleled in the assemblage from Sidbury (Darlington and Evans 1992; fig 20:5), although in this case it was interpreted as the neck of a flagon.

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Malvernian ware (fabrics 3, 3.1, 3.2) also declined drastically in this phase, amounting to just 20 sherds. This appears to be due to the decline in production of the tubby cooking pot form (fabric 3.2) towards the end of the 2nd century. The most unusual form within the assemblage was a flange-rimmed bowl (fabric 3; context 3005) which appeared to be imitating those of Blackburnished ware 1 fabric. In addition, everted rim jars also imitating Black-burnished ware 1 were present (context 3017). The production of such vessels may indicate an attempt to compete with the large-scale industry, which was dominating the coarseware cooking vessel market in western Britain at the time.

Black-burnished ware 1 in Phase 4 totalled 98 sherds and included a wide variety of forms. Once more, jars dominated, and the majority displayed obtuse lattice, characteristic of 3rd and 4th century forms. These could be paralleled with WA types 2 and 3 (Seager-Smith and Davies 1993). A single example of the early WA type 1 form was identified within context 3005, consisting of 45 highly abraded, heavily burnt sherds (Fig 11: 14) and clearly residual within the context. Bowls in the group were mainly of the plain rimmed form (WA type 20), although one flange-rimmed example was identified (context 2067; WA type 22). Decoration on both types consisted primarily of intersecting arcs. In addition, two different miniature jar/beakers (WA type 10) were found (context 3016). This form had a short production span lasting only during the 2nd century and therefore both these vessels were residual. As with those from Phase 3 contexts, many of these sherds displayed evidence of use over heat.

A total of 51 sherds of fabric 21.3 were present within this phase, all were residual. Forms consisted of those identified within earlier contexts such as the necked and carinated bowl, butt beaker and rusticated jars. In addition, there was one highly unusual form (Fig 10: 10; context 3005) which could not be paralleled with any other ceramic vessel from the region but appeared to be an imitation of a glass vessel. It consisted of three adjoining sherds and appears to be copying a 'mould-blown hemispherical ribbed bowl' (Price and Cottam 1998, 60-61, fig.14). Such glass vessels are fairly common on sites in southern Britain during the mid-1st century. It is therefore possible to assume that this imitation was also of this date, and the date range of other forms in this fabric would support this.

Five sherds of Oxfordshire mortaria were identified, three of white fabric (fabric 33.1) and two oxidised with a white slip (fabric 33.2). The two slipped sherds appeared to be from the same vessel, one coming from the lower fill (context 3017) and one from the upper fill (context 3016) of the same pit (context 3018). Of the white mortaria, two were diagnostic and dated according to parallels within Young's type series (Young 1977). The first was of type M2 (Young 1977, 69; fig18: M2.6) and dated to AD 100-170, making it residual within this phase. The second had a bead rim and was of type M13 (Young 1977, 73, fig 73: M13.3), dated to AD 180-240. Other sherds of Oxfordshire production consisted of four body sherds of parchment ware (fabric 40). None were diagnostic and could therefore only be dated from the 3rd century onwards.

The remaining identifiable fabric was that of Dressel 20 amphora (contexts 3005 and 3017), which amounted to two sherds. In addition, there were three sherds which could not be attributed to a fabric group and were therefore grouped as miscellaneous Roman fabric (fabric 98).

#### Phase 5: 3rd-early 4th century (contexts 2098, 508, 509, 513, 515, 516 and 517)

A total of 263 sherds (weight 8.11kg) were retrieved from Phase 5 contexts. All the contexts (except one) were from a sequence of well-stratified deposits, densely packed with sherds, that were the fills of a deep feature that was only seen in part (context 512; Fig 7). Many sherds within these deposits appeared to be residual. Context 2098 was a general soil layer that had developed through the Roman period and contained material of mixed date.

Although oxidised Severn Valley ware (fabric 12) was still dominant in this phase, just one sherd of the reduced fabric (fabric 12.1) was present. Forms consisted almost exclusively of jars and bowls with only one tankard sherd identified. More unusual diagnostic sherds within the group included two colander fragments from context 508 but from different vessels. These were residual, dated to between the 2nd and 3rd centuries. There was also one possible bowl or tazze rim with applied

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rope decoration from the same context (Fig 10: 2). In addition, one small sherd from this group displayed incised graffiti (Fig 10: 17; fabric 12).

The second largest fabric group was Black-burnished ware 1 which totalled 81 sherds. However, only four vessels were represented by these sherds, with the majority of these sherds coming from a single everted rim jar (context 508; Seager-Smith and Davies 1993: WA type 3). Only a narrow range of forms was represented, consisting of two highly everted rimmed jars (WA type 3) and two plain bowls (WA type 20), one of which had a grooved rim.

Handmade Malvernian wares were poorly represented in Phase 5 contexts. Two sherds of slab-built vessels (fabric 3.1) were present (context 508) and could be dated to between the 3rd and 4th centuries. In addition an everted rim jar imitating Black-burnished ware 1 was present (context 513). The remaining material included three near-complete knob-handles lids (context 508; Fig 11: 11-13). Although such lids were probably intended for use with vessels of the same fabric, there was a near complete Black-burnished ware 1 jar rim in the same context which one of the lids fittted exactly, and it seems likely that the lids were used with jars of both fabrics. Despite the decline in handmade vessels, there was an increase in the occurrence of the wheel-thrown fabric (fabric 19) with three everted rim jars (contexts 508 and 515) and a lid identified (context 508). The remaining fabrics were found in small quantities and consisted primarily of residual sherds. In addition 13 sherds were grouped as miscellaneous Roman fabrics (fabric 98).

# Phase 6: Post-medieval and modern (contexts 502, 504, 2001, 2002, 2004, 2009, 2011, 2023, 2025, 2035, 2037, 2039, 2041, 2049, 2054, 2072, 2079, 2089, 3003, 5031 and 5033)

The Roman pottery from this phase was residual. In general the range of forms and fabrics closely resembled those identified within the previous phase discussions. However, there were a small number of sherds of note. Three mortaria were identified within the assemblage, two were of Hartshill-Mancetter fabric (fabric 32; contexts 2001 and 2002) and the other consisted of two sherds of Oxfordshire white fabric (fabric 33.1; context 2001). Only one sherd (fabric 32; context 2002) was diagnostic and identified as a hook-rimmed form of late 2nd-3rd century date.

The remaining two sherds of note were both from a roughcast beaker (context 5031). The fabric of this vessel could not be ascertained, however it is known to be an import from the continent, possible Cologne and can be dated to between the 1st and 2nd centuries based on parallels.

#### Functional composition of the assemblage

The functional groups of this assemblage have been created from diagnostic sherds present within the coarseware assemblage and are classified as follows: amphora, beakers, bowls/dishes, flagons, jars, miniature jars/beakers, tankards and mortaria (Table 3). Bowls and dishes have been combined to form a single category due to the majority of sherds being too small to determine ratio of diameter to height. The figures below do not represent a minimum vessel count but show the relative proportions of diagnostic types recognised within the excavated assemblage.

#### Function in relation to form

Vessel Form	Total number of	% of vessel forms
	vessel forms	
Amphora	3	0.4
Beaker	16	2.1
Bowl/dish	126	16.8
Jar	531	71.1
Flagon	14	1.9
Miniature	5	0.7
jar/beaker		
Mortarium	9	1.2
Tankard	44	5.9

Table 3: Identifiable forms in Roman pottery assemblage

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The dominant vessel type were jars, accounting for over 70% of this assemblage. In contrast, the bowl/dish category accounts for less than a quarter of identifiable vessel forms and although still forming a large proportion is significantly lower than that of the jars. A possible explanation is that the jar form is adaptable, serving many functions ranging from storage of foodstuffs and liquids to cooking.

Cooking jars were not well represented within the assemblage, with a relatively low proportion of Black-burnished ware and Malvernian ware vessels which commonly display evidence of being used on open hearths. Only one near complete mortarium and three fragments from another were retrieved. The small proportion of these wares is unusual. There is apparantly a low quantity of pottery associated with food preparation and cooking, which may reflect refuse disposal practices. The good condition of sherds indicated that the much of the pottery had not been redeposited and was dumped shortly after breakage. A number of near-complete vessels from the fill of a ditch (context 2074) may suggest that some vessels were only broken upon being dumped.

The presence of mortaria, amphorae and flagons, although relatively small in number, are nevertheless evidence of food preparation and consumption behaviour that reflect a degree of Romanisation in comparison to rural settlements in the local area. It is likely that such vessels were purchased because they served specialised functions such as the efficient preparation of various foodstuffs in the case of mortaria. The character of the assemblage closely reflects the Deansway pottery assemblage (Bryant and Evans 2001), and seems to be characteristic of household refuse in the Roman small town (Dalwood and Bryant 2001)

There was very little evidence of repair within the assemblage with only two rivet holes and one actual dovetail rivet of lead noted. This latter example was identified within the wall of a near complete flange rimmed bowl (Fig 10: 1; fabric 12; context 508).

The Malvernian (fabric 3) lids were presumably used to cover cooking pots from the same source, although they may also have been used in conjunction with Black-burnished ware jars. A number of these were identified within the same context as the lid sherds and were of a size which could be covered adequately by them.

One small flagon with a tall neck (Fig 11: 15) can be paralleled with Oxfordshire form C8, dating to AD 240-400 (Young 1977, 149, fig 53: 8.1-8.7) and is similar to one excavated at Sidbury (Darlington and Evans 1992, 54, fig. 28.5). Closer analysis of fabric is needed to determine the source of the product.

# The Samian ware

A total of 59 sherds of samian (fabrics 43.1, 43.2 and 43.3) were retrieved from analysed contexts (Appendix 1). In general, the pottery was lightly abraded with good slip preservation. The assemblage consisted of a narrow range of forms and fabrics, with Southern Gaulish (fabric 43.1), Central Gaulish (fabric 43.2) and Eastern Gaulish (fabric 43.3) sherds identified in almost equal proportion and with diagnostic sherds being entirely of bowl or dish form (Dragendorf forms 15/31, 18/31, 18/31R, 18R, 31, 37 and 30).

Only a very small proportion of the group was decorated in comparison to the average for an urban site, representing just seven individual vessels. This low occurrence of decorated wares was noted at the adjacent Magistrates' Court site, where the frequency was calculated at 17-18% (Jeremy Evans pers comm). A single partial stamp was identified. It displayed the letters RIS.C.M but no parallel could be found. A single sherd of a black-slipped samian beaker, thought to be of Central Gaulish origin was retrieved from context 2067 and could be dated to the 2nd century (Derek Hurst pers comm).

The stratified samian consisted of 20 sherds from Phase 3 contexts, dated to the 2nd century (contexts 2003, 2022, 2090, 2094 and 3004). The remaining 39 sherds were residual. In common with the assemblage from the Magistrate's Court site, it is notable that the Southern Gaulish wares (fabric 43.1) were primarily residual, possibly indicating that only small-scale activity was occurring on the site prior to the early 2nd century (Jeremy Evans pers comm).

# Medieval pottery

A total of 60 sherds of medieval pottery (weight 517g) were retrieved from the site. These were from post-Roman contexts, and not identified to fabric type. However the dominant fabrics within this group were Worcester-type sandy glazed ware (fabric 64.1) and oxidised glazed Malvernian ware (fabric 69), dating between the 13th and 15th centuries.

# Post-medieval and modern pottery

The post-medieval and modern pottery assemblage amounted to 1228 sherds weighing 20.01kg. The post-medieval assemblage was extremely well-preserved, containing a high proportion of large, relatively unabraded sherds and is considered worthy of a more detailed analysis in the future. The assemblage comprised a range of commonly identified fabrics dating from the 16th century onwards with a dominance of those of late 17th to 18th century date. These included a high proportion of post-medieval red wares (fabric 78.1) with either black glaze or inlaid slip decoration, and post-medieval buff wares (fabric 91) with inlaid slip decoration or mottled glaze. Later material of 19th-20th century date consisted of modern stone china (fabric 85) and miscellaneous late stonewares (fabric 81.4).

# **Building materials**

# **Building stone**

#### Fiona Roe

There were fifteen fragments of building stone from Roman contexts, and another 44 from post-medieval contexts (Appendix 2). The building stone accorded well with what is already known about building practice in the small town. However 15 of the 16 fragments from Roman levels were burnt, a higher proportion than that noted elsewhere in the city. These Roman finds included five fragments of Lower Old Red Sandstone tilestone, replicating the numerous finds from Deansway and other Roman sites in the city (Roe 2001). The nine fragments of Lias and one of Triassic sandstone from Roman contexts have similar parallels. The Old Red Sandstone appears to have been used mainly for roofing tiles. Some of the Roman finds of Lias may have been used for walling, but one piece with a worn, concave surface (context 515) was probably a fragment of paving stone. The fragment of local, red Triassic sandstone (context 513) may be building stone.

Another roofing tile fragment came from a post-medieval context (1037), but could be either Roman or medieval in date. There were a further six Lias fragments from post-medieval contexts, one (context 1091) a small block with mortar adhering, and again these could have been in use during either the Roman or medieval periods. The two fragments of local, red Triassic sandstone, both from post-medieval contexts (contexts 1006 and 2002) could have been utilised at almost any date. There are also fragments of grey, Welsh slate from five post-medieval contexts, and this was used in Worcester from medieval times onwards.

# Ceramic building material

Ceramic building material consisting of tile and brick of Roman, medieval, post-medieval and modern date was retrieved. A total of 1160 pieces of tile weighing 81.08kg and 288 pieces of brick weighing 10.59kg were recorded. Due to the large quantities of building material on the site, only a sample of the total was collected. Only Roman material was examined in detail.

#### Roman tile

In comparison to the large quantity of pottery, there was only a small amount of Roman ceramic tile just 754 fragments (4314g). The majority of these pieces were fragmentary and highly abraded, even in contexts alongside well preserved pottery sherds. This may indicate that the building material may have been demolition debris transported from a different area before disposal,

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reflecting a widespread pattern across the Roman settlement (Dalwood and Bryant 2001). Despite the small size of the assemblage there were a few interesting pieces within the group, including a two signature marks, and a small amount of flue tile which may indicate that the original source was a higher status building. There was an unsual example of a box flue tile (Phase 5: context 508), with the keying roughly incised in the form of lattice, as opposed to the more common combed type.

# Fired clay

A total of 207 fragments of fired clay weighing 3411g were retrieved from the site, of which 104 were from Roman contexts. The vast majority of this material was undiagnostic and fragmentary. One larger piece (residual, context 502) was of particular interest as it was partially vitrified. This piece had obviously been repeatedly exposed to high temperatures. The presence of waster sherds and a single kiln bar from the adjacent Magistrates' Court site (Jeremy Evans pers comm.) may suggest that it been used within a Roman kiln structure.

# Mortar and plaster

Sixty-one fragments of mortar and two of plaster were identified. One fragment of plaster was from a Roman context (context 2003) and had traces of dark reddish-brown paint on the upper surface.

# Artefacts of glass, metal and stone

#### Glass

Two fragments of Roman glass were recovered from Phase 4 (contexts 3003 and 3017) and dated to the 3rd century or earlier. A fragment from context 3003 was too small to identify. The other fragment (context 3017) appeared to be from the junction of the base and wall of a vessel. It was pale bluish green in colour and of fine quality with no visible flaws. The shape of the fragment indicated that it might have come from a square bottle.

#### Metalwork

A total of 238 fragments of metalwork were retrieved from the excavation stage of the site and consisted primarily of ironwork, with smaller amounts of copper alloy and lead. The iron and copper alloy objects were x-rayed by Vanessa Fell of the Ancient Materials Laboratory, Institute of Archaeology, University of Oxford. The radiographs are retained in the site archive.

#### Lead

A total of eight pieces of lead were retrieved from the site. All came from contexts of medieval date or later. The group included three window cames (contexts 1004 and 1042).

# Copper alloy

A total of 28 pieces of copper alloy were identified within the assemblage. Of these, only four pieces were retrieved from Roman contexts. The only identifiable piece was a *ligula* (Fig 11: 21; context 513). Such objects were used for extracting ointments from jars and a good parallel can be seen in an example from Fishbourne (Cunliffe 1971, 109 no 58). The context was dated to the midlate 3<sup>rd</sup> century.

#### Iron

A total of 200 fragments of iron weighing 3745g were retrieved from the site. Of these, 22 pieces were from Roman contexts (508, 509, 513, 517, 2003, 2017, 2022, 2059, 2090, 2094, 3014 and 3016). This material consisted entirely of nails of various sizes.

## Iron slag

A large amount of ironworking slag totalling 584 pieces was found within contexts of 2<sup>nd</sup> to late 3<sup>rd</sup> century date. There is no structural evidence for the smelting or working of iron, and this material may have dumped here as part of a more general process of rubbish disposal, or redeposited from earlier use as hardcore.

#### Worked stone

#### Fiona Roe

There were three stone objects, comprising a disc from a Roman context, and a whetstone and a quern or millstone fragment from post-medieval contexts (Appendix 2). In addition, shale fragments from two post-medieval contexts probably related to Roman activities.

#### Roman objects

The disc (Fig 11: 22; context 515) was a type of object now well known from Roman sites in the area, and may have been used in a throwing game. It was typical in being made from re-used roofing tile, in this case of Lower Old Red Sandstone. Another disc, this time made from Lias, was found in a Roman context at Deansway (Roe 2001). Similar discs have occurred at a number of Roman sites in Gloucestershire, including Frocester (Price 2000, 189) and Great Witcombe (Leach 1998, 69). The three small unworked shale fragments from post-medieval contexts (contexts 1004 and 1007) probably also derived from Roman layers. There were numerous finds of Kimmeridge shale from Deansway, but around 28% of these were redeposited (Roe 2001). A single jet bead was retrieved (context 2098).

#### Post-medieval objects

A whetstone (context 1034) made from a fine-grained, banded green sandstone was slab-shaped. The typical post-medieval form is that of a tapered cylinder, so this small example may be of earlier date. The fragment of quartz conglomerate (context 2035) from the Forest of Dean was over 80mm thick, and may come from a millstone rather than a rotary quern. Small millstones made from the same variety of Old Red Sandstone occurred in medieval levels at Deansway, and it was suggested that there could have been a windmill in the vicinity of this site (Roe 2001). There was a small amount of abraded medieval pottery from the site, and so a medieval date would not be impossible for the quartz conglomerate found here.

#### General discussion

#### The Roman settlement

The Magistrates Court site, immediately to the east, proved to have a much more complex series of deposits than the Police Station site, once excavation began there in April 2000 (Jones and Vyce 2000). The discovery of extensive, stratified deposits over the area shown in Figure 1 influenced our interpretations of the remains found at the Police Station site. The results and conclusions in the present report must be considered in this context. However, a number of conclusions can be drawn from the Police Station site.

Activity at the Police Station site appears to start in the early 2<sup>nd</sup> century and continue to the end of the 3<sup>rd</sup> century. There was no evidence for late 4<sup>th</sup> century activity, in contrast to evidence from the County Education Offices (Fig 2, Dalwood *et al* 1997). Provisional dating from the Magistrates Court site informed interpretation of the Police Station site, and activity at the former also appeared to cease at the end of the 3<sup>rd</sup> century (Andy Boucher pers comm).

There was evidence for the division of the area into compounds, with boundaries aligned east to west. The southernmost boundary did not appear to last into the 3<sup>rd</sup> century, but the dating of the

#### EXCAVATIONS ON THE SITE OF THE NEW POLICE STATION, CASTLE STREET, WORCESTER

northern boundary ditch is less clear. There was no clear evidence within the Police Station site of buildings within the compounds. This contrasts with the evidence from the Magistrates Court site, where timber roundhouses were present in the earliest phase of the site, succeeded by a rectangular timber building which was altered and extended in subsequent phases (Jones and Vyce 2000). Finds from both sites include flue tile, stone roof tiles and brick, which perhaps suggest that a more substantial and luxurious building was situated nearby. Alternatively, this material may derive from the area to the north in Britannia Square, where stone foundations have been recorded (see above).

Material and deposits at the Police Station site gave almost no indications of any specialised activity on the site during the two centuries of occupation. The focus appeared to be domestic and agricultural, possibly pastoral, although the animal bone evidence suggested possible horse knackering in the area.

There was no evidence of ironworking either within the excavated area or found during the watching brief. Evidence for iron smelting has been found at the Kardonia site, Broad Street (Fig 2), Deansway and possibly Sidbury, but is absent from other sites in between. The industry was therefore not localised within one area of Roman Worcester, although smelting slag is found at most excavated sites and was also specifically used for road construction.

The excavation and watching brief produced no further evidence for the line of the Roman road recorded at Broad Street and Blackfriars (see above and Fig 2). The accumulating evidence now suggests that it must have diverged from its apparent course, although the probable alignment is uncertain.

Roman activity appeared to be concentrated in the eastern part of the excavated area at the Police Station site. This could partly be due to better survival, as deposits were more deeply buried to the east. Observations during the watching brief indicated that there had been horizontal truncation of Roman deposits by post-Roman cultivation, and it is possible that deposits within the western area had been completely removed by this means. The presence of Roman pottery within the soil suggested that this may be partly correct; however, activity in this area must have been less intensive, otherwise deeper cut features would have survived.

#### Medieval and later activity

Although the focus of the project was on the Roman period, evidence for medieval and later activity was recorded, and has been summarised above. Medieval evidence was limited as had been anticipated, based on evidence from other sites. The Police Station site lay outside the built-up suburb (Fig 2), and the presence of abraded pottery within the soil overlying Roman deposits indicated that the area was cultivated and manured during this period.

Subsequently post-medieval formal gardens were laid out, then the area began to be built up. Evidence of this survived in the excavated area. In addition to structural evidence for buildings shown on 19th century maps, two deep pits contained an interesting assemblage of post-medieval artefacts, which has potential for future study, but which lay outside the scope of the present project.

# Acknowledgements

The project was directed by Rachel Edwards and the Project Manager was Hal Dalwood. The site staff comprised Jeremy Bretherton, Martin Cook, Anna Deeks, Shona Robson, Nigel Topping, and Dave Wichbold. The following gave invaluable voluntary help on site: Corinne and Gordon Bailey, Robert Baston, Mary Biddulph, Ted Howell, Ben Savine and Thomas Wellicome. The Service would like to thank the following for their kind assistance in the successful conclusion of this project: Andrew Peasgood (Worcestershire County Council), West Mercia Constabulary, Tony Causer (Hall and Tawse Western Ltd), and James Dinn (Worcester City Council). Malcolm Atkin, Duncan Brown, Victoria Bryant, Derek Hurst and Robin Jackson (all of Worcestershire Archaeological Service) assisted in various ways. David Jordan (Terra Nova Ltd) helped with the interpretation of soils.

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Laura Griffin would like to thank Jerry Evans for advice on the Roman pottery in general, and Derek Hurst for advice on the samian. Ian Baxter would like to thank Andy Hammon (Sheffield University) for generously sharing the results of his assessment of the animal bones from the Magistrates' Court site.

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# Appendix 1 Samian ware

Phase	Context	Fabric no.	Form	Total
	112	?43.2		1
	300	43.3	Drag. 18/31	1
	2062	43.3	Drag 37	1
	3000	43		1
	3000	43.3		1
A CONTRACTOR OF THE PROPERTY O	3000	43.3	Drag 18/31	1
	3014	?43.1	<u> </u>	1
3	2003	43.2	Drag 37	8
3	2003	43.1		1
3	2022	43.1	THE PARTY STATE AND A PROPERTY OF THE PARTY	1
3	2022	43.3	PDrag 37	1
3	2022	43.3	<u> </u>	2
3	2090	43.3	Drag 18/31	1
3	2090	43.3	Drag 18R	1
3	2090	43.1	Drag 15/31	3
3	2094	43.2	Drag 18/31R	1
3	3004	43.2		1
4	500	43.2	Drag. 30	1
4	511	43.2	<u> </u>	1
4	2005	43.2		1
4	3016	43.2		1
4	3016	43.2		1
4	3016	43.2	Drag 37	2
4	3017	43.3	?Drag 30	1
5	508	43.1	?Drag 18/31	1
5	508	43		1
5	508	43.3		1
5	509	43.1	The second secon	1
5	509	43		1
5	510	43.1	Drag 18/31	2
5	515	43.1	9	2
5	515	43.1		3
5	515	43.3		2
5	516	43.3		1
5	516	43.1		1
5	516	43.2		1
5	516	43.1		2
5	516	43.1		1
6	2001	43.3	Drag 18/31	1
6	2004	?43.3	Drag 31	1
6	2004	43	The second secon	1
6	2035	43.2	THE RESERVE OF THE PERSON OF T	2

# Appendix 2 Catalogue of stone

# Catalogue of stone objects

## Roman

#### WCM 100414

Context	Description	Type of stone
515	Roundel, probably a gaming disc, made from	Lower Old Red Sandstone
	roofing tile; diam 65 x 63 mm, th 14 mm, 75 g	
WCM 100	358	
2072	Froment of wall veneer with single row of	Marble now a light blue grey colour

2072	Fragment of wall veneer, with single row of	Marble, now a light blue-grey colour
	moulding, polished outer surface, some burnt	
	plaster on the back and top; now 122 x 89 x 22	
	mm, 310g	

# Post-medieval

#### WCM 100414

1004	2 small fragments; 2 g	Kimmeridge shale
1007	1 small fragment; 2 g	Kimmeridge shale
1036	Part of small whetstone, slab type, worn on 2	Fine-grained green banded sandstone or slate
	sides; now 72 x 20 x 10 mm, 28g	
WCM 10	00358	The state of the s

2035	Fragment from rotary quern or millstone, burnt,	Upper Old Red Sandstone
	one pecked surface; max th 83 mm, 1.150 kg	quartz conglomerate

# Catalogue of building stone

#### Roman

# WCM 100414

Context	Description	Type of stone
508	3 burnt fragments; 60g	Lias
	5 burnt fragments; 355 g	Lower Old Red Sandstone
509	2 fragments, slightly burnt; 315 g	Lias
513	1 burnt fragment building stone; 225 g	Triassic sandstone
515	1 fragment with worn, concave surface, possible <i>paving stone</i> ; max th 53 mm, 425 g	Lias
516	1 fragment, burnt; 410 g	Lias
WCM 100	358	
2067	2 burnt fragments; 135 g	Lias

# Post-medieval

# WCM 100358

1004	1 fragment with concave surface, possible well worn <i>paving stone</i> ; 734 g	Lias
1006	1 fragment with worn, flat surface, possible paving stone; 270 g	Lias Triassic sandstone
	1 fragment possible building stone, 462 g	
1015	2 fragments grey roofing tile; 10 g	Welsh slate
1037	1 very small slab, possible <i>roofing tile</i> ; 16g 1 burnt fragment; 30g	Lower Old Red Sandstone
		Lias
1038	1 burnt fragment; 28 g	Lias
1049	1 slab with worn surface, possible <i>paving stone</i> , 185 g	Lias
	2 fragments grey roofing tile, 1 burnt; 107g	Welsh slate
1074	9 small burnt fragments, probable roofing tile; 10	Welsh slate
	g	

# Excavations on the site of the New Police Station, Castle Street, Worcester

1091	1 small block with mortar adhering, probable	Lias
	building stone; 600 g	
	21 fragments grey roofing tile, 2 with traces of	Welsh slate
	hole; 480 g	
2002	1 fragment <i>roofing tile</i> ; 236 g	Lower Old Red Sandstone
	1 fragment probable building stone; 125 g	Triassic sandstone

# List of unworked stone

## WCM 100414

## Roman

Context	Description	Type of stone
508	3 burnt fragments	Quartzite
509	1 small pebble	Quartzite
513	1 burnt fragment pebble	Quartzite
	1 burnt fragment pebble	Quartzitic sandstone
	1 fragment pebble	Oolitic limestone
515	13 fragments pebbles	From river gravels:
		3 x igneous
		4 x medium-grained sandstone
		4 x fine-grained shale/ sandstone
		1 x shelly Jurassic limestone
		1 x quartzite
516	1 burnt fragment pebble	Quartzite
	2 small, flat slabs	Sandstone
	2 small pebbles	Quartzite
517	3 fragments pebbles	Lower Old Red Sandstone

## WCM 100358

2022	1 fragment	Lower Old Red Sandstone
2067	Part of burnt pebble	Lower Old Red Sandstone
3005	1 fragment pebble	Lower Old Red Sandstone
3006	1 burnt fragment pebble	Igneous
3017	1 burnt fragment	Quartzite

# Post-medieval

## WCM 100414

1	1006	2 small fragments	Lower Old Red Sandstone
	1073	1 small slab	Sandstone
	1074	1 small fragment	Black chert
		1 small fragment	Yellowish chert

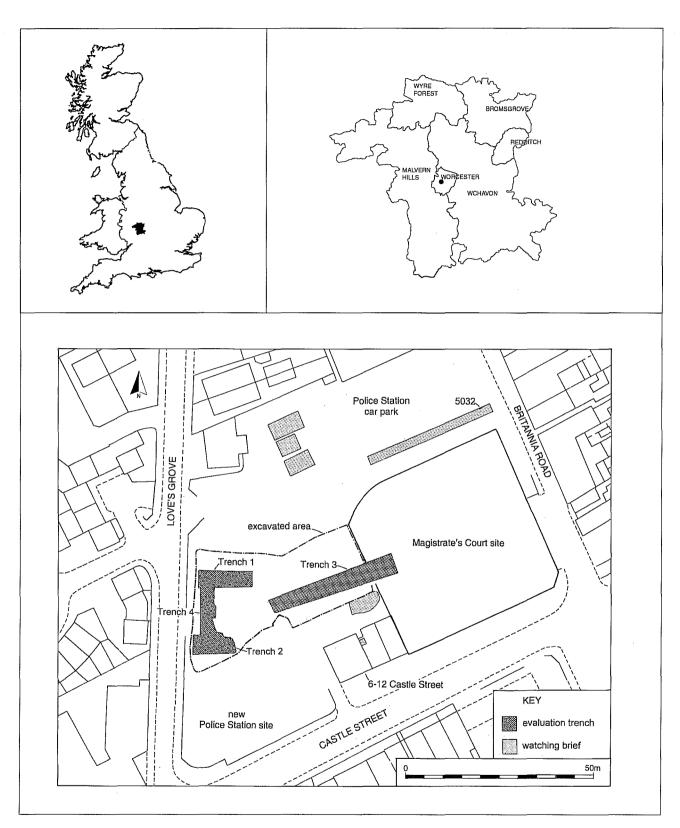


Figure 1: Location of the site

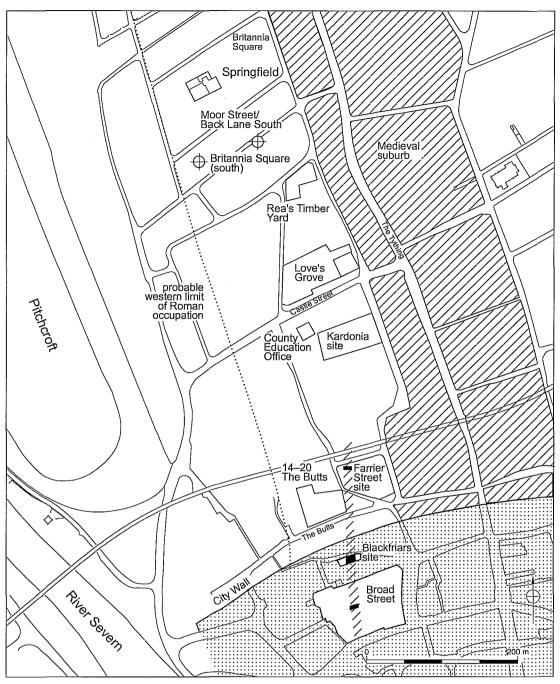


Figure 2: Other sites in the vicinity

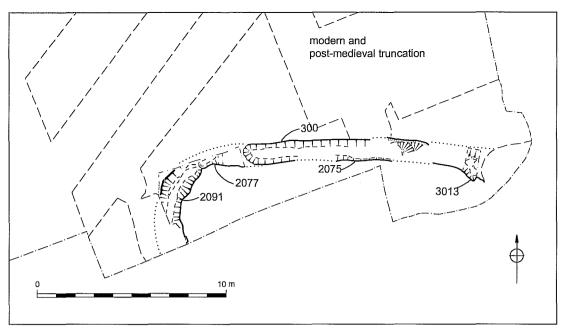


Figure 3: Plan of Phase 2 features

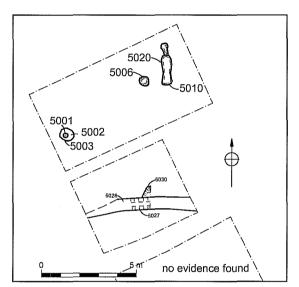


Figure 4: Plan of features revealed in the watching brief to the north of the excavated area

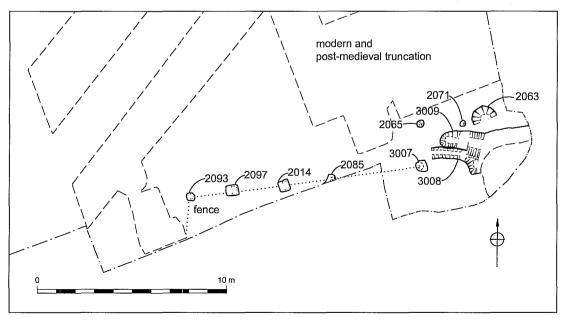


Figure 5: Plan of Phase 3 features

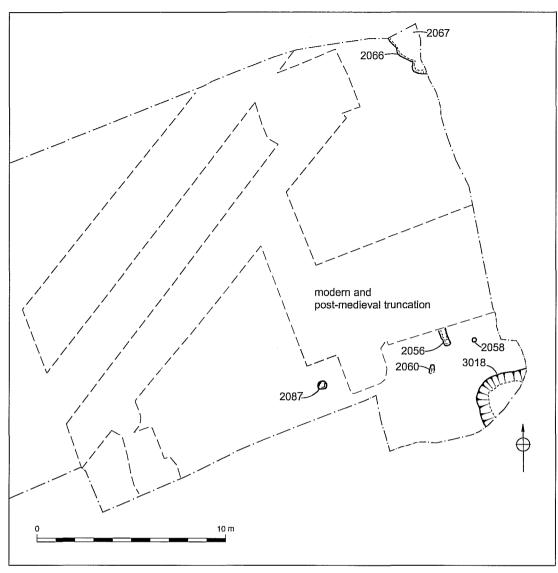


Figure 6: Plan of Phase 4 features

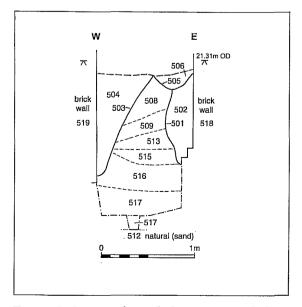


Figure 7: Section through deposits revealed during watching brief, 6–12 Castle Street

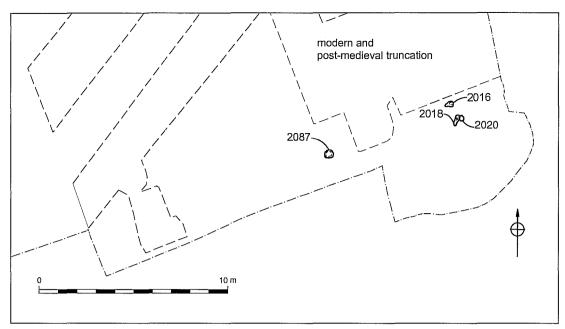


Figure 8: Plan of Phase 5 features

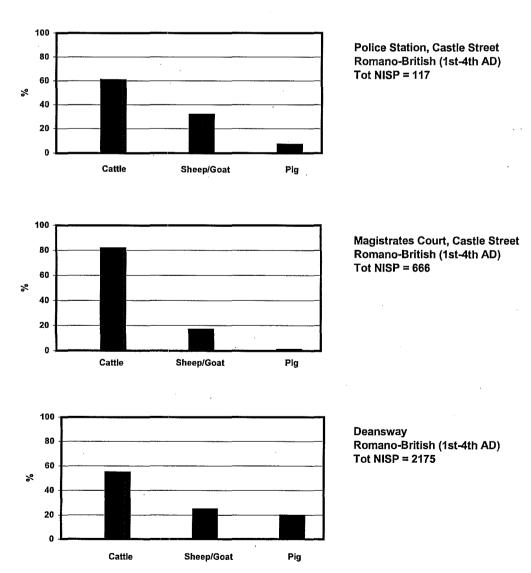


Figure 9: Frequency of the main domestic mammals at Police Station, Castle Street, and other Romano-British sites in Worcester.

Magistrates Court, Castle Street based on Hammon (2001);

Deansway based on Nicholson and Scott (2001).

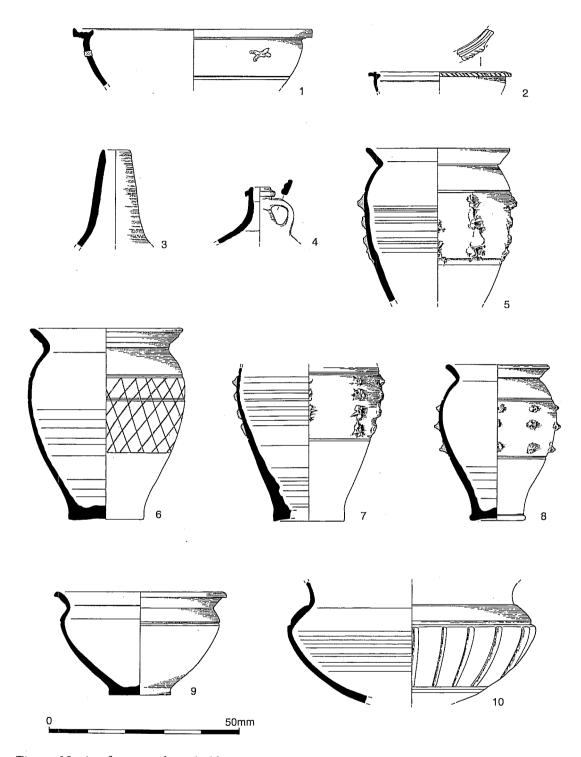


Figure 10: Artefacts numbers 1–10

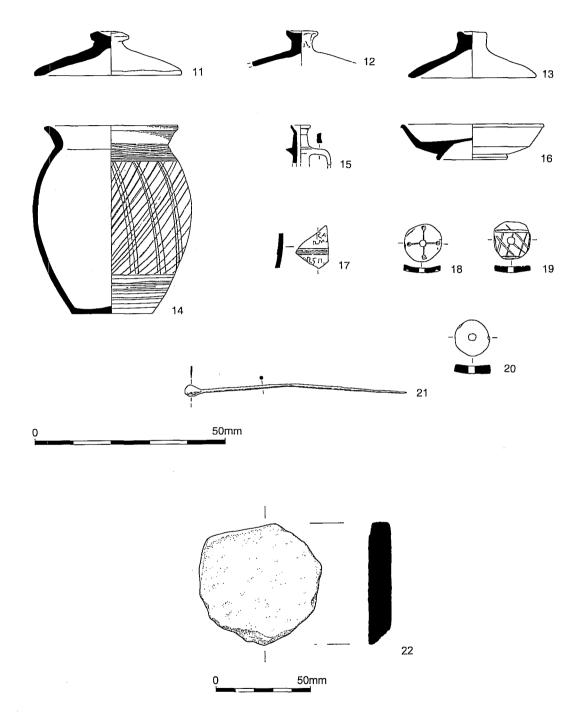


Figure 11: Artefacts numbers 11–20