

Loss and Discovery...

Excavations Across The North Town Wall

Stratford Road, Sandy

Central Bedfordshire

by Les Capon



Published as a digital monograph by

AOC Archaeology Group and Sandy Town Council

2023

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Front cover: aerial view of the site looking west

Inside cover: Roman rosette brooch RF69

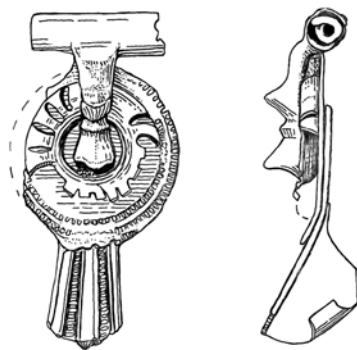
Back cover: site location; imported fineware vessel V53

LOSS AND DISCOVERY...

EXCAVATIONS ACROSS THE NORTH TOWN WALL, STRATFORD ROAD, SANDY, CENTRAL BEDFORDSHIRE

LES CAPON

WITH CONTRIBUTIONS FROM ANDREW PEACHEY, KYLIE MCDERMOTT, ALEXANDRA JOHNSON, MARA TESORIERI, MATILDA HOLMES, FRASER HUNTER, ANGELA WARDLE, HELEN CHITTOCK, ALICE FRASER, RICHARD HENRY, DAWN MCLAREN, ANDREW MORRISON, JACKALINE ROBERTSON



AOC ARCHAEOLOGY GROUP

DIGITAL MONOGRAPH 1

Contributors

Principal author	Les Capon
Volume editor	Rebecca Haslam
Project managers	Les Capon and Catherine Edwards
Post-excavation managers	Huw Sherlock and Melissa Melikian
Academic adviser	Hannah Firth
Graphics	Mark Hoyle
Finds illustrations	Gabby Rapson
Photography	Les Capon, Mara Tesorieri, Alexandra Johnson, Mark Hoyle
Roman pottery	Andrew Peachey
Post-Roman pottery	Kylie McDermott
Ceramic building material	Andrew Peachey
Human bone	Alexandra Johnson, Mara Tesorieri
Registered finds	Fraser Hunter, Helen Chittock, Alice Fraser
Glass	Angela Wardle
Numismatics	Richard Henry
Vitrified materials	Dawn McLaren
Post-medieval metal	Andrew Morrison
Ecofact analysis	Jackaline Robertson

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Acknowledgements

AOC Archaeology and Les Capon would like to thank Sandy Town Council, in particular Chris Robson, for enabling the fieldwork and post-excavation analysis through time and funding. Thanks are also extended to Hannah Firth (Archaeologist, for Central Bedfordshire Council) for the curatorial advice and interest shown in this project. Thanks are also due to Martin Oake for his interest and specialised local knowledge.

Many specialist staff have produced comprehensive reports which can be consulted in the site archive, but have also contributed to the interpretation, particularly Andrew Peachey (pottery, CBM and flint), Mara Tesorieri with Alexandra Johnson (osteology), and Helen Chittock (Roman small finds and metal). Thanks also to Matilda Homes (animal bone), Richard Henry (coins), Natalie Mitchell (Conservation), Jackaline Robertson (ecofacts), Angela Wardle (glass), Dawn McLaren (industrial materials), Andrew Morrison (post-medieval metalwork) Kylie McDermott (post-medieval pottery and clay tobacco pipe) and Fraser Hunter (shale). Figures were produced by Mark Hoyle and finds illustrations by Gabby Rapson.

Thanks to Catherine Edwards for overall management of the project, including fieldwork, to Huw Sherlock and Melissa Melikian for overseeing the post-excavation process, and to Rebecca Haslam for editing. Finally, thanks are given to all the AOC Archaeology field staff who worked on the site.

Summary

This monograph details the results of excavations to the west of the Municipal Cemetery, Stratford Road, Sandy, Bedfordshire. The excavations revealed new evidence regarding Roman and Saxon settlement and burial practices in the area between the 1st and 6th centuries AD. Of note was the discovery of a town ditch and a later town wall, the presence of which suggests that the Roman settlement that formerly occupied the site was more substantial than previously thought. Within the town wall, evidence of land division and road infrastructure were discovered, as were ovens, kilns and numerous pits spanning the mid-1st to 4th centuries AD. Outside the town wall, a cremation cemetery developed during the earlier part of the Roman period and a possible offering or midden pit was created during the 2nd century AD. Another noteworthy find was the discovery of a Saxon-style sunken featured building (SFB) and an early Saxon inhumation, carbon dated to the 6th century AD. The presence of these features raises the possibility of unbroken occupation between the Roman and post-Roman periods in the vicinity of the site.

Chapter 1: Introduction

This report documents the results of archaeological investigations undertaken by AOC Archaeology Group between April and September 2018 at Stratford Road, Sandy, Bedfordshire, on land to the northwest of the Municipal Cemetery. Previous work to the immediate south and east of the site suggested the former presence of a small Roman town. The site itself appears to have been situated towards the northern side of the town.

The principal finds of Roman date were the town wall, two long-established open areas, presumably representing plots of land defined by property boundaries, and an Early Roman cremation cemetery. A sunken featured building of possible Saxon date and a solitary 6th-century inhumation were also uncovered.

The site lies c.500m to the southeast of the core of the modern settlement of Sandy, within an area known locally as Chesterfield, and to the east of the Railway Station

and its approaches. It is bound by Potton Road to the northeast, Stratford Road to the west, the existing Sandy Town Municipal Cemetery to the south and an open field to the north (Figure 1). The centre point of the site is located at National Grid Reference (NGR) TL 17907 48728. The site measured 0.7 hectares.

The archaeological investigation comprised the sequential excavation of a single area, undertaken in advance of extending the existing Municipal Cemetery to the northwest (Plates 1–3; Central Bedfordshire Council 2015). AOC were contracted by Sandy Town Council to excavate the site, without prior evaluation, but with recognition of the archaeological potential through local finds and background research. The site was supervised by Les Capon (Project Manager) under the overall management of Catherine Edwards, Operations Manager at AOC Archaeology Group. The work was monitored by Hannah Firth, Archaeologist for Central Bedfordshire Council. An open day at the end of the excavations allowed the public full access to the site, with tours of the features and a display of the finds.



Plate 1: Overview of south end of site, looking south towards the Municipal Cemetery



Plate 2: Aerial view of the northern half of the site looking west with the town wall foundation, the town ditch or channel and the cremation cemetery



Plate 3: View west across site to the railway and supermarket. 2m and 1m scale

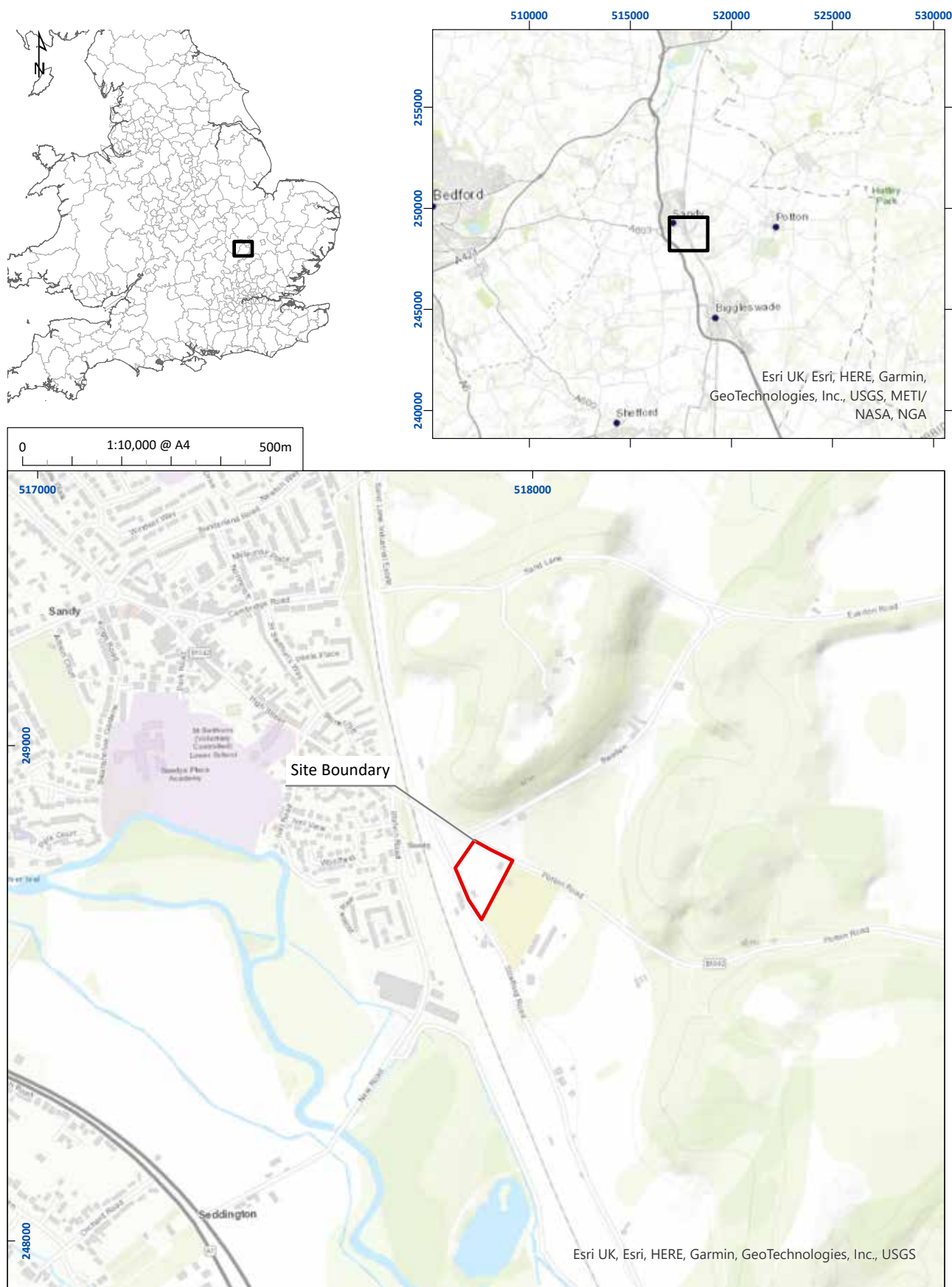


Figure 1: Site Location Plan and Detailed Site Location Plan

Methodology

Fieldwork

A brief for the work was written by Central Bedfordshire Council Archaeology Team and a Written Scheme of Investigation approved (Central Bedfordshire Council Archaeology 2016; AOC 2016). Machine stripping of the proposed archaeological investigation area was carried out under archaeological direction by a 360° tracked excavator fitted with an appropriate toothless ditching bucket. Undifferentiated topsoil overburden of recent origin was removed to the uppermost level of any identified archaeological features, or the natural geology, whichever was encountered first. Following monitoring of the preliminary stripping, archaeological excavation and recording within the area commenced under the supervision of a fully qualified Archaeological Project Officer.

Where archaeological horizons were encountered, subsequent excavations were undertaken by hand, unless otherwise agreed with the archaeological monitor. In rare cases, large features containing generally sterile fills, such as ditch or channel X1, were excavated in part by machine. All excavated sections were drawn at a scale deemed appropriate for the task, usually 1:10 or 1:20. All plans and sections were tied into the Ordnance Survey (OS) grid and Ordnance Datum (OD) heights were established for all strata and features through the use of the Global Positioning System (GPS).

Archaeological features were sample excavated in accord with the methodology as set out in full in the WSI.

A unique site code for the project (BEDFM 2016 81) was issued by the Higgins Art Gallery and Museum, Bedford, and used as the site identifier for all records produced. Written records were compiled using *pro forma* context and trench record sheets and by single context planning. This methodology was compatible with that published by the Museum of London (MoLAS 1994). A record of the full sequence of all archaeological remains as revealed was made. Plans and sections of features were drawn at an appropriate scale of 1:10 or 1:20, with sections drawn at 1:10. A full photographic record was maintained and indexed using digital Single Lens Reflex (SLR) cameras. Registers were kept of all photographs, levels, plans, sections, finds and samples taken in the field.

Identified archaeological finds and artefacts were carefully recovered by hand and bagged or boxed according to the type of artefact and the archaeological context from which they came, with a label indicating the site code, find type and context reference number. Particularly notable artefacts were recorded as 'registered' finds and recorded three dimensionally with Ordnance Datum levels.

The finds identification, dating and analysis work was subsequently undertaken by the relevant finds specialists. Relevant county or region-specific type series were used for identification and dating, where available.

The site archive will comprise all artefacts, environmental samples and written and drawn records. All records and finds have been collated and ordered as a permanent record. The archive uses the site code as a unique identifier.

The investigations were supervised by Les Capon (Project Manager) and managed by Catherine Edwards (Operations Manager) for AOC Archaeology Group. They were monitored by Hannah Firth, Archaeologist for Central Bedfordshire.

Scope and Structure of the Report

This report provides a narrative of the site's development from the prehistoric period up to the present day. The dating evidence shows that occupation on the site was established early in the Roman period, peaking in the late 1st to 2nd century AD, before diminishing gradually through the ensuing two centuries. Limited evidence of pre- and post-Roman activity, including a Saxon inhumation and a possible building, were also identified.

The archaeological sequence presented herein is arranged by archaeological phase (six in total), ranging from the prehistoric period through to modern times. Each phase is unique to this project, having been formulated with regards to the stratigraphy of the site, the artefactual dating evidence recovered and the wider archaeological context at local, regional and national level. Divisions between phases are determined by significant land-use changes on the site, while sub-phases are determined by lesser land-use changes. Phases are numbered in ascending order from earliest to latest, while sub-phases are denoted through the use of an alphabetic suffix (e.g. 3a, 3b etc). The phase boundaries used herein are as follows:

Phase 1:	Natural Geology
Phase 2:	Prehistory
Phase 3:	Mid-1st to early 3rd century AD
Sub-Phase 3a:	Mid-1st to late 1st century AD
Sub-Phase 3b:	Late 1st to early 2nd century AD
Sub-Phase 3c:	Mid- to late 2nd century AD
Sub-Phase 3d:	Late 2nd to early 3rd century AD

Phase 4:	3rd to 4th century AD
Phase 5:	Saxon
Phase 6:	Post-medieval to modern

This chapter presents a brief geological, topographic and archaeological background (Chapter 1). This is followed by the archaeological sequence (Chapter 2) and artefact and ecofact summaries (Chapter 3). The concluding section presents a series of thematic discussions regarding the development and evolution of Roman Sandy, the decline of the settlement and occupation during the Saxon period (Chapter 4). Detailed specialist contributions are provided in the appendices (Appendix A to N).

Textual and Graphical Conventions

The unit of cross-reference that underpins this report and the archive upon which it is based is the context number. This unique number is awarded to each archaeological 'event', including 'positive' features (e.g., the accumulation of deposits, the construction of a wall, the creation of a road surface etc) and 'negative' features (e.g., the digging of a pit or ditch etc). In this report, cuts and structural remains are shown in square brackets '[0]' and deposits (fills and layers) are shown in rounded brackets '(0)'. For clarity and brevity, equated contexts are collated where necessary, e.g., '(2, 4, 6)' for deposits and '[1, 3, 5]' for cuts. Group numbers have been assigned to related contexts, each of which has been awarded a unique alphabetic or alphanumeric identifier (e.g. 'P1', 'D3', 'X1', 'B', etc). Environmental samples are denoted thus: '<0>'. Vessel numbers are prefixed with the letter 'V', registered finds are prefixed with the letters 'RF' and inhumations are prefixed with the letters 'SK'. Dating evidence is presented selectively by group within the results section (Chapter 2) and can be found in full in the specialist appendices.

Levels within the text and figures are expressed in meters above Ordnance Datum (m OD). Phase plans and selected sections are provided for each archaeological phase, replete with scales of reproduction. The plans illustrate features by archaeological phase and, where appropriate, are extrapolated to facilitate interpretation. A selection of noteworthy artefacts are also illustrated within the specialist appendices.

The Research Archive

The archive that underpins this report consists of a large quantity of data that is unsuitable for publication, such as the context and group register, the matrix and the site records, including context sheets, plans, sections and site photographs. This data will, however, form part of the site archive. This will be deposited with the Higgins

Art Gallery and Museum in Bedford and can be consulted upon request.

Geology and Topography

The geology of the area is the Woburn Sands Formation of the early Cretaceous period. Superficial geological deposits consisting of clay, silt, sands and gravels (Head) are recorded in proximity to the site. In addition, colluvial deposits of some depth were known to exist within the present Municipal Cemetery and the surrounding area, burying the Roman occupation horizon by up to 1.5m.

The site lies on the lower slopes of the Greensand Ridge, overlooking the River Ivel to the west. At the time of the excavation, the southern and central portions of the site sat upon a relatively flat plateau that exhibited a very gentle fall in height from a maximum level of 35.06m OD in the south to c. 34m OD towards the north. A relatively dramatic fall in height then occurred across the northern third of the site, with the land falling more sharply in a northerly direction to a minimum height of 32.30m OD in the vicinity of the northern site boundary. This topographic variance was probably induced by the course of a palaeochannel of the River Ivel, which may have arced around the site to the north. As shall be demonstrated, this topography appears to have been key to the ways in which the site was used in antiquity.

Archaeological Background

Overview

The location, extent, character and date of prehistoric and Roman settlement in the vicinity of Sandy has been investigated on numerous occasions by antiquarians and archaeologists. In 2003, the layout of Roman Sandy was hypothesised in an Extensive Urban Survey of the settlement, which also considered prehistoric activity in the area (Albion Archaeology 2003). This model was comprehensively updated to include more recent archaeological findings relating to the Roman period in 2021 (Luke 2021). The following archaeological background draws upon those overviews, in addition to other sources.

Iron Age (c. 700 BC to AD 43)

The earliest known archaeological activity recorded within the vicinity of the site dates to the Iron Age period. This includes an Iron Age hillfort, known as Caesars Camp, which was situated on a relatively elevated area situated c.400m to the north of the site, at a height of 68m OD (CBHER, 442). Caesars Camp forms part of a wider network of Iron Age hillforts, with the scheduled remains of Sandy

Lodge promontory fort and the scheduled univallate hill fort on Galley Hill, 1km to the southeast of the site (NHLE 1015006; NHLE 1015555).

At Potton Road, to the immediate east of the site, a geophysical survey revealed a group of intercutting enclosures and trackways that possessed a typical prehistoric morphology, while the ensuing archaeological evaluation uncovered a pit cluster that dated to the Middle to Late Iron Age. These remains are presumed to be associated with a multi-phase prehistoric field system and a probable settlement that may be of Iron Age date (Magnitude Surveys 2018; Albion Archaeology 2019). This is supported by the discovery of three Late Iron Age coins, which are more commonly associated with Late Iron Age settlement sites of relatively high status (Albion Archaeology 2019).

A small number of Iron Age artefacts were also recovered from the area to the east of the site between 1989–91 by Bedfordshire County Council, which suggested the existence of a cemetery in this location that pre-dated the known Romano-British cemetery (CBHER1501). Recent archaeological investigations to the southwest of the site by AOC Archaeology in 2012 demonstrated the presence of occupation from the Late Iron Age through to the 2nd to 3rd century AD (AOC 2011; 2013). Late Iron Age enclosures and pitting were recorded, interpreted as small-scale activity close to the edge of a previously unknown area of prehistoric settlement. Taken together, this evidence could be taken to suggest a pre-Conquest origin for the Roman town (Dawson 1997).

The Roman Period (AD 43 to AD 410)

A Roman settlement in the vicinity of Sandy has long been suspected. The earliest record recounting the recovery of ancient artefacts from the outskirts of the town dates to the 17th century, when John Aubrey and William Stukeley wrote about finds from the Chesterfield area. In his unpublished work, *Monumenta Britannica*, Aubrey described an urn that was 'red like coral.' A reference to the urn was first published by Camden. Significant local placenames include 'Stratford,' suggesting the existence of an ancient street fording a stream, and indeed 'Chesterfield' itself, which derives from the presence of stones or walls in a field that presumably herald from Roman stone-built structures.

In Roman times, a settlement at Sandy may have been situated at the junction of up to five roads, although direct archaeological evidence for just one of these, the Baldock to Godmanchester road, has thus far been found in the immediate vicinity of the town (Allen *et al.* 2016; Luke 2021). This was a byroad of the important route that linked London with the legionary fortress at Lincoln. It was

recently identified to the immediate east of the site during a geophysical survey and archaeological evaluation at Potton Road, where the road surface itself and flanking ditches were identified (Magnitude Surveys 2018; Albion Archaeology 2019). As extrapolated in Luke and Watt's overview of Roman Sandy, the road more probably passed the southern boundary of this site at a distance of c.200m to the south, before kinking towards the south through the site of Woodside Farm, where a linear anomaly that could represent the thoroughfare was discovered (Luke 2021). Within the Chesterfield area, much of the metalled surface of the Baldock to Godmanchester Road was reputedly removed during the last century because it disrupted ploughing. That said, evidence of the road surface appears to have survived to the immediate east of the site at Potton Road (Magnitude Surveys 2018).

Excavations in the southwest corner of the Municipal Cemetery between 1987 and 1991 revealed extensive Roman stratigraphy, which confirmed the presence of a settlement to the immediate south of this site. Several clearly defined occupation phases were identified, dating from the 1st century BC to the 5th century AD. A number of Roman buildings were discovered, with stratigraphy surviving beneath a layer of colluvium up to 1.5m deep. Although not fully published, the Municipal Cemetery excavations provide by far the most detailed information about the Roman town (Bedfordshire County Council 1988; CBHER 444; Bedfordshire County Archaeology Service 1996; Dawson and Maull 1992).

Finds indicative of the presence of former structures included building rubble in the form of brick, tile and sandstone blocks. Evidence of burning and sandstone rubble, initially interpreted as a street, may instead represent the remains of a stone-built structure. Sandstone blocks associated with metalling to the northeast of the modern chapel may also represent the remains of a Roman building or structure. In addition to this, the remains of a substantial, high-status building comprising a mortared wall, surfaces, and refuse pits were exposed during the installation of a septic tank in 1994. Roman pottery, tile, and structural ceramics related to heating were recovered. It has been suggested that the wall represents part of a possible 'mansio,' built sometime in the late 2nd to early 3rd century AD (Dawson 1997). Building rubble, comprising sandstone blocks, flue tile and roof tile was also recovered from the surface of the field that is situated to the immediate east of the Municipal Cemetery.

A recent geophysical survey and archaeological evaluation at Potton Road to the immediate east revealed ditched enclosures, replete with buildings and other structures, including one that may represent a smithy. It is also possible that a large ditch, uncovered within the southeast corner of the evaluated area, could represent

part of the town ditch. The discoveries at Potton Road support the notion that ribbon development occurred along the Baldock to Godmanchester road, with settlement extending to the south and northeast of the urban core of Roman Sandy. It has also been suggested that similar ribbon development characterised another road that exited the town to the northwest, (Luke 2021).

The construction of the railway to the west of the site in the mid-19th century uncovered numerous burials, while the quarrying of Tower Hill between 1850 and 1910 further impacted upon a Roman cemetery area situated to the north of the railway excavations. This meant that there was a period of about 70 years during which a plethora of major discoveries relating to Sandy's Roman cemetery areas were made. Both inhumations and cremations were found, dating mainly from the Roman period but also from the Late Iron Age and Saxon periods. At Tower Hill to the west, large numbers of both cremation and inhumation burials were unearthed. This suggests that the cemetery was used for a long period of time, with the earlier 1st and 2nd century AD burial rite of cremation gradually giving way to a later practice of inhumation (Dawson 1997, 40–1).

Burials have also been found within the Municipal Cemetery. BCAS excavations in this area uncovered 29 inhumations, mostly dating from the 3rd to 4th centuries. In keeping with the situation on a plethora of other Roman era sites in southern Britain, some of these were buried in the upper reaches of infilled ditches, thus providing evidence for what may have been a minority burial rite for the period (Crerar 2016).

Inhumations of Romano-British date have more recently been recorded to the southwest of the site, west of New Road (AOC 2013). The distribution therefore covers quite a substantial area. It is not presently clear whether these form part of a single or fragmented funerary landscape.

From 1989–94, large-scale excavations at Warren Villas, 1km to the south of the Roman town, uncovered evidence of Iron Age and Roman farmsteads and field systems which presumably sat within the agricultural hinterland of Sandy's Iron Age settlement and Roman town (Dawson and Maull 1996, 58–66).

Saxon Period (AD 410 to 1066)

Anglo-Saxon occupation in the vicinity of Sandy is most conclusively demonstrated by the discovery of a cemetery dating to this period. Anglo-Saxon burials have been found to the north and east of the known Romano-British cemetery containing grave goods dating to the 5th and 6th centuries. At least thirteen Saxon urns, as well as two knives, a bone pin and a silver bracelet, are known to have come from Sandy. Most of the discoveries from this period were made in the 1850s during the construction of the

railway. Sandy itself is referred to in the Domesday Book, as *Sandeia*, a derivation from the Old English *Sandieg*, meaning a sand island. The river Ivel is first mentioned in a document of the 7th Century AD called the Tribal Hidage, which refers to the people who lived along its banks (Hart 1971; Sandy Historical Research Group 2022)

Medieval (AD 1066 to 1540) and Post-Medieval to Modern (AD 1540 onwards)

Historic documents indicate that the settlement of Sandy, as we understand it today, was in existence by the medieval period (CBHER 17131). The centre of the medieval town had migrated northwards from the earlier Roman core, being situated approximately 500m to the north of site. The site itself was by then situated within the hinterland of the settlement, presumably within woodland or more probably farmland.

Sandy continued to increase in size throughout the post-medieval period. During the earlier part of this period, this was limited to ribbon development along the main roads leading into the town, namely the High Street, Bedford Road and St Neots Road. Growth then accelerated from 1850 onwards in the wake of the arrival of the Great Northern Railway and the ensuing economic growth that this generated. This was furthered in 1857 by the construction of a second railway line that linked Sandy with nearby Potton.

Historic mapping indicates an 18th to 19th-century farmstead was situated within the northern part of the site for much of this period. Sandy Town Municipal Cemetery first appears on the 1901 Ordnance Survey map, at which point it occupied a rectangular parcel of land abutting Potton Road only. Between 1926 and 1938, the cemetery was extended to the southwest and was further extended between 1964 and 1979 to its current size.

In terms of 20th-century land use, historic mapping indicates the location of two smaller structures to the west of the Municipal Cemetery Lodge. Based on the size of the structures these are considered likely to be lightweight ancillary buildings. The site was used for allotments from the late 1970s until the mid-2000s. As a result of this land use, no cropmarks nor earthworks are visible on aerial photographs of the site taken during that time span.

Previous Archaeological Investigations

Archaeological salvage recording within the site boundary recorded part of a ditch, several postholes or small pits and a possible kiln (Richards and Newbould 2014). Iron Age and medieval pottery were also recovered. The investigations were not extensive, however, and were limited to the recording of features which had already

been exposed during excavations to create 'anti-access' ditches around the perimeter of the site.

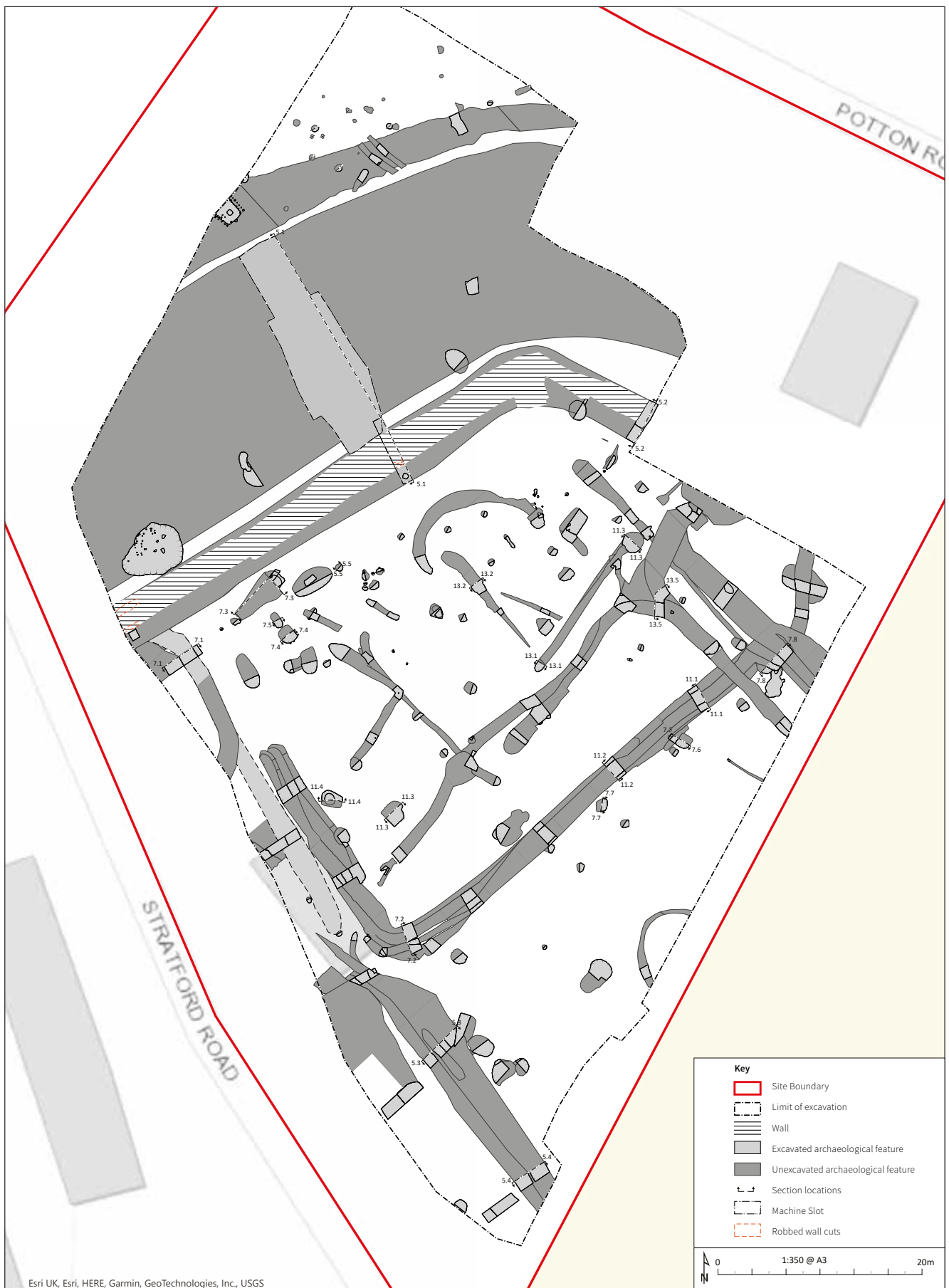


Figure 2: Plan of All Archaeological Features

Chapter 2: Results

Introduction

The site is prehistoric to Saxon in date, with evidence of Roman settlement from the 1st to 4th centuries AD (Figure 2). The site was divided into two distinct areas by a Roman town boundary ditch followed by a town boundary wall, which presumably marked the northern edge of the urban core of Roman Sandy in antiquity. These features separated property divisions and settlement activity to the south from funerary activity to the north. The centre of the settlement must have lain largely downslope to the south. A gravel surface along the southwest edge of the site represented the edge of a Roman road into the core of the settlement, the route of which appears to be approximated by the modern course of Stratford Road. The wall and much of the settlement activity dates to the 1st- to 2nd centuries, with a notable reduction of activity in the later Roman period.

Outside the town ditch and wall, the land sloped away to the northwest, where a Roman cemetery and the later remains of a sunken featured building (SFB) of Saxon character lay. Colluvial wash over the ensuing centuries had buried the cemetery by up to 1.50m below 21st-century ground level, whereas a 0.5m thick layer of topsoil and subsoil on the plateau overlay the Roman occupation evidence.

It is thought that at least 0.30m depth of settlement deposits were lost to horticultural reworking and colluvial

movement on the upper parts of the site in the post-Roman period, and the features would therefore have been notably deeper in antiquity, including the shallow postholes and gullies.

Phase 1: Geology

The natural geological deposit of light brownish yellow sand was generally consistent across the plateaued, higher part of the site, with only one lens of gravel seen at the edge of a change in the topography where the site fell dramatically to the north by 2m. This fall may indicate the valley of a curving palaeochannel that levelled out beyond the site boundary. Here, the naturally lain sand was a yellow brown colour and remained slightly damper. The flattest part of the site was in the centre, dropping away to the south. This topography is still apparent along Stratford Road today. Elsewhere the overall topography of the area was altered when Sandy Station and associated tracks were laid down in the 19th century, with the land west of Stratford Road reduced to level ground consistent with the level of Sandy New Road. The geological horizon had relict yellowish brown silty sand subsoil in the north of the site up to 0.14m deep, around the Roman town boundary, and in the south towards the Municipal Cemetery.

Phase 2: Prehistory

Prehistoric evidence from the site was limited to a scatter of residual finds and two features. The only prehistoric finds were flints that were collected from Roman features and comprise an assemblage of ten



Plate 4: Ditch D3 looking east, 1m scale

pieces exhibiting technological traits indicative of the Mesolithic period, plus sparse Neolithic to early Bronze Age flakes present in colluvial subsoil and topsoil. The northern subsoil contained a Mesolithic flint core, while a ditch and a pit comprise the earliest features on the site (Figure 3).

An undated oval pit P8 in the valley floor at the north end of site measured 1.53m long and was 0.46m deep, with a rounded profile. There was a single fill, of slightly stony dark brown sandy silt (86). No finds were present, however the position of this feature in the stratigraphic sequence demonstrates that it was one of the earliest features present on site since it was cut through by a probable late prehistoric ditch D3.

East-west ditch D3 was traced for 36.10m and was 3.85m wide and 1.40m deep with a rounded profile. The primary fill was yellowish brown sandy silt (17), filling much of the lower parts. The secondary fill was slightly darker brown sandy silt (94), in turn overlain by yellowish brown sandy silt (93), representing erosion of the sides of the feature, before being fully filled by the top fill, a deposit of greyish brown sandy silt (92). There were two Roman potsherds in the top fill, which probably represents Early Roman colluvial wash from the valley edge into what was still an earthwork at the beginning of the Roman period, and therefore representing a probable Iron Age landscape feature.

Phase 3: Roman 1st to Late 2nd Centuries AD

The Roman settlement at Sandy was established in the 1st century AD, with the town sited upon the Baldock to Godmanchester Road, however a gravel road with roadside ditch also appears to have been established on the line of what is now Stratford Road. Pits and ditches were being cut and filled with household debris and initial infrastructure was laid out. The early settlement appeared to be bound by a shallow ditch that encircled the flat plateau upon which the core of Roman Sandy was established. The land to the south of this was divided into roughly rectangular plots by a series of ditches that presumably represent property boundaries. Within the confines of the site, two open areas were defined in this way, henceforth termed the northern property and the southern property herein.

As the decades or centuries passed, the town ditch was replaced with a more robust barrier, a stone town wall and external ditch that took advantage of the northward fall in the local topography. This topographic variance elevated the wall relative to the external approach to the town, thus creating a commanding barrier in the landscape.

During the Early Roman period, land north of the town ditch was used as a cremation cemetery. To the south of that boundary, the evidence suggests that activities carried out included eating, working, baking in ovens, and general settlement activities common to 1st and 2nd-century AD Roman life. This must have included dwellings, although limited structural evidence was revealed during this

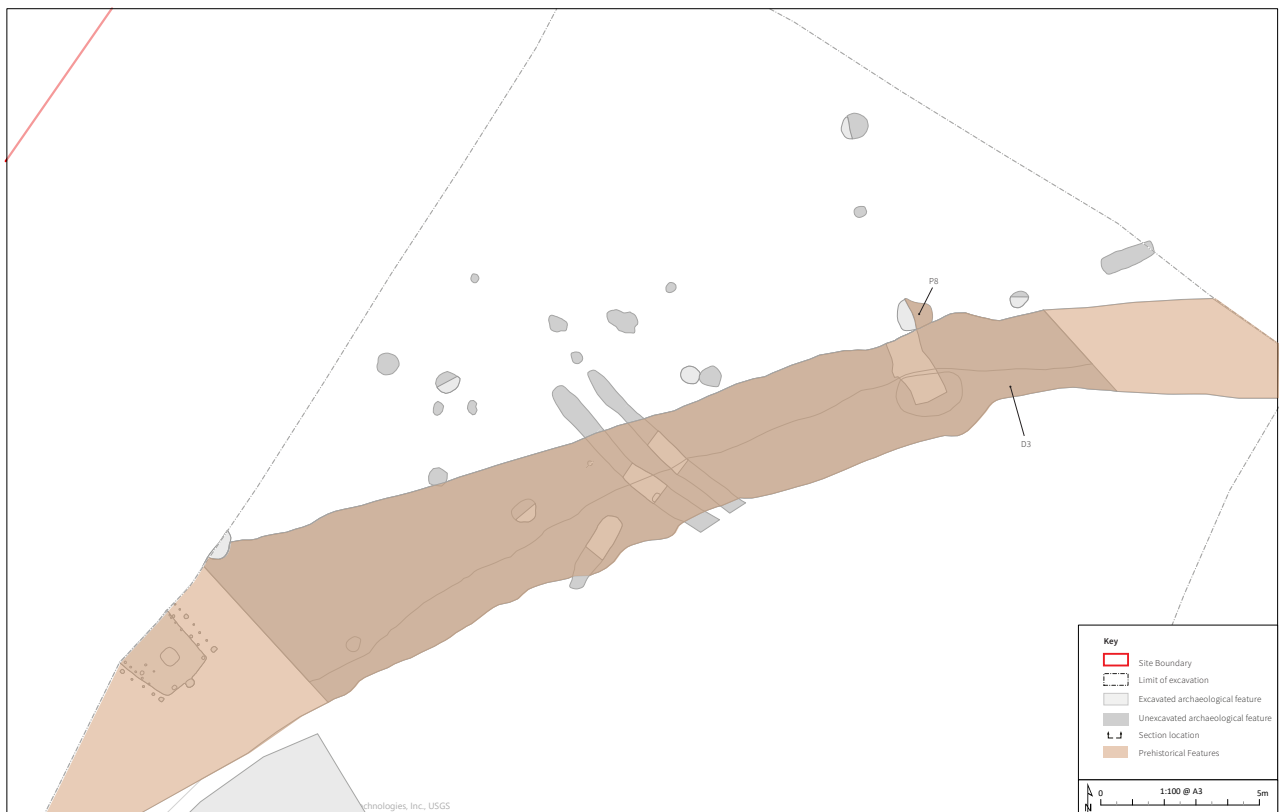


Figure 3: Phase 2- Prehistoric Features

excavation, perhaps as a result of adverse preservation. A low quantity of ceramic building materials would indicate that in this part of town, the buildings were timber, not stone or brick, with few or no tiled roofs used. The pottery finds indicate that the first residents of the Roman town used a varied source of tablewares and storage jars from the local area and the wider Empire.

Phase 3a: Mid- to Late 1st Century AD (Figure 4.1)

Ditch or Channel X1

Situated on the edge of the settled area, a large channel or ditch, 18.6m wide with a concave profile and a 30° slope to a rounded base, cut the edge of the plateau on which the urban core of Roman Sandy was situated (Figure 5.1). The ditch or channel was 30.6m OD at its deepest, the top of the cut being at a height of 34.64m OD on the edge of the plateau to the south and 32.6m OD on the valley floor to the north, thus the feature formed a boundary that was up to 4m deep. The fills were notably lacking in any organic material. The lowest fill was yellowish brown sand (165) biased to the southeast side of the cut, suggesting that it may be the product of edge collapse. This was overlain by brown silty sand (164), virtually stone free, and also free of finds. This could represent fluvial deposition, which implies the former presence of an actively flowing watercourse in antiquity. As such, this feature may originally have been a natural channel, albeit it one that

was subsequently repurposed as a boundary during the Roman period. Whether the stream was diverted or canalised cannot be demonstrated from the available evidence.

Town Boundary Ditch D10

An early Roman ditch, D10, was oriented southwest-northeast for 49.1m along the edge of the plateau, before turning southeast with a 115° turn for a further 13.2m. It survived up to a maximum width of 2.1m and a depth of 0.40m, with steep sides dropping to a slightly rounded base. The outer edge was fully truncated when the later town wall was erected on the same alignment. This suggests that this feature may have formed an earlier boundary around the northern edge of the town, later being replaced by the town wall. The lower fill was light greyish brown sand (114, 183, 278), and the much-truncated upper fill (236) was slightly darker (Figure 5.2). The finds recovered from the ditch were few in number. The pottery was generally broadly dated, however the most diagnostic sherds suggested a mid-1st to early 2nd-century AD date of infilling that was probably the result of gradual silting rather than deliberate dumping. The boundary may have been short lived, having been cut away by settlement features during the late 1st and 2nd centuries and by the subsequent construction of the town wall (see Phase 3b).



Plate 5: Road edge and roadside ditch looking northwest, 2m scale

Inside the Town Boundary

Road RR1 and Roadside Ditch D21

The edge of a gravel surface representing the eastern side of the Roman road, approximating the course of modern Stratford Road, was identified in the southwest of the site, bound by a ditch. The ditch was re-established later in the Roman period, slightly to the east, and the gravel was extended across the first ditch.

Two slots were excavated across the road, which extended up to 3.37m into the site. The road RR1 was constructed in a slight hollow with a rutted base, and comprised localised variations in layers of sand, gravel and ironstone. The lowest layer varied from dark grey silty sand (936) to reddish brown sand (951) up to 0.15m deep, overlain by sand with inclusions of gravel and small pieces of local ironstone (934, 952). A lens of sand was present in the south (935). A solid core of sand and ironstone was laid down (933, 953) with a sprinkling of sand to level it (864, 932), and the top surviving layer was compacted sandy clay and gravel (863, 931, 950). The road had a camber D29, dropping away to its ditch 1.7m to the east. The camber was filled with sands and silt (937) as well as worn and scattered surface materials (795, 796, 797, 798) and (860, 865, 867, 868).

The earliest phase of the roadside ditch D21 was c. 2m wide and was up to 0.61m deep at the south end of the site, shallower to the north, where a probable terminus was lost to 20th-century building works. It was oriented

northwest-southeast and had gently sloping upper edges that dropped sharply to a rounded base. A primary silting fill (992) was largely an erosion product, whilst the main fill of dark greyish brown sandy silt (788, 856) contained pottery, animal bone and building material, of up to late 2nd-century AD date. This ditch flanked the southern property as well as the road. A second section of ditch further north D30 flanked the northern property (discussed subsequently). The space between the sections of ditch would have allowed access into the properties; the potential termini of both were truncated. The northwest end of this early phase roadside ditch D21 was only seen for a short distance, and was a similar width, and up to 0.52m deep, with a rounded profile, and a single fill of (858) brownish grey sandy silt, including occasional larger stones, perhaps indicating deliberate infilling or compaction (Figures 5.3 and 5.4). This first phase roadside ditch was overlain by a spread of gravel (861), lying in the resultant hollow and the ditch re-established further to the northeast

Northern Property

A major property boundary was established parallel to the road, enclosing land south of and next to the town ditch. The earliest part of the boundary A1 was a 15m long segment of a ditch with steep sides and a rounded base. This was 0.53m deep and contained a single fill of yellowish brown silty sand (801, 811, 818), containing pottery and animal bone with no primary silting. The pottery dated to the mid-1st to 2nd centuries. The termini of the ditch



Plate 6: Ditch A1 with recuts and later intrusions, looking northwest, 2m scale

indicated access routes into the northern property from the road. Whether the ditch filled up through silting, subsidence or deliberate infilling was not proved.

The property boundary, or a second section of it, D24, turned northeast defining a second property to the south. The ditch was over 0.90m wide and truncated to 0.46m deep with 45° sides dropping to a flat base, with a fill of yellowish brown silty sand (813, 840, 842). Its full extent could not be proved due to later re-establishment of the ditch in the same general location. The feature seems to have continued further to the northeast, surviving as a short section of ditch A6, truncated so that no full profile was present, with a fill of greyish brown sandy silt (616).

A heavily truncated pit or ditch remnant in the east of the site may represent an eastern part of the boundary that surrounded the northern property, P60. It was oval, measuring 1.02m by 0.76m, truncated to 0.35m deep. It had steep sides and an undulating base and had a fill of charcoal-rich very dark greyish brown sandy silt (743) from which five sherds of mid-1st to 2nd-century AD pottery, bone and flint artefacts were recovered.

Within the northern property, three pits are dated to this early phase. The largest of these, P12, measured 1.58m by 1.50m and was 0.13m deep, with a rounded base. The fill of greyish brown sand (179, 590) contained mid-1st to 2nd-century AD pottery, animal bone, unfired bluish grey clay, metal and part of a small square-bodied glass flask RF72. These items seem domestic, and the unfired clay may have been prepared for use as daub. The smaller pit, P26, was

closer to the town ditch, and was 0.73m across and 0.43m deep, with two fills. The lower (354) was slightly gravelly with occasional ironstone fragments, the upper fill (353) was dark brown with oyster shell inclusions (Figure 5.5). The small assemblage of 1st-century AD pottery in the fill indicated the early date for the feature. Animal bone was also present. The finds were not a large assemblage.

The third pit, situated in the east of the northern property, P54, was much truncated by later boundaries. The pit was 1.45m wide and 1.10m deep, with steep sides and a flat base; its upper parts had been truncated. The primary fill was dark bluish black with charcoal fragments (636), the colour perhaps indicating a cess-like, organic origin for the fill, the secondary fill was dark brown (635), with mid-1st to 2nd-century AD pottery, bone, and charcoal finds.

Southern Property

A short section of ditch forming the poorly preserved western side of the property boundary that defined the southern property, D32, ran parallel with the roadside ditch in the southern corner of the site. This was truncated to a maximum of 0.78m wide and 0.58m deep and had a rounded profile and a fill of gradually deposited dark brown silt (878). This had clearly been a significant boundary. Its northern end was not identified due to the effects of later truncation. The southern property contained evidence of more direct settlement in the 1st century AD, comprising a shallow curvilinear ditch, an oven and a pit.



Plate 7: Oven K1 looking southeast, 1m scale

Internal to the property boundary was a curvilinear ditch D2, which had a radius of c. 5m, with only half a circle present within the excavation, and was 0.80m wide and 0.18m deep, with a single fill of greyish brown sandy silt (477). The sample area excavated did not reveal postholes or stakeholes that might represent a wall line, and neither were there any internal features to prove that this was a house structure, or that the ditch represented a drip gully. Despite this, the size and diameter of the ring ditch concords with the expected dimensions of an Iron Age to Roman round house, while the location of the feature within the property boundary of the southern property together suggest that this represents a dwelling.

Oven K1 (Figure 4.2)

The oven K1 in the east of the southern property had an elongated oval shape oriented southwest–northeast, measuring 3.33m by 1.47m and 0.34m deep, with a spur 0.55m wide and 0.15m deep lying to the north, truncated after 0.77m length. The primary fill at the base was a layer of burnt clay, slightly greyer to the northeast (762) than in the southeast (481) of the oven, perhaps an indicator of increased heat. This was overlain by brownish grey silty sand (480) with pottery and a large deposit of animal bone that was perhaps dumped within the feature after it fell out of use. The pottery derived from two grog-tempered jars of a type that were first manufactured prior to the Roman Conquest but they continue as hand-made vessels to c.AD 65. Thus, a date for the oven in the mid- to late 1st century AD is probable. The topmost fill in the main oven was blackish grey (479), with slight stone content. Finds included pottery, animal bone, and a small copper-alloy rivet. Sample <38> of the fill revealed wood charcoal, and an abundant and diverse assemblage of wheat and barley grain along with sedge and grass seeds plus small weed seeds including black bindweed. The cereal and charcoal are interpreted as residual crop drying waste and fuel associated with use of the oven. The northern spur had a primary fill of dark greyish brown silty clay (584), overlain by burnt clay (583) which may be the remnant of a daub cover *in situ*. The purpose of this feature is uncertain, however it has been speculated that it may represent a pottery kiln in which grog-tempered ware was produced (see Appendix A).

Pits

A deep rectangular pit P67 in the west of the southern property was truncated by a later modification to the roadside ditch. The surviving northeast end of the pit was 2.70m long and 1.88m wide; 1.52m deep, with steep sides and a flat base. The primary fill was yellow sand (887),

an erosion product from the sides of the pit. The second deposit was 0.3m depth of interleaving lenses of yellowish brown sand and charcoal-rich dark brown sandy silt (885), probably representing individual dumps with some sand added for compaction. This was followed by 0.90m depth of brown sandy silt (884) containing pottery, bone and part of a rodded wattled panel, and there were no lensed variations or tip lines, strongly indicating that this derived from a rapid backfilling event, distinct from the lower thin-lensed deposit. The third fill was compact pale green sand (883), and the topmost fill was soft greyish brown sandy silt (854). The pottery contained within the pit suggests deposition in the decades immediately following the Roman Conquest, being principally comprised of grog-tempered jars and necked bowls.

Pit or posthole P31 in the southern property was devoid of artefacts but was cut by one of the property re-establishments A5, so is presumed to date to this phase due to this stratigraphic relationship. This measured 0.8m by 0.6m and was 0.20m deep, with a flat base, and a fill of greyish brown sandy silt (497).

Tree Pit

Towards the east corner of the site, a large oval pit P35 measuring 5m north–south by 2.38m east–west and with a depth of 0.47m was observed. It possessed irregular sides and a rounded base. The single fill of mottled greyish brown sandy silt (526, 528) was intermixed with lenses of yellow sand resembling the geological deposit. This represents a tree pit, and contained pottery and animal bone of mid- to late 1st-century AD date. In the absence of later period finds plus the stratigraphic relationship (cut by ditch F2) this probably represents the location of a mature tree which fell or was felled in the 1st century AD.

It is thought that at least 0.30m depth of settlement deposits were lost to horticultural reworking and colluvial movement of this flat part of the site in the post-Roman period, and the features would therefore have been notably deeper, including the shallow postholes and gullies.

Phase 3b: Late 1st to 2nd Century AD (Figure 6)

Town Wall [5]

The success of the settlement may be measured by and signified by the need for a robust town wall [5]. This had a foundation up to 3.4m wide and was constructed directly over the phase 3a boundary ditch within a newer cut, 0.50m deep, that removed its outer edge. This was on precisely the same route as the ditch, with a 115° turn in



Figure 4.1: Phase 3a- Mid- to Late 1st-Century AD Features

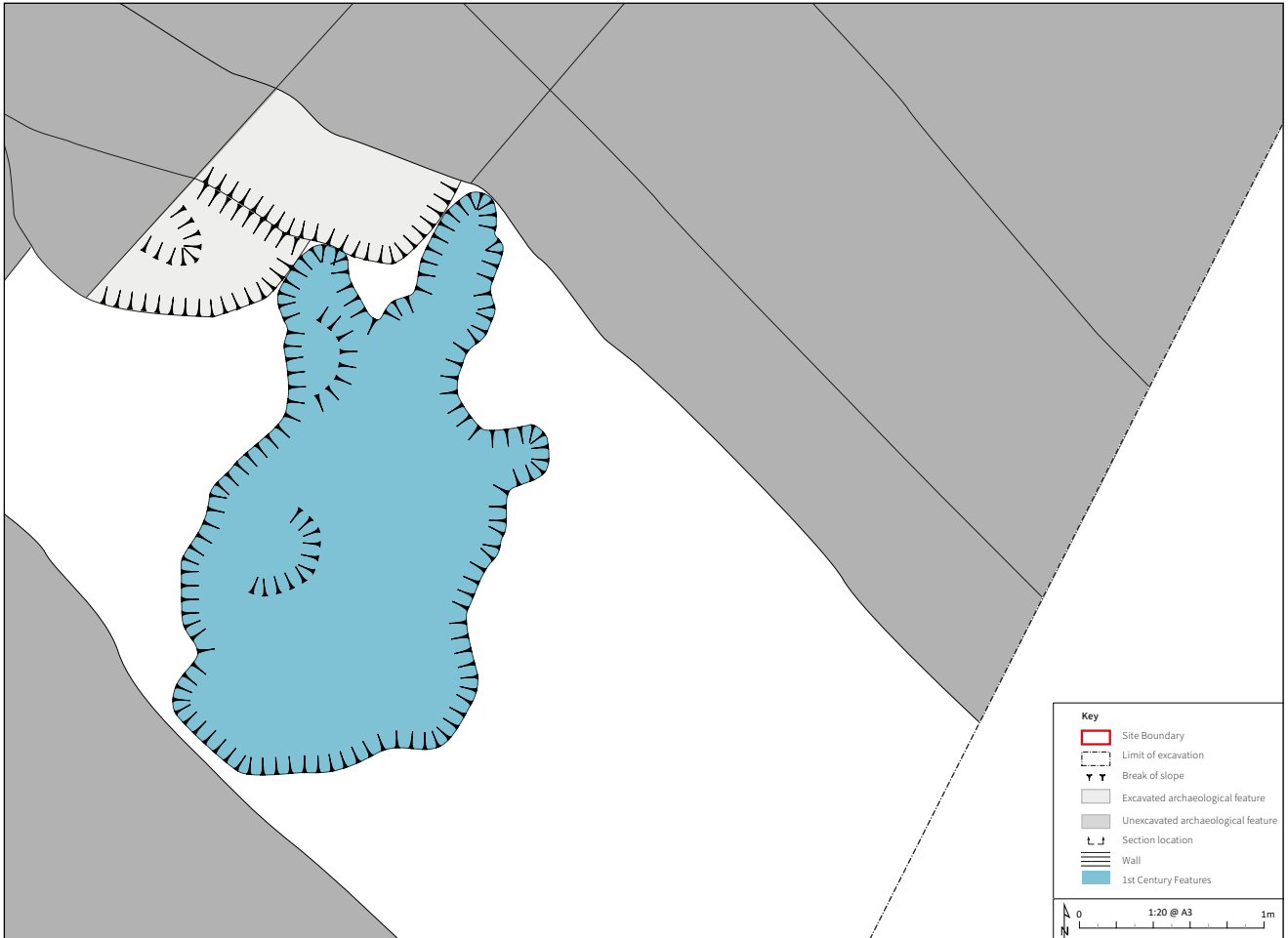


Figure 4.2: Phase 3a: Detail of Mid- to Late 1st-Century AD Oven K1

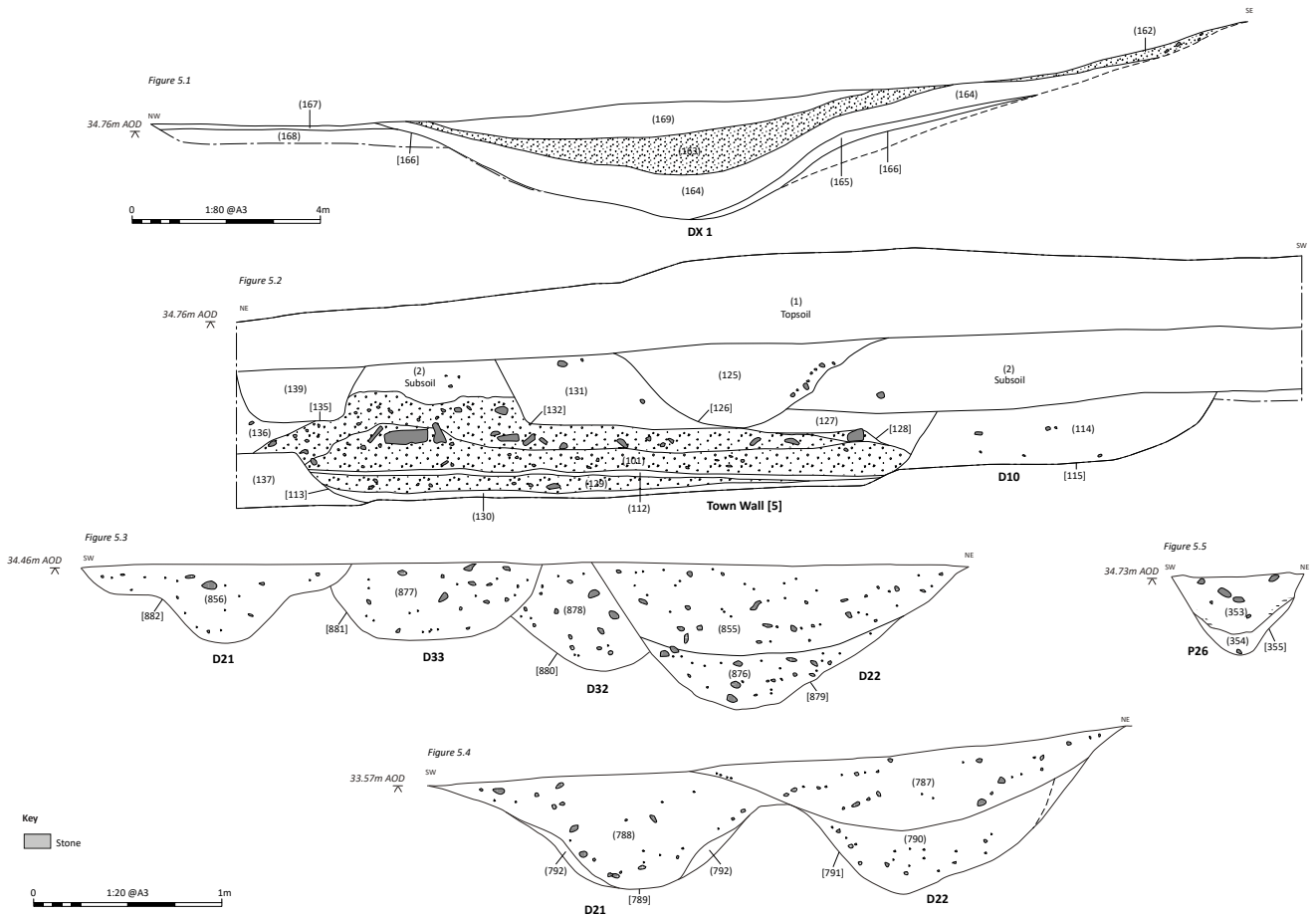


Figure 5.1 to 5.5: Sections

the east. Within the turn, a square-backed area of solid foundation, 3.05m wide, extended 1.61m inwards and is likely to represent a buttress or platform within the north corner.

The body of the wall was constructed with the laying down of a thin layer of blue clay (130, 241), followed by 0.10m depth of gravelly sand (129), with a second layer of clay above (112). This was overlain by sandy clay and gravel (101, 211, 219), which was the base for the structural faced squared ironstone blocks (185) and its rubble core (133). After construction, the trench for the wall was backfilled (242). The wall only survived as a single course of dressed masonry where investigated, which was overlain by hard white mortar (4, 218). The only dating evidence recovered from this feature took the form of a single sherd of 1st-century AD pottery.

The scant remains of the town wall show a dressed outer face of ironstone blocks, with a core of rubble, gravel, clay

and sand, bound with lime mortar. What is not proved is the height of the wall, but a height similar to the 3m width might be a realistic estimate, with centuries of robbing and salvage presumably having been carried out either for buildings within the post-Roman settlement, or in field boundaries around, or in the newer settlement of Sandy, to the north.

Ditch or Channel X1

The large ditch on the edge of the plateau continued as a feature into the 2nd century AD.

The third fill was stony greyish brown sandy silt (163), and represented accumulation in the middle of the ditch when it had already silted up by a metre in the base. A fill on the southeast side above this represented tumble of wall material (162), showing that this was still an active landscape feature at the end of the Roman period.



Plate 8: Robbed Roman town wall, looking northeast, 2m scale



Plate 9: Section excavated through wall and phase 3a ditch looking southeast with 2m and 0.5m scale



Plate 10: Dressed stone of town wall foundation, looking southwest, 0.5m scale

Inside the Town Wall

Roadside Ditch D4

In the northwest of the site, just inside the town wall, a ditch D4 with a northwest terminus ran parallel to Stratford Road and may therefore be part of a roadside ditch. The northwest terminus of the ditch had been dug against the internal face of the town wall, while the road itself presumably ran through an opening in the wall that must have been situated to the immediate west of the excavated area. The ditch was up to 1.91m wide, reduced

by a later truncation to 1.61m wide, and was 0.71m deep with a rounded profile and a rounded terminus. The fills comprised thin lenses of gradual and individual dumps, plus larger filling events. The lowest fills were sand from erosion (351), a dump of metalworking slag (122), reddish brown sand (159, 348), brown sand (158), charcoal (347), followed by sand (346), possibly again subsidence. The next fill was 0.5m depth of blackish grey silty sand (111) with finds including a bone pin RF13 (Figure 7.1). The sample contains wheat grain, grass seeds, occasional barley grain, arable weeds seeds including corncockle,



Plate 11: Ditch or Channel X1, looking north with 2m and 1m scale

black bindweed, sedge, knotweed and pink. Heather was also identified, which could have been brought to site with turves. This was overlain by greyish sand (157, 161, 282), and patchy black silt (160).

Northern Property

The boundary that surrounded the northern property was re-established through the recutting of the ditch that was situated next to the road. This second phase of the ditch, A2, had a rounder profile and a northwest terminus, aligned northwest-southeast for 25m before turning northwest and crossing the entire site. Its northwest terminus was at the same approximate location as the earlier phase, and this ditch was 0.70m deep and in places fully truncated by a later phase. Where a primary fill was identified (805, 817, 845), it contained small pieces of local ironstone rubble, as well as datable finds of pottery of mid-1st to 2nd-century AD date, plus animal bone. This primary fill was, however, discontinuous and was not present along the entire length of the feature. The upper fill was yellowish brown sandy silt (511, 543, 618, 695, 804, 816, 844), again containing pottery and animal bone, with finds contemporary with those of the fill below, and deriving from activities carried out in the contemporary properties (Figure 7.2).

A curvilinear gully, which may represent the shallow remains of part of a house, was identified close to the town wall within the northern property. The gully D1 comprised the northern half of a curve of 12m diameter with a terminus at each end, and may represent a drip gully or wall trench. The terminus to the west tapered to a rounded end, and showed 1.07m width and 0.32m depth with a single fill (108) containing 2nd-century AD pottery with two bone pins RF11 and RF12. The terminus to the west was 0.62m deep, and may represent the location of a major post. The lower fill of the gully, (597), was light yellowish brown, with the middle (596) and top (595) fills slightly darker. The middle fill contained the remains of wheat and barley. A 3m long section of ditch D38 in the east of the site may be a continuation of this feature; it measured by 0.8m, 0.30m deep with a flat base D38 and a fill of brownish yellow sand (771). This was truncated by a later pit.

Within the bounds of the curve, but not necessarily contemporary with it, a narrow slot J1 measuring 1.73m by 0.30m and 0.09m deep with a flat base had a fill of brown sand (138). Dating to the 1st century AD, this was unlike the form of any other feature, and it was suggested that this could have held a frame for an upstanding device such as a weaving loom or a lathe. A bone tool RF14 from the fill has been identified as a thread picker or pin beater. It is not closely datable, however this form first appeared in Britain in the Roman period, continuing in use into the

early medieval period (Walton Rogers 1997, 1755–7).

Two additional postholes and a possible pit may be related to this feature group. Two metres south of the eastern terminus of the curve, a large posthole PH2 may be contemporary. The post was established within a rounded hole measuring 1.00m by 0.80m, and 0.50m deep. The lower fill was greyish brown sandy silt (569), packed around a central rounded post pipe of 0.28m diameter. The post pipe was filled with greyish brown sandy silt (571). The upper greyish brown fill (568) of the posthole overlay both the post pipe and the packing fill and was dated to the late 1st to 2nd century AD by the pottery finds within it. The second posthole PH27 was 3.5m from the western terminus of the curve, and measured 0.95m by 0.88m and 0.39m deep, with a fill of brown sand.

A roughly oval pit P39 within the structural group at the eastern side of the northern property is dated to the 2nd century AD, and measured 1.50m by 1.40m, and 0.35m deep. The primary fill was mixed grey and yellow sand (554), the result of the sides slipping in, mixed with some subsoil, whereas the upper fill was greyish brown silty sand (553) with pottery and bone finds.

A small pit P59, further south measured 0.55m across and was 0.35m deep with a rounded profile. This may be a posthole or a small pit, for example a rubbish pit. The fill was brownish grey (741), with a concentration of animal bone, that may either have been interred in the feature as post packing, or else represents dumped domestic waste.

A group of four pits in the west of the northern property are of this phase. The finds date from the mid-1st to 2nd century AD, but it is recognised that the household waste can include items used for years or even decades before discard. The northernmost of the group, P18, measured 2.7m by 1.1m and was 0.70m deep, with steep sides and a rounded base. It could be a large posthole. Four fills were present (Figure 7.3). The primary fill was a thin layer of dark grey silty sand (276), overlain by mottled silty clay (275) containing pottery and bone finds. The third fill was brown gravelly clay (274), with pottery, bone and CBM, and the top fill was greyish brown silty sand (273), with no finds, and may represent a naturally-derived silty fill.

In the central northwest of the northern property, an almost square pit P13 with rounded corners had five stakeholes around the southern half, perhaps the remnants of a screen or hurdle fence. The pit measured 1.70m by 1.60m and was 0.76m deep, with steep sides and a flat base (Figure 7.4), and had become deformed through collapse of the edges. The five stakeholes were spaced unevenly, perhaps more of a response to the deformed edges than by design. The lowest fill was largely composed of slumped natural sand (187), with inclusions

of occasional large, rounded stones, as well as pottery and animal bone. The main upper fill was dark brown sandy silt (186) with finds of pottery and bone, as well as oyster shell and more large stones. There was no sign of tiplines or lenses of variable dumps, suggesting either a rapid fill, or dumping of deposits of such homogenous character that variations were not observable. The fills of the stakeholes (189, 191, 193, 195, 197) did not contain any finds.

Immediately northwest of the pit in the northern property, an oval pit or notably large posthole P14 is broadly dated to the 2nd century AD. This measured 1.62m by 0.80m and 1.24m deep; an uncharacteristically narrow form for a pit, but uncommonly deep for a posthole (Figure 7.5). The sides dropped steeply then tapered to a rounded flat base. The primary fill was greyish brown slightly stony sandy silt (202) just 0.11m deep, with pottery and bone finds. The second fill was a slump of the sides of the pit into the base (201). The third fill (200) also resembled the geology of the site, but contained pottery and bone, so is likely to have a domestic source. The uppermost, fourth fill, was dark brown (199), with finds of pottery, bone and metal.

Just south of here, the fourth pit in the group was shallow P74, measuring 1.80m by 1.20m and was just 0.20m deep, with a fill of blackish grey sand (360), with pottery, bone and metal finds again attesting to the disposal of household waste.

A moderately large round pit of this phase cut through the edge of the infilled early town boundary ditch. This pit P55 measured 1.96m by 1.84m and was 0.90m deep. When initially dug, this probably had vertical sides and a flat base, but there had been slumping of the edges while the pit was open. Eighteen distinct deposits filled the pit, suggesting a prolonged period of use, but all were of this phase. The lowest fill was pale yellow sand (648), from erosion or slumping of the sides soon after it was excavated in the Roman period. The second fill was clean brown sand (647), possibly representing topsoil that came in with the first fill. One notable find was part of a glass jug or flask, RF77. A layer of subsided subsoil (692) followed, in turn overlain by a deposit of light greyish brown sandy silt, dumped from the east (645), then a lens of mottled grey sand (687). Another pale yellow erosional product sealed this (651), followed by redeposited subsoil (650) and additional sand (688). This was overlain by two distinct dumped deposits: a greyish brown dump in the south (644) and a dull greyish brown dump in the west (646), followed by a layer of pale greyish blue silty clay (643), uncommon for the fills on the site. The fill sequence continued with a layer of brown sandy silt (690), a greyish brown dump (689), a lens of light brown sandy silt (642), a layer that was mottled greyish brown in colour (686), a mottled brown fill (691), a brown fill (641) and the top fill was dark grey silty sand with charcoal and oyster shell (640). Overall, the pottery assemblage in the pit comprised

channel-rim jars and beakers plus body sherds of a flagon with red-painted hoop decoration, and most notably the frilled flange of a tazze, whose chronology is most likely limited to the 2nd century AD.

Also in the northeast of the Northern Property, a small pit P21 measured 0.48m by 0.28m and 0.12m deep with a rounded base, and had dark brown fill (288) with bone finds. Again, this was small for a rubbish pit but also insubstantial as a posthole.

The remnant of a shallow pit lay close to the southern stretch of the property P38. This survived for just 0.80m by 0.80m, with one square corner and a flat base, 0.10m deep. The single fill was greyish brown sandy silt, (551) with no finds.

Two small postholes in the middle of the Northern Property may be part of a group, or may be large stakeholes: PH18 measured 0.23m in diameter and was 0.13m deep with a rounded base, and a fill of pale grey silty sand (573). PH19 measured 0.15m in diameter and 0.12m deep with a pointed base and also had a fill of pale grey silty sand (575).

Northeast of the curved gully or ditch D1, an oval posthole may be related to activities within the property PH24, measuring 0.39m by 0.29m and 0.17m deep with a flat base and a fill of greyish brown sandy silt (739). Southeast of this was a large round posthole PH21. It measured 0.67m wide at the top, and was 0.56m deep with a flattish base with a diameter 0.48m. The lower fill was loose light brown sand with charcoal inclusions (706), and the upper fill was light greyish brown sandy silt (656).

Southern Property

The southern property was bound on its northern edge by the new ditch around the northern property A2, whilst the property's southwest boundary was evidently re-established after the first phase had silted up through the discovery of ditch remnant D33. This re-excavated ditch D33 was shallower and narrower, measuring 1.13m wide and 0.44m deep at its deepest, with a fill of dark brown sandy silt (877). A truncated pit or ditch P75 was discovered within the southern property immediately adjacent to the northeast end of property boundary ditch A2. It survived for just 2.50m in length and 0.75m in width, and was 0.24m deep. It may be a survival of a northwest-southeast division within the southern property, or else it may mark the eastern edge of the property, with a gap before the town wall. The fill was dark brown silty sand (535), with pottery and bone finds.

Features within the southern property comprised five pits and two postholes.

A large, deep square pit P50 in the southern property lay close to the boundary A2, and measured 1.48m by 1.45m, being 1.36m deep, with steep sides and a flat square base (Figure 7.6). The lowest fill in the pit was 0.43m deep, and was greyish brown sandy silt (614) with occasional stone inclusions, plus pottery and animal bone, and probably represented several episodes of fill, since tip lines were evident in section. The second fill was sand which had eroded from the sides (613), and may represent a pause in use, or a sudden slump. The top fill was dark greyish brown sandy silt (612), again with an assemblage of pottery and bone, as well as charcoal and flecks of chalk.

A square posthole PH25, was cut by the secondary roadside ditch, and had steep sides and a flat base and a fill of brown sand (946). This lies in the west, close to the ditch between the properties.

Just south of the early property ditch, and in the southern property, a rectangular pit P29 similar to P50 measured 1.30m by 1.20m and 1.30m deep (Figure 7.7). The fill was dark greyish brown sandy silt (491), with inclusions of stone and charcoal, plus pottery, bone, glass from a square bottle RF63 and CBM. There were no distinct variations in this fill, but the animal bones were largely chicken and goose. Analysis shows that the hens were in lay, and the presence of a juvenile bird suggests a probable spring to autumn season of deposition, as hens tend not to lay as many eggs in winter.

An oval pit P69 in the southern property close to the road, measured 1.40m by 1.20m and was 0.20m deep with a flat base. The lower fill was silty sand (896), the upper fill was greyish brown (890) and contained finds of pottery, imbrex and bone.

Pit P58, situated close to the northeast limit of the excavation, was 2.45m by 1.50m in plan, and was 1.05m deep, with a lower fill of reddish brown sandy silt (723) and an upper fill of brownish yellow sand (722), resembling natural deposits. The small quantity of finds recovered and natural-like fill suggests this was a possible tree throw. A similar feature was a much truncated shallow pit P44, situated in the eastern side of the southern property, which cut through the edge of an earlier oven pertaining to the previous phase. It survived for 1.64m by 0.76m and was generally rounded, 0.22m deep, and had an irregular base (Figure 7.8). The fill was dark brownish grey silty sand (580). This could represent a tree or shrub growing over the former location of the disused oven.

Two postholes situated to the south of boundary A2 and running parallel with it, were situated 5m apart. Both were similar sizes. Measuring 0.80m in diameter, PH16 was 0.16m deep and was filled by (501). The other PH17 was 0.81m in diameter and 0.13m deep with a similar fill (503). Although only broadly dated to the Roman period,

their orientation suggests that they could be associated with boundary A2, perhaps forming the poorly preserved remains of a fence, for example.

Phase 3a to 3b: Mid-1st to 2nd Century AD

Outside the Town Wall

Just outside the town wall, near the corner, a pit (P3) was also of early to mid-2nd-century AD date. This was cut into the slope down to the valley floor, and measured 2.75m by 2.1m, and was 0.42m deep with a gently concave profile. The primary fill was yellowish brown sand (24) with occasional finds, whereas the main, upper fill of mottled dark brown sand (23) contained pottery, butchered animal bone and building material, as well as metalworking debris in the form of roasted iron ore. Cereal and charcoal within the fill were a mix of food and fuel debris disposed of within the pit. Elderberry may represent food waste or was from an invasive plant that grew nearby, whereas heather and grass may have been used as fuel or were components of turf brought to the site.

Valley Floor and the Cremation Cemetery (Figures 6 and 8)

The Romano-British cremation cemetery featured fifteen cremations of mid-1st to 2nd-century AD date, comprising a minimum number of 17 individuals including five individuals of unknown age or sex, three adults of unknown sex, two adult males, two adult females, and at least five non-adults. This lay downslope from the Roman town wall, beyond the ditch. The cremations lay in an irregular cluster measuring 10m by 7m.

Cremation C1 (shown on Figure 6) was removed from the main group of cremations, being situated c.20m to the south. It was dated to the late 2nd century AD and was contained within an urn RF2 in an oval pit, excavated into the partially filled ditch or channel, X1. The fill of the pit was dark yellowish brown sandy silt (21). This represented an individual aged between 9 and 18, and was accompanied by a number of grave goods. These comprised a fragmented glass spouted jug RF5, a samian ware dish from central Gaul that was stamped by Censorinus ii, accompanied by a poppyhead beaker (Plate 12) and jar. Fragments of a thin-walled glass flask (possibly dating to the 2nd century AD) were also recovered. The urn itself has been dated to the mid-1st to 2nd century AD, and is a channel-rim, lid-seated jar in shell-tempered ware. Neither the pottery nor the glass jug appeared to be heat affected and were probably incorporated into the burial after the cremation process as grave goods.

Cremation C2 was an adult male within an unurned burial found in a small round pit. The fill of the pit (32) contained



Figure 6: Phase 3b- Late 1st to Early 2nd-Century AD Features

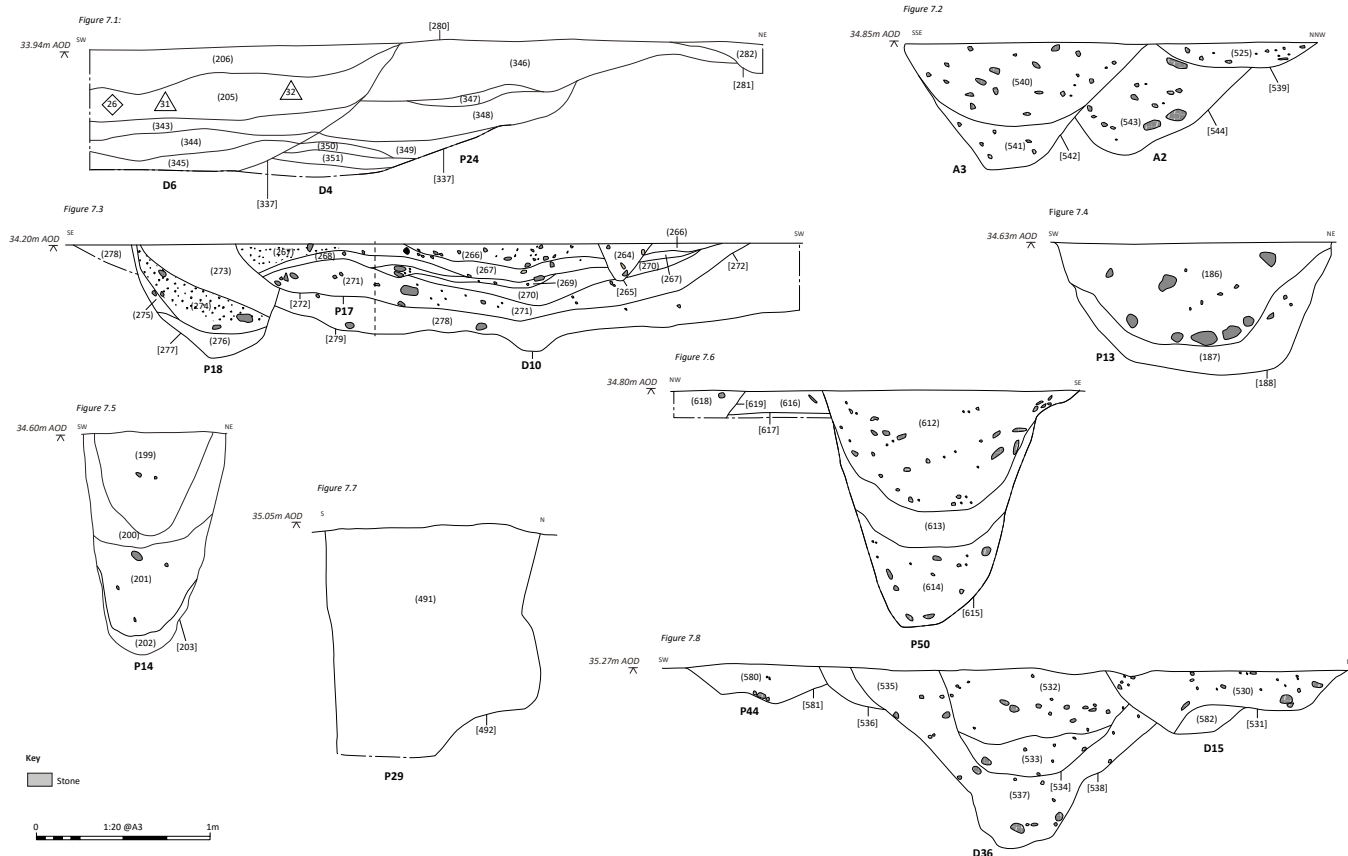


Figure 7.1 to 7.8: Sections

a small number of Roman pottery fragments as well as six nails and fuel ash slag. The bone was predominately yellow in colour, suggesting low combustion temperatures during cremation.

Cremation C3 (34) was of an adult, over the age of 21, found in a small pit. The pit contained several Roman pottery fragments along with a total of 88.43g of cremated bone, all white in colour with some of the long bone fragments black in colour along the medullary cavity.

Cremation C4 deposit (38) comprised a female adult and an infant or foetus, buried within a slightly larger pit. Within the fill, a number of samian pottery fragments were recovered, dating to the 2nd century AD as well as eight fragments of copper alloy possibly belonging to an item of personal adornment. Finds that had been cremated with the individual or that the individual was wearing at the time of the funeral rite included a copper-alloy fantail brooch. The presence of a small amount of cremated chicken bone and grapes (represented by charred seeds) suggest that food was burnt on the funeral pyre as part of the burial ritual. A surprisingly large number of nails were also recovered and included chisel headed tacks, which, given their small size, may have been used in the construction of small wooden boxes or similar wooden items in the grave or on the pyre. This evidence cumulatively suggests that feasting perhaps accompanied the interment of this young mother or mother-to-be, while the presence of the fantail brooch and the nails suggest that objects,



Plate 12: Poppyhead beaker with diamond panels of fine grey barbotine dot decoration over a thin white slip V135

including at least one of some value, were included in the cremation.

Cremation C5 deposit (40) was found in a small round pit. A total of 359.9g of cremated bone was recovered from the fill. Identifiable elements indicated one individual at least nine years old.

Cremation C6 deposit (46) was found in a very small pit. A total of 83.08g of cremated bone was recovered from the fill. Based on size, it is likely that the individual is an infant or juvenile.

Cremation C7 from an adult (50) was found in a round pit, along with a small number of Roman pottery fragments. A large number of iron nails (15 nails and 6 chisel headed tacks) were also recovered all with evidence of having

been heat affected, suggesting they had been in the pyre with the individual and not placed inside the pit during burial, as was the case with the pottery.

Cremation C8 deposit (54) comprised the remains of two individuals, one younger than 16, the other of unknown age. It was found in a pit and contained a small number of Roman pottery fragments along with a copper-alloy nail-cleaning tool or similar implement.

Cremation C9 deposit (68) was found in an oval pit. The pit was quite small (only 5cm in depth), and it is therefore not surprising that only 26.18g of cremated bone was recovered. Age and sex could not be determined.



Plate 13: Cremation C7 looking southeast, 0.5m scale



Plate 14: Cremation C10 Pit with dish looking east with 0.5m scale

Cremation C11 deposit (72) represented at least one adult, probably female, within an oval pit with an associated complete local coarseware jar RF9 containing small mammal bones. The complete jar is a 2nd-century AD wide-mouthed jar with a dished rim and carinated angular shoulder above a cordon decorated with alternating opposed panels of oblique lines. An iron chisel headed tack was also found.

Cremation C12 (74–75) represented one individual of at least 21 years old, and a second aged between two and 10.5 years old within an oval pit. The pit itself was quite large, almost one metre long (0.96m) and 0.64m in width, while being quite shallow (0.02m). The fill included six nails, and a small chisel-shaped iron tool.

Cremation C13 (90) was found in a round pit, cut by Cremation C10. Within the fill were fragments from a locally produced small squat-necked cordoned bowl in the 'Belgic' tradition dating to the mid-1st to mid-2nd century AD. Bone fragments represented a minimum of one individual of unknown age and biological sex.

Cremation C10 partially truncated Cremation C13 and was contained within one of the larger pits. It contained deposit (70), which produced the remains of an adult and also contained a complete platter / dish (RF8) dating to the late 1st to 2nd century AD. The sandy greyware dish had a slightly in-turned plain rim with a burnished exterior. A fragmented beaker dated to between the mid-1st to early / mid-2nd century AD, which was probably originally deposited complete, was also recovered. The platter was found positioned above the cremation deposit against the southern side of the pit with the beaker adjacent to the platter. In addition to the associated pottery vessels, a large number of broken iron nails, a small chisel and a small iron fragment possibly belonging to an iron tool was also recovered. Charred remains in the sample included cereal grains and wood charcoal.

Cremation C14 was one individual of at least 11–12 years old, interred in a now fragmented 'Belgic' cordoned bowl. The presence of lamellar bone along the anterior tibial shaft suggests the individual was healing from localised infection. This was within a small pit of 0.25m diameter with a round profile and a fill of blackish brown silty sand (8), with charcoal and burnt bone fragments. A copper object in the fill was probably cremated with the bone as it was distorted.

A small pit C15 0.20m round and 0.08m deep within the cremation area contained a young adult aged 17 to 25. Assessment of pathology resulted in the identification of dental pathologies including calculus and linear enamel hypoplasia. A small plaque of periostitis was also observed on the right fibula. An unusual inclusion in the fill were five frog skeletons.

Pits

One pit to the east of the cremation cemetery is dated to the early 1st to 2nd century AD, pit P1. The pit was 0.65m across and 0.36m deep with a rounded base, and a fill of dark brown silty sand (6). Pottery and bone from the fill was small and fragmentary. The function of the pit remains uncertain.

A small oval pit P4 on the valley floor east of Cremation C10 measured 0.59m by 0.48m and was 0.24m deep with a slightly rounded base (Figure 8). It was approximately aligned with Cremations C7 and C10 and may therefore be associated with the cemetery. This had a fill of brownish black silt containing burnt clay fragments (42). One iron find from this was the angled binding from a wooden box. Environmental sampling revealed the presence of wheat grain, grass seeds, peas and beans, plus seeds including corncockle, docks, sedges, elder and seeds from the pink family.

Pit B (Figures 7.9 and 9)

Just north of the wall, one part of the large channel or ditch edge X1 was cut into near the west of the site by Pit B. This feature was dug either for a very specific practice, or simply as a large, perhaps communal rubbish pit. This was a large hollow pit with a flat base. The northern, open side of the pit had two lines of stakeholes, indicating a probable wattled panel fence was present to enclose the contents. This is contemporary with the cemetery, and therefore of late 1st to 2nd-century AD date. The base of the pit was flat and oval, measuring 5m by 3m, the top of the pit measured 6.75m by 5.03m. The sides were steep, not vertical, and due to the pit being cut into a slope the northwest side was open (Figure 7.9). The pit was 0.57m deep.

Four postholes in the base, [208], [210], [212] and [378], with fills of brown sand (207), (209), (211) and (377), contained pottery fragments of 1st to 2nd-century AD date, that probably tumbled in as the posts burned or rotted, from the fills of the pit overall. They do not form a line or a regular structure but suggest that either a frame or single posts were driven into the base of the pit.

A double arc of 67 stakeholes on the downslope side of the pit suggested a retaining fence of hurdles to prevent the contents of the pit from spreading beyond its confines; because it was cut into a slope, the northwest side was, essentially, open. Only one contained pottery, no earlier than 2nd-century AD date. The stakeholes were all the same approximate size; round, with a diameter of 0.07m, and driven vertically. There was an inner arc of stakeholes, and an outer arc of stakeholes. One may replace the other, or it could be a double row, with turves or now subsided clay packed between. Occasional outlying stakeholes may

represent struts or modifications and repairs.

The lowest fill in the pit was dark brown sandy silt (181), lying against its southern edges, and perhaps representing subsidence of topsoil when the pit was first used. This basal fill contained relatively sparse pottery sherds but confirms deposition initially commenced from the early to mid-2nd century AD, and most likely included isolated sherds of contemporary vessels recorded in two of the stakeholes that were cut into the base of the pit. The primary fill was overlain by 0.12m depth of dark reddish brown mottled silty sand (99), mixed with lenses of compact clay, and appeared to have been heat affected. The top of the layer was level, and the compaction suggested that this was deliberately firmed or trampled, rather than compressed by weight of deposits above. This was sealed by 0.05m depth of a brittle, hard layer of reddish brown burnt clayey sand with a high proportion of charcoal (78). Between them, these two layers contained c. 200–300 sherds (c.2–3kg) of pottery also of early to mid-2nd-century AD date. The third layer of fill was biased towards the southern part of the pit, and was friable dark blackish brown, charcoal-rich silty sand (95), up to 0.28m thick, and sparse pottery finds. Oyster shell in this fill suggested feasting or food waste was part of the source; also present was iron working slag. The uppermost layer in the pit was mixed dark brown to yellowish brown silty sand (48) with occasional small stones and oyster shell fragments. Animal bones from the fills of this pit include bones from

horse, sheep, cattle, dog, pig and bird, including meat-bearing and non-meat-bearing bones, suggesting animal processing as well as consumption was being carried out nearby. There is also tegula and bessalis, Roman tile and brick, and 599 pottery sherds (8,759g) of early to mid-2nd-century AD date, potentially not significantly post-dating c. AD 130. There are also twelve nails and five hobnails from the pit, and five personal objects (fill 99), being four bone hairpins RF10, RF28, RF100, RF113 and one ear scoop RF30. All the samples from this pit provided rich assemblages of environmental evidence, that included wheat and barley grain, grass seeds and legumes. Other taxa represented were corncockle, docks, elder, knotgrass and black bindweed.

Pit B contained a large assemblage of pottery, and arguably the foremost point of intrinsic interest relating to the pattern of urban deposition, be it funerary or domestic. There is no evidence that any of the vessels in this feature were burnt and there is also a relative paucity of any sooting that may be associated with cooking vessels. The total quantity of pottery from Pit B accounts for 19.3% of the assemblage by sherd count (14.7% by weight), with a relatively low mean sherd weight for this assemblage of 15.2g, though in truth this is a modest level of fragmentation that perhaps more reflects the density of packing within the deposits. That said, the degrees of fragmentation, lack of complete or near-complete vessels, and near absence of cross-joining sherds between fills



Plate 15: Aerial photograph of Pit B, looking north



Figure 8: Phase 3a to 3b- Mid-1st to Early 2nd-Century AD Cremation Cemetery

mitigates against the deliberate placement of vessels, even if they had been deliberately broken nearby. Furthermore, it may be suggested that the deposition of this group was either the clearance of debris from a narrow episode of conspicuous consumption outside the town walls, potentially associated with the interment of the cremations as they appear contemporary, or perhaps it is most likely that this was a midden situated outside the town boundary, to which rubbish was transported contemporary with the growth in urban consumption evident within the core of the town.

The bone assemblage from the pit included the remains of at least two dogs, one an adult and the other a juvenile. Gnaw marks on some of the bones (from context 48) suggest that these animals were not completely buried, consistent with other evidence described above that many deposits were left open. Pit B also contained the remains of the left lower leg of a horse.

Phase 3c: Mid- to Late 2nd Century AD (Figure 10)

The boundary between the northern and southern properties was re-established twice during the later 2nd century AD, and new activities were carried out. This included the creation of roadside ditch D6 and recuts to the boundaries that defined the northern and southern properties: ditches A3, A4 and A5.

Inside the Town Wall

Roadside Ditch D6

An extensive ditch D6 or pit with a curving edge in the northwest of the site near the wall, cut through an earlier ditch D4. This was 13m long, 1.88m wide and 0.71m deep, continuing beyond the limit of excavation, and may represent a deep drainage ditch alongside the Roman precursor to Stratford Road. The cut was rounded in plan and profile. The primary fill was yellowish brown sand (233), probably a subsidence event. This was overlain by a dirtier, mottled sand (156, 345), a second subsidence event (155, 344), a finds-rich dump of brown silty sand (154, 343) which must have come from a household, and a dump of brown silt with fuel ash slag (206), then a reddish brown deposit of sand with metalworking slag, copper-alloy fragment RF31, cereals, and vegetables (151, 205). The top fill was (152) yellowish brown sand, probably accumulated subsoil in a hollow, or a deliberate dump (Figure 7.1).

Northern Property

The third phase of the ditch defining the northern and southern properties cut through much of its second phase, with a northwest terminus near the large ditch. This recut ditch A3 had a round profile, and started at the same



Figure 9: Phase 3b- Detail of Pit B

terminus in the northwest of the site, showing a continuity of access from the roadside, just inside the wall line. This was 0.72m deep and seems to have continued in use until the later 2nd century AD. Where a primary fill was present, it contained flinty gravel, ironstone fragments, oyster shell, pottery, and animal bone among the sandy silt (541, 669, 698, 802). The main, upper fill of yellowish brown silty sand (540, 625, 668, 697, 803, 849, 851) produced a similar assemblage of finds comprising pottery, animal bone, CBM, and more frequent local stone (Figures 7.2, 11.1 and 11.2). A conical lead weight RF90 was also present.

After the ditch had silted up for the third time, it was re-established as a shallow gully A4, beginning at the corner near the road, and continuing to the northeast along the southern edge of the earlier cut. This gully was just 0.41m wide and 0.10m deep, with a darker greyish brown fill than the earlier features, and containing pottery of 1st to 2nd-century AD date as well as animal bone (499, 525, 623, 664, 693, 836 838, 847) including skulls of pig and cattle, and metalworking slag; quite an uncommon find for this site.



Plate 16: Ditch A3 with earlier and later phases, looking northeast with 2m scale

A second gully, A5, along the northern side of the boundary was identified for a length of 15m, and was similarly narrow and shallow, just 0.53m wide and 0.16m deep, with a flat base and a single fill of brown sandy silt (661, 666), containing pottery and bone of 2nd-century AD date. Animal bone from here included pig and cattle skulls. It may represent another incarnation of boundary A3.

Near the corner of the turn of the town wall, a tree had grown, and its resultant pit P9 measured 1.78m by 1.50m and was 0.65m deep with a rounded profile, and had evidence for root disturbance. The lower fill in the pit was greyish black silty sand (171), the upper fill was greyish brown silty sand (170).

A large pit, Q1, was a polygonal feature in the northeast of the northern property that measured 6m by 5.2m and was 0.40m deep. Four possible stakeholes in the base were arranged in an irregular layout that is suggestive of them having been created by temporary markers or pegs rather than representing the remains of a more permanent structure. The lowest fill was greyish brown silty sand (176), with finds of pottery, bone, metal and CBM, and oyster shell, showing a general domestic origin for the fill. This was the main layer at the base of the feature, and was overlain by an undulating deposit of compact sand (175), with spreads of blackish brown sand (174) with household finds, a small patch of cement (173), and a dump of sand (172), making the top of the pit level. These represent layers of backfill. The function of this feature is uncertain. Its large size and somewhat irregular shape could be taken to suggest that it represents either a quarry or a working hollow. What can be said with relative certainty is that this large pit was infilled with a component of domestic waste after it fell out of use, which suggests that it was reused as a rubbish pit.

In the east of site, close to the wall, a second gully D7 was established, with a cut 0.50m wide and 0.36m deep, with a series of shallow fills comprising fills of greyish brown sand (223), mottled brown sand (222), light brown sand (216), and very dark grey silty sand with charcoal and baked clay (215). This was extensively truncated by a tree pit P9 and linear burrow D8.

By this phase, the rounded structure D1 had gone, and a line of square postholes PH8, PH9 and PH10, oriented east-west cut across its former location. They may represent a fence or part of a structure which was partially truncated. These were each 0.61m across and 0.13m deep with dark brown fills. In one of the postholes, the fill (15) contained a fragment of a square glass bottle RF15, and a near-complete samian ware platter of early to mid-2nd-century AD date, which was notable not only for its preservation but also for the fact that it had been substantially repaired, probably to extend its life, and presumably it still retained some value when it was deposited.

Other postholes in the northern property did not indicate a group or a structure, and may represent individual events. A posthole south of the line of three, PH12, was circular, measuring 0.65m across and 0.25m deep and it contained a fill of dark greyish brown sand (140)

A smaller posthole by a cluster of undated pits in the north

appears to be an isolated survival, or was an isolated, single rounded post PH14, with a round base and a fill of brown sand (358).

Pits within the Northern Property

A total of eight pits in the northern property were mostly distributed around the edge of the area rather than centrally. The exception was a small pit in the middle, P42, that measured 1.00m in diameter and was just 0.19m deep, with steep sides and a flat base. A single fill of dark greyish brown silty sand (567) contained 22 sherds of mid- to late 2nd-century AD pottery, bone, bract, and glass RF70. There were two copper-alloy Rosette brooches from the fill. One, RF69, was very well-preserved with cast decoration visible in the form of grooves running along the bow, a characteristic trait of this brooch type. The second, RF71, is less well preserved and appears corroded and slightly distorted, but traces of decorative pattern can be seen on its rosette. A fine wire ring was also included in the finds assemblage. The location of this pit, somewhat in isolation, does not strongly signify any zoning of activities.

One pit and a large posthole or sub-circular pit were located in the west of the northern property. The northernmost of these was an elongated pit, P17, 6m by 1.21m and 0.45m deep. It lay close to the town wall in the northwest of the northern property, with a broad rounded profile and flattish base. It may be a section of ditch, but is not aligned with anything else other than the town wall. The pit had a deep primary fill, and the upper fills were all shallower. The primary fill (271) was greyish brown, with occasional stones, and finds of mid-2nd-century AD pottery (124 sherds in total), animal bone, including a dog skull, cattle, sheep / goat, pig and fish bones, and copper alloy. The second fill was a dump of charcoal with brown sand (270), which produced a further 24 sherds of pottery dated to the early to mid-2nd century AD. A sample of this burned material contained heather charcoal with small weed seeds including sedges, knotweeds and grasses, plus occasional wheat grain. The third fill was a thin lens of blueish clay (269), perhaps unburned daub or prepared clay, and was up to 0.08m thick. The fourth fill was dark brown silty sand with no finds (268), and may represent a fallow period of accumulation, or the addition of clean topsoil into the pit. The fifth fill was also very thin, and was greyish brown, (267), with eight sherds of 2nd-century AD pottery and animal bone from cattle, sheep / goat and pig. The top fill was dark brown (266), with finds of pottery, mammal bone from sheep / goat, cattle and a hare, fish bone and a bone pin RF23.

The southernmost feature, PH11, measured 0.78m across and was 0.31m deep with a lower fill of dark brown silt (97) and an upper fill of very dark brown silt (98), with finds of a domestic origin. This could be indicative of this being a

household rubbish pit or a large posthole.

An oval pit in the northwest of the northern property, situated next to ditch D6, P24, dated to this period. It measured 3.40m by 1.72m and was 0.69m deep, with an uneven rounded profile. Three fills were present (Figure 7.1). The lowest fill was brownish yellow sand with ironstone inclusions (336) and three sherds pottery of general Roman date. The secondary fill was greyish brown silty sand (335) with finds of pottery (23 sherds dated to the late 1st to mid-3rd century AD) and a small bone pin. The top fill was pinkish brown sand with inclusions of ironstone (334).

A pit or very large posthole, P16, was revealed in the west of the northern property, which truncated earlier pit P74. It was 1.39m in diameter and was up to 1.48m deep. The sides started with a 60° slope before dropping vertically to a flat oval base. If this were a posthole, subsidence or removal could have resulted in this profile. Three fills were excavated. The lowest was slightly greenish yellow sand (357), which probably derived from the collapse of the upper edges. The second fill was yellowish brown sand (356), also an erosion product, and the top fill was reddish brown silty sand (259). This contained a complete fragmented, large two-handled flagon with a horizontal flanged rim that would have weighed nearly 2.5kg when empty, and is unlikely to have been produced after the mid-2nd century AD. A copper-alloy pin RF34 was also present, as was animal bone from cattle, sheep / goat, pig and horse. The subsided natural deposits within the feature could have resulted from the removal of a post, and the resultant hole was reused as a rubbish pit.

Two pits were located in the east of the property. One was a large rectangular pit P77 which measured 2.76m by 1.98m and was 0.39m deep, with sloping sides and a flat base. There were three stakeholes and one posthole cut into the base. The fill was blackish grey silty sand (769), with 50 sherds of mid- to late 2nd-century AD pottery, bone and CBM, wheat and barley grain, grass seeds including oat, corncockle, sedges plus legumes including pea / vetch and a possible lentil, all domestic food waste. The function of this feature is uncertain. Given the large size of the pit, possible interpretations include but are not limited to a quarry or a possible working hollow of Roman date. The presence of domestic waste within the feature suggests that it was reused as a rubbish pit after it fell out of use.

The other eastern pit was a large circular vertical-sided pit P53 with a flat base that measured 2.14m in diameter and was 1.89m deep (Figure 11.3). Eight distinct fills were excavated. A lot of slumped or dumped clean sand typified the lower fills. The first fill was clean sand (683), which probably represents an initial slump that occurred soon after the pit was cut. The second fill was very dark brown

(681) and could represent topsoil slumping; no finds were present. This was sealed by another layer of slumped sand (680), then a dump of greenish brown sand (675). This was the lowest fill to produce finds, which included 13 sherds of 2nd-century AD pottery, wheat and barley grain along with small legumes and docks, but also contained occasional seeds from chickweed. The dumped layer was sealed by more sand (679), followed by a dump of greyish brown sand (678), further slumped sand (683), leaving a hollow 0.65m deep, lastly filled with greyish brown sandy silt with pottery, bone and fragments of flue tile.

In the south of the northern property, close to the southern ditch, a large irregular pit P33 measured 3.8m by 2.4m and was 1.38m deep, and had uneven sides and a flat base. The primary fill was soft greyish brown sandy silt, (545) with no finds, although clearly not a natural deposit. The secondary fill (549 / 550) derived from subsided and collapsed edges of the cut, in turn overlain by the third fill which was charcoal-rich dark brown sandy silt (523), with pottery and bone finds (sheep / goat, cattle and pig), and one small find of a copper nail cleaner RF67. The top fill was a reddish brown colour (519) with charcoal, occasional stone, plus pottery, bone and oyster shell. Wheat grain, large and small legumes including vetch / pea cotyledons, elder and sedges were present in the fill. Fuel charcoal from hazel, blackthorn, oak and ash add to the interpretation of this deposit as dumped material deriving from domestic fuel and food waste.

The remains of a rectangular pit P71 in the west of the northern property measured 2.12m by 1.58m, and was 0.50m deep with a flat base (Figure 11.4). A single fill of sandy silt with early 2nd to 3rd-century AD pottery (23 sherds) and pig bone (894) was only slightly darker than the natural geology of the site.

Southern Property

Features in the southern property of this phase are fewer, and comprise two pits in the west, close to the roadside ditch. One of these was a large rectangular pit with rounded corners P70, measuring 2.6m by 2.2m, and was 1.80m deep. It had almost vertical sides and a flat base. The fill sequence appeared to be gradual, as if the pit were open for a period of time, having fills from different sources. Twenty individual layers of fill were identified. From the base upwards, these were a thin layer of subsided yellow sand (897) that contained cattle and sheep bone; an organic dump with pottery (four sherds of general Roman date) (898), a greenish layer which may indicate use as a cess pit (899), but with charcoal and burnt plants including wheat, barley, fat hen and chickweed, followed by a subsided sand layer (900). The subsidence may represent seasonal collapse or weathering. The sequence continued with a thin lens of charcoal (901), a brownish grey layer (902), another greenish deposit (903), again containing four sherds of Roman pottery, charcoal



Plate 17: Pit P53, looking east, with two 2m scales

from wheat, barley, fat hen and chickweed, a dump of mottled sand from the east (904); and then further subsidence (905). After this third slump, a layer of sand and charcoal (906) was dumped; then a dark brown layer (907) from which 56 sherds of 1st-century AD pottery and a small quantity of animal bone (sheep, sheep / goat and cattle) were recovered, a light brown dump from the west (908), a brown lens (909), then a fourth slump (910) of the western edge. This was followed by a third green cess-like layer (911) with finds of tiny copper-alloy studs and 27 sherds of 1st-century AD pottery and a larger assemblage of animal bone (34 fragments) including cattle, sheep, sheep / goat, pig and horse. A layer of light grey sand (912) then accumulated, followed by a fourth cess-like deposit (913) from which 14 sherds of late 2nd to mid-3rd-century AD pottery and 12 animal bone fragments were recovered, including cattle, sheep, goat and pig. Sealing this was a dark brown dump from the west (914), a reddish brown sandy deposit (915), and the topmost fill was brownish grey sand with ironstone rubble (916), which may represent a final filling and compaction event that contained 11 sherds of 1st-century AD pottery and a small quantity of animal bone including pig, cattle and sheep / goat. Fragments of flue tile were also in the fill; these were probably just dumped rather than signifying a

heated building on site.

A large oval pit P73 with a flat base lay just south of this. The pit measured 2m by 1.60m and was just 0.19m deep. A primary fill of subsided natural (943) was present on the north side of the pit, and the rest was filled with dark brownish grey silty clay (945), and finds of pottery, bone, glass from a square bottle, baked clay, and charred wheat, barley, fat hen and chickweed.

Phase 3d: Late 2nd to Early 3rd Century AD (Figure 12)

Reorganisation inside Town Wall

The two properties that typified the first three Roman sub-phases within the town wall were reorganised during this phase.

Northern Property

To the north, a rectilinear arrangement of ditches, F3 and F4, delineated a small enclosure surrounded by a larger one, delineated by ditches F2 and F6.



Plate 18: Pit P70 looking northwest with 2m scale



Figure 10: Phase 3c- Mid- to Late 2nd-Century AD Feature

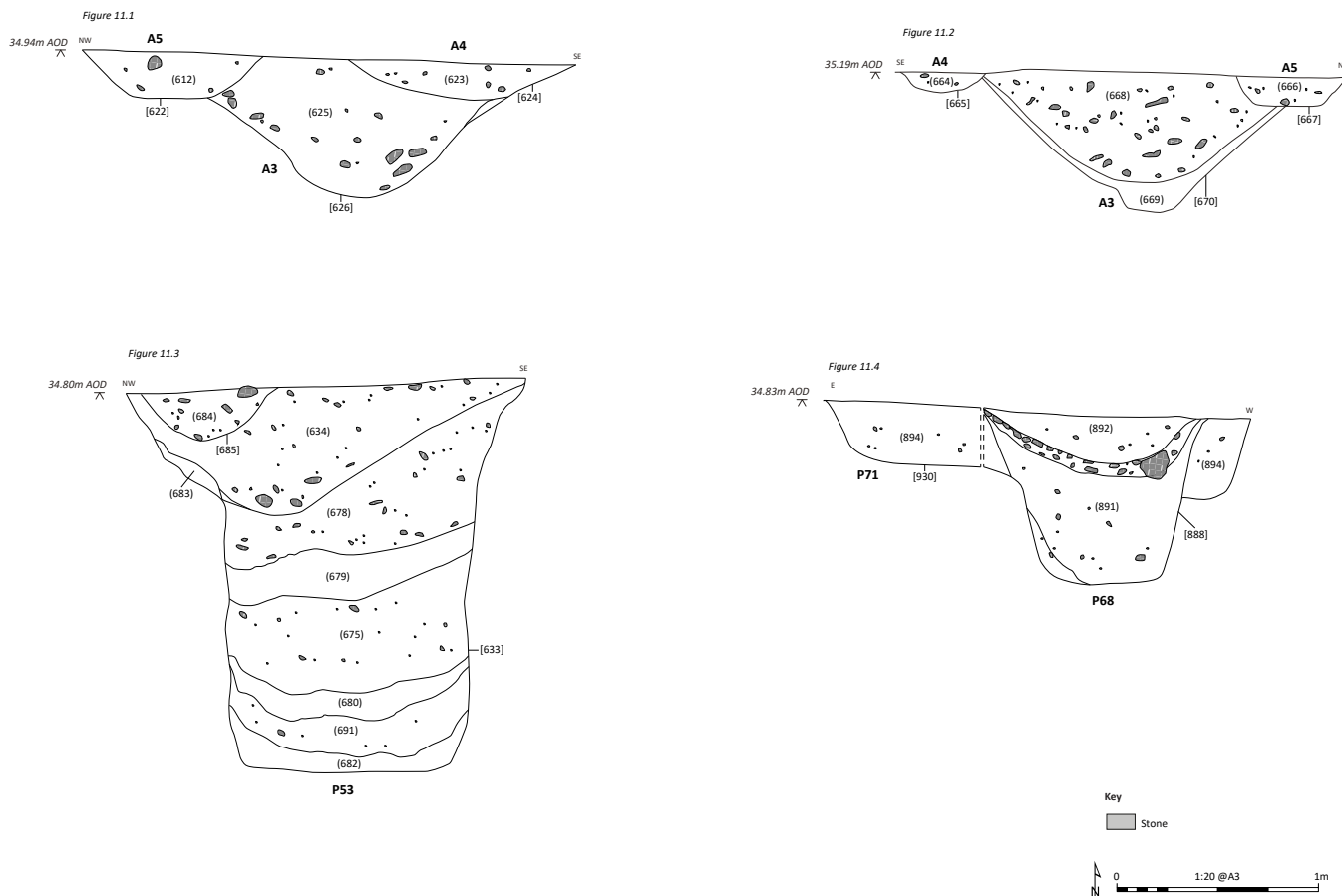


Figure 11.1 to 11.4: Sections

Boundary F6, was oriented northeast–southwest with a southwest terminus, was the largest of these. The ditch had a steep northern edge and a more stepped, gentler southern edge, and was up to 1.40m wide and 0.52m deep. The single fill present throughout the ditch was dark greyish brown sandy silt (562, 599, 638, 702). The only notable finds were bessalis, a brick commonly used in hypocausts.

Two meters west of the ditch terminus, a 22m length of a shallower ditch or gully F2 was oriented northwest–southeast, its terminus in alignment. This was 0.60m wide and no more than 0.11m deep with a lower fill of yellowish brown sand (746), and an upper fill of greyish brown sandy silt (760, 588, 606, 745). One small find was a strip RF87. Just north of the northern terminus, a moderately sized posthole PH3, of 0.45m diameter and 0.12m deep with a flat base, may be related to the layout. The primary fill was dark brown sand (375), the upper fill was soft yellow sand (376), similar to the natural geology.

A narrower, shallower ditch F3 (Figure 13.1), situated 1.5m north of ditch F6, is contemporary. Also oriented northeast–southwest and seen for 15m, this had a well-rounded southwest terminus and the northeast end obscured by a pit. The width and depth were generally consistent along its length, up to 0.80m wide and 0.23m deep. The fill was greyish brown silty sand (484, 684, 763).

The date of the feature was confirmed by a fragment of a glass jar of flask fragment RF101, dated to the 2nd–3rd centuries AD.

At 90° to F3 (Figure 13.2), a second shallow ditch F4 forms the rest of the inner enclosure, and was 12m long, up to 1.41m wide and 0.40m deep, with a rounded northwest terminus, becoming narrower and shallower to the southeast. The primary fill (262, 514, 785) was mid-brown silty sand, and the upper fill was darker brown (261).

An oval pit P34 inside the corner of the inner enclosure is of this phase, measuring 1.80m by 1.50m and 0.65m deep, with a generally convex profile and flattish base. The primary fill was yellowish brown (524), with a small quantity of 2nd-century AD pottery and animal bone. The secondary fill was dark greyish brown, with 13 sherds of 2nd to 3rd-century AD pottery bone, and small fragments of oyster shell (521). The uppermost fill was mottled brown sand, again with bone and pottery. Imbrex were also collected.

In the east of this enclosure, close to the town wall, an oval pit P57 measured 1.30m, 0.80m and was 0.35m deep. It had a single fill of blackish grey silty sand (123, 662) with pottery and bone, and was heavily disturbed by later animal burrows Z2.

To the north of ditch F2, an oval pit close to the town wall in the northern enclosure, P2, measured 4.30m by 2.42m and was 0.27m deep, with a flat base. This may be a working pit or hollow; five stakeholes were identified in the base, each 0.08m in diameter and 0.09m deep into the natural horizon. Three were clustered to the west end of the pit, the others did not make a cohesive arrangement or prove a structure. The soil fills of the pit comprised an initial slump of sand in the centre (373), followed by a deposit of mid-reddish brown silty clay (371) which also filled the stakeholes, and had pottery and bone finds, and an upper fill of dark grey sand with burnt clay (372). In the centre of the fill, a slight hollow measuring 1.30m by 0.60m and 0.11m deep contained very dark brown silty sand (44) pottery, bone and metal finds, and may represent accumulation after the fill subsided.

Two quite large pits are dated to this phase, both lying to the west of boundary ditch F2 and the road. One square pit, P30, measured 2.14m across and 0.67m deep, with a flat base, and was slightly deformed by subsidence of one side (Figure 13.3). The lowest fill was the subsided edge, on the northeast (513). This contained a pottery assemblage of 30 sherds spot dated to the 3rd century AD, one near-complete Rhenish-type beaker of early to mid-3rd-century AD date (RF111) and the complete base of a samian cup (RF110) stamped by Maior I (c. AD 170–200). Also present was a small assemblage of bone that included pig and cattle, as well as two amphibian and two micro mammal

bones that could potentially represent pit fall victims that became trapped in this feature when it was open. The secondary fill (495) was dark brown and again contained a modest animal bone assemblage that included horse, pig, cattle and sheep / goat, as well as 111 sherds of pottery of early to mid-2nd-century AD date. Metal, imbrex and tegula were also recovered. The top fill was slightly darker, and contained a similar assemblage of household debris (494) that included horse, cattle, sheep / goat, pig bones, domestic fowl and unidentified bird bones.

The other pit, though smaller, contained more Roman cultural material, some of which probably derived from an earlier pit through which it was cut. This smaller pit P68 was a round pit 1.20m across and 0.83m deep with steep, almost vertical sides, and a flat base. The primary fill was very dark brown silty sand (891), with a large pottery assemblage of 30 sherds. Of note was a small bowl (rim diameter 100mm) that appears to have been deliberately placed (and remains complete) in the pit (V128). The bowl has a slightly everted plain rim, a weak neck and squat body; superficially suggesting a fairly Early Roman date, but stratigraphically, the pit is later. Also present was CBM and hammerscale. Wheat and barley grain and grass seeds plus chaff was present in a sample of the fill. This probably had a domestic source. The secondary fill was a dump of baked clay (929) which may represent burned daub or a broken-up oven. The top fill was brown sandy silt (892) with occasional pieces of burned and baked



Plate 19: Pit P30 looking north with 2m and 0.5m scales

clay as well as eight sherds of mid-1st to 2nd-century AD pottery and animal bone. Wheat and barley grain and grass seeds and hulled barley were also identified in this sample. It appears that while some of the grain may have been spoiled the remainder were still edible and these finds have derived from the disposal of domestic food residue alongside some fuel waste.

Southern Property

The eastern side of the southern property was initially defined by ditch remnant D36 during this phase. This feature was much truncated and had a strong deep profile with a flat base, surviving for 1.55m width and 0.42m depth. The fill was mottled dark brown to yellowish brown sand with occasional natural stone inclusions (537). Across this feature, one of a pair of ditches on a northwest-southeast axis was established, which may represent a later incarnation of this boundary. These were parallel and 5m apart. The more eastern of the pair D15 contained 2nd to 3rd-century AD finds as well as earlier, residual material. This was 1.4m wide with splayed edges and a deeper rounder base, up to 0.65m deep. The lower fill was yellowish brown silty sand (582, 730, 732), the upper fill greyish brown silty sand (530, 727, 729). Flue tile from this feature is a similar inclusion to other features of this phase. Situated 5m to the west, the parallel ditch D12, where not truncated, was 2.03m wide and 0.79m deep with 45° sloping sides and a V-shaped base. The lower fill was firm yellowish brown silty sand (489, 737), probably

partially an erosion product. One more significant find was a copper bracelet fragment RF59, and also a radiate from the reign of Tetricus I (275–285) RF61. The upper fill was greyish brown silty sand (736), with a sparse finds assemblage.

Ditch D15 was subsequently truncated along its northeast side by ditch D16. This was 1.21m wide and 0.58m deep with steep sides and a flattish base. The lower fill was brownish grey slightly stony silt (533), and the upper fill was dark brownish grey silty sand (532). No dating evidence was recovered from the feature, however its stratigraphic position suggests that it represents a later incarnation of ditch D15.

One pit was present in the southern part of the site in this phase. This large pit P76 in the southwest measured 2.80m by 2.60m and was 1.02m deep. It had steep sides and a flattish base (Figure 13.4). The primary fill of the pit was 0.25m depth of a series of interdigitated thin lenses of brown silty sand, greenish brown cess-like sand and yellow sand (759). The secondary fill was 0.22m depth of yellowish brown sand (755), possibly a sealing layer over the cess-like deposit, with a dipping profile as the layer below dried. The top fill was greyish brown friable silty sand (754), which was cut into for a later oven. The feature produced a bronze shank or pin, a small, severely heat-affected strip that could have formed part of a jewellery item or fitting, or potentially part of the blade of a nail cleaner. A corroded object, possibly part of a spring, and a



Plate 20: Radiate from the reign of Tetricus I (275–285), RF61

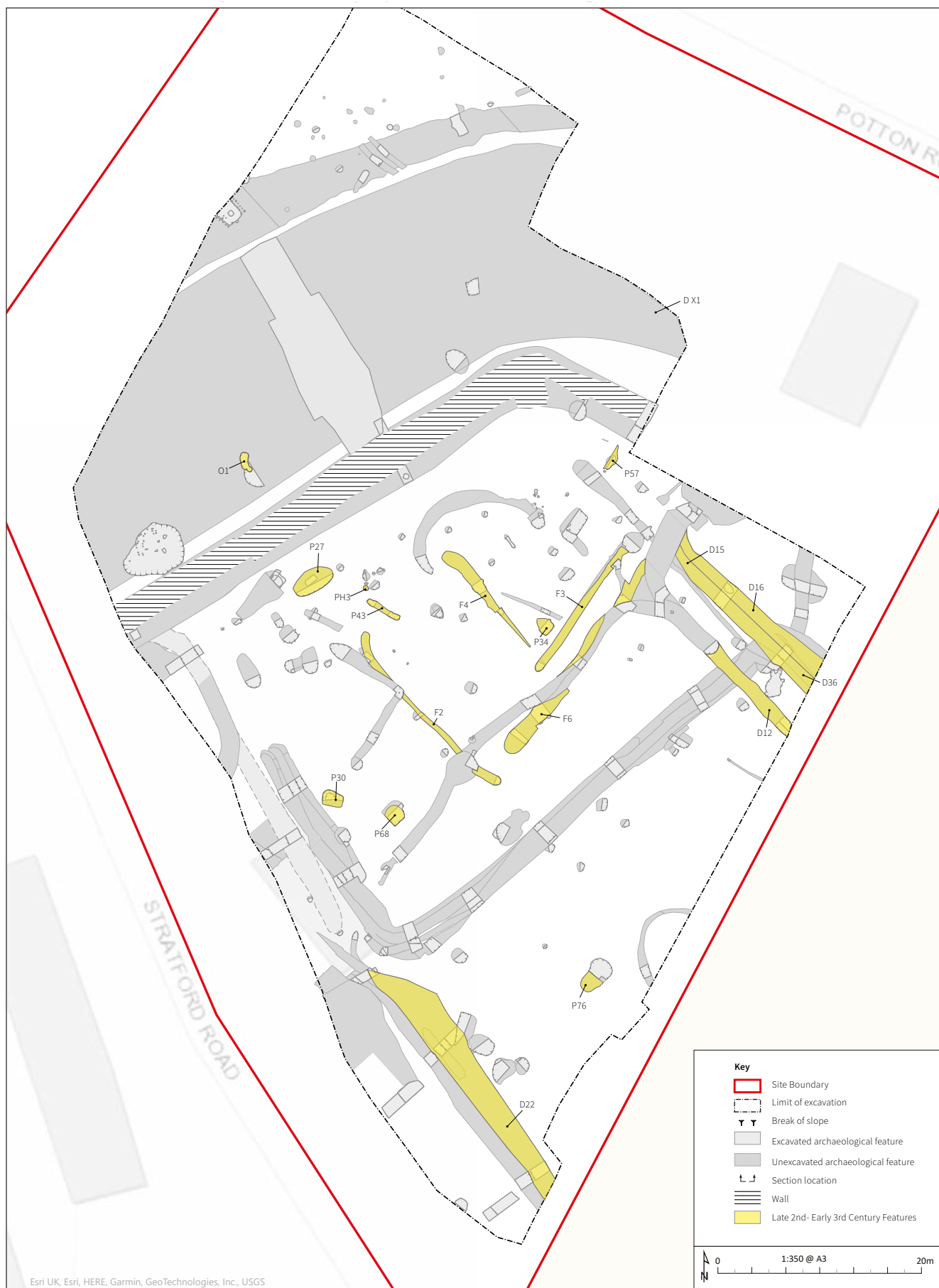


Figure 12: Phase 3d- Late 2nd to Early 3rd-Century AD Features

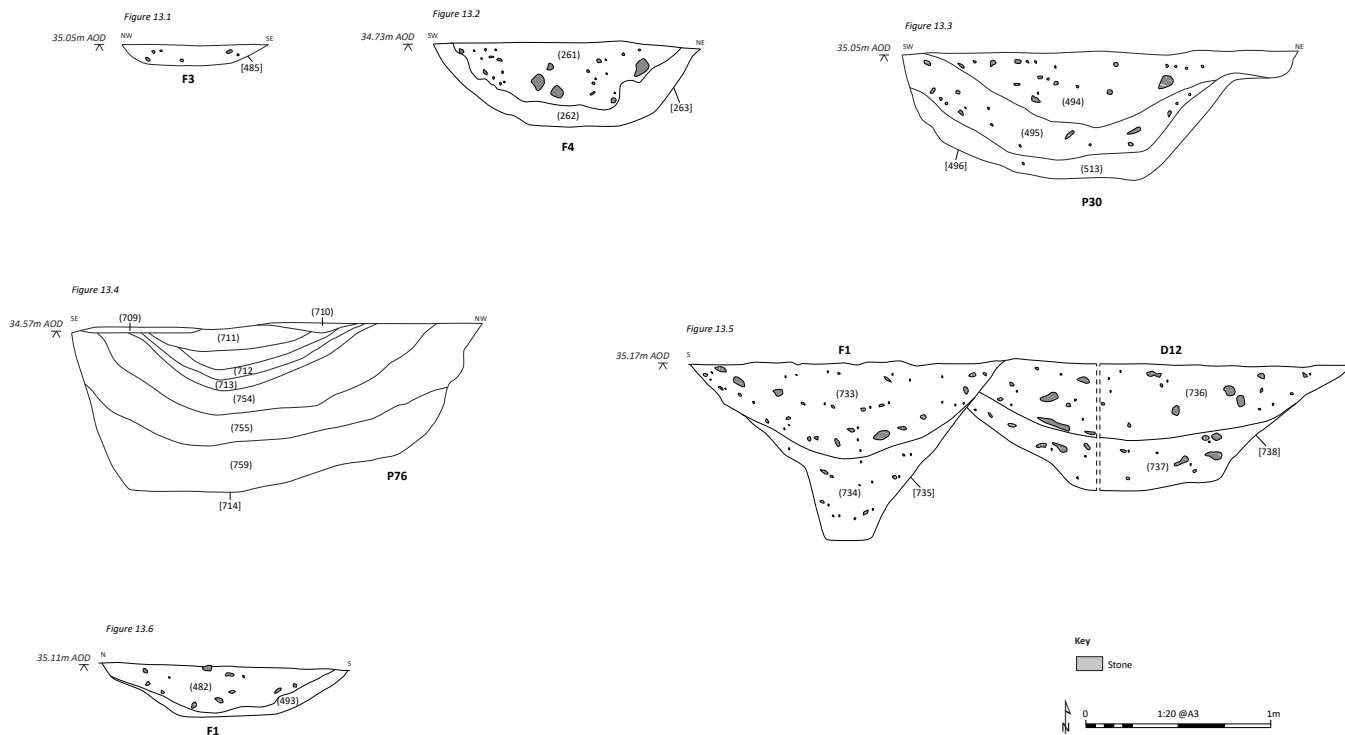


Figure 13.1 to 13.4: Sections

round sectioned piece of rod or wire were also present, as were four cereal caryopses. These objects are not closely datable, but may be of Roman date.

Roadside Ditch D22

The southern roadside ditch was a re-established D22 through the edge of the backfilled first phase and cutting through backfilled pits of the previous phase. The newer ditch measured 2.40m wide and 0.75m deep; this was broader than the first phase and again with a rounded profile. Part of the northeast edge had fallen in, with a slump of sand (917). There were two fills. The lower fill was brown and very sandy (790, 876), the upper fill was dark brown (787, 855). The northern end of this ditch was lost to modern intrusion. The pottery within included dishes imitating samian ware, suggest a cessation of deposition by the late 2nd to early 3rd century AD. There is earlier pottery within the fill, suggesting that some of the fill was deriving from clearance of, or subsidence from, 1st-century AD features. This early pottery included a butt beaker barrel jar, and the foot of a pedestal-based urn. This lay alongside a bowl with white-painted decoration, most likely produced in the Upper Nene Valley and body sherds from a folded beaker with white-painted vine or scroll decoration of late 2nd-century AD date.

The northern part of the ditch was heavily disturbed in the location of a 20th-century building (see Figure 18, below), and may have had two phases; an indistinct spread of grey sand (830) in a shallow hollow may be the remnant of a

ditch RR3, and this was cut by a now irregular ditch RR4 surviving for 0.40m deep, with a fill of dark greyish brown silty sand (829).

Phase 4: 3rd to 4th-century AD features (Figure 14)

Inside the Town Wall

Northern Property

The layout of the northern property was reorganised again in the mid-3rd to 4th centuries, with a shallow ditch or gully established across the earlier phase F1, oriented southeast–northwest towards the east of site, and turning southwest for 35m to a root-disturbed terminus. The cut varied in width and depth according to horticultural impact on the stratigraphy, up to a maximum width of 1.34m and a maximum depth of 0.42m (Figure 13.5). A primary fill of pale yellowish brown silt was identified towards the west (493, 734, 753 and 751), whereas the body of the fill varied from brown to reddish grey (482, 564, 600, 700, 715, 733 750, 941). RF79 copper-alloy fragment and an iron hooked tool or fitting were recovered from this deposit. The feature truncated earlier ditch D12 (Figure 13.5). There are few features proved to be of this late phase, and the earlier boundaries all appear to have become infilled. Perhaps the settlement had shrunk, or been re-ordered into less distinct zones. A coin from the fill was a radiate from the reign of Tetricus I (271–274) RF3, and bessalis was



Plate 21: Ditch F1 looking northeast with 0.5m scale

collected from the feature.

Broadly contemporary with this was an L-shaped ditch or gully F5 with a northwest-southeast section having a well-rounded northwest terminus and turning to the southwest with a sharp 90° turn. The southwest terminus was cut by a pit. The width and the depth of the ditch was quite consistent throughout its length, 0.90m wide and 0.47m deep with a flat base and steep sides. The fill was greyish brown sandy silt (604, 577, 631). Although this contained 2nd to 3rd-century AD pottery, it cut through ditch F2 thus demonstrating that it belongs to a later phase. The most interesting and decorative find from the fill was two joining fragments of a Romano-British lathe-turned shale bangle (RF604). The angular inner face reflects where the core was removed without extensive subsequent smoothing and is a characteristic feature of artefacts manufactured using a lathe. The colour and character suggest it is Kimmeridge Shale. There was a large-scale Iron Age industry based around the main sources in Dorset which continued throughout the Roman period, expanding its repertoire. Its products were extensively distributed across Roman Britain, as far as the northern frontier.

Ditch D11

A ditch D11 cut across the filled ditch F1, and across various Phase 3 land divisions. It was oriented southeast-northwest before turning northeast and may be a re-establishment of Ditch D12. The cut was 2.24m wide and

0.83m deep with steep, 60° sides, dropping sharply to a flat base, and was clearly a significant boundary. The primary fill (487) was subsidence from the eastern side, which had deformed, whilst the main fill was dark brown sandy silt with inclusions of stone, degraded ceramic building material and mortar (486, 629). A radiate from the reign of Gallienus (260–268 AD) confirms the later date of this feature.

Ditch D18

A gully or ditch, D18, in the east of the site was oriented northwest-southeast and was one of the latest Roman features present. This could be demonstrated through the stratigraphy, as this feature partially truncated Phase 3d boundary D15 to the east (Figure 12), as well as Phase 3c ditches A3 and A4 (Figure 10) further towards the south. The stratigraphic relationship between this feature and Phase 4 ditches F1 and D11 could not be determined. Ditch D18 had a rounded northwest terminus and was up to 1.15m wide and 0.32m deep, with a flat base. It contained a patchy primary fill of silty sand (658, 672), and a main fill of compact light brownish grey silty sand (560, 610, 652, 654, 676). One stakehole was seen at the base of this, with a fill of brown silt (660). The fills included a cattle skull and dog bones, and embedded within a patch of burnt clay was a footprint from a large dog.



Plate 22: Section through Ditch D11, looking northwest with 2m scale



Plate 23: Dog bones in ditch D18 looking southwest with 0.5m scale

Pit P40

One pit, P40, cut D18 so despite containing 2nd-century AD pottery, must be one of the latest features on the site. It was located just north of the old 1st to 2nd-century AD boundary, towards the east of the site. The pit measured 1.60m by 1.00m, and was 0.64m deep, with steep sides and a rounded base. The lowest fill was mottled light brown sand (558) and is most likely to represent subsidence once excavated in the Roman period. The second fill was greyish brown (557), and the top fill was dark brown with inclusions of ironstone, and finds of pottery and bone (556).

A short length of gully in the north half of the site D39 was oriented northwest–southeast, 7m long, 0.50m wide and 0.18m deep with a flattish base, and a brown fill (783), but was of unclear function.

Other Pitting Activity

There are fewer pits dated to the 3rd century AD. One P61 cut across the junction of two ditches F1 and F2, and was an oval pit measuring 3m by 2.4m and 0.67m deep, with a flat base (749) and two fills. The lower fill was largely derived from natural sandy erosion products (758) with finds of pottery, animal bone and building material, whereas the dark brown upper fill (748) contained pottery, metal RF86, tegula and vessel glass RF85. Frequent wheat

and barley grains, and grass seeds were also present. The stratigraphic position of this feature demonstrates that it is late in the sequence

The F1 ditch was cut by two postholes. One was oval PH28, measuring 0.32m by 0.26m, and just 0.07m deep, with a fill of yellowish brown silty sand (719). This was cut by the second PH23, which had a diameter of 0.60m and was 0.16m deep, with a flat base and a fill of dark brown slightly clayey silty sand (717). A similar posthole nearby PH22 measured 0.90m by 0.74m and 0.28m deep, with a fill of greyish brown silty sand (707), and a high proportion of stone, which may be subsided packing.

The large, filled pit downslope from the wall (pit B) was overlain by a later deposit of dark brown sandy silt, containing 4th-century AD pottery, and may represent accumulated topsoil across this large feature (77).

Two postholes cut through the edge of the secondary roadside ditch after it filled and must be late in the sequence. One PH1 was a substantial posthole, 0.62m across and 0.36m deep, with a single fill of dark brown sandy silt (799) with Roman pottery and bone collected. The second, 4.6m to the south PH26 was 0.64m deep and 0.53m deep, with a fill of fine grained silty sand (822).

Southern property

A possible oven O2 was established at the top of an early pit P76, in the southeast of the southern property, and was a distended oval in shape, measuring 2.50m by 2.34m, with a narrow southwest end. The flattish base and sides were formed by a spread of clay 0.06m thick, baked pinkish red (713). The clay included tiny hammerscale fragments, wheat grains, and grass seeds that may well herald from the use of the oven, however accidental inclusion cannot be entirely ruled out. The primary fill over the clay was dark brown charcoal-rich silty sand (712), and is thought to represent the active contents of the oven, and featured charred grass seeds and cereal grains, plus oak charcoal. A thin scatter of wind-blown sand overlay the charcoal layer. The roof of the oven had fallen into the pit, represented by a fractured layer of burnt clay 0.12m thick, with the exterior oxidised pink, the interior reduced to a blueish grey colour (711). There was no roof in the east part of the oven. Wheat grains and black bindweed seeds were present in the clay. The base where the roof was absent was overlain by a deposit of speckled greyish brown sandy silt (710), containing charcoal from wheat and barley grain, as well as grass seeds, pea seeds, sedges and dock seeds. The whole feature was sealed by a layer of loose ashy brown sand (709), from which charred wheat and barley grain were recovered.

Outside the Town Wall

Oven O1

One oven O1 lay beyond the town wall, dug into the slope left by the partially infilled channel. The oven was sub-rectangular, measuring 1.70m by 0.80m and 0.49m deep with a flattish base, and remnants of burnt clay around the upper edge. At the southern, uphill end, a smaller rounded area of 0.48m diameter was just 0.18m deep, with a flat base characterised by having its edges baked pink by heat. The fill of the smaller section was dark blackish brown sand (87) with fragments of burnt clay and charcoal. The clay may represent the remains of a cover, and the charcoal showed a rich and moderately diverse charred assemblage of wheat grain plus seeds from the knotweed family and wild radish. The fill of the rectangular area also overlay the fill at the southern end, and was dark brown sand (89) with inclusions of charcoal, occasional stones, a small quantity of oyster shell, pottery and bone, and this most likely represents a disuse dump or deliberate infilling. But there is also a small assemblage of hammerscale. The charcoal came from wheat and barley grain, possible legumes and occasional weed seeds such as bindweed, and elder charcoal. The cereal and vetch are probably residual food waste prepared within this feature and subsequently overlooked during later cleaning. The south end of this oven was truncated by a later pit. The bulk of the vessels in the oven appear consistent with



Plate 24: Oven O2 looking southeast with 2m scale

types common in the first half of the 2nd century AD, but dish and beaker sherds are also present that suggest a late 3rd to 4th-century AD date.

Pitting Activity

An oval pit P6 cut into the slope just northeast of and outside of the town wall. It measured 2.84m by 2.54m and was up to 0.34m deep, the uppermost levels lost to colluvial erosion. The pit had a generally concave profile, and just a single fill of dark brown silty sand, with household waste including oyster shell, pottery and bone (3). This also cut into the oven O1

The large, 2nd-century AD pit downslope from the wall (pit B) was overlain by a layer of dark brown silty sand (77) which contained pottery sherds from numerous vessels of 4th-century AD date mixed with those typical of the underlying early to mid-2nd-century AD fills. This represents subsequent infilling and / or levelling separate to primary deposition into the pit.

Latest fills of Ditch or Channel X1

Towards the end of this phase, the large ditch outside



Plate 25: Oven O1 looking northeast with 0.5m scale

the settlement continued to silt up, and the topmost fill was dark brown silty sand (169), containing 2nd to early 3rd-century AD pottery sherds and three coins: a radiate of uncertain date (after 260 AD) RF24, a nummus of Arcadius (388–395 AD), RF22, and a nummus of Constans (347–348 AD) RF21. This suggests that the channel or ditch was finally fully lost from the landscape during the mid-4th century AD or later.

Phase 3 to 4: Features of General Roman Date (Figure 15)

A scatter of Roman features have no tight dating evidence, nor clear associations with other feature groups. Although most of these produced Roman remains, the generic nature (or typology) of the artefacts meant that they could not be assigned to a specific sub-period of the Roman era. That said, as set out below, some possible associations with feature groups have been attempted where possible, and sub-phases are suggested when appropriate.

In the area of the Phase 3a–3c properties were eight pits and four postholes. One of these was a shallow oval pit P37 that cuts the secondary property gullies and is therefore late in the archaeological sequence. This pit measured 1.32m by 1.00m, and was 0.32m deep, with an irregular concave profile. The lower fill was stony sandy silt (547), the upper fill was dark brown, with finds of pottery, bone and brick (bessalis).

A second pit P15 was located in the northwest of the northern property and could be part of the group of 1st to 2nd-century AD features there, it measured 1.20m by 0.62m and just 0.08m deep with a flat base. The fill was dark brown sandy silt (231).

A group of small features in the centre north comprise a small, truncated pit P20 that measured 0.82m by 0.66m and was 0.27m deep with a concave profile. A single fill was light brown sand (286). A similar sized pit P22 lay a close distance to the northeast. This measured 0.75m by 0.55m and was 0.16m deep, also with a rounded profile. The single fill was greyish brown sand, with flecks of charcoal (290). A small stakehole SH1 immediately north of it could be contemporary; it measured 0.17m in diameter and was 0.10m deep, with a brown fill (294). A third similar sized pit P25 lay just south of these. This measured 1.1m by 0.90m and was just 0.08m deep, with a rounded profile. A primary fill was brown sand (339) with pottery finds, the upper fill was dark brown with charcoal (338).

A pit P65 cutting one of the Phase 3 ditches contained Roman finds. Considering that a filled ditch would encourage trees to grow, this had the character of a tree pit. It measured 1.78m by 1.52m, with an irregular base and was 0.40m deep, with a fill of stony dark brown sandy



Figure 14: Phase 4- 3rd to 4th-Century AD Features

silt (809).

A small pit P48 between the ditches on the east of site measured 0.61m by 0.51m and was 0.11m deep, with a flat base. The fill was greyish brown silty sand (602). Of similar form and fill was an adjacent pit P49, which measured 0.54m by 0.29m and 0.05m deep, with a fill of greyish brown sand (608)

A possible round posthole PH6 in the northwest corner of the northern property measured 0.37m across and was 0.10m deep with a concave base. The fill was greyish brown silty sand, with occasional charcoal (177). It may be no more than the base of a burrow or a post-medieval planting bed.

A posthole PH4 in the north of the northern property post-dates P20. It measured 0.38m in diameter and 0.36m deep, with a rounded base. Three fills were identified. The lowest was brown sand with flecks of blue clay (284); the second fill was light blue clay (283), not natural to the site, and potentially a piece of clay prepared and never used during the Roman period. The top fill was sand (352). A second posthole PH5 nearby measured 0.30m in diameter and 0.11m deep, with a rounded base. The fill was greyish brown sand with flecks of charcoal (292).

By the town wall, a posthole, PH13, was 0.42m across and 0.21m deep with a fill of mixed dark grey sand (264).

In the southern property, three pits and one posthole were undated. One of these was a rectangular pit P78 measuring 0.86m by 0.70m and 0.20m deep with a flat base. Brown silty sand (779) within the fill contained bone finds but no datable pottery. A larger pit P32 in the east of the southern property contained no pottery finds. It was rectangular, oriented square with the nearby boundary ditches, so could be of phases 3a–3c. The pit measured 1.36m by 0.98m and was 0.63m deep, with vertical sides and a flat base. Initial fills were tipped in from the northeast. The primary fill was brownish grey silty sand (509), the second fill was slumped (508) from the edge, and the main component of the fill was dark brownish grey silty sand (507). There were only two pieces of bone in the finds assemblage; the function if this pit was probably a household rubbish pit, if it was a posthole, then it was very large.

An oval pit P66 in the southern property, close to the ditch, is similar in size to pits dated to the 2nd century AD, but was less regular and was probably another tree pit. This measured 1.66m by 1.36m and was 0.29m deep, with an irregular base, and a fill of greyish brown silt (827) with finds of pottery and bone. It could have started as a filled pit and distorted by a tree later.

A single posthole PH7 in the centre north of the southern

property had no associated features and was undated. It measured 0.46m in diameter and was 0.26m deep, with a slightly stepped, rounded base. A single fill of greyish brown silty sand had no finds.

Phase 5: The Saxon Period (AD 410 to 1066) (Figure 16)

In the shadow of the abandoned Roman town of Sandy, downslope and west of the old cemetery, a building in the Saxon style, and several pits and shallow ditches may have formed part of a Saxon settlement situated outside the remains of the wall. There was also a single burial, in the east of the site, dated to the 6th century AD. Whether the people who made the interment were aware of the previous use of the northern end of the site as a cemetery is uncertain. That said, evidence from the western Roman cemetery of Sandy (situated in the vicinity of the modern railway station) indicates that burials continued to be made there during the Saxon period to the north and east of the Roman cemetery core. In the case of this site, the Saxon burial lies c. 12m west of the nearest Roman cremation, so it remains possible that a similar pattern of land use occurred here.

With the exception of the inhumation, the presence of Saxon features on the site is not proved by the archaeological dating, instead relying on the morphology of the features. What can be said is that there was either a small Saxon building with a below-ground space, termed a 'Sunken-Featured Building,' (SFB) or this was a Roman period structure in a Saxon style; all the finds are, however, Roman. Also, this was located just west of the Roman cemetery, and Romans tended not to live amongst the dead, thus elevating the probability of a post-Roman date. Saxon settlement outside the town wall is therefore a possibility.

Sunken Featured Building (Figures 16 and 17)

Less than half the building lay within the excavation area, continuing northeast into the adjacent field. The main sunken part of the building was oriented northwest–southeast, exposed for a length of 2.12m, with a width of 1.96m and 0.30m deep. The base was cut by a large square posthole, 0.52m across and 0.26m deep, with a flat base and a fill of dark brown sandy silt (26). Around the edge of the rectangular pit were a group of postholes and stakeholes representing sides of the building and internal fittings. There was a post at the southeast end of the pit, and the sides were represented by 0.16m square postholes 1.4m apart, with three stakeholes between, representing probable wattled panels woven *in situ*. Lines of stakeholes were driven into the ground 0.28m apart within the walls, and probably represent retaining pegs for a boarded floor over the void below.



Figure 15: Phase 3a to 3c- Features of General Roman Date



Plate 26: Sunken-Featured Building (SFB) looking southeast with 0.5m scale

The floor void was filled with primary slumping from the edge (104) which contained pottery sherds and smithing slag from a hearth. The main fill was dark brown sandy silt (18), with a range of 2nd-century AD pottery vessel sherds. A rarer fragment was part of a convex glass phial or flask RF6. A sample of the fill revealed wheat grain and grass seeds, plus fat hen and elder.

Also in the valley floor were a pair of parallel gullies D5a and D5b 1.52m apart, oriented northeast–southwest, both 0.30m wide and 0.16m deep with rounded profiles and rounded northwest termini. The fills of grey silt (118) and (116) and produced no finds. The more western gully had a square posthole in the base, 0.23m wide and 0.09m deeper, with a similar fill to the ditch (120). This may indicate that these were two parallel fences, but there is no proved relationship to the cemetery or sunken-featured building. What can be said with certainty is that they were aligned with the structure, thus increasing the likelihood of them pertaining to this phase.

Another short ditch had Roman pottery D5c, also cutting the earliest ditch in the valley floor. It was, oriented northeast–southwest and measured 2.7m long, 0.75m wide and 0.16m deep, with a flat base and a pale brown sandy silt fill (61). It contained Roman pottery but may date to the Saxon period as it ran at an approximate right-angle to parallel gullies D5a and D5b.

The edge of a pit on the valley floor near to the cremation burials was dated to the late 1st to 3rd centuries AD. It was close to the SFB, hence its inclusion in this phase, but could alternatively be of Roman date. The pit P2 measured 0.73m by 0.43m and was 0.22m deep. The fill was dark brown silty sand (9), and included 4.7kg of Baetican amphora sherds, underlying a large, rounded stone.

Inhumation

A single inhumation of a young adult male dating to the 6th century AD, was also recovered from the site, to the east of the mid-1st to 2nd-century AD Roman cremation cemetery. Although four centuries later, it may suggest reuse of the Roman cemetery during the Saxon period. The single inhumation (SK59) was found in a rectangular grave. The individual was lain in the supine / extended position with the head at the west end of the grave. The head was positioned with the face towards the south, with the right arm flexed over the thorax and the hand positioned over the left ribs. The left hand was flexed with the hand positioned over the upper thoracic vertebrae. Both legs were extended with the plantar surface of the feet flat against the east end of the grave cut. The skeletal remains were well preserved, although fragmentation was high, with only c. 40% of the skeleton present. The man was 21–34 years old, and analysis of the teeth have shown at least three episodes of severe physiological stress- at around



Plate 27: Baetican amphora sherds below a rounded stone in pit P2

the ages of 2.5–3 years old, 3–3.5 years old, and then again at 4–4.5 years old. Physiological stress at these ages is common, frequently brought on by the complications of weaning and childhood diseases. Porosity of some of the bones is most likely a signifier of nutritional deficiency. Carbon dating of the bone has revealed a date of c. AD 539. The fill of the burial was soft brown silty sand (58).

Town Wall Robbing and demolition

The town wall appears to have been partly taken down and to have partly collapsed over the infilled town ditch, an event that conceivably occurred during this phase. There were tumbled stones downslope among the post-Roman colluvial subsoil, but not sufficient to make a wall higher than 0.25m, indicating that much of the stone had been removed. Whether the wall slipped gradually into disrepair or crashed into the valley floor cannot be proved archaeologically, since so much was removed. The downslope tumble was typified by dark brown silty sand with limestone blocks (136, 182, 362); the latest pottery is post-medieval in date amongst the rubble, with residual Roman sherds, thus indicating post-depositional movement and disturbance since the initial collapse. A good example of this is a stony layer of dark brown silty sand (362) in the west, with sub-rectangular blocks of ironstone and sandstone, on the northwest slope of the valley overlying the backfilled large pit B. This probably

represents rubble from the robbed Roman wall, either tumbled from collapse, or scattered during a robbing event. Finds included a copper object RF39, which was not closely datable.

The surviving footings of the wall were notably level, suggesting that the masonry had been robbed to the same approximate level for reuse. Although the wall was generally cleared to a level horizon, there were deeper cuts R2, measuring 5m by 1m by 0.21m with a grey fill (127), R3 measuring 3m by 1m and 0.40m deep, taking out the core, leaving a loose lower fill (242) and a stony upper fill (213), R4 measuring 1.2m by 1m and 0.3m down to the base of the wall, filled with yellowish brown sand (245) and silt (247), R5, measuring 2.1m long and 0.40m deep, with a yellow fill (252), and an upper browner fill (249). The buttress masonry was irregularly robbed R1, with a sub-rectangular cut filled with sandy silt, gravel, and pieces of ironstone (20), slightly lower than the adjacent foundation. Pottery from the fills of the robber cuts included 1st to 3rd-century AD residual sherds.

Phase 6: Post-medieval and Modern Features (Figure 18)

An array of features of post-medieval to modern date and of little archaeological significance were found across the site. Various small features filled with deposits



Plate 28: Burial (SK59) looking west with 0.5m scale



Plate 29: Corner of the partially robbed masonry of town wall, looking north with 1m and 0.5m scale



Figure 16: Phase 5- Saxon Features

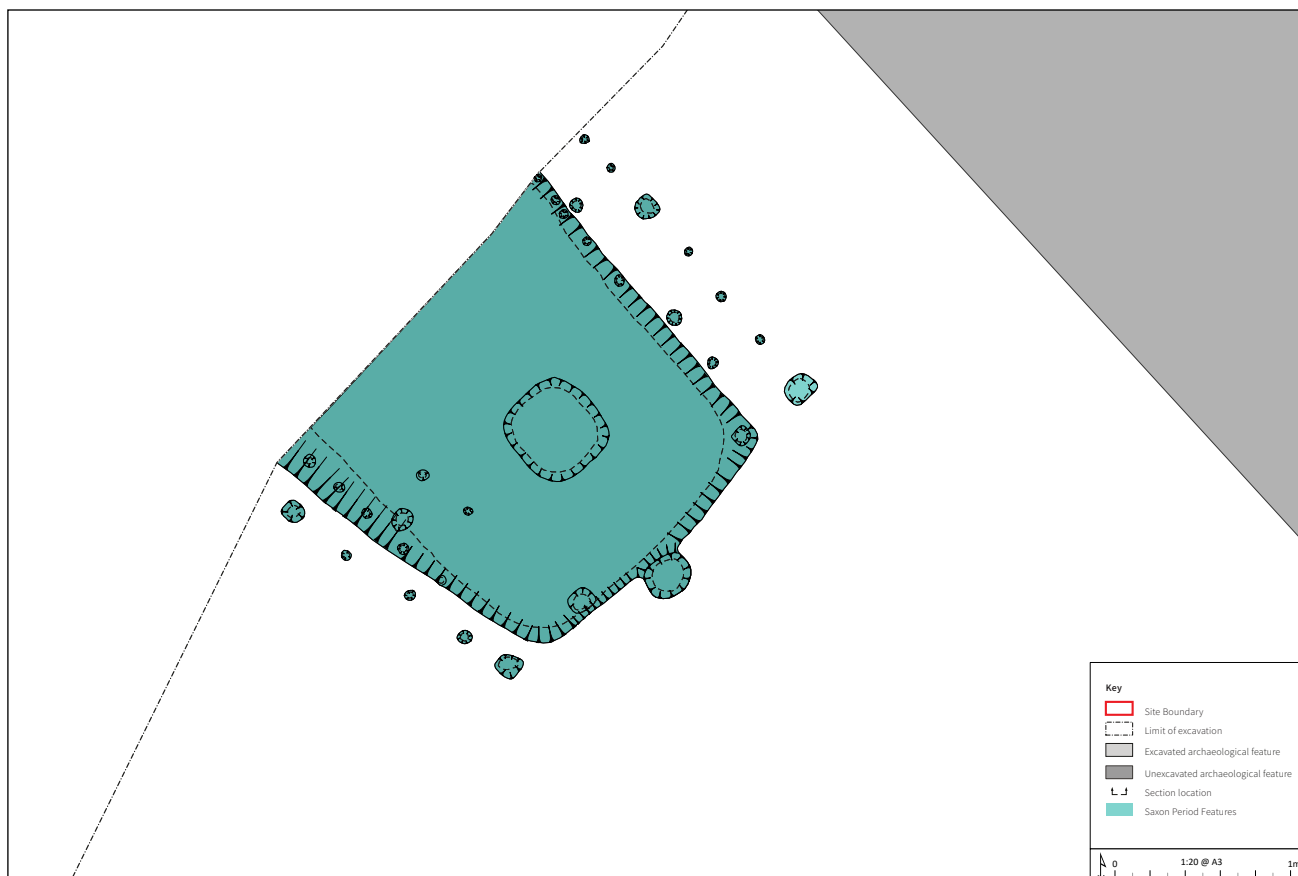


Figure 17: Phase 5- Detail of the Sunken Featured Building

resembling topsoil are most likely to be animal burrows. These comprise an oval hollow Z1 in the middle of the old northern property, a hollow Z2 in the northeast; a short hollow Z4 in the west and an intrusion Z5 into an earlier, Roman pit. Also present was a small pit Z7, a rounded pit PM8 and a rectangular pit PM1. Rectangular trenches PM2 and PM3 may represent a post-medieval bedding trenches, while PM4 and PM5 may represent similarly dated planting pits. Northwest-southeast linear D37 was undated and poorly defined, but may represent another agricultural trench. These features probably relate to the site's former use as an allotment.

A larger ditch PM12 near the demolished Roman wall measured 1.20m by 0.60m and 0.37m deep and had a fill of dark grey silt (131). It was re-established in a similar location as PM11, and was 5m long, 1.45m wide and 0.44m deep, with 45° sides dropping to flat base and a fill of grey silt (125). It may represent a boundary within the allotment.

Other allotment features may comprise the following. A short trench PM13, an oval pit PM14, a planting bed PM15, an elongated pit PM6 and a possible bedding trench Z3.

More recent features containing late 20th-century materials included rounded pit PM7, while features PM9, Z6, Z8, Z9 and PM16 may represent allotment features or later intrusions.

Modern

A large storage unit on the site of 20th-century date had concrete foundations PM10, and these had been cut into the road surface and ditches on the central west of the site, where the ground was the most level. Residual Roman finds were present. Also of modern date was a service trench PM11, feeding a below-ground tank.

The whole of the site was overlain by variable subsoil, mottled light brown to reddish brown, typically 0.30m deep at the highest, central part of the site over the densest Roman occupation area. Registered copper-alloy finds included a Roman nail cleaner RF41; a 17th-century buckle RF20; an 18th-century buckle RF45; an 18th-century thimble RF26; two 19th-century buttons RF25 and RF46; an 18th-century button RF46; and a Cu statuette RF102. Brass bullet cases were also collected, as was a post-medieval lead object RF47. The subsoil was intermixed with colluvial wash, dropping downslope to the southeast (831, 833, 863, 864) over the Roman road. This was up to 0.7m deep, and downslope into the valley floor to the northeast, up to 1.30m deep over the cremation features. This was overlain by topsoil (1), up to 0.30m deep, deriving largely from the enrichment of the land during the decades of allotment use. Metal finds from the topsoil included five copper-alloy military buttons, a George VI shilling, an 18th-century copper-alloy buckle, and two lead weights.



Figure 18: Post-Medieval to Modern Features

Chapter 3: Finds Summaries and Discussions

Finds Summaries

All the finds have been analysed and have been catalogued as appropriate. The full finds reports are presented as detailed appendices with illustrations appropriate to their significance and for specialised dissemination (Appendices A–N).

Roman Pottery

The pottery assemblage indicates a pattern of supply and consumption that spans the Roman period, but peaks significantly in the mid- to late 1st to 2nd centuries AD, with further depositional biases evident in specific feature groups. Notably, this includes a group of 1,494 sherds (22,689g) contained in the multiple fills of a single large pit B, which may have functioned as part of a midden outside the town wall associated with the urban occupation or alternatively as a receptacle for offerings. This group accounts for 19.3% of the entire assemblage. This assemblage also presents a clear picture of relatively intense urban pottery consumption within a small area of the corner of the former Roman town, where a series of pits associated with property boundaries contained most of the assemblage, with smaller amounts in ditches and gullies. Activity tails off from the early 3rd century AD, perhaps indicative of a contraction of the settlement or less use of this part of the town.

Pit groups situated immediately outside the town wall have a composition which closely parallels that within the wall, representing the deliberate middening of material cleared from the urban space, whereas the internal pits may represent cess pits. Supplementing the early occupation activity evidenced in this assemblage is a group of (near) complete accessory vessels contained with interred cremations, whose character is consistent with the general assemblage.

Throughout this occupation the pottery supply is dominated by approximately equal proportions of locally produced shell-tempered wares- jars and storage jars, and sandy grey wares, including utilitarian jars, dishes and bowls. There is also a diverse range of minority fabric and form types present which reflects Roman Sandy's status as an urban consumer emphasised by the presence of a possible *mansio* at a crossing point of the River Ivel (Dawson 2007, 71–2). In the 2nd to early 3rd centuries AD, this included a considerable input from *Verulamium*, and possibly Godmanchester, which were directly connected to Sandy by the Roman road network (Johnston 1974, 35–54), in the form of white ware vessels, mainly bowls

and flagons, but also more idiosyncratic forms such as candle sticks, triple vases and tazze that may reflect an elevated style and complexity to domestic occupation. This status is also reflected in the fine wares, dominated by fine poppyhead beakers and mica-dusted wares, supplemented by beakers from imported continental and regional Romano-British sources, plus plain imported samian ware. Other specialist vessels include mortaria from regional British sources, and relatively limited amphorae from southern Spain (Baetica and Cadiz) that are nonetheless notable because they include not only types associated with the importation of olive oil, but also defructum and fish sauce; further highlighting the consumer power and taste of the urban occupants.

The concentration of generally scarce fine wares at Sandy suggests either a hitherto unsuspected local source or that the status of this urban area warranted mercantile supply, rather than individuals transporting possessions or traded exotica. The current site has a modest incidence of samian ware repaired with lead riveting, which may be postulated to relate to the presence of capable artisans associated with metalworkers.

Pottery assemblages from sites around Sandy show similar character of the 1st to 2nd century AD assemblage here. The economy on the site is also closely paralleled in the 2nd to mid-3rd-century AD deposits at the settlement at Kempston, where there are similarly elevated levels of samian ware, a range of mica-dusted beakers and bowls, fine greyware poppyhead beakers and Baetican amphora supplementing the expected coarse ware vessel types, notably shell-tempered jars (Parminter and Slowikowski 2004, 458–9, 496).

Similarly, excavations of a Roman settlement and associated farmsteads at Biddenham recorded an assemblage in which deposition contemporary with Phase 3 of this assemblage was significantly reduced, and in the mid-1st to 2nd centuries AD more typically in ditch features rather than pits (Wells 2016, 10, 13, 156). However, the supply pattern has much in common with Sandy with variations reflecting what at Biddenham may be a rural economy derivative of market centres such as Sandy, with trade links that were not local in the 2nd century AD, may be postulated as predominantly from or via *Verulamium*.

The pattern of pottery supply at Sandy, as represented by extensive disposal of domestic waste into rubbish pits and property boundaries within the urban environment, plus a small funerary group, is characteristic of a strongly affluent if not buoyant economy in the 2nd to early 3rd centuries AD, which benefited from close road and river links to major urban consumers, notably *Verulamium*, while also reaping the benefits of local resources that provided an array of sand-tempered and shell-tempered coarse wares. Therefore, kitchen and cooking vessels,

notably jars, are supplemented by extensive table wares ranging from dishes and bowls, to a plethora of samian ware, fine grey poppyhead beakers and an intriguing array of mica-dusted wares, imported Rhenish beakers and rare but distinctive examples of candlestick, tazza and triple vase, providing the occupants with the complex equipment to embrace Roman consumerism in the same style as fine villas and townhouses across southern Britain and the western Empire.

Post-Roman Pottery

Both early and late post-medieval pottery was identified. The earliest fabric in the post-medieval assemblage is one sherd of a Cistercian-type ware cup, followed by a small fragment of tin glazed ware. Post-medieval redwares dominate the assemblage with both black and brown glazed sherds. The assemblage also includes 19th-century Staffordshire-type slipwares, 18th-century white salt glazed stoneware, English brown glazed stoneware, transfer printed pearl ware, refined white earthenware with no decoration present and with 'flow blue' decoration.

Building Material

The excavations recovered a total of 548 fragments (24,835g) of Roman CBM with additional fragments of fired clay and mortar, and low quantities of post-medieval peg tile. The CBM is in a highly fragmented and moderately abraded condition, and perhaps unusually in a Roman urban environment is not present in any significant concentrations and relatively sparsely distributed despite apparent property boundaries, substantial associated pottery groups and the adjacent town wall, suggesting a degree of clearance and robbing may have depleted evidence for structures and demolition deposits within the investigated area. The CBM includes fragments of tegula and imbrex roof tile, bessalis brick and box flue tile. The fired clay is also sparsely distributed and highly fragmentary (friable) and thus probably represent scattered debris derived from daub walls and ovens / hearths associated with urban domestic occupation.

The total amount of tegula roof tile is perhaps equivalent to only three complete tiles, and the bessalis to a single brick, therefore this fragmented assemblage most likely represents detritus scattered in an urban environment, probably as disposed rubbish, but possibly deliberately as rubble to enhance surfaces or drainage. In Phase 3 (mid-to late 1st to 2nd century AD), pit B contained a mixed group of relatively small fragments from tegula roof tile and bessalis brick in varying fabrics, as well as daub / oven lining and mortar with coarse chalk temper; all consistent with the clearance, if not re-disposal of general rubble associated with a local building(s).

The limited magnitude of the CBM assemblage, notably the presence of tegula roof tile and box flue tile is quite contrasting with the 2,260 fragments recovered from the adjacent Municipal Cemetery excavations in 1987–1991, although it was noted that quantities of CBM in the previous excavations increased in the Late Roman phases, which are little evidenced in this area (Wells 2016, 10, 13, 156). As the previous material was only subject to a basic assessment and not full analysis, a close comparison of technological aspects cannot be made, though the CBM from previous excavations appear to incorporate a wider range of fabrics and notably dominant proportions of shell-tempered variants potentially produced in the Harrold kilns, whose prevalence may also reflect the contrasting chronological ranges. The prevalence of shell-tempered fabrics was also observed at settlements at Ruxox and Kempston, although sand-tempered variants were dominant at Aston Well, where both tegulae and imbrices appear to have been manufactured with broadly comparable sizes and profiles, while bessalis bricks had an equally negligible presence (Wells 2004). Compared to these settlements, the box flue tile exhibits a narrower range of fabrics, key marks and an absence of roller stamping (Wells 2004); while the scarcity of bessalis contrasts with those associated with the pilae of bathhouses such as those at Newnham (Ingham *et al.* 2016, 34). This may reflect the actual proximity of hypocausts or bathhouses at these nuclei of rural settlements and estate centres compared to the relative distance that may be between properties within this site and a bath house in the urban area of Sandy. In further contrast, the settlement at Biddenham produced higher quantities of tegula and imbrex roof tile than at Sandy, but technologically had a narrower range of form types and variable (Wells 2016 2–3), further highlighting that the scale of this CBM assemblage is slightly incongruous from within the corner of an affluent Roman small town.

Human Bone

A total of 15 cremated individuals were recovered from the site, one of which was urned (C1). Present within the assemblage were five non-adults, two males, two females, three adults of unknown sex, and three individuals of unknown age.

A single inhumation of a young adult male, aged c. 21–34 years old and carbon dated to AD 539, was also present (SK59). The individual was lain in a rectangular grave in a supine / extended position. The head was at the west end of the grave and positioned with the face towards the south. The right arm was flexed over the thorax with the hand over the left ribs. The left hand was flexed and positioned over the upper thoracic vertebrae and both legs were extended with the plantar surface of the feet flat against the east end of the grave cut.

The skeletal remains were well preserved but with high fragmentation, with c. 40% of the skeleton surviving. Analysis of the teeth demonstrates at least three episodes of severe physiological stress at c. 2.5–3, 3–3.5 and 4–4.5 years of age. Physiological stress at these ages is commonly observed in the archaeological record and frequently results from complications of weaning and childhood disease. Porosity of some of the bones may also be the result of a nutritional deficiency.

Animal Bone

A moderate assemblage of 6,386 refitted fragments of hand-collected animal bones and teeth was recovered from Roman features. Findings are consistent with the deposition of food waste, typical of lower-status urban households, reflected by small groups of high-meat value bones and an abundance of cattle. It is likely that the town was supplied with older cattle from the hinterland, as well as sheep and pigs bred for meat or culled as a surplus.

Butchery marks were most common on 1st to 2nd-century AD deposits, the majority of which were observed on cattle bones in all phases. Some sheep / goat and pig bones were butchered, and occasionally equid (horse or donkey) and canid (dog or fox), even though these animals were not commonly eaten. Most stages of carcass reduction were represented, from horn, skin, brain and marrow removal to disarticulation, jointing and filleting. There were no large deposits of primary butchery waste to indicate the almost industrial scale of butchery observed in some large Roman towns such as Lincoln, Dorchester and Winchester (Dobney, Jaques and Irving 1996; Maltby 1989, 75–106; Seetah, 2006, 109–116).

The findings reveal information regarding diet, cultural, social, and economic practices relating to the production and consumption of food, status and the animal economy of the site.

In all phases the meat diet of those living in Sandy was dominated by beef and lamb, with occasional additions of pork, chicken, goose and fish. Given the relative carcass sizes, beef would have been most commonly consumed, even when the proportion of cattle decreased slightly in the 2nd to 3rd century AD as pig remains increased. There were low proportions of domestic fowl, wild animals and fish. It is unclear to what extent this represents variances in waste disposal and / or excavation bias rather than dietary habits in antiquity, given that the nearby River Ivel and its floodplain could easily have provided freshwater fish and wildfowl to the inhabitants of Roman Sandy.

There is nothing to suggest that the refuse disposed of on site was from high-status households. Beef is largely acknowledged to have been the most commonly consumed meat on most Roman-period sites (King 1999,

168–202). The meat diet of other Early Roman (1st to 2nd century AD) sites in the region is similar, although the proportion of cattle and pigs at Sandy is towards the higher end of the range. This changes from the 2nd to 3rd century AD, when the proportion of cattle is lower than those recorded from other sites in the area, with sheep / goats and pigs being more common. The increase in cattle observed at Sandy in 3rd to 4th-century AD deposits once again makes it more comparable with other sites in the region.

There was striking evidence for cattle to have been subject to two culls coinciding with wear stages E (2–3 years) and G (4.5–6.5 years), which suggests that the town was supplied with animals at prime meat age, and older animals that had been used for secondary products such as draught work or milking. Sheep / goats exhibited a broader cull profile, with peak culls at stages C (6 months–1 year) and E (c.2–3 years), suggesting that the emphasis was on young animals culled for meat, either as a surplus or as they approached maturity and became full grown. Despite these peaks, smaller numbers of sheep / goats were culled steadily between birth and old age and this is particularly evident in the large sample from the 1st to 2nd century AD.

The presence of two dogs in a pit that were subject to some post-depositional movement and at least partially exposed to the elements, combined with the presence numerous disarticulated dog remains scattered throughout the site, suggests the opportune disposal of non-food animals with little sentiment. Several dog mandibles showed signs of oral pathologies. Although one very old animal was recorded that may have been a favourite pet or working dog, most died as young animals, which makes the high proportion of oral pathologies surprising as this trait is more common in older animals (MacKinnon 2010, 290–309).

Worked Bone and Shale

A small assemblage of worked bone and Shale objects is dominated by diagnostic hairpins suggesting the site was occupied before AD 200, which is concurrent with the early dates of Roman metal objects from the site and those from the excavation of the part of the Roman settlement directly to the southeast. The find of a thread picker or pin beater RF14 is indicative of industry carried out on site. Two joining fragments of a Romano-British lathe turned shale bangle were also recovered of 3rd to 4th-century date.

Glass

The excavations produced 86 fragments of glass from 29 contexts, of which 22 were classified as accessioned

finds, a small but potentially significant assemblage. Most of the Roman glass sits comfortably within the 1st to 2nd centuries (Phase 3), with a very little later material in Phase 4 contexts.

The most significant vessels are from Cremation 1, a jug RF5 with a pinched spout, is a form which dates from the late 1st to the early 3rd century AD, but here is likely to be from the late 1st to 2nd century AD, supporting the ceramic dating. It is incomplete, but part of the rim with funnel mouth, concave base, and ribbon handle survive. Fragments of a thin-walled colourless vessel were recovered from the same deposit. None are diagnostic, but the vessel is likely to be a globular flask and the colour and quality of the glass indicate a date in the 2nd century AD. The two vessels were clearly deposited after cremation of the body. Although damaged and incomplete, both are better preserved than any in the remainder of the assemblage, reflecting the fact that they were deposited complete, and perhaps containing provisions for the afterlife. Grave goods are, in general, more common in juvenile burials, perhaps because of understandable sentiment, but also perhaps due to the belief that the spirits of the young and children in particular could wander and exert a malign influence. The only other fragment which may originally have been from a burial comes from the side of a small square-bodied flask in good quality colourless glass.

The assemblage includes one fragment of cast matt

/ glossy window glass of 1st to 2nd-century AD date, implying some degree of sophistication within the settlement.

Roman glass is comparatively rare in rural contexts and in smaller towns, as opposed to major urban centres, so is always of interest in these contexts. Although, after the adoption of glass blowing in the 1st century AD, glass could be mass produced, it was always more expensive than other materials and was more readily available in larger towns. Its presence in a smaller settlement is therefore of local significance and of limited interest in the wider context. It is noticeable that, with the exception of the two vessels from Cremation 1, all glass fragments are very small and appear to be incidental finds from pits and ditches. It should perhaps be remembered that in the Roman period, glass was regularly recycled and did not therefore enter the archaeological record.

Roman Metal

The assemblage of metal objects from Sandy is of local and regional significance. It includes objects from both settlement and funerary contexts, which fit into southern British typologies. In the context of the site, its potential date, very early in the Romano-British period, provides new insights on the transition into life in a walled Roman town in Bedfordshire. The assemblage from the site makes



Plate 30: Sestertius of Commodus (RF19) dating to the period AD 180–192

for an interesting comparison with the assemblage from the Municipal Cemetery with the inclusion of different but contemporary brooch types.

Of particular significance within the assemblage are the exceptionally well-preserved nails and tacks, probably preserved through heating as part of the cremation process. The chisel headed tacks are potentially unparalleled, possibly because of their good survival, but are interpreted as having been used in the construction of small boxes or other wooden items. The assemblage of nails is a good demonstration of the poorly understood practice of including nails within cremation burials. Some nails may have been included in recycled wood used on cremation pyres, but others are interpreted as having been included in the cremation burials more deliberately.

The dates of the metal objects from Sandy seems to indicate that both the settlement and cremation cemetery were in use during the earliest part of the Romano-British period. The diagnostic objects of the assemblage- the brooches, bracelet terminal and toilet instruments- together suggest dates in the 1st century AD, with some of these objects showing major similarities to those from pre-conquest period sites in southeast England, such as King Harry Lane (*Verulamium*), Colchester and Baldock.

Coins

The assemblage of 16 Roman coins from the excavations consist of: one silver denarius; two copper-alloy sestertii; six copper-alloy radiates; six copper-alloy nummi and one copper-alloy radiate or nummus which could not be identified further. The datable coins span the years AD 140–402. The assemblage includes a coin of numismatic interest: a sestertius of Commodus (RF19) dating to the period AD 180–192 which depicts *Britannia* seated right inscribing a shield (RIC no. 440) and is a scarce issue.

Vitrified Material

The vitrified materials recovered from Sandy, comprise two main categories of waste: slags related or possibility related to ironworking activities (521.33g) including evidence of smithing in the form of smithing slags and hammerscale and other vitrified materials (18.22g), such as fuel ash slag (not diagnostic by form alone of metalworking activities). The most compelling evidence of ironworking present amongst this group is the evidence for smithing which comes in the form of a single fragment of smithing slag and a low-density scatter of hammerscale flakes. Yet the low quantities of hammerscale flakes or spheres from the soils from this site suggest that this

smithing waste was probably residual and that the focus of the ironworking activities represented by the waste sits beyond the excavated area.

Post-Medieval Metal

Most of the metal artefacts recovered are considered to be of low to moderate archaeological significance, attesting to day-to-day activities over several centuries, whilst a small number of the artefacts recovered are worthy of further note. These finds include a late 16th to 17th-century trapezium-shaped double loop-framed copper-alloy buckle (RF20), a probable 18th to 19th-century copper-alloy thimble (RF26), a late 17th to 18th-century double oval loop-framed copper-alloy buckle (RF45), a lead bale seal, and two perforated globular lead weights. The majority of the assemblage is made up of buttons, buckles and buckle fragments, and ammunition including a copper-alloy bullet and blank cartridges.

Ecofactual Analysis

A total of 5,844 carbonised macroplants were analysed from 51 Roman contexts and one Saxon deposit. The heather and charred peat fragments were semi-quantified due to their fragile condition, which prevented them from being counted in full. The plant assemblage was composed of cereals, fruits, vegetables, economically useful plants, turves, woodland taxa and weeds.

Cereal was present in 48 Roman features and in one Saxon deposit. The dominant cereal was wheat (32%) followed by bread / club wheat (18%), oat (7%), emmer / spelt (4%), six-row hulled barley (2%), barley (1.3%), emmer (0.1%), spelt (0.5%) and two-row barley (0.1%). These crops were all cultivated throughout Roman Britain (Renfrew 1993, 68–9; van der Veen 1992). The results recovered from these periods of occupation at Sandy are consistent with other similar sites in Bedfordshire in that wheat and six-row hulled barley were all cultivated and were mainstays within the diet and type of agriculture practised (Robinson 1995).

Fruits were noted in eight Roman features and one Saxon deposit. The species were crowberry, apple / pear / hawthorn, elderberry and grapes. There is evidence the apple / pear / hawthorn and grapes were purposely disposed of within cremation deposits as these finds were absent from any other feature on site.

Vegetables were recovered from 19 Roman deposits and one Saxon context. The species were cabbage, pea, common vetch, tufted vetch, smooth tare, and vetch. These finds were concentrated within Roman pit B and pit P77.

The weed assemblage was varied in terms of species diversity and are a mix of corncockle, brome grass, sedge, pink family, cornflower, mouse-ears, fat hen, goosefoot, wild carrot, black bindweed hemp-nettles, cleavers, rush, knotweeds, ribwort plantain, grass, knotgrass, buttercup wild radish, sheep's sorrel, dock, ragged-robin, common chickweed, stitchworts and violet.

Most wood charcoal, probably fuel, came from oak, with lesser examples of ash, cherry, apple / pear / hawthorn, field maple and alder.

The taphonomic pathways that created the Sandy cemetery ecofact assemblage has allowed for the economic and ritual role of the macroplants in the Roman phase of occupation to be more fully understood. Certain food items composed of grain, fruits, vegetables, medicine and possibly flowers were deliberately incorporated within some of the cremation deposits as grave offerings. The remainder of the macroplant assemblage accumulated from corn drying waste left *in situ* along with the disposal of domestic food debris, small-scale processing waste and turves in the surrounding pits and ditches. Analysis

of the two ecofact assemblages clearly demonstrated that the occupants who lived and were ultimately buried at this site had access to a wide range of plant resources. The local Roman population had continued access to a wide range of crops, fruits, vegetables and woodland resources that they were able to exploit for food, medicine, fuel, building and to provide ritual offerings used to honour the individuals interred at the settlement.

Flint

Ten pieces (153g) of struck flint (33g), predominantly exhibiting technological traits indicative of the Mesolithic period, but with sparse Neolithic to early Bronze Age flakes, were recovered from the excavations. The material was found as residual inclusions in later features.

Clay Pipe

A total of two stems (4g) of clay tobacco pipe were recovered from the excavations. No bowls or mouthpieces were identified. They are of a general post-medieval date.

Chapter 4: Discussion

Excavations to the west of Sandy's Municipal Cemetery have provided a unique opportunity to investigate the foundation, growth and decline of a Roman settlement in southern *Britannia*. Crucially, this undertaking has redefined the status of the town through the discovery of a town ditch and town wall. This important feature separated the settled area to the south from the Roman cemetery to the north. As such, these excavations have provided a unique opportunity to evaluate the ways in which Roman society viewed and treated land in this liminal area and how land use differed within and without the boundary of the town.

The investigations also provided the chance to examine patterns of land use in the area prior to the founding of the Roman settlement and during Saxon and later periods. Notably, the results contribute to the complex debate surrounding the fate of Roman towns during the post-Roman period through the discovery of an early Saxon burial and a possible Saxon building.

Prehistoric Activity in the Vicinity of Sandy

There was a minor Mesolithic presence represented by one core in the subsoil, and two flakes and one micro burin that were found as residual inclusions in Roman features. Mesolithic occupation sites have proven hard to identify in Bedfordshire, and a large proportion of the artefactual evidence has been recovered from surface collection or as residual material (Luke 2007, 25–7). River valleys and good vantage points overlooking the Greensand Ridge and Chilterns appear to represent favoured locations that have produced moderately extensive flint assemblages. Despite the diagnostic technology of the Mesolithic artefacts recovered from this site, the low quantity of the material used in combination with the small nature of the assemblage means little can be added to this existing picture.

Flints dated to the early Neolithic to early Bronze Age were also recovered from the site. These are typically more regular and possess more cortex than the Mesolithic artefacts, and probably represent debitage flakes associated with flint knapping. Again, they were residual in Roman features and therefore contribute little to our current understanding of later prehistoric activity in the vicinity of Sandy. What this flint assemblage suggests as a whole is that the area was subject to sporadic visitations by mobile or semi-mobile bands of hunter-gatherers and early farmers during the Mesolithic, Neolithic and early Bronze Age periods.

The earliest features seen at this site comprise an undated pit and a ditch crossing the low ground outside what later

became the Roman town. The lower fills are undated but Roman pottery is present in the top fill, suggesting that it is a late prehistoric feature that was still an earthwork in the Roman period, with minor quantities of debris accumulating. The extent of this feature continued east and west beyond the limits of excavation. It could be a palaeochannel rather than a ditch, but it does have a strong profile. Given the dearth of evidence for prehistoric occupation within the site, this feature (if it is indeed man-made) may represent a field boundary or drainage feature rather than a boundary around a settlement.

It has previously been suggested that Roman Sandy was founded on or close to the site of a significant Late Iron Age settlement. Indeed, prior excavations in the Municipal Cemetery identified an Iron Age round house through the discovery of its drip gully and associated features, and this may represent a single modular enclosure that was associated with a wider field system (Bedfordshire County Archaeological Service 1996). More substantial evidence for prehistoric settlement, most probably of Iron Age date, was also identified to the immediate east at Potton Road, where Middle to Late Iron Age pits and prehistoric enclosures were discovered (Magnitude Surveys 2018; Albion Archaeology 2019). It is therefore noteworthy that this excavation at Stratford Road did not produce any settlement features of definitive prehistoric date, thus suggesting that Iron Age settlement did not extend into this area. That said, two early Roman round houses were identified within the confines of the site, which could be taken to suggest that occupation in the Iron Age style persisted within the immediate vicinity of the earlier settlement during the earlier part of the Roman period. In addition to this, early in the Roman phase, a kiln in the south of the site was found to contain sherds from two grog-tempered jars of a type that were first manufactured prior to the Roman Conquest. The form continued as hand-made vessels to c. AD 65. This strongly indicates that British people were indeed living in the town shortly after it was founded. This was therefore not a settlement for Romans only, but for local people using the advantages offered by a town and its trading links. It is also reasonable to suppose that at least some of these local people came from families with long-standing ties to the Sandy area due to the presence of probable Iron Age settlement to the east and south.

The Development and Evolution of Roman Sandy

Topography, Environment and the Founding of the Roman Town

The site at the north end of the Roman Town has now defined one corner of the Roman settlement, and enables a more structured and informed view of the town's location in the landscape. The topographic setting would

appear to be key to the founding of a town in this location.

The current topography of the site and of Stratford Road shows a similar topography to the Roman period, although there has been much colluvial wash, agricultural and horticultural impact, plus significant truncation of the broader landscape when the railway line and station were founded in the 19th century (Albion Archaeology 2003). It has been noted that the route of the Roman Road between Baldock and Godmanchester took advantage of a break in the greensand ridge (Albion Archaeology 2003), but key to the success of a settlement in this location was a freshwater supply from a tributary of the River Ivel (Sandy Historical Research Group 2022), its location indicated by the name of Stratford Road, but also clearly visible in the topography to the south of the site, where the road undulates, before rising again to the south. The site also took advantage of the natural topography; the settlement lies on a roughly level plateau at the base of the ridge but above the Ivel River flood plan, with a notable drop of 3–4m to the north, caused by ancient erosion, and used as the settlement's northern boundary. The fertile floodplain of the Ivel to the west would have been verdant yet potentially marshy, while wooded hills to the northeast and east potentially provided timber and firewood for the settlement.

Infrastructure and Organisation

Location and Extent of the Town

Roman Sandy was founded on the Roman road between Baldock and Godmanchester, which is oriented north-northwest–south-southeast. Locally, this road is called Stratford Road, and forms the site's western boundary, although the edge of the Roman road was identified on site, as the modern route deviates slightly westwards.

The site straddles the northern corner of the town, which was perhaps initially defined by a ditch or palaeochannel X1 in combination with a town ditch and finally by a robust and strongly mortared stone wall foundation.

Initially, the edge of the settlement was bounded by a ditch in the mid-1st century AD, to be replaced by a stone wall, perhaps as early as the 2nd century AD. For the first time since the town walls disintegrated and were robbed of their stone, the aspect of Sandy as a walled Roman town has been proved. The wall remains are preserved *in situ* at the new cemetery, and its presence has been plotted so that no new burials will be cut through it.

The base of the wall was 3m wide, coursed with layers of local ironstone and was oriented southwest–northeast, before turning southeast, parallel with Potton Road. At

the north corner of the wall, an additional structure with a flat southern edge is a strong candidate for a tower or lookout, or more simply, a buttress to prevent the wall from falling outwards off the plateau. The original height of the wall cannot be proved, but its presence marks the town as more than a village or enhanced mansio. The wall appeared to have been extant throughout the rest of the Roman period. There is a low earthwork to the south of the Municipal Cemetery, which could mark the southern extent of the town and the wall. The impact of the railway line now appears to have removed a large stretch of the western side of the settlement, which may have lain under what is now the station carpark.

The Road Network

The edge of the Roman Road was formed of sand and gravel, with the uppermost layer sand and pea shingle. If a metalled surface characterised this part of the road in antiquity, it must have been salvaged for reuse. The road lies further east than the current route of Stratford Road, as has been testified by ploughing in the Chesterfield area (Albion Archaeology 2003). Any confluence of Roman roads in Sandy does not lie within this site, but it now may be recognised that a town with walls is more likely to have had gates where the roads entered and left. The road was bound by a ditch on the eastern side, which was re-excavated as it filled, and eventually re-established a little further to the east, later in the Roman period.

In 1955, a section was excavated through the road at The Bungalow on the east side of the current Stratford Road to the southeast of the Municipal Cemetery site. A cambered, metalled road at least 5.18m wide was revealed, comprising successive layers of rammed gravel 0.36m thick overlying a foundation layer of larger stones. A single sherd of samian ware pottery of the 1st century AD was recovered from the lowest layer, dating the construction of the road. Other roads in the district include Viatores Route No.224, which heads west from Sandy towards Bedford, and has been identified on aerial photographs, but its veracity is not thoroughly tested by excavation (CBHER738; Albion Archaeology 2003, 21). Other sections of road within the probable extent of the town may be more major internal routes. One aligns with the probable route to Bedford, and road surfaces have been seen when cutting pipe trenches at the fire station, the railway station, and the Cemetery keeper's garden.

The site only covers the northern corner of the town and its 2nd-century AD wall, and as such it is hard to determine in isolation whether properties were apportioned in a planned fashion when the settlement was established in the mid-1st century AD, or whether it grew more organically around a confluence of roads. If it is accepted that Stratford Road runs through the town and that the



Plate 31: Aerial photograph of ditch or channel X1 (shown in the lower left to upper centre of the image), the town wall (right) and the sunken featured building (left). Photograph looks northeast

two properties on site align square to the road, then this could indicate a grid pattern within the intramural part of the town. That said, recent work on the adjacent site of Potton Road suggest that more organic growth may have taken place along at least one major road (the Godmanchester to Baldock Road) beyond the town ditch and town wall to the northeast (Magnitude Surveys 2018; Albion Archaeology 2019). This leaves open the possibility that certain areas of the town were planned, while other areas developed in a more organic fashion.

In terms of the extent of the settlement, the archaeological record shows that the town wall turns to align parallel with Potton Road, perhaps suggesting an intramural town plan that was not fully rectangular. The town ditch may also have been picked up in two evaluation trenches situated in the southern corner of the Potton Road site, however the town wall was not identified. A shallow earthwork, situated further south along Stratford Road, may represent the southern edge of the town's defences, in a field currently under pasture. Geophysical survey of that field may give an answer to the location of the southern extent of Roman Sandy, recognising that the west side was lost during the construction of the railway during the 19th century. Extramural ribbon development also appears to have occurred to the northeast along the Godmanchester to Baldock road (Magnitude Surveys 2018; Albion Archaeology 2019).

The Town Wall

The town defences initially comprised a ditch, followed by a wall built of the local ironstone, mortared strongly together. The lack of any recorded knowledge of the wall, either through excavation or in antiquarian documentation, suggests that it was robbed for reuse at an early point, conceivably during the Saxon or medieval period. The original height of the wall remains unproven. Large settlements such as London, Colchester, Lincoln and Silchester have walls over 7m tall; Sandy's defences may have comprised stone wall of similar height, or a lower wall with a palisade; the surviving base course seems well laid and finished, as if the wall was constructed by skilled masons. The name Chesterfield also identifies the presence of stonework (Magnitude Surveys 2018; Albion Archaeology 2019), and this may therefore be an indication that another part of the Town wall runs through the field to the south of the site, perhaps demarking the southern edge of the town. That said, the stone could alternatively derive from other Roman structures. There is a low earthwork oriented northwest-southeast in Chesterfield, and this could be the base of the wall. In these excavations, the town wall runs east from the road with a possible tower at the corner, turning southeast to align parallel with Potton Road. It is recorded that building rubble in the form of brick, tile and sandstone has been observed in the Municipal Cemetery, and if this lies at a similar distance from the road as these excavations, it may be that debris from the wall has been previously

encountered but not recognised. The presence of a wall also implies the existence of a gateway to the immediate west of the site that would have permitted the passage of the Roman thoroughfare that is today approximated by the modern course of Stratford Road through this barrier.

Dating evidence recovered from deposits immediately pre-dating the construction of Roman Sandy's town wall, and those associated with its construction, together suggest that it was erected in the late 1st to 2nd century AD, more probably during the latter part of that period. A late 1st-century AD date of construction can probably be precluded because a town ditch may instead have encircled the settlement at that time.

A 2nd-century (or later) date of construction is further supported by what is presently known of the wider political situation in *Britannia* during the 1st and 2nd centuries. During the mid- to late 1st century AD, Roman law only entitled *coloniae* with the privilege of constructing town walls without special dispensation from the Emperor, a decision that was made to reduce the likelihood of creating breakaway strongholds in a recently conquered province (De la Bédoyère 1992, 95). As such, Colchester (*Camulodunum*), Lincoln (*Lindum*) and Gloucester (*Colonia Nervia Glevensium*) became walled at an early point, perhaps in part to mark their status as *coloniae* (De la Bédoyère 1992, 95; Wachter 1995, 118, fig. 48, 135). Yet some lesser settlements were walled at that time despite the existence of the law, namely St Albans (*Verulamium*), Silchester (*Calleva Atrebatum*), Winchester (*Venta Belgarum*) and Chichester (*Noviomagus Reginorum*). Notably, the latter three lay in the probable territory of the client king Togidibnus / Cogidubnus of the *Regini*, and as such it has previously been suggested that they were exempt from the aforementioned legal restriction as a mark of political favour (De la Bédoyère 1992, 95).

During the 2nd century AD, restrictions on the construction of town defences appear to have been relaxed, and this political development may have allowed Sandy's town wall to be constructed (De la Bédoyère 1992, 95). Yet a 2nd-century AD date of construction is still notably early. Earthen banks were more commonly favoured and were generally not erected until the late 2nd century AD, while circuits incorporating masonry, such as the one that encircled Roman Sandy, were more typical of the 3rd century AD (De la Bédoyère 1992, 96). If Sandy's masonry town wall does date to the 2nd century AD then it is atypical. The relative proximity of Sandy to *Verulamium* (also walled at an unusually early point) could be of relevance here, leaving open the possibility that the two towns were walled for similar or identical reasons (as may have been the case with *Calleva Atrebatum*, *Venta Belgarum* and *Noviomagus Reginorum*). That said, the quantity of artefactual evidence presently available to date the construction of Sandy's town wall is modest and

the possibility of residuality cannot be ruled out. As such, it is hoped that the results of future archaeological work in the Sandy area will provide additional evidence capable of clarifying the date of construction of this important landscape feature.

Why towns came to be walled when they did is a complex debate, the detail of which lies beyond the scope of this publication. In short, the argument can be reduced to the following possibilities, none of which are mutually exclusive: defence, to control movement or as an indication of political or economic status (De la Bédoyère 1992, 96–102). A defensive purpose is suggested by the correlation that exists between an upsurge in wall building and Empire-wide instabilities in the late 2nd and 3rd centuries. Yet the high building quality of most of the town walls that surrounded settlements in Roman *Britannia*, including the Sandy town wall, is not suggestive of rapid construction in response to a crisis (De la Bédoyère 1992, 96–102). This has led some scholars to suggest that town walls were instead a mark of status or were used to control the flow of people, goods and money in and out of a settlement, or were simply a social custom that came to define a British settlement as a town by the later part of the Roman period. As set out in full by Wachter (1995) and de la Bédoyère (1992), it is likely that different combinations of these factors resulted in the walling of towns at different times in different places, depending upon the political, social and economic situation and the status of the town in the Roman world.

Not enough is presently known about Roman Sandy's economic and political status to deduce why it came to be walled. That said, the presence of a wall, whether for defence, as a status symbol or to control movement, does suggest the presence of a settlement of that was, as a minimum, of regional significance.

Land Division and Buildings

Within the land between the wall and west of the main road, the land was divided into two rectangular plots (the northern and southern properties) in the mid- to late 1st century AD (Phase 3a), with most of the northern property present within the site, while a smaller proportion of the southern one was present. A possible round house may have been situated in the southern property at this time. This first apportioning of properties remained until the late 2nd century AD (Phase 3b), with activities within the properties represented by rubbish pits and postholes. There was also part of a possible round house in the northeast corner of the northern property, and occasional other posts suggesting straight-lined structures, but nothing fully survived. It is notable that there is a low amount of brick and tile in the Phase 3 assemblages, implying that the richer or more permanent houses which

might have had roof tiles did not exist in this part of the town or were limited in number. Whilst the site was clearly laid out into separate units, this may not have been the richest part of the settlement. There is a small kiln in the southern property which may have produced local wares during the 1st century AD, and this could indicate that this part of the town was used at first by local British people, carrying out traditional activities, but within the relative formality of a structured Roman Town.

Economy

Material Wealth

When considering the material wealth of this part of Roman Sandy, as exhibited through the finds, there is a low quantity of coins, a low quantity of glass, while pottery includes both local and imported table wares and storage containers. Structural evidence was also limited to possible round houses, which were a British rather than Roman style of architecture.

Throughout this occupation the pottery supply is dominated by approximately equal proportions of locally produced shell-tempered wares, in particular channel-rim jars and storage jars, and sandy grey wares, including utilitarian cordoned or channel-rim jars, bead-rim dishes and reed-rim bowls. The town's status as an urban consumer base is emphasised by the presence of a *mansio* at a crossing point of the River Ivel (Dawson 2007, 71–2) and there is a diverse range of minority fabric and form types present. In the 2nd to early 3rd centuries AD, this included a considerable input from *Verulamium*, and possibly Godmanchester, which were directly connected by the road network. Of interest is the further presence of isolated *tazza* and ring-vase vessels that are associated with urban living in other towns in *Britannia*.

The pattern of pottery supply at Sandy, as represented by extensive disposal of domestic waste into rubbish pits and property boundaries within the urban environment, is characteristic of a strongly affluent if not buoyant economy in the 2nd to early 3rd centuries AD. Kitchen and cooking vessels are supplemented by extensive table wares including samian ware, poppyhead beakers and an intriguing array of mica-dusted wares, imported Rhenish beakers and rare but distinctive examples of candlestick, *tazza* and triple vase, providing the occupants with the complex equipment to embrace Roman consumerism. The interesting repaired samian plate could be evidence of the curation of a desired vessel, but it may alternatively be that this demonstrates repair and reuse of a previously discarded object, on behalf of a poorer household who could not afford the new.

The roadside ditch was re-established, and the properties

were re-ordered in the late 2nd to early 3rd centuries, with the northern property appearing to have become smaller, and remaining smaller until the end of the Roman period. Rubbish pits continued to be dug, ovens established and small industries carried out within this settlement. The presence of new, smaller properties could be a signifier of a higher population and a denser concentration of dwellings, where more properties were required in a limited urban space. The quantities of finds rises towards the end of Phase 3 (early 3rd century AD), and declines in Phase 4 (3rd to 4th century AD). This would align with the general historical background of the Empire until 3rd-century AD invasions and rebellions across Europe.

Exploitation of Natural and Farmed Plant Resources

The environmental evidence collected from the features on the site show a range of plant species available to, and exploited by, the people living and working in Sandy. Wood is present in the archaeological record in association with cremated remains, ovens, household pits and generally across the settlement, and this is a testament to the use of wood for fuel, since uncharred wood from buildings, furniture and tools does not survive. The dominant species was oak (61%) along with much smaller quantities of ash, cherry, apple / pear / hawthorn, hazel and blackthorn, plus very small amounts of field maple, alder, birch and buckthorn. Whilst oak was the dominant species in the assemblage, the figures show that oak was the favoured species particularly among the cremation fuel, rather than the necessarily dominant species in the available woodlands around Sandy.

Heather in the assemblage may have come from peat lands and marshes, and peat has been recorded west of New Road (AOC 2013). Other wetland plants which left residues in the environmental samples are sedge, rushes, and ragged-robin (Table 1), although alder and birch also prefer damper soils.

The drier lands around Sandy were farmed, with cereal crops and their attendant companion wild flowers represented in deposits of domestic waste as well as in ovens. Crop species used by the Romans in Sandy and presumably brought to the town from satellite farmsteads comprise mostly wheat, with lesser amounts of bread / club wheat, oats, emmer / spelt and barley. Weeds or wild flowers among the cereal crops comprise corncockle, grasses, cornflower, pinks and hemp-nettles (Table 1). Other plant evidence includes tubers and beans, which have dietary significance and suggest that, in addition to cereal production, an array of other horticultural practices were probably occurring in the vicinity. Wild plants with potential medicinal qualities also exist within the assemblage; while some could represent the accidental inclusion of weed seeds within natural or farmed resources,

Species	Description of plant and its Environment	Potential Use(s)	Description of Potential Use(s)
Black Bindweed	Black bindweed is common to arable land, gardens, middens and roadsides. It has been a common arable weed seed in Britain since the Neolithic.	A potential foodstuff or a weed	The seeds are edible, and were used in the past as a food crop, with remains found in Bronze Age middens#
Brome Grass	Brome is an annual grass of roadside verges, waste ground, meadows and cultivated ground; it is considered a weed in cereal crops and on arable land.	N/A: a probable weed	N/A
Buttercup	Buttercups usually flower in the spring, but flowers may be found throughout the summer. Typify meadows, pastures and water-meadow environments, with some species favouring disturbed ground, waste ground, arable land, scrub, woodland and grassland.	N/A: a probable weed	All Ranunculus species are poisonous when eaten fresh, however the toxins are degraded by drying, so hay containing dried buttercups is safe.
Cleavers	Cleavers is a common annual weed native to hedgerows, scrub and arable land. Small 'sticky' seed pods and stems.	A potential foodstuff or a weed	The leaves and stems of the plant can be cooked as a leaf vegetable if gathered before the fruits appear. Poultices and washes made from cleavers were traditionally used to treat a variety of skin ailments, light wounds and burns. As a pulp, it has been used to relieve poisonous bites and stings. Dioscorides reported that ancient Greek shepherds would use the barbed stems of cleavers to make a 'rough sieve,' which could be used to strain milk.
Common Chickweed	One of the most common weeds of cultivated land	Potential pharmacological use or a weed	Used for stomach and bowel problems, lung diseases, wounds and skin ulcers, joint pain, and other conditions, but there is no good scientific evidence to support these uses
Corncockle	A plant of cultivated cornfields probably first brought to Britain from Europe by Iron Age farmers. Not edible; a common weed associated with arable agriculture.	N/A: a probable weed	N/A
Cornflower	1m tall plant with bright blue flowers. Once a common arable weed species.	Potential pharmacological use or a weed	Cornflower used to be taken against poison, plague, wounds, fevers and inflammations
Dock	Large leaves and distinctive seedheads. Grows in meadows, pastures, woodland and waste ground	Potential pharmacological use or a weed	These leaves are edible and used for herbal remedies and dyeing.
Fat Hen	Disturbed, nutrient-rich habitats, such as arable fields, manure heaps and waste ground, in particular midden sites and soil heaps.	Foodstuff and potential pharmacological use	Eaten as a vegetable from the Neolithic period until the 16th century AD when it was replaced by spinach and cabbage. Rich in vitamin C. The seeds can be ground into flour, and it was grown as food for pigs, sheep and chickens. The leaves are a source of ascaridole, an oil used to treat infestations of round worms and hook worms.
Hemp-nettles	Found growing on cultivated farmland, especially along field margins	Potential pharmacological use or a weed	Used in more recent times for medicinal tea to treat respiratory infections (although the effectiveness of this is not proven).

Table 1: Plants from the site, their environments and modes of exploitation

Species	Description of plant and its Environment	Potential Use(s)	Description of Potential Use(s)
Knotgrass	Occupies a very wide range of habitats (depending on the species); some species grow among cereal crops.	Potential pharmacological use or a weed	The plant has astringent properties, with an infusion of it useful in diarrhoea, bleeding piles and all haemorrhages.
Knotweed (Persicaria)	Depending on the species, native varieties are terrestrial but favour damp or wet habitats such as marshes, wet meadows or dune slacks and are also a weed of cultivated land and verges.	N/A: a probable weed	N/A
Mouse-Ear	A low ground-spreading plant with small white flowers. Grows in a wide range of grassy and disturbed habitats including meadows, pastures and marsh.	N/A: a probable weed	N/A
Pink Family	Depending on the species, wild forms in Britain characterise open, disturbed ground, grassland sites, pastures, field margins, waste ground, sandy soils, dunes and limestone crevices.	Ornamental plant or a weed	Many species are grown as ornamental plants, and some species are widespread weeds.
Ragged-robin	Grows in damp meadows and ditches, pink or white flowers	N/A: a probable weed	N/A
Ribwort plantain	A wide range of habitats but mainly acidic soils, including meadows, pastures, upland grasslands, rock ledges and crevices, sand dunes and cliffs, arable land and waste land.	Potential pharmacological use or a weed	Has medicinal properties as antihistamine, antioxidant, analgesic and mild antibiotic.
Rush	Grow on infertile soils in a wide range of moisture conditions. The best known and largest genus grow exclusively in wetland habitats.	Manufacturing and building, for example as thatch	N/A
Sedge	A grass-like plant often growing in marshy places	N/A: a probable weed	N/A
Sheep's sorrel	Similar to common sorrel but smaller in size. Grows on dry heaths, non-calcareous sand dunes, shingle beaches, open grasslands on poor acidic, sandy or stony soil	Potential pharmacological use or a weed	It has been used historically to treat inflammation, scurvy, cancer, and diarrhoea
Stitchworts	A common weed of cultivated land	Potential pharmacological use or a weed	This plant is used allegedly to cure the pain in the side known as 'stitch'
Violet	A common weed of cultivated land and rough ground	Potential pharmacological use or a weed	They are antioxidant, anti-inflammatory, and a blood cleanser. They are good for coughs and colds, and can be made into a violet leaf and honey cough syrup.
Wild Carrot	Wild carrot mostly grows on well-drained to dry soils.	N/A: a probable weed	This weed can cause skin irritation upon contact, especially if one touches the sap and is then exposed to sunlight.
Wild Radish	An annual or biennial weed that occurs on cultivated and rough ground.	N/A: a probable weed	N/A

Table 1 (cont): Plants from the site, their environments and modes of exploitation

others could have been put to pharmacological use (Table 1). Regardless of whether these weeds were intentionally gathered or not, the variety encountered attests to the fact that an array of local environments were exploited for economic purposes including for food, fuel, construction and manufacturing from nearby woodland, marshland and farmland. The potential environments that were exploited and some of the ways in which different plant resources could have been used are set out in Table 1.

Food Production, Craft and Trade

The zoning of craft and trade activities within the town has been investigated and discussed following excavations in the cemetery and several conclusions were reached (Dawson 1995), which are here reconsidered in light of the evidence from the 2018 excavations. The presence of quernstones, iron tools and the predominance of spelt grain has led to the suggestion that Roman Sandy retained a largely agricultural character (Johnston 1974), and certainly there can be no doubt that cereals formed a part of the diet of the inhabitants. In these 2018 excavations, wheat was the predominant cereal for all of the Roman phases and subphases. The south property oven contained a lot of wheat, so the residents in the later Roman period were presumably baking bread based on wheat flour, but not necessarily processing it in this part of the town, since there were no quern stones found. It is also reported that 'a quantity of charred wheat ... amounting to almost 30 quarters' (380kg), found during gravel extraction, may have been the stock of a corn merchant destroyed by accidental fire' (Johnston 1974), so clearly the Romano-British inhabitants were storing and using wheat. As a staple foodstuff, the presence of wheat amongst other foodstuffs including animal bone from the meat-bearing bones, pulses and vegetables, show that the residents had a wide range of dietary sources, as might be expected in a permanent settlement.

Since only the substructure of the ovens survived at Sandy, proof of the form of the walls and lid remains elusive. However, in the 4th-century AD oven in the south of site, O2, the subsided top appeared to have been manufactured of sandy clay, and was 71mm thick. This specific oven contained charred remains of grass seeds and cereal grains, plus oak charcoal, wheat and barley grain, as well as pea seeds, sedges and dock seeds, which could have been wind blown. This does suggest that the oven was used in food production, with a dome or crock constructed to retain the heat. It should be recognised that an oven could be used for many purposes, such as roasting meat, rendering fat, or processing metal as well as baking.

Baking under a crock or clay lid, known as 'sub testu' is described by Cato in the 2nd century BC, and repeated by

Pliny the Elder. In many parts of the Empire, small ovens or baking bells were used in which just one or two loaves were baked. Cato offers two recipes:

Recipe for kneaded bread: Wash your hands and a bowl thoroughly. Pour meal into the bowl, add water gradually, and knead thoroughly. When it is well kneaded, roll out and bake under a crock. The second is for Libum: crush 2 pounds of cheese thoroughly in a mortar; when it is thoroughly macerated, add 1 pound of wheat flour, or, if you wish the cake to be more dainty, ½ pound of fine flour, and mix thoroughly with the cheese. Add 1 egg, and work the whole well. Pat out a loaf, place on leaves, and bake slowly on a warm hearth under a crock.

It is likely that there was a butchery quarter in the town, as well as locations for other crafts and industries. At the Municipal Cemetery site, the stream bed was infilled with butchery waste and industrial ash, possibly indicating the site's proximity to the sources of the two deposits. Indications of iron working in the form of hearth bottoms, slag and hammerscale, were all found. Crucible fragments found amongst house debris attest to the casting of bronze while silver objects awaiting recasting indicate silver smithing (Dawson 1997).

Many finds from Sandy indicate metalworking in the town, including a hoard of ironwork, horse trappings, an anvil, lead ingots, and there are also finds showing horn working: bone pins, spindle whorls and needles. It is thought that these latter finds probably indicate home production rather than specialised industries (Dawson 1997).

A lead pig, or ingot, 'shaped like the prow of a boat,' reportedly found in Sandy, indicates lead working, such as the production of lead coffins which would have been made close to their eventual resting place (Cato the Elder 160BC [1934], 74–5), and at least two lead coffins have been recovered from Sandy.

An oculist's stamp from Sandy records the names of Gaius Valerius Amandus and Gaius Valerius Valentinus. These suppliers of eye ointments were probably either brothers or father and son. Their tripartite names suggest that they were Roman citizens (Simco 1984).

The two properties bound by the wall at this site contained minor localised craft evidence: a 1st-century AD kiln and a late Roman oven in the southern property are examples of this. Outside the city wall a small kiln or oven was identified.

Trade and Exchange: Roman Sandy and the Regional Context

The relationship between the town, its hinterland, and the wider region can be directly exposed by the

traded goods which are best represented in the pottery assemblage, as well as the recognition that a town would be fed from the surrounding countryside.

Prior to the major excavation of the area adjacent to the current site, and the realisation that Sandy was a Roman town (previously considered a dispersed rural settlement), building works east of St. Neots Road in 1981 recovered a group of 2nd-century AD pottery that includes imported central Gaulish samian bowl and dishes from Lezoux, locally made jars, beakers, grey ware dishes and bowls (Dix and Aird 1983, 3–4); this has a composition remarkably consistent with the rubbish pit groups in Phase 3 here. A smaller group, nonetheless containing contemporary samian ware, fine grey ware, black-burnished ware 2, other coarse wares and a single sherd of amphorae was also recovered from an evaluation at Woodside Farm, Sandy (Wells 2002, 12). The economy, or at least pottery consumption, on the site is also closely paralleled in the 2nd to mid-3rd-century AD deposits at the settlement at Kempston, where there are similarly elevated levels of samian ware, a range of mica-dusted beakers and bowls, fine grey ware poppyhead beakers and Baetican amphora supplementing the expected coarse ware vessel types (Parminter and Slowikowski 2004, 58, 458–9, 496). Conversely, the contemporary assemblage from Ruxox had much lower proportions of fine ware, albeit still with common whiteware from *Verulamium*, although both sites have more extensive Late Roman components than are evident here (Wells 2002, 494–5).

Closer to modern Bedford, the bathhouse and estate at Newnham has produced an assemblage with slightly higher proportions of shell-tempered ware to sandy grey ware; similarly common fine grey wares but markedly less samian and white ware with only isolated mica-dusted wares. This profile of consumption may reflect the slightly contrasting activity around the particular (bathhouse) building and land slightly removed from the actual villa, with its associated rubbish pits from more domestic consumption, but all-in-all the early to mid-Roman pattern of pottery consumption appears far more restrained and of limited scale compared to that at Sandy.

Excavations of a Roman settlement and associated farmsteads at Biddenham recorded an assemblage in which deposition contemporary with Phase 3 of this site was significantly reduced, and in the mid-1st to 2nd centuries AD more typically in ditch features rather than pits (Wells 2016, 10, 13). The supply pattern has much in common with Sandy with variations reflecting what at Biddenham may be a rural economy derivative of market centres such as Sandy, with trade links that were not local in the 2nd century AD. It may be postulated as predominantly from or via *Verulamium*. The Biddenham groups share a closely comparable range of common

utilitarian jars, storage jars, dishes and bowls, with a similar proportion and range of regionally traded wares, notably from *Verulamium*, the Lower Nene Valley and the Oxford kilns (Wells 2016, tables 27, 37). Quantities of samian ware per farmstead / settlement at Biddenham do not contrast significantly in composition of fabric or form type with that from the urban area of Sandy. The fine wares at Biddenham are similarly dominated by fine grey wares, notably beakers, and mica-dusted wares have a lower but still notable presence, including a shallow semi-hemispherical bowl; while white wares have a reduced presence but include a fine oxidised (white-slipped?) candlestick (Wells 2016: vessels P92 and P110), further highlighting the relative affluence of the economy, culture and consumption at Sandy, and the ripple effect its pattern of supply may have had on its rural hinterland.

In conclusion, the pattern of pottery supply at Sandy, as represented by extensive disposal of domestic waste of pottery and animal bones, plus the loss / discard of personal adornments into rubbish pits and property boundaries within the urban environment, is characteristic of a strongly affluent and buoyant economy in the 2nd to early 3rd centuries AD, which benefited from close road and river links to major urban consumers, notably *Verulamium*, while also reaping the benefits of local resources that provided an array of sand-tempered and shell-tempered coarse wares and the foodstuffs for the table. Therefore, kitchen and cooking vessels, notably channel-rim jars, are supplemented by extensive table wares ranging from bead-rim dishes and reed-rim bowls, to a plethora of samian ware, fine grey poppyhead beakers and an intriguing array of mica-dusted wares, imported Rhenish beakers and rare but distinctive examples of candlestick, tazza and triple vase, providing the occupants with the complex equipment to embrace Roman consumerism in the same style as fine villas and townhouses across southern Britain and the western Empire.

The Cremation Cemetery in a Wider Context

The Funerary Landscape of Sandy's Roman Town

The cremation cemetery was located beyond the town wall, in the north of the site, in keeping with the typical Roman practice of separating the dead from the living. The cemetery at this site lies on low ground below the undulating land on which the town is situated. Previous works have uncovered at least probable cemetery areas associated with the Romano-British town, including one to the southeast, next to the probable line of the Godmanchester to Baldock Roman road and one to the south of the site at Tower Hill (CBHER 11309; 11318). It is unclear whether the two sites formed part of a single

funerary landscape or whether they represent two distinct cemetery areas (AOC 2013).

Excavations in the 19th century at Tower Hill, where the railway station is now, revealed cremations and inhumations of Roman date; the cremations being the earlier and the inhumations later in the Roman period (CBHER 11318). This lies west of the site, presumably outside the settled area of the town, beyond the town wall. Inhumations of Romano-British date have also been recorded at New Road (AOC 2012). The distribution therefore covers quite a substantial area; it is not clear whether these form part of a single or fragmentary funerary landscape.

The location of a cemetery outside the town wall, adjacent to one of the main roads, also features strongly in the regular form of Roman settlements, and the widespread reports of inhumations around Sandy may indicate a series of cemeteries along the roads to and from the town. Roman burials have also been found within the Municipal Cemetery. BCAS excavations in this area uncovered 29 inhumations, mostly dating from the 3rd to 4th centuries buried in conventional graves and the upper fills of silted up ditches (EBD441).

Roman Cremation Traditions

By ancient tradition, Roman cemeteries were located outside the boundaries of towns and cities. Monuments and simple burials lined the roadsides, sometimes clustered together. Additionally, the bodies of the dead were regarded as polluting (Salzman 2007, 116). At the same time, pietas was a fundamental part of old Roman culture. The care of the dead negotiated these two emotionally opposed attitudes. By honouring the dead with funeral rites and memorials the spirits of the dead were thought to become benevolent to their descendants (Erker 2011, 41–2).

At a cremation funeral, the heir lit the pyre with a torch, his face averted. Once the corpse had been consumed in the fire, the spirit of the deceased was thought to have begun their separation from the world of the living (Scheid 2007 264, 270–1). After a cremation, the heir sprinkled the ashes with wine, gathered them along with any traces of bone, placed them in a cremation urn and interred them. Cremation was far more costly and time-consuming than inhumation; at its simplest and least costly, inhumation required little more than a scraped hollow in the ground, then backfilled. The planning and execution of cremations required expertise. Wood for pyres were expensive; on average, an effective, well-built pyre employed a lot of timber and once lit need to be tended for 8 or 9 hours to ensure that the body was completely consumed. In the late 1st century AD, cremation was such a commonplace

occurrence that Tacitus referred to it as the Roman Way (Tacitus AD 109 [2012], 16.6)

A potential midden or offerings pit, Pit B, was identified just north of the town wall within the cemetery area. This interpretation is based on the concentration of charcoal and burnt material, with its downslope side fenced, to contain the contents. The inclusion of unburnt items and its position on a slope, however, makes this an unlikely location for a pyre (AOC 2022). While only one of the cremations was urned, ten of the cremation pits contained either pyre or grave goods or both, comprising nails, ceramic pots and platters, a copper-alloy brooch, ferrous and copper-alloy objects, and a glass jar. Additionally, at least four contained evidence of feasting including burnt animal bone and / or archaeobotanical remains such as grapes and apple, pear or hawthorn.

Cremation as a burial rite has been archaeologically attested to as far back as 40,000 (±2000) years ago in Australia and has been observed across the world from 10,000-year-old burials in China to 3,000-year-old burials in Mexico (Williams *et al.* 2017, 1–24). As described by Williams and colleagues ‘...cremation constitutes the scorching and fragmentation of body and things with fire. [It] is a memorable spectacle created at a prominent location between land and sea, between earth and Heaven.’ The cremation rites incorporate more than just fire and body but involve a complex interplay of beliefs, settings, participants and / or actors, materials and fuels meant to transform the body, memory, and emotions (Williams *et al.* 2017, 1–24). These factors may have varied substantially depending on the time period, society, and environment under consideration. In some societies cremation was the predominant method of burial, while it was considerably rarer in other societies. Burial rites in the Roman world typically comprised either inhumation or cremation of a body on a pyre, with the remains commonly deposited in a variety of containers including glass jars, ceramic pots, stone boxes, or small wooden caskets; the final resting place or locus religious considered sacred (Carroll 2006).

According to McKinley, ‘[cremation] was expensive in terms of (at least) time and effort and had the potential to create a variety of deposit and feature types for which we may recover archaeological evidence.’ What can be interpreted of the cremation as a burial rite thousands of years later is limited to the archaeological evidence, principally the bones, associated artefacts, and any preserved evidence of a pyre (e.g. heat-affected soils or rocks, charcoal, fuel ash slag, etc.). Despite the common occurrence of cremations in Roman Britain, relatively few pyre sites have been identified, as evidence of burning is only preserved if covered immediately after use (McKinley 2013). Fragmentation of remains can be the result of tending to the pyre, when replacing or moving bones or



Plate 32: Aerial photograph of the cremation cemetery and the sunken featured building. Photograph looks northwest

fuel, for example. The collection of the cremated remains can also result in fragmentation when they are placed in pots or bags for burial. It is possible some of these features had been truncated by agricultural activity, but some of these may also have originally only comprised a small amount of remains, intended as a type of token deposit.

The burial practice of interring cremated remains in urns or in cloth / leather bags is accompanied at the Sandy site by evidence of feasting recovered from some of the deposits, which contained ecofactual material comprising burnt animal remains and the charred remains of grains like spelt, grapes, chickweed, and apples, pears or hawthorn. Some of the artefacts (and ecofactual remains) including the nails and the brooch exhibited evidence of being heat affected and were probably parts of objects for personal adornment that accompanied the body on the pyre (pyre goods). Some of the other artefacts including the nail-cleaning tool, ceramic pots and glass vessel, however, did not appear to be heat affected, indicating they were added to the burial deposit as grave goods after the cremation process was complete.

The incorporation of ceramic vessels either as urns or grave goods was largely introduced during the Roman period (McKinley 2013). According to Williams, 'many of the ceramics placed with the dead were not 'ritual' artefacts created especially for funerals, but items employed in daily social and economic life...' (McKinley 2013, 417) Furthermore, Williams argues that the deliberate choice to include ceramics in Romano-British cremation burials (either as urns or as grave goods) relates to ritual feasting of the living as part of the burial rites, in a way of 'selectively remembering and forgetting the dead... and sustain[ing]

relationships between the living and the dead' (McKinley 2013, 419). The incorporation of ecofactual evidence in the deposits at Sandy- both charred animal bone and plant material- substantiates the notional importance of feasting as a funerary rite and suggests that food may have been included within the funeral pyre as an offering to the deceased.

Decline of the Roman Town and Developments During the Saxon Period

Late Roman Settlement in Sandy

The nature and causes of the decline of the town towards the end of Roman period probably relates in part to external, Empire-wide forces which eventually saw Roman authority withdraw from governance in *Britannia* during the early 5th century AD. While this cannot be proven through analysis of this site in isolation, it can be stated that the decline of Roman Sandy is represented in the archaeological record here by a decline in the number of late features, in line with wider patterns. The finds assemblages offer little evidence for changes to the culture: the sources of the pottery remain consistent with the earlier phases, but form types evolve and indicate a chronology in the late 3rd to 4th centuries AD. The lesser number of features encountered also generated fewer finds. The bone assemblage also offers little evidence for change, though again, the quantities are diminished. Cattle remains still dominated, although substantial deposits of sheep / goats were also present. Pigs were next most common followed by horses, dogs and domestic fowl as well as a few cat, frog / toad bones and several

oyster shells.

Sample sizes were too small to provide reliable trends in the redistribution of carcass parts, although there is a potential over-representation of cattle proximal radii and pelvis fragments and sheep / goat proximal radii, pelves and distal tibiae. There were no concentrations of these elements in any one feature, although two left cattle scapulae were recovered from ditch D18, which implies the deposition of remains from the consumption of a large quantity of meat.

Again, the adjacent Municipal Cemetery site offers a larger range of evidence for the later Roman period, perhaps signifying its proximity to the centre of the town; there the stream was infilled with industrial and butchery waste, and houses built above. This could suggest a cessation of industry and craft, and a change to a more 'garden city' form of settlement, as seen in other, larger urban centres, including the provincial capital, *Londinium*. This change in 4th-century AD settlement patterns is not confined to Sandy, so the question arises as to where the population was dispersing to. Recent work by AOC Archaeology and OAU near Swindon, for example, adjacent to Ermin Street, revealed that a rural, agricultural settlement became much busier in the 4th century AD and probably continued into the post-Roman period (AOC 2020). This could, then, be just one example of evidence that the centres of Romano-British trade and governance were declining, and the population were resettling the countryside in large farming estates. Local villa rustica and the dating thereof may provide such information for the later Roman period. The change from urban centres to a less city-based living is identified as early as the late 3rd century AD at Silchester, where the Basilica was converted to industrial use, whereas here, such municipal buildings are yet to be discovered.

Settlement and Burial During the Post-Roman Period

It has been recognised that some urban centres, for example Canterbury, Cirencester, Wroxeter, Winchester and Gloucester, remained active during the 5th and 6th centuries, surrounded by large farming estates.

Inhumations and cremations of Anglo-Saxon date have been found over a long period at Sandy, mainly to the north and east of the Roman cemetery. A large urn was found in the 17th century but the majority of the finds were made in the 1850s during excavations for the railway. The finds are generally early to mid-5th century to 6th-century AD in date and include black, decorated cremation urns (Camden 1695, 288–9). The proximity of the finds to the Roman cemetery led to confusion as to which burials were Saxon and which were Roman. There is therefore a clear possibility that the Roman settlement of Sandy continued

into the Anglo-Saxon period and then on through to the present day, although with relocation to the west.

The single inhumation of 6th-century AD date at this site substantiates antiquarian and 19th-century reports of Saxon burials around Sandy. It was interred within the Early Roman cremation cemetery, so continuity of use between the Roman and Saxon periods is not proven given the four-century gap. It is possible, however, that enough continuity of local knowledge and custom, or direct recognition of a graveyard through mounds and grave markers, led to the reuse of the Roman cemetery during the Saxon period. It is recognised that the 15 cremations discovered on the site represent a small part of the Roman cemetery that surrounds Sandy, and their date range is no doubt unrepresentative of the whole. Continuity of burial between the Roman and Saxon periods therefore remains possible but is currently unproven.

The man buried in the Saxon period was aged between 21 and 35 at the time of death in 539 AD. The skeleton exhibited indicators of physiological stress both during childhood (multiple dental enamel hypoplasias) and in adulthood, probably caused by periods of malnutrition. No evidence for cause of death was forthcoming, and no grave goods were present.

The single building outside the town walls has the qualities of a Saxon sunken-featured building, yet contained few finds, and these were residual pieces of Roman pottery. The building was timber framed with earth-fast posts, and probably had a pitched roof. The walls were either wattle or boarded, and the sunken floor boarded over with planks which were presumably staked to the ground. The low quantity of finds within that part of the building within the site reduces interpretation of the function of the building, and the lack of other buildings makes it impossible to determine whether this was an outlier of a denser settlement, an individual property, or a building associated with the cemetery.

The excavation of all features here enabled the search for ephemeral or shallow evidence for post-Roman occupation to be investigated across the whole site, and this revealed no evidence for post-Roman activity except for the use of the site as allotments in the modern period. Yet the presence of both Roman and Saxon burials in such close proximity does imply some continuity of land use in the 5th to 6th centuries. As such, any future archaeological work undertaken in the vicinity of this former Roman town has the potential to shed light on one of the least understood periods of British history. In particular, it would be interesting to discover whether any post-Roman settlers established dwellings within the Roman town walls or whether the masonry was robbed for use off site. This site only offers limited data regarding the post-Roman period of transition and change and as

such further work is eagerly anticipated.

Saxon Building Styles and Techniques

Anglo-Saxon secular buildings were normally rectangular post-built structures, where timber posts were driven into the ground to form the framework of the walls upon which the thatched roofs were constructed. Timber was easily available and practical to use: even the Anglo-Saxon word for 'building' is 'timbe' (Turner 1970). Though very little contemporary evidence survives, methods of construction have been investigated archaeologically and practically, such as reconstructions at West Stowe. The major rural buildings were sunken-floored or post-built buildings (Hamerow 2004). Frequently, sunken floors were formed by a shallow pit over which planks were suspended or pegged to the ground. The pit may have been used for storage, or filled with straw for winter insulation. Another common design was simple post framing, with heavy posts set directly into the ground, supporting the roof. The space between the posts was filled in with wattle and daub, or occasionally, planks. Roofing materials varied, with thatch being the most common, though turf and even wooden shingles were also used (Hamerow 2004). The building evidence at Sandy suggests that there is one end of a sunken featured building with one of the ridge posts, with smaller wall posts around the perimeter, and smaller stakeholes representing pegs for securing boards spanning the below-ground hollow.

Roman rule in Britain ended in the early 5th century AD, but it is likely that Britain remained part of the Roman cultural world, with inhabitants who identified themselves as Roman for some decades into the 5th century AD. An example of such continuity is shown at Chedworth Villa, for example, where a mosaic was designed and created in the mid-5th century AD. The 5th and 6th centuries in Britain are marked by a sharp discontinuity in town life, perhaps always a somewhat artificial Roman imposition on the landscape, dependent on imperial military requirements and requirements of administration and tax collection; the exceptions are a handful of sites, for example London, York, Canterbury and Wroxeter (Loyn 1991, 15–16). Features at the site in Sandy presented as being of Saxon date, including the SFB, all contain Roman pottery, but this does not preclude their Saxon date; post-medieval gardening features and topsoil also contain Roman finds. Not only would Roman-period artefacts have continued in use into the later 5th century AD, but it may also be recognised that the recruitment of Germanic auxiliaries in the army and then gifts of land to veterans would have introduced more diverse continental influences. The presence of a building outside the walled settlement strongly indicates its probable Saxon date.

On Saxon Burial Practices

High-status burials of the Saxon Period are famous as being richly appointed, and Saxon burials frequently comprise grave goods. This 6th-century AD burial at Sandy had no finds at all within the grave: not food, jewellery, or weaponry, and the date of the inhumation is provided by C14 dating only. During the 5th to 8th centuries AD, burial was the common custom for disposing of the dead, and unfurnished graves, like the example from this site, have been recorded in both rural and urban contexts across Britain (Lucy 2000, 65). The bodies in Anglo-Saxon inhumations have been found in a variety of positions (Geake 1992, 86). They have been found supine as in this case, but also prone, or on one side, with no obvious significance to the position nor orientation (Geake 1992, 78). The lack of any evidence for rites or rituals in this grave reduces the interpretation of the significance of this burial but, given the proximity of graves disturbed during construction of Sandy Station, it is not unique for the area. Archaeological investigation has displayed that structures or buildings were built inside a number of pagan cemeteries, and that evidence from cemetery excavations is suggestive of small structures and features, some of which may perhaps be interpreted as shrines or sacred areas (Wilson 1992, 63). It is therefore possible that the building remains in the north of the site represent a shrine structure rather than a dwelling, however this remains uncertain.

Settlement Migration during the Later Saxon Period

The research agenda presents questions on the transition of the settlement from its Roman centre to 500m further west, where, by the late Saxon period, settlement was based roughly in the area of the present church. The Domesday Survey of 1086 records a manor of 16 hides, with land for 16 ploughs. In addition, there were also two mills listed, and both of these would have been water powered. There are still references to one of them in the road name Mill Lane which runs along the River Ivel. This site does not provide archaeological evidence for the relocation of the town, but the very loose nature of the sandy geology which subsides into features, and the evidence from the Municipal Cemetery excavations where a tributary of the Ivel was infilled, could indicate that Roman Sandy was running out of fresh water, and all parts of the infrastructure were becoming unusable (Bedfordshire County Archaeological Service 1996). That the Roman cemetery and outskirts of the town continued in use (although how much is not proved), into the 6th century AD is testified by the burials, finds and features previously recorded, and the burial and SFB unearthed during these works. What was notable at this site was the lack of rubble from the stone wall. Even if the town wall stood just 1m high, with palisade above, there was

virtually no loose rubble or scatters of material where the wall had fallen. Clearly, the wall was taken down, and possibly then taken to the new Sandy town-centre. The reasons for movement to the new location may be manifold. This could include a reluctance to build on a ruin, either through superstition or practicality, or as prosaic as the lack of a water source as the level carved out new routes through the marsh. Inundation of rivers with silt has been observed elsewhere in Britain, as land clearance for timber led to erosion upstream and silting up of the rivers downstream; the need for deeper water for mills, the need for solid ground to found the grand buildings such as the church, or the fall from use of the Baldock to Godmanchester road as new routes across Britain were established.

Concluding Remarks

The excavations to the west of Sandy's Municipal Cemetery have provided crucial evidence about the foundation, evolution, decline and the eventual abandonment and migration of the Roman town. Crucially, they demonstrated for the first time that the status of this settlement was greater than hitherto thought through the discovery of a town wall. The results have furthered our understanding of why the town came to be situated in the location that it did, how it was organised internally in terms of land division and road infrastructure and how aspects of its economy functioned, including food production, craft, trade and industry. The discovery of an Early Roman cremation cemetery and a possible offering or midden pit has also added to the existing body of evidence concerning funerary ritual, religion and

rubbish disposal beyond the town walls of Roman Sandy. It has also been possible to compare how land was used on either side of the town wall throughout the Roman and post-Roman periods, thus enabling changing attitudes to these spaces to be charted.

Perhaps the most significant feature that was uncovered during the excavations was the town wall itself, which was found in association with dating evidence suggestive of a 2nd-century AD date of construction. While this could represent residual material, the possibility of the wall being a 2nd-century AD feature must be entertained. If this were so, this would further elevate its significance, given that masonry town walls were relatively rare around smaller towns in Britain prior to the 3rd century AD. Also of consequence was the discovery of a Saxon-style sunken featured building and an early Saxon inhumation beyond the town walls, the presence of which hints at the possibility of unbroken occupation in Sandy between the Roman and post-Roman periods.

As with any archaeological undertaking, there is always more to be gleaned. Consequently, it is hoped that any archaeological works undertaken in the Sandy area in the future will complement and expand on this study by adding to the existing picture. In particular, it is hoped that future work will confirm or refute a 2nd-century AD date of construction for the town wall and better illuminate the fate of the settlement during the post-Roman period.

Appendices:

Specialist Reports

Appendix A: The Roman Pottery

Andrew Peachey (External Specialist)

Introduction

Excavations recovered a total of 7725 sherds (154219g) of Roman pottery, generally in a well-preserved condition and with high proportions of diagnostic sherds, cross-joining sherds and profiles that can be reconstructed. The assemblage indicates a pattern of supply and

Phase	Date	Sherd Count	Weight (g)	R.EVE
2	Prehistoric	2	25	0
3a–3b	Roman: Mid- to late C1st to C2nd AD	4899	100,951	47.99
3c–3d	Roman: C2nd to C3rd AD	853	17,465	12.02
4	Roman: C3rd to C4th AD	657	11,563	6.61
3–4	Roman (indeterminate)	1075	19,289	11.26
6	Post-medieval	8	128	0
	Unstratified / topsoil / subsoil	231	4,798	1.95
Total		7725	154,219	79.83

Table 2: Quantification of pottery by phase

consumption that spans the Roman period, but peaks significantly in Phase 3a to 3c: mid- to late 1st to 2nd centuries AD (Table 2), with further depositional biases evident in specific feature groups.

Notably in Phase 3a to 3b (mid- to late 1st to 2nd century AD) this includes a group of 1494 sherds (22689g) contained in the multiple fills of pit B, which may have functioned as part of a midden outside the town wall associated with the urban occupation, although focussed deposition associated with funerary activity in the vicinity cannot be discounted. This group accounts for 19.3% of the entire assemblage by sherd count (14.7% by weight). The bulk of this group appears to date to the early to the mid-2nd century AD, the following were present: shell-tempered channel-rim jars, and atypical elevated proportions of fine wares and white wares, notably mica-dusted beakers and bowls, fine grey poppyhead beakers, roughcast beakers from central Gaul and Colchester, white ring-necked flagons, and a range of samian ware from south and central Gaul including decorated bowls and a dish with a maker's stamp. However, the currency of some vessels in pit B may commence from the mid-1st century AD, and the

upper fill also includes several vessels of late 3rd to 4th-century AD date, including shell-tempered jars, a range of colour-coated vessels from the Lower Nene Valley, white mortaria and red-slipped bowls from the Oxford industry, suggesting a more complex formation process. Also situated beyond the northern extent of the town wall / boundary were a series of cremations whose accessory vessels would have been deposited complete in the mid-1st to 2nd century AD, including fine grey poppyhead beakers, while a single samian ware dish from central Gaul has a maker's stamp indicative of the mid- to late 2nd century AD. Other substantive groups inside the town wall / boundary assigned to this phase were contained in roadside ditches, a sequence of property boundaries, and rubbish pits that received a continuum of urban disposal. These groups included comparable fabric and form types to pit B, often with equally enigmatic or elevated levels of fine wares including samian ware, mica-dusted and white-slipped wares perhaps indicative of urban domestic consumption and status, spanning multiple episodes of deposition through the mid- to late 1st to 2nd centuries AD.

Consumption in Phase 3 (2nd to 3rd century AD) broadly represents a direct continuation of the deposition in the previous phase, notably with a group in the north property dated to the mid-2nd to mid-3rd centuries AD that includes fine ware beakers and samian ware from east Gaul, fine wares from the industries at Hadham and the Lower Nene Valley, and white-ware mortaria from the Oxford kilns. The sequence of pottery deposition into discrete rubbish pits evident in the previous phase also continues into at least the early to mid-3rd century AD with strong chronological markers in the form of samian ware from east Gaul and beakers from the Lower Nene Valley, although there is a clear component of residual material from preceding activity.

In Phase 4, deposition continues into the northern property with the supply of fabrics remaining consistent, but form types evolve and indicate a chronology in the late 3rd to 4th centuries AD, albeit also with significant levels of residual material. A substantive group from an oven and associated ditches is also tentatively assigned to Phase 4 based on rare Late Roman vessels, but the bulk of the group is more consistent with Phase 3 (mid- to late 1st to 2nd century AD) and may not be residual.

Through Phases 3, to 4 pottery supply to the site is dominated by approximately equal proportions of locally produced shell-tempered wares and sandy grey wares (Table 3), but a very wide range of fabric types are present, reflecting its status as an urban consumer. In the 2nd to early 3rd centuries AD, this includes considerable input from *Verulamium*, and possibly Godmanchester, in the form of white ware vessels, mainly reed-rim bowls but also more idiosyncratic forms such as probable candle

sticks and triple vases; while fine grey poppyhead beakers and other fine wares, including samian ware, imported and regionally-traded colour-coated wares are well represented. However, the dominant vessels remain coarse wares in the form of channel-rim, lid-seated jars in shell-tempered ware and a range of common utilitarian jars, dishes and bowls in sandy grey ware. Several complete or near-complete vessels were recorded, representing vessels deliberately buried as containers for cremations or as accessory goods. Other specialist wares in the form of amphorae and mortaria are also modestly represented.

Methodology

The pottery was quantified by sherd count and weight (g), with fabrics analysed at x20 magnification and all data entered into a Microsoft Excel spreadsheet that forms part of the site archive. This was carried out in accordance with the Standard for Pottery Studies in Archaeology (Barclay *et al.* 2016), which complement the guidelines of the Study Group for Roman Pottery (Willis 2005). Where possible, fabric types have been cross-referenced with the National Roman Fabric Reference Collection (Tomber and Dore 1998) and the Bedfordshire Ceramic Type Series (Parminter and Slowikowski 2004, 442–97), while local or indistinguishable coarse wares were assigned an alpha-numeric code and are fully described in the report or referenced to major type sites and kiln groups in the area. Samian ware form types refer to the standardised form types / codes (Webster 1996), with figure types abbreviated as O.XX (Oswald 1936–7). The pottery fabrics are described (Table 4), and the fabrics quantified (Table 5) with a catalogue of the pottery entered into a Microsoft Excel spreadsheet that forms part of the site archive.

Roman Pottery

A total of 54 fabric groups were identified (Tables 4 and 5), including very rare sherds of handmade Iron Age fabric (Q1), but entirely representing a complex pattern of domestic, commercial, funerary and possibly industrial use on the edge of a Roman town, whose chronology appears to span the mid-1st to 4th centuries AD. Pottery supply to Sandy may have been heavily influenced by its location on the River Ivel, and major Roman roads to the north towards Godmanchester and the south towards Baldock (and thus *Verulamium*); providing ample access to several major pottery industries (as well as economic gains, other crafts and consumables), thus demonstrating a wide ‘supply base’ around a small town not associated with extensive Roman kilns. Early Roman kilns have previously been recorded along the River Ivel around Sandy, as well as along the Great Ouse, in the Kempston, Great Barford and Bedford area, therefore these production sites may have produced some of the local coarse wares in the assemblage, in particular the grog-tempered and black-surfaced wares (SOB GT1 and BSW2). However, it appears that a high proportion, if not all of the common shell-tempered wares (ROB SH) may have been produced c. 23–25km to the west in the Ousel Valley and at Harrold, where a major Roman pottery industry developed. It is likely that high volumes of pottery, including amphorae and specialist wares, could have transported along the local rivers, both as containers and as distinct products, and with them may have come many of the wide range of fine wares in the assemblage.

Samian ware was clearly being imported from the mid- to late 1st century AD from south Gaul although no clearly dated early products could be identified from this source. The increase in samian supply / consumption coincides

Fabric	Sherd Count	% Sherd Count	Weight (g)	% Weight	R.EVE	% R.EVE
Samian ware	236	3.06	3,397	2.2	5.87	7.35
Imported fine ware	53	0.69	680	0.44	2.35	2.94
Romano-British fine ware	545	7.06	4,599	2.98	8	10.02
White and white-slipped wares	749	9.7	13,297	8.62	13.18	16.51
Iron Age coarse ware	2	0.03	30	0.02	0	0
Sandy grey wares	2218	28.71	29,843	19.35	16.73	20.96
Grog-tempered wares	830	10.74	19,744	12.8	4.07	5.1
Shell-tempered wares	1939	25.1	54,087	35.07	19.24	24.1
Other ‘local’ coarse wares	837	10.83	11,765	7.63	7.13	8.93
Regional coarse wares	167	2.16	3,945	2.56	2.27	2.84
Amphorae	125	1.62	11,482	7.45	0.24	0.3
Mortaria	19	0.25	1,256	0.81	0.75	0.94
(Post-medieval pottery)	5	0.06	94	0.06	0	0
Total	7725	100	154,219	100	79.83	100

Table 3: Summary quantification of fabric groups

Fabric Code	Beds. Type Series Code	Fabric Name / Description
Samian ware		
LGF SA	R01B	La Graufesenque samian ware
MON SA	R01B	Montans samian ware
LMV SA	R01A	Les Martres-de-Veyre samian ware
LEZ SA2	R01A	Lezoux samian ware 2
RHZ SA	R01C	Rheinzabern samian ware
TRI SA	R01C	Trier samian ware
Imported fine ware		
CNG BS	R04A	Central Gaulish black-slipped (Rhenish) ware
MOS BS	R04A	Moselkeramik black-slipped (Rhenish) ware, probably from Trier
KOL CC	R04C	Lower Rhineland (Cologne) colour-coated ware
CNG CC1	R04D	Central Gaulish colour-coated ware
Romano-British fine ware		
UNS MD	R02	Mica-gilded wares. Orange surface, redder margins and a mid-grey core (golden mica dusting). Inclusions of common quartz (<0.2mm) with sparse black-dark red iron-rich angular grains (<0.5mm)
COL CC2	R04E	Colchester (late) colour-coated ware
LON MA	R04-	London Marbled ware[1] a pure white, hard fabric with an orange red marbled slip on both surfaces; more likely produced in London although similar, possibly slightly coarser marbled fabrics are speculated to have been produced at <i>Verulamium</i> .
GRF1	R06C	Fine grey ware. Mid-grey throughout, sometimes slightly darker core. Inclusions comprise common-abundant fine quartz (<0.1mm) with occasional black iron ore (<0.25mm). A hard, smooth fabric. Possibly from Upper Nene Valley / N'hants kilns, maybe also Bucks-N'hants border.
OXF1	R17	Oxidised fine ware 1. Pale orange-pink to mid-orange surfaces fading to a mid-orange core. Inclusions comprise common quartz and sparse red / white clay pellets (all <0.25mm). A smooth / powdery fabric; probably from a Northamptonshire source.
OXF2	R30	Fine micaceous type (orange surfaces over a grey core)
LNV CC	R12B	Lower Nene Valley colour-coated ware
OXF RS	R11D	Oxford colour-coated ware
White and white-slipped ware		
UNS WH1	R03A	White ware (almost certainly of <i>Verulamium</i> origin, but possibly including rare sherds of a local N'hants., Bucks. or Godmanchester source). White to off white, sometimes with a pale orange core. Inclusions comprise common quartz (generally <0.25mm, occasionally to 0.5mm) with sparse red / black iron-rich grains (generally <0.25mm, occasionally to 2.5mm). L1-2?
GOD WH?	R03D	White ware, with fine shell / calcareous grains; potentially from a Godmanchester source
UNS WH2	R03	Fine white ware. Off-white surfaces, often with a slight grey-green tinge. Inclusions comprise sparse black iron-rich grains (0.1-0.75mm) with occasional quartz (<0.5mm) and shell / calcareous grains (<3mm). Hard with a smooth to slightly abrasive feel. Probably a fine variant of the <i>Verulamium</i> fabric.
UNS WS2	R05D	White-slipped ware. Pale orange surfaces over a mid-grey core, with a matt white external slip. Inclusions comprise common fine quartz (<0.1mm, with occasional polycrystalline grains to 0.5mm) and sparse round red iron-rich pellets (<0.5mm). A hard smooth fabric
UNS WS1	R06H	White-slipped grey ware. Dark grey surfaces over a mid-grey core, with a matt white slip over the external surfaces and internal rim. Inclusions comprise common translucent quartz (0.1-0.5mm, some polycrystalline) with occasional black iron-rich flecks (<0.2mm). A hard slightly abrasive fabric, where not slipped; probably local.
LNV PA	R12C	Lower Nene Valley parchment ware
OXF WH	R11A	Oxford white ware
Hand-made Iron Age coarse ware		
Q1	F29	Handmade sand-tempered ware. Dark red-black surfaces over a thick dark grey core. Inclusions comprise common-abundant sub-angular quartz (0.25-0.5mm), sparse shell and clay pellets (<2mm), and sparse mica.
Sandy grey ware (predominantly local but may include regional sources)		
GRS1	R06	Sandy grey ware. Mid-grey surfaces and core. Inclusions comprise common quartz and sparse black iron-rich grains (both <0.25mm), with common fine mica. Hard with a slightly powdery finish

Table 4: Roman fabric codes and descriptions

Fabric Code	Beds. Type Series Code	Fabric Name / Description
Grog-tempered wares		
SOB GT1	F06B	Grog-tempered ware. Red-orange to dark red-brown surfaces over a mid-dark grey core. Inclusions comprise common grog (<1.5mm) and sparse quartz (<0.5mm). Wheel or hand-made, with a slightly soapy feel
SOB GT2	F06A	Fine grog-tempered ware. Red-orange surfaces over a dark grey core. Inclusions comprise common grog and sparse quartz (both <0.5mm)
Shell-tempered ware (wheel made)		
ROB SH1	R13	Roman shell-tempered ware / Black to dark red-brown. Inclusions of common–abundant shell (0.5–3mm, occasionally to 5mm)
Other 'local' coarse wares		
BSW1	R07B	Sandy black ware; local
BSW2	R07D	Romanising / black-surfaced grey ware 1 (wheel made). Black surfaces, oxidised margins and a mid-grey core. Inclusions comprise common quartz (0.1–0.5mm), sparse iron-rich grains and grog (<1mm).
GRC	R06E	Calcareous grey ware
GRG	R06F	Grog and sand grey ware
OXS1	R05A	Orange sand-tempered type
OXS2	R15	Smooth orange ware
Regional coarse wares		
LVN GW	R06A	Lower Nene Valley (white-bodied) grey-slipped ware[2]
DOR BB1	R07A	Black-burnished ware 1; Dorset?
BB2	R07G	Black-burnished ware 2; relatively fine fabric variant, probably a Thameside source (Cliffe / Mucking?)
PNK GT1	R09A	Soft pink grog-tempered ware. Pale orange-pink surfaces and slightly darker margins fading to a mid-grey core. Inclusions comprise sparse prominent grog (generally <3mm, occasionally larger), sparse quartz and iron-rich grains (<0.5mm). Soft to moderate hardness, frequently with grog protruding from surface. Production suggested in the Ouzel valley near Milton Keynes[3]
UNS BU	R10	Buff ware
HAD RE1	R22B	Hadham reduced ware
HAD OX	R22A	Hadham oxidised ware
HOR RE	R06-	Horningsea reduced ware[4]
DER CO	R06-	Derbyshire coarse ware (Tomber and Dore 1998, 125), sparse–common ill-sorted quartz, sparse black iron-rich grains and grey clay pellets (all <0.5mm). Very hard
Amphorae		
BAT AM1	R19B	Baetican (Early) amphorae 1 (Tomber and Dore 1998, 84); Haltern 70 amphorae
BAT AM2	R19A	Baetican (Late) amphorae 2 (Tomber and Dore 1998, 85); Dressel 20 amphorae
CAD AM	R19B	Cadiz amphorae (Tomber and Dore 1998, 87)
Mortaria		
LVN WH (M)	R12A	Lower Nene Valley mortaria
UNV WH (M)	R03?	Upper Nene Valley white ware mortaria (Tomber and Dore 1998, 120)
OXF WH (M)	R11E	Oxford white mortaria (Tomber and Dore 1998, 174)
OXF WS (M)	R11E	Oxford white-slipped mortaria (Tomber and Dore 1998, 177)
VER WH (M)	R33	Verulamium region mortaria
?HAD WS (M)	R21	Unsorted white-slipped mortaria; dark grey surfaces and a mid-grey core, beneath a matt white slip. Inclusions comprise common well-sorted translucent rounded quartz and occasional pale grey clay pellets (all 0.1–0.25mm). Trituration grits are of common rounded quartz and sparse red iron-rich grains (?sandstone) (both 1.5–2.5mm). The hard fabric and a slightly abrasive and pimply surface. Possibly from a Hadham source.

Table 4: Roman fabric codes and descriptions (cont)

Fabric	Sherd Count	% Sherd Count	Weight (g)	% Weight	R.EVE	% R.EVE
Samian ware						
LGF SA	9	0.12	39	0.03	0.1	0.13
MON SA	1	0.01	45	0.03	0	0
LMV SA	49	0.63	1,043	0.68	1.34	1.68
LEZ SA2	160	2.07	2,063	1.34	3.86	4.84
RHZ SA	14	0.18	160	0.1	0.35	0.44
TRI SA	3	0.04	47	0.03	0.22	0.28
Imported fine ware						
CNG BS	16	0.21	461	0.3	1.5	1.88
MOS BS	21	0.27	125	0.08	0.25	0.31
KOL CC	2	0.03	9	0.01	0	0
CNG CC1	14	0.18	85	0.06	0.6	0.75
Romano-British fine ware						
UNS MD	96	1.24	1,165	0.76	1.52	1.9
COL CC2	20	0.26	161	0.1	0.75	0.94
LON MA	1	0.01	3	0	0	0
GRF1	247	3.2	1,636	1.06	4.32	5.41
OXF1	23	0.3	169	0.11	0.22	0.28
OXF2	2	0.03	7	0	0	0
LNV CC	145	1.88	1,281	0.83	1.04	1.3
OXF RS	11	0.14	177	0.11	0.15	0.19
White and white-slipped wares						
UNS WH1	489	6.33	7,753	5.03	9.2	11.52
GOD WH?	39	0.5	1,062	0.69	0.8	1
UNS WH2	15	0.19	143	0.09	0.65	0.81
UNS WS2	180	2.33	3,987	2.59	2.04	2.56
UNS WS1	20	0.26	292	0.19	0.34	0.43
LNV PA	3	0.04	11	0.01	0.15	0.19
OXF WH	3	0.04	49	0.03	0	0
Hand-made Iron Age coarse ware						
Q1	2	0.03	30	0.02	0	0
Sandy grey ware, predominantly local						
GRS1	2,218	28.71	29,843	19.35	16.73	20.96
Grog-tempered wares						
SOB GT1	816	10.56	19,630	12.73	3.87	4.85
SOB GT2	14	0.18	114	0.07	0.2	0.25
Shell-tempered ware (wheel-made)						
ROB SH1	1939	25.1	54,087	35.07	19.24	24.1
Other 'local' coarse wares						
BSW1	536	6.94	6,771	4.39	5.08	6.36
BSW2	155	2.01	1,743	1.13	0.6	0.75
GRC	26	0.34	540	0.35	0	0
GRG	38	0.49	1,454	0.94	0.8	1
OXS1	67	0.87	1,005	0.65	0.65	0.81

Fabric	Sherd Count	% Sherd Count	Weight (g)	% Weight	R.EVE	% R.EVE
OXS2	15	0.19	252	0.16	0	0
Regional coarse wares						
LNV GW	23	0.3	484	0.31	0.15	0.19
DOR BB1	3	0.04	73	0.05	0.12	0.15
BB2	75	0.97	1,503	0.97	1.45	1.82
PNK GT1	4	0.05	400	0.26	0.1	0.13
UNS BU	6	0.08	52	0.03	0	0
HAD RE1	42	0.54	884	0.57	0	0
HAD OX	11	0.14	277	0.18	0.1	0.13
HOR RE	2	0.03	187	0.12	0.1	0.13
DER CO	1	0.01	85	0.06	0.25	0.31
Amphorae						
BAT AM1	11	0.14	1113	0.72	0.14	0.18
BAT AM2	113	1.46	9992	6.48	0	0
CAD AM	1	0.01	377	0.24	0.1	0.13
Mortaria						
LNV WH (M)	7	0.09	370	0.24	0.15	0.19
UNV WH (M)	6	0.08	447	0.29	0.25	0.31
OXF WH (M)	2	0.03	232	0.15	0.25	0.31
OXF WS (M)	1	0.01	19	0.01	0	0
VER WH (M)	2	0.03	172	0.11	0.1	0.13
?HAD WS (M))	1	0.01	16	0.01	0	0
Post-medieval glazed red earthen ware (unstratified / intrusive)						
(GRE)	-5	-0.06	-94	-0.06	0	0
Total	7,725	100	154,219	100	79.83	100

Table 5: Quantification of Roman fabric types

with the 2nd-century AD peak of production in the major central Gaulish factories (LMV SA and LEZ SA2). Economic power (or supply) appears to have dwindled by the mid-3rd century AD, with little samian ware supplied from east Gaul, and the bulk of Romano-British fine wares also dating to the early 2nd to mid-3rd centuries AD, with only sparse quantities from the Lower Nene Valley (LNV CC) and Oxford (OXF RS) potentially extending into the 4th century AD. Also imported from the continent were amphorae, with at least three types from various parts of southern Spain indicative of links with the major trading centres in the region. In the Early Roman period, up to the mid- to late 2nd century AD, fish sauce (*garum*) and cooking wine (*defrutum*) may have arrived from Cadiz and Baetica, with the latter also supplying olive oil during this period, potentially into the 3rd century AD. Other specialist wares include mortaria, predominantly drawn from the major industries situated in adjacent regions to the site, well connected by river or road, including *Verulamium*, the Upper and Lower Nene Valleys, as well as Late Roman mortaria from the major industry at Oxford.

Discussion of Fabric Groups

Samian Ware (Figure 19)

Samian ware accounts for 3.06% of the assemblage by sherd count, consistent with the proportions associated with ‘smaller civil sites,’ especially those on major arterial routes between ‘major civil centres,’ whose inhabitants acquired only limited quantities despite the frequency of goods passing through (Willis 2005: 7.2.5). Only a very small proportion of this is from south Gaul (LGF SA and MON SA), including isolated examples of Dr.27 cups and Dr.18/31 dishes (Table 6) typical of the latter half of the 1st century AD, into the early 2nd century AD. The LGF SA includes small sherds of a probable Dr.29 bowl in linear feature A4 and a Dr.30/37 bowl in ditch D6 that exhibit the fractured edges of unidentifiable ovolos; however, ditch D24 contained a body sherd from a Dr.30/37 bowl with a ‘replacement’ ovolo in which the classic egg design is replaced by a double medallion whose outer circle is frilled (probably RGMZ serial no. 3000340).

The vast majority of the samian ware is from central Gaul, mainly Lezoux (LEZ SA2), but also including a substantial and distinctive component from the early 2nd-century AD factories at Les Martres-de-Veyre (LMV SA). Unfortunately, Dr.30/37 bowls in subsoil (920) and feature P10 are fractured above the ovolo and decorated zone, but a Dr.30R bowl with two zones of rouletted decoration is a notable presence in pit B, fill (99). The bulk of the LMV SA is comprised of plain ware Dr.18/31 dishes, including the Dr.18/31R variant, with sparse Dr.27 cups with double-curved walls (Table 6), typical of the early 2nd century AD. One of the Dr.18/31 dishes is represented by a base in pit

B, fill (48) (RF107), stamped [VIDVCVSF] (V133), die 5b/d Viducus ii, dated c.AD 100–130 (Figure 19: V133). A further LMV SA Dr.18/31R dish was recovered (V129) approximately three-quarters complete from posthole PH10 (RF105) and was stamped [ROPPUSFE]; die 1a of Roppus ii, dated c.AD 110–135 (Figure 19: V129). Perhaps more intriguingly it had been extensively repaired, including four intact lead rivets (staples) variously folded through the centre and edge of the base, and the walls to reconstruct the vessel after it was broken in antiquity. The incidence of repair of samian ware tends to be higher in smaller civil centres, sometimes attributed to the marketing of ‘seconds,’ but this is a less than convincing argument here, rather perhaps the specialist skills of non-ferrous metal workers known in Sandy made facilitating repair easier, with shallow plates / dishes second only to mould-decorated bowls chosen for repair in smaller civil centres (Willis 2005, 11.5–7).

The economic flourishing of the site or that of conspicuous disposal or deposition in the 2nd century AD is reflected by the predictable predominance of samian ware from Lezoux (LEZ SA2), the ‘super-industry’ exporter of samian ware during that period. A total of 52 LEZ SA2 vessels were recorded, of which approximately one third were mould-decorated bowls that were almost, if not entirely of Dr.37 type (Table 6). Decorated and diagnostic fragments from three Dr.37 bowls are present in pit B (fills 48 and 78) and suggest the feature remained open or in use into the mid- to late 2nd century AD (Antonine period). One has a trident-tongue ovolo (the tongue truncates the outer border), above a wavy line border and a crowded panelled design incorporating astralagus and rosette stamps (as termini or filler). Stylistically, this is possibly the work of Servus iii or Cintusmus. A second exhibits the hindquarters of a running animal, probably a leopard (O.1541–2?); and a third has a squat ovolo with a circular-blob terminus to the left, above a design incorporating an unidentified animal and a medallion containing a sphinx (O.853/4?). In other features, a Dr.37 bowl in ditch D7 exhibits an ovolo with an applied rosette terminus that may belong to Potter X-5 (c.AD 125–145); while the fragment from pit P42 exhibits an abraded panelled design with rosette terminals that possibly includes the figures of a nymph and dolphin (O.2382? and 339?). These figure types were used by a host of mid- to late Antonine potters, most likely Paternus, but others including Cinnamus, Lullinus ii and Casurius ii all remain possibilities. The remaining LEZ SA2 Dr.37 bowls exhibit less diagnostic decoration, with sherds in ditches D4, D6, pits P53 and subsoil (2) exhibiting partial borders, decorative motifs or figures (specifically legs) that are insufficient to allow further identification. That said, a body sherd in pit P17 exhibits a panelled design and the legs of a seated figure, almost certainly Apollo (O.83), used by numerous Trajanic-Antonine potters at Lezoux, including Arcanus and Cinnamus. The body sherd in pit P53, which exhibits a partial stirrup leaf also has a post-firing repair hole through it, as do Dr.37 rim / plain zone

Form Type	Vessel Type	LGF SA	MON SA	LMV SA	LEZ SA2	RHZ SA	TRI SA	Total
Dr.29?	Mould-decorated bowl	1 (-)	-	-	-	-	-	1 (-)
Dr.30 or Dr.37		2 (0.05)	-	2 (0.10)	1 (0.05)	-	-	5 (0.20)
Dr.30R		-	-	1 (0.05)	-	-	-	1 (0.05)
Dr.37		-	-	-	14 (0.43)	-	-	14 (0.43)
Dr.18/31	Shallow dishes with bead rims	-	1 (-)	6 (0.40)	9 (1.78)	-	-	16 (2.18)
Dr.18/31R		-	-	3 (0.60)	-	-	-	3 (0.60)
Dr.18/31 or Dr.31		-	-	-	3 (0.15)	-	-	3 (0.15)
Dr.18/31R or Dr.31R		-	-	-	2 (-)	-	-	2 (-)
Dr.31		-	-	-	3 (0.35)	1 (0.10)	-	4 (0.45)
Dr.42	Dish	-	-	1 (0.07)	-	-	-	1 (0.07)
Dr.79		-	-	-	-	1 (0.05)	-	1 (0.05)
Dr.27	Cup	1 (0.05)	-	3 (0.12)	1 (-)	-	-	5 (0.17)
Dr.33		-	-	-	9 (0.50)	2 (0.20)	2 (0.15)	13 (0.85)
Dr.35		-	-	-	1 (0.05)	-	-	1 (0.05)
Dr.36	Bowl	-	-	-	2 (0.20)	-	-	2 (0.20)
Dr.36/ Curle 11		-	-	-	3 (0.20)	-	-	3 (0.20)
Curle 11		-	-	-	1 (0.05)	-	-	1 (0.05)
Dr.38		-	-	-	2 (0.10)	-	1 (0.07)	3 (0.17)
Dr.45?	Mortaria	-	-	-	-	1 (-)	-	1 (-)
Total		3 (0.05)	1 (-)	16 (1.34)	52 (3.86)	5 (0.35)	3 (0.22)	79 (5.67)

Table 6: Quantification of samian ware form types by minimum number of vessels (R.EVE) per fabric

sherds in posthole PH26 and as unstratified material, and as does a footing base in ditch D7. This strongly suggests that these bowls were repaired with similar reasoning to the Dr.18/31R bowl (above).

The LEZ SA2 plain ware presents a very consistent pattern, dominated by Dr.18/31 dishes with emerging Dr.31 types reflecting a chronology bridging the mid-2nd century AD, and the common Dr.33 conical cup superseding the earlier Dr.27, typical of 2nd-century AD consumption patterns (Table 6), as previously evaluated by Willis (2005: 5.3.2.3 and 5.3.2.6). Foremost amongst the examples of Dr.18/31 dishes is a complete example (V140) contained in pit C1 (RF3), which represents a cremation accessory vessel. The dish is fairly pristine with no wear and minor 'abraded' circles visible on the interior floor and underside of the footing, from where the dish was stacked during firing. This dish is stamped [CENSORINI], die 1b of Censorinus ii, c.AD 160–190, corresponding with the mid- to late Antonine date of the decorated Dr.37 bowls. Furthermore, pit P6 (inc. RF108) contained the bases of two stamped Dr.18/31 dishes, one illegible (abraded) and the other, V1, reading [VAG...], probably die 3a or 4a of Vagiuro (Vagirus), dated c.AD 155–185 (Figure 19: V1); while a partial unclear stamp in ditch D6 (RF109; V131) may end [...IXM], possibly die 4 of Divixtus, c.AD 145–175 (Figure 19: V131). The common Dr.33 cups appear united by exhibiting an internal offset to the rim and an external mid-body groove, but exhibit modest variability in size

and height, with an example from subsoil (2) a fairly small variant. Two Dr.33 bases in pits P30 (RF110) and P53 (RF106) respectively exhibited makers' stamps also consistent with a mid- to late Antonine chronology. The former (V54) read [MAIORIS] (with a dot as the crossbar to the A, and an elongate S; Figure 19: V54), die 6b of Maior I, c.AD 170–200; and the latter (V80) read [PRIMANI], die 6d of Primanus iii, c.AD 160–200 (Figure 19: V80).

The LEZ SA2 exhibits a minor degree of variety of plainware, also including sparse examples of form types relatively common in the general repertoire, in the form of semi-hemispherical and hemispherical bowls of Dr.36/ Curle 11 type or Dr.38 type. Those in the former Dr.36/ Curle 11 range are frequently defined by fragments of flange exhibiting trailed leaf decoration, though it is notable that examples in pit P3 and residually in the Sunken Featured Building have small holes drilled through the upper walls, potentially to facilitate hanging or possibly for repair similar to the Dr.37 bowls. In contrast to being repaired, the base of a Dr.38 bowl in pit B exhibits the slip worn away on the interior floor, but not the walls, suggesting it was used as a small mortar (for spices or cosmetics), a not uncommon phenomenon for this type of bowl. A relatively high incidence of riveting, repair and secondary use of samian ware has previously been recorded at Sandy (Bedfordshire County Archaeology Service 1995, 20) and appears equally true in this assemblage, consistent with patterns in smaller civil centres (see above).

Samian ware imported from east Gaul (RHZ SA and TRI SA) appears to maintain a focus on the common Dr.33 cups, with the paucity of Dr.31 dishes (Table 6) slightly at odds with the general pattern of importation and the previous consumption of Dr.18/31 types, potentially suggesting a decline or shift in consumption or economy in the late 2nd to early 3rd centuries AD, rather than a rise in an alternative fine ware product. The presence of a TRI SA Dr.38 bowl in pit P53 is consistent with the LEZ SA2, while an isolated RHZ SA Dr.79 dish in pit P42 may represent a relatively ‘early’ east Gaulish import. Also intriguing is a body sherd of samian ware (RHZ SA) mortaria in pit P70, probably from a Dr.45 type, which exhibits heavily worn white quartz trituration grits, suggesting extensive or robust use prior to deposition, most likely post-dating the late 2nd century AD. Based on the ratios of samian ware alone, this pattern suggests that the intensity of occupation and consumption was significant after c.AD 100 but particularly in the mid-Antonine period (mid-2nd century AD), probably declining around or shortly after c. AD 175 (Willis 2005: 5.3.2.3, 5.3.2.6), therefore postulating a shift in the type of activity or consumption in this urban area by the early to mid-3rd century AD may be a conservative estimate.

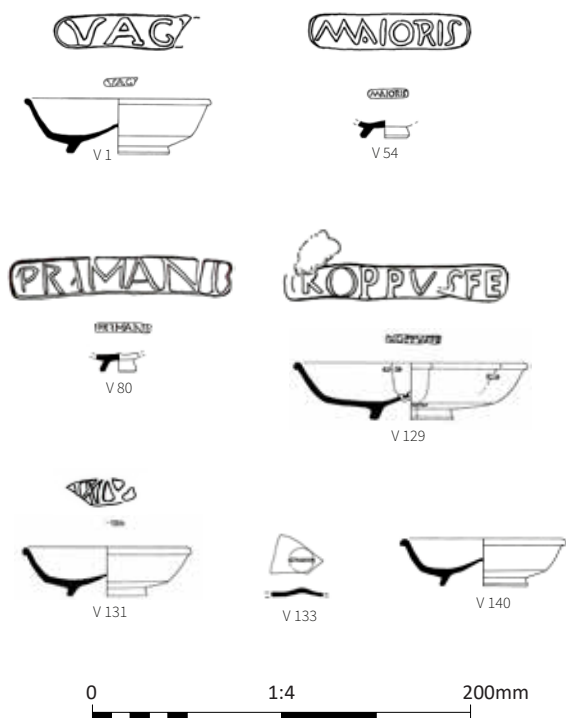


Figure 19 Samian ware

Imported Fine Ware (Figure 20)

Non-samian ware imports from the Continent collectively account for <1% of the assemblage (Table 3) and mirror the major sources of the samian ware, in that they were manufactured in central Gaul (CNG CC1 and CNG BS) and eastern Gaul (KOL CC and MOS BS), and most likely travelled along, if not shared, trade routes

with the samian ware. However, there is little evidence they contrast significantly chronologically, and they are entirely represented by beakers, potentially fulfilling quite a different function to the samian ware cups within the suite of dining apparatus (and actually more likely for imbibing). Potentially the earliest to arrive was the CNG CC1, which in ditch F4 includes body sherds from a beaker with hairpin decoration dating from the mid-1st to 2nd centuries AD; however, the remaining CNG CC1 is entirely comprised of cornice-rim beakers with roughcast clay pellet decoration that were exported from the early to mid-2nd century AD until the end of the century (Symonds and Wade 1999). Examples of these beakers were present in pit B (Figure 20: V169), pit P33 (Figure 20: V64), ditches D4 and D6, with roughcast body sherds in pit P17 and ditch D16 probably also of this type.

From a similar source, possibly including Lezoux, the CNG BS in this assemblage is striking for its high production values, including very hard firing, thin walls and metallic slip, but probably was not imported until the mid- to late 2nd century AD. The CNG BS occurs as two beaker types, the first a classic Rhenish type with a small funnel neck and bead rim, shouldered body with circular folds / indentations and three rouletted bands. A near-complete example (V53; RF111) of this mid- to late 2nd to mid-3rd-century AD type was recorded in pit P30 (Figure 20: V53), with body sherds from a further example in pit P17. The second CNG BS beaker type is bag-shaped with a tall neck above barbotine ivy scroll decoration, between rouletted bands, including extensive cross-joining sherds in pit Z8 (Figure 20: V104) with sherds from a similar beaker also in ditch F1. This type is probably contemporary with the other CNG BS beakers, but it was noted at New Fresh Wharf, London that they potentially only arrived after c.AD 180 (Richardson 1986 ‘Pottery’, 115, 1.101).

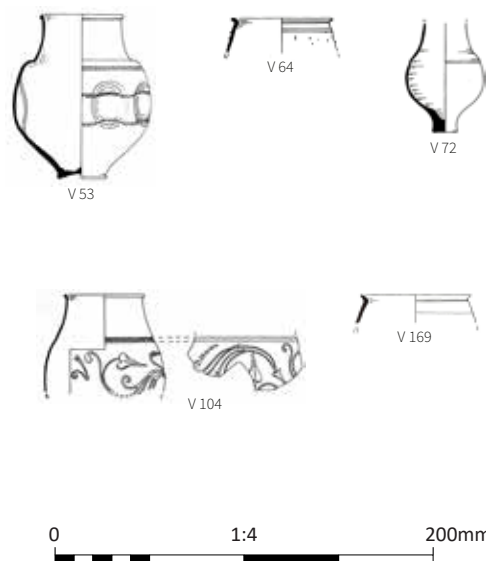


Figure 20: Imported Fineware from the Site

A large proportion of the east Gaulish fine wares may be derived from similar beakers with one or both of folded bodies and rouletted bands; also dating to the mid- to late 2nd to 3rd centuries AD. Body sherds of KOL CC conforming to this type were present in pits P34 and P55, and MOS BS in ditches F4, F1 and F6. The one exception was a MOS BS beaker also in ditch F4, which had a small flaring mouth, a tall neck, globular body and small-footed base (Figure 20: V72); combined with a very metallic glaze but otherwise undecorated (Symonds 1992, 54: Group 47). The beaker had no extant spout as is typical of the type, but as only part of the vessel was present, it may have functioned simply as a beaker, or possibly as a lamp filler or similar specialist vessel, potentially associated with some of the more exotic vessels in white ware associated with lighting.

Romano-British Fine Ware (Figure 21)

Romano-British fine wares account for approximately 7% of the assemblage by sherd count, and within these three fabric types have a substantive presence: mica-dusted wares (UNS MD), fine grey ware (GRF1) and Lower Nene Valley colour-coated ware (LNV CC); with all other types limited to a scarce presence. The relative popularity of UNS MD appears anomalous but may be in keeping with a pattern of urban consumption at Sandy and / or particular-status sites in the region (see conclusions). Nonetheless, it is a very conspicuous presence in the assemblage and has a distribution that appears very skewed and suggests a close connection with focused deposition on the site, possibly midden deposits although funerary associations cannot be entirely discounted. Of 28 UNS MD vessels, twelve were recovered from various fills of pit B, potentially a midden, two from ditch D6, three from ditch D6 and seven in pit P17 just inside the town wall, but also close to pit B outside it. UNS MD was typically produced from the mid- to late 1st to 2nd centuries AD, with kilns at *Verulamium* and in the Walbrook Valley, London, the highly likely sources (Seeley and Drummond-Murray 2005, 120). That said, other sources including Colchester and hitherto unknown local sources cannot be discounted as form comparisons with the known kiln products are varied. Several form types in this assemblage appear most common in the early to mid-2nd century AD. The most common UNS MD form type appears to be bowls that imitate samian ware form type Dr.37, of which two preserve distinctive decoration. In pit P17 is a Dr.37-type bowl decorated with circular bosses pushed out from the inside (Figure 21: V38), and in pit B body sherds from a decorated zone incorporating ring stamps framed by a diamond arrangement of narrow stab marks; both decorative traits that are closely paralleled by vessels at Baldock dated to the first half of the 2nd century AD (Rigby 1986, 247–8, 252). Further rim sherds of this type of bowl in pit B (Figure 21: V146) and associated posthole [210] in pit B were fractured above the decorated zone, while footring

base fragments in pit B, and ditch D6 are probably derived from this type of bowl. Other UNS MD bowl types present in pit B and pit P17 include types with a horizontal flange and carinated body (also common in UNS WH1), comparable to types at *Verulamium* (Wilson 1972, fig.108.312–3) and flanged types imitating samian form Dr.38. Dishes or platters appear slightly less common, but examples in pit P17 (Figure 21: V28), ditch D6 and subsoil (2) appear shallow with a slightly in-turned, tapered rim and a flat base, comparable to examples from the Walbrook Valley kilns (Seeley and Drummond-Murray 2005, 124, 136–7). UNS MD beakers appear relatively common, but it is difficult to assess frequency with multiple fragments from several examples entirely contained in pit B, including types with a cornice rim, (V156) and with a short, everted rim and folded body (elongate indentations) (Figure 21: V132). Cornice-rim types appear more common in the London kilns (Seeley and Drummond-Murray 2005, 28), while the everted rims and folded bodies appear more common at *Verulamium* and *Camulodunum* (Wilson 1972, fig.123.836; Symonds and Wade 1999: fig.5.19.40–3), as well as being well-represented in publicity material produced for the 1987–91 excavations at Sandy (but not elucidated in the associated assessment report). A fragment of a three-rib strap handle in pit P3 suggests UNS MD flagons may also have been consumed, while an UNS MD cup imitating samian form Dr.27 (V146) is paralleled at *Verulamium* (Wilson 1972, fig.120.739).

The fine grey ware (GRF1) appears broadly contemporary with the UNS MD, potentially spanning the late 1st to late 2nd to early 3rd centuries AD, but most likely common in the first half of the 2nd century AD. However, the GRF1 demonstrates a far more singular focus with regard to types, and most likely represent vessels imported from the Highgate Wood kilns, although other kilns including at Rushden, Northamptonshire produced similar vessels. The principle GRF1 vessel was the poppyhead beaker-finely burnished with a thin white external slip over which were typically rectangular or occasionally diamond-shape panels of barbotine dots (mid-grey). Potentially, up to 22 of these beakers were present; most strikingly a complete example deposited in cremation pit C1 (Figure 21: V135), a burial deposit, and identical to grave goods recorded at Warren Farm, Deepdale, Sandy (Dawson and Slowikowski 1988, 25–32). Further diagnostic rim sherds were present in pit B, pit P17, ditches D4 and D6, linears F1, RR4 and deposit (169), which sealed ditch or channel X1; while distinctive decorated body sherds were present in pit B, ditches D7, A4, D24, D22, pits P6, P18, PH2 and P53 and within the Sunken Featured Building. Less common beaker types that appear contemporary with the poppyhead types include globular beakers also with white-slipped bodies but burnished lattice decoration in oven O1 (Figure 21: V6) and ditch D6, and beakers with slightly cupped rims and decorated with a rouletted band in pit B and cremation C10 (Figure 21: V141) the latter of which was

probably deposited complete alongside other accessory vessels. Similar to the UNS MD the GRF1 included bowls imitating samian Dr.37, with examples in pit P9 (Figure 21: V10), linear D18 and ditch D22 exhibiting ring-and-dot stamp decoration that conforms to ‘London-type’ bowls in the region from several sources (including the Upper and Lower Nene Valleys); while ditch A3 contained an isolated examples of a GRF1 small narrow-neck jar (Figure 21: V79) more consistent with the products of the Rushden kilns, Northants.

The scarcer Romano-British fine wares also appear to span the late 1st / early 2nd to late 2nd/ early 3rd century AD. Of intrinsic interest is a single sherd of marbled ware (LON MA) in ditch D32, from a beaker or cup with very thin walls (3mm); a very rare occurrence and probably an Early Roman product of kilns in London (Davies et al 1994, 123), if not an import. The OXF1 does not present a homogenous group, but includes isolated examples of a globular beaker and folded beaker in pit P75 and linear F1 respectively, similar to those in UNS MD and GRF1. In contrast, in ditch D22 an OXF1 hemispherical bowl with a flanged rim that is decorated with white-painted arcs (Figure 21: V109) is closely comparable to vessels common in the Milton Keynes area and was most likely produced by kilns in the Upper Nene Valley / Northamptonshire in the latter half of the 2nd century AD. In many instances, alongside the UNS MD and GRF1 vessels was a consistent presence of colour-coated wares from Colchester (COL CC2), limited to a very narrow range of beakers either with a cornice rim and bag-shape body, or short out-curved rim and folded body; but almost entirely with fine

roughcast decoration and dating to the early 2nd to late 2nd early 3rd centuries AD (Symonds and Wade 1999, types Cam.391, Cam.396). These further support the heavy consumption and deposition of beakers on parts of the site with COL CC2 beakers present in pit B (Figure 21: V142), pits P6, P14 (V15), P16 (Figure 21: V24), P55 (Figure 21: V84), P61, ditches D6, A3 and D18 and residually within the SFB.

The colour-coated wares from the major industry in the Lower Nene Valley (LNV CC) are present in moderate quantity but present a more disparate group of form types, and while the earliest vessels may have arrived in the early to mid-2nd century AD, the bulk probably arrived over a period spanning the late 2nd to 4th centuries AD. The bulk of the LNV CC vessels are beakers, including small roughcast types in pit B and ditch D6 that may have arrived from the early to mid-2nd century. In the mid- to late 2nd to early 3rd centuries AD these may have been supplemented by cornice-rim types with bands or rouletting on the body, such as those in pits P27, P29 and ditch D35; and possibly also by beakers with more complex decoration represented by body sherds, including a hunt cup with the (partial) hand and leg of a figure in the SFB and a cluster of lanceolate leaves in ditch terminus F1. In the late 2nd to 3rd centuries AD the LNV CC beakers appear dominated by folded beakers, wither with applied scale decoration as in pit B, pit P29 and the SFB; or with rouletted bands comparable to Rhenish types in CNG BS, as in linear F3, pits F1, P69 and P73. Unlike the other fine ware beakers, the LNV CC includes types that clearly continue into the Late Roman period, notably a funnel-

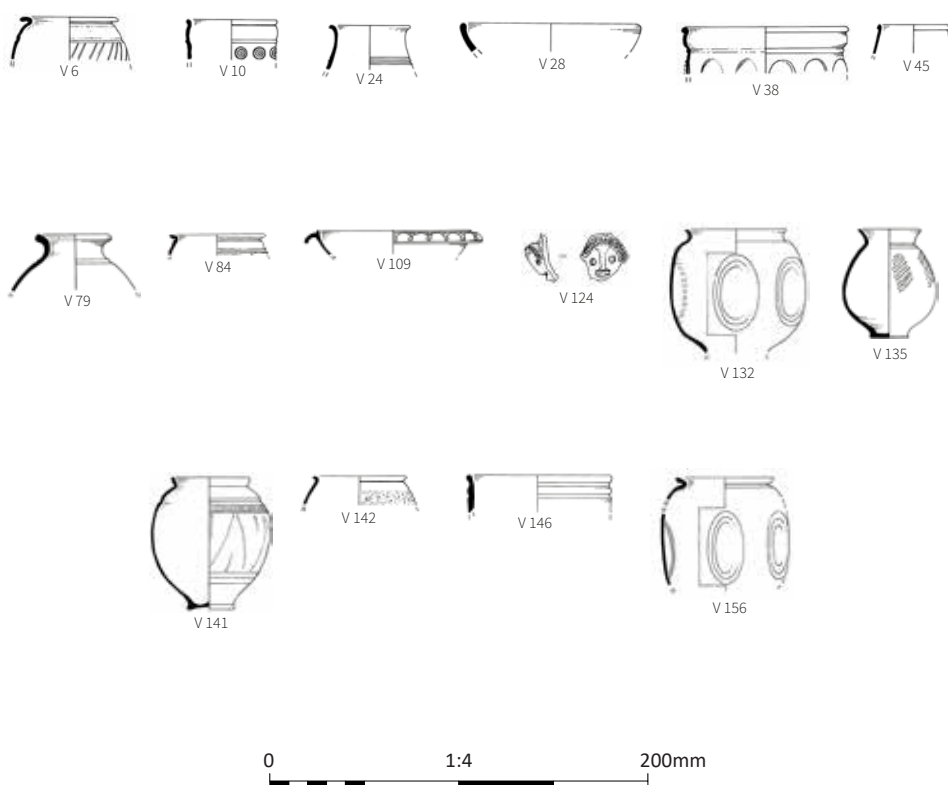


Figure 21: Romano-British Fineware from the Site

neck type with underslip vine-and-berry decoration in ditch F1 (Figure 21: V45), and it remains unclear but likely that similarly decorated body sherds in oven O1, pits P30, P61, ditches F6 and D22 also represent types of beaker most common in the (late?) 3rd to 4th centuries AD. Other LNV CC form types are rare but include a single mid-2nd to early 3rd-century AD Castor Box in D15, while flagons or jugs are represented only by the stumps of handles in pit B and linear F1. Dishes and bowls are limited to distinctive Late Roman types, in particular bead-and-flange-rim types in oven O1 and pit B, fill (77) (V159); the latter a deposit with several Late Roman vessels that is incongruous with the other lower deposits in that large feature group.

In the Late Roman period, the LNV CC may expectedly be the dominant fine ware, but it is supplemented by the common regionally-traded red-slipped ware from the major Oxford industry (OXF RS), potentially arriving from the late 3rd century AD but possibly limited to the (mid- to late?) 4th century AD. The OXF RS appears principally limited to globular / hemispherical bowls with bands of rouletted decoration (Young 2000: types C55–61), including in pit B (77), ditches D11 and F1; although an unstratified bowl also has an overhanging rim with white-painted arcing dot decoration.

White and White-Slipped Ware (Figure 22)

White and white-slipped wares are approximately as common as samian ware and the fine wares (imported and Romano-British) in the assemblage by sherd count (Table 3). They are dominated by two fabrics: UNS WH1 and UNS WS2 (Table 5), and while occasional sherds may be more local, it is almost certain that these represent the products of the extensive workshops situated around *Verulamium*; predominantly of 2nd-century AD date with some vessels possibly continuing into the early to mid-3rd century AD. As such the UNS WH1 and UNS WS2 are considered as one, demonstrating a very narrow range of common form types that are typical of the *Verulamium* industry and a few rare idiosyncratic types. A minimum of 16 bowls were recorded with reeded rims and carinated bodies, typical of the 2nd century AD. The reeded rims were typically horizontal or slightly undercut but included occasional triangular or stubby variations; however, they remained very consistently sized. UNS WH1 examples included those in ditches D8, D11, D18 (V95), D35, D22 (V125), pits P17 (Figure 22: V27), P53 and P55 (Figure 22: V85); with UNS WS2 examples in pit B, SFB fill (104), ditches D6, D7 (Figure 22: V18), RR4 and D21. The other common form type in these fabrics were flagons, almost entirely with slightly cupped, ring necks characteristic of the late 1st to mid- to late 2nd centuries AD, but exhibiting considerable variation in size. A small UNS WH1 example was recovered virtually complete as unstratified material from the cemetery area; with other UNS WH1 examples in

pit B (Figure 22: V145 and V147), pit P30, the SFB, D4, D6 and D18 (V73), (V88); with UNS WS2 examples in ditches D7, D21 and D24. Numerous further examples appear present, represented by stumps or sections of strap handle only, including further vessels in pit B, pits P14, P33, deposit (207), the SFB, F1, RR4 and D22. Also relatively common in UNS WH1 were short-neck jars, with short everted bifid rims and often a fumed exterior, a classic 'cooking pot' type vessel produced by the *Verulamium* kilns, spanning the 2nd to mid-3rd centuries AD, with examples in pit B (Figure 22: V165), pit P14 (Figure 22: V14), posthole [27] within the SFB, the fill of the SFB and ditches D6, D7 (Figure 22: V17) and A4.

The common vessel types in UNS WH1 and UNS WS2 establish a clear, conducive trade relationship and supply pattern with *Verulamium* until at least the end of the 2nd century AD, but also highlight that this major urban centre may have provided a diverse range of other vessels, both those produced there and those merely passing through as traded goods. Amongst those produced there are some rare flagon types. Pit P16 (RF27) contained a significant proportion of an UNS WS2 large two-handled flagon with a horizontal flanged rim (Figure 22: V127) that would have weighed nearly 2.5kg when empty, and is unlikely to have been produced after the mid-2nd century AD (Wilson 1972: vessels 116 and 819). Face flagons were also represented by body sherds, with an UNS WH1 examples in ditch D7 exhibiting the fairly crude ridge and crest of the nose on an applied face / mask, and an UNS WS2 example in ditch D6 (V130) exhibiting a small, applied face with small impressions forming the hairline, eyes and mouth. The latter is also fairly crude and although white-slipped, the raised areas appear to have been deliberately blackened to accentuate the contrast. It is closely comparable to an example at *Verulamium* dated to c.AD 150–155 (Wilson 1972, vessels 309/311, 705). The UNS WH1 also includes some rare, idiosyncratic forms that are nonetheless known in the repertoire of the *Verulamium* potters and perhaps highlight the niche or ritual activities being undertaken on the site, if not a signifier of a very developed urban consumption pattern. They include in pit P55 the downturned frilled flange of a tazza (Figure 22: V82), which was probably used to burn incense; and in pit P34 the small, cupped, 'socketed' rim on a stem, of a candlestick (Figure 22: V66), which are sufficiently rare to be known but poorly understood (Hull 1963, 130, fig.72.24–6), while similar projections occur as handles on postulated paterae (Seeley and Drummond-Murray 2005, 124, 263, 277). The use of tazza and lighting equipment such as candles is culturally significant and indicates a desire for artificial light beyond the typical hearths and torches, and may also signify elevated modes of dining or reading and writing; the presence of which shows a strong bias to military and urban settings (Eckardt, H. 2000, 9–12).

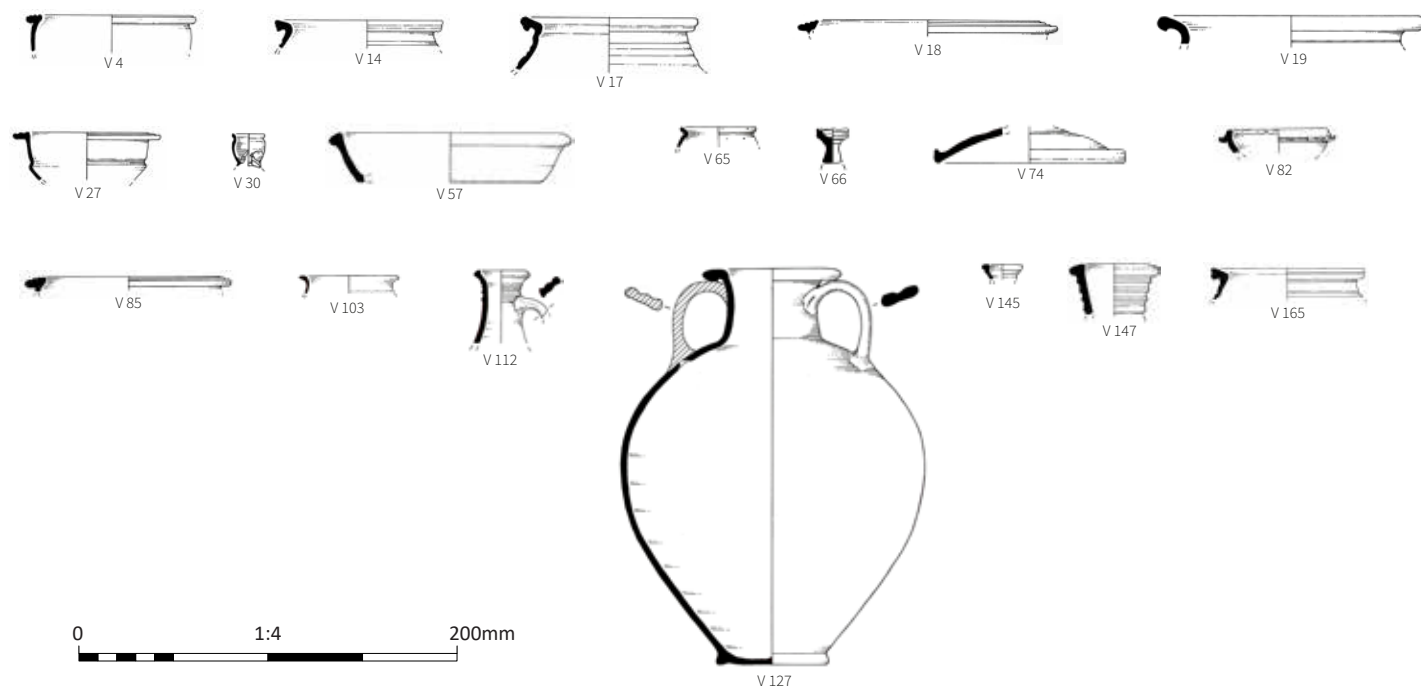


Figure 22: White and White-slipped Ware from the Site

Supplementing the *Verulamium* products is a slightly calcareous fabric that is clearly influenced by the former, and was probably produced at Godmanchester (GOD WH?). This fabric is principally comprised of bowls with reed rims, similar those in UNS WH1 and UNS WS2, but always with a stubbier rim; and with examples in large pit B (V163), pit P6 (Figure 22: V4), posthole [27] and the SFB. Production of these vessels is known at Godmanchester in the mid- to late 2nd to early 3rd centuries AD, but it is highly likely that the industry there had a broader scope. The GOD WH? also included, in linear A4, body sherds from a large flagon with dark red-brown painted decoration, in the form of a slightly sloppy vine-and-berry motif aligned vertically at intervals around the body. The regionally-traded OXF WH and LNV PA, whose industries also provided fine wares and mortaria, appear limited to flagons, albeit only represented by body sherds. The LNV PA is notable for body sherds decorated with hoops of red paint, including in pits P30, P62 and P69.

The source of the very fine UNS WH2 is unclear, but it may represent a fine variant from the kilns at *Verulamium* or in the Walbrook Valley and London, if it is not an import, or even from a single source. It includes a cornice-rim beaker in pit P33 (Figure 22: V65), and a body sherd of a flagon with red-painted decoration in pit P55 but is of intrinsic interest because of a small cup contained in pit P17 (Figure 22: V30). The cup (diameter 20mm) is thin walled with a scar towards the base that suggests it was once affixed to a basal ring that held multiple cups, potentially as part of a 'triple vase' (Symonds and Wade 1999, Cam.495) or similar multi-chambered item, potentially used for incense, offerings or even light; holding similar connotations to the tazza and candlestick (above).

The remaining UNS WS1 represents a slightly disparate group, unlikely to be from a single source, representing fine to medium grey wares with a matt white slip and often a pimply finish; probably an enhancement of locally produced sandy grey wares and potentially including some Upper Nene Valley or *Verulamium* wares. Form types are fairly generic and utilitarian, principally bead-rim 'pie' dishes in ditches P9, D6, pit P30 (Figure 22: V57) and the SFB; with deeper bowls in ditch D6 and pit P29 appearing to be plain imitations of samian ware form Dr.37. The handle stump of a flagon was also present in ditch D6, while a jar with burnished lattice decoration in pit P3 is a clear imitation of types in black-burnished ware.

Hand-Made Iron Age Coarse Ware

Two body sherds of hand-made prehistoric pottery were contained in pit P34 and ditch A3, with fabric Q1 consistent with manufacture in the middle to Late Iron Age. It is conceivable these sherds could represent the mid- to late 1st-century AD survival of pre-Roman vessels, but perhaps more likely that they are residual: incorporated and redeposited in Roman soils along with later waste.

Grog-Tempered Wares (Figure 23)

'Belgic' grog-tempered wares comprise approximately 10% of the assemblage, including a minor fine variant (SOB GT2), with the bulk a medium-coarse fabric (SOB GT1) that incorporated a significant quantity of large storage jars that may have maintained a lengthy currency in the Roman period. The production of SOB GT1-type fabrics is well attested in the local area, and it is feasible

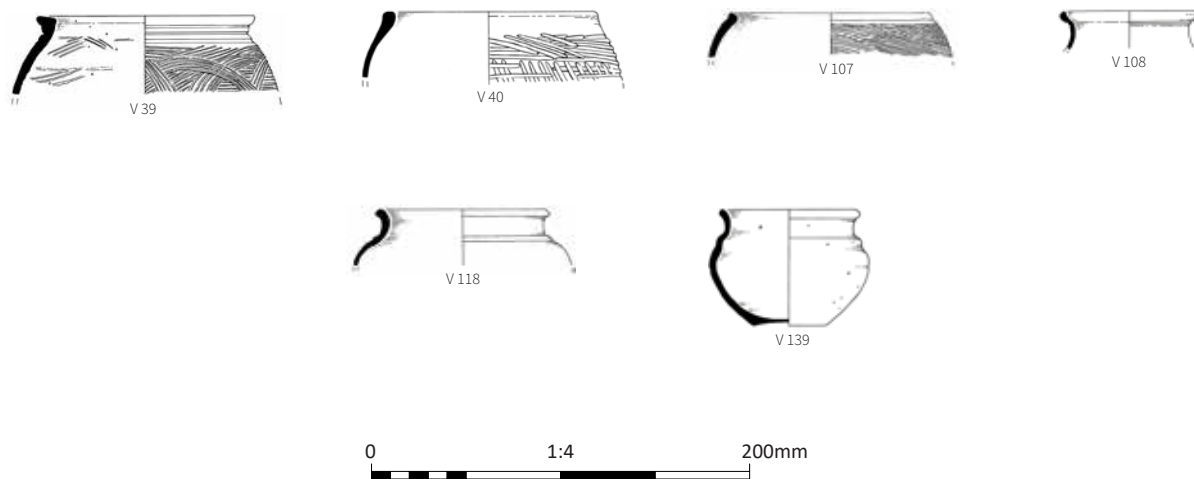


Figure 23: Grog-Tempered Wares from the Site

that they were produced on site in kiln K1. The bulk of the SOB GT1 vessels appear to date to the latter half of the 1st century AD, representing a continuation of the pre-Roman Late Iron Age ceramic tradition, though it is feasible some may span the Roman Conquest period. Intriguingly, the two vessels in kiln K1 (Figure 23: V39 and V40) were hand-made but finished on a slow wheel, comprising jars with a flat-topped or internally thickened rim and combed exterior (Thompson 1987: types C1-1 and C3) both a manufacturing and form type not represented elsewhere in the assemblage, supporting the theory the kiln may represent early activity within the excavated area. More typical of the mid- to late 1st-century AD repertoire are SOB GT1 barrel and lid-seated jars that were entirely manufactured on a slow wheel; with barrel jars in ditch D22 (Figure 23: V107), pits P68 and P70; and channel-rim lid-seated jars in ditch D21, pits P35 and P68. These jars are much scarcer than their counterparts in shell-tempered ware, suggesting SOB GT1 had a limited impact on consumer choice. A single SOB GT1 narrow-neck jar in pit P70 had a globular body decorated with a wide lattice, while sparse cordoned jars and bowl were wheel made, notably including a substantially complete example in pit C14 (V139). It is unclear if these wheel-made jars and bowls were associated with fragments of pedestal bases in ditch D22, pits P61, P67 and P70, but these may have represented relatively finely finished vessels that survived and continued into the Early Roman period. Despite the presence of these vessels, the bulk of the SOB GT1 is associated with thick-walled, heavily-tempered storage jars; often represented by robust body sherds with arcs of combed 'decoration' on the exterior. One storage jar, with a giant barrel profile is represented by sherds in both P70 and D21 and may be of 1st-century AD date. However, the remaining storage jars have robust everted bead rims, including examples in pits P13, P30, ditches D6, D15 and D35; which are most likely to have been manufactured and maintained a currency into the 2nd and 3rd centuries AD.

The finer grog-tempered variant (SOB GT2) is rare and has distinctive red-orange surfaces, a trait commonly associated with well-finished vessels produced towards the northwestern extent of common 'Belgic' pottery production, around Milton Keynes, Northampton and the Chilterns. SOB GT2 may represent a regionally-traded 'fine' fabric and appears limited to butt beakers of 1st-century AD date. Ditch D22 contained the out-turned bead rim with an internal offset of a classic butt beaker (Figure 23: V108); while PH27 contained further body sherds with hairpin decoration.

Sandy Grey Wares (Figure 24)

In eastern England, sandy grey wares are a ubiquitous major component of all pottery assemblages, and here they account for c. 28% of the assemblage by sherd count (Table 4). It is highly likely that the bulk were produced locally, probably by kilns that were specifically operated to serve Sandy, notably including an early to mid-2nd-century AD grey-ware producing kiln at Warren Villas c. 1.5km to the south (Slowikowski and Dawson 1993, 37–49), with other kilns known at Everton, Cardington and Woburn. However, despite the apparent contemporaneity, there are only very limited parallels in the GRS1 with the products identified in the Warren Villas kiln, principally the limited examples of narrow-neck jars, copies of black-burnished ware jars, and shallow, semi-hemispherical bowls paralleled in the kiln wasters (Slowikowski and Dawson 1993, 44–6, fig. 6. 1, 7.15–16, 8.29, 34). Thus, while the abundant availability of the resources required for pottery production is well-attested locally, and despite its relative homogeneity, the GRS1 may include sherds from regional centres such as Godmanchester, the Upper Nene Valley, as well as major industries such as Horningsea and *Verulamium*, although the greater likelihood is that Sandy was well-served by other grey ware kilns that remain to be located.

The range of form types in GRS1 is very consistent with the 'standard' utilitarian Roman form types one expects in the mid- to late 1st to 3rd centuries AD, though it is notable that many 'early' and 'late' types one might expect at either end of this chronological range are quite absent. The common GRS1 form types can broadly be categorized as jars, dishes, bowls and lids; with the minimum number of each comprising 41:30:17:6. Within the jars, the most common type is necked with an everted bead rim and a shoulder cordon; typically above a rounded shoulder and potentially of late 1st to 2nd-century AD date; although a couple of examples in linear A4 and pit P50 (Figure 24: V75) have slightly angular shoulders suggesting they do not post-date the early 2nd century AD. Cordons may be between grooves or ridges and with the exception of a burnished wavy line in pit P13, are entirely plain burnished. Examples of this type include those in boundary / stock Enclosure A2 (V70), ditches P9, D6, A3, F4, D22 (Figure 24: V110), D33, pits P3 and P33 (Figure 24: V63); however, many further jars are represented only by small fragments of everted bead rims, probably derived from this type but broken at a natural point of weakness and of limited diagnostic value. Less common types of GRS1 jar include lid-seated, channel-rim types in ditches

A4, A3 and A2; which are most likely copies of the common types in shell-tempered wares and probably of mid-1st to early 2nd-century AD date. In the late 1st to early 2nd (to 3rd) centuries AD, the channel-rim type was probably superseded by more finely finished types with a short, dished rim, as in pit B (Figure 24: V167), ditches D4, A2 and D24. Also present but uncommon in pit B (Figure 24: V149) and pit P57 are GRS1 jars with a short everted bifid rim, which were probably influenced by UNS WH1 types and may have originated in *Verulamium* or Godmanchester. Equally uncommon are jars imitating black-burnished ware types, although examples in oven O1 (Figure 24: V7), pit B (Figure 24: V144) and pit P16 (Figure 24: V22) with flaring rims and a mid-body zone of lattice decoration may represent types that emerge in the mid- to late 1st century AD at the earliest and are paralleled in the Warren Villas kiln (Slowikowski and Dawson 1993, 45, fig.7.15–16). The rarest jars are those with a narrow-neck, also paralleled in the Warren Villas kiln (Slowikowski and Dawson 1993, 44, fig.6.1) with isolated examples in pit B (Figure 24: V173) and pit P16 (Figure 24: V23). The jars generally exhibit little indication of wear, with only four examples exhibiting traces of soot on the exterior, suggesting they were used for cooking or a similar function. The GRS1 dishes

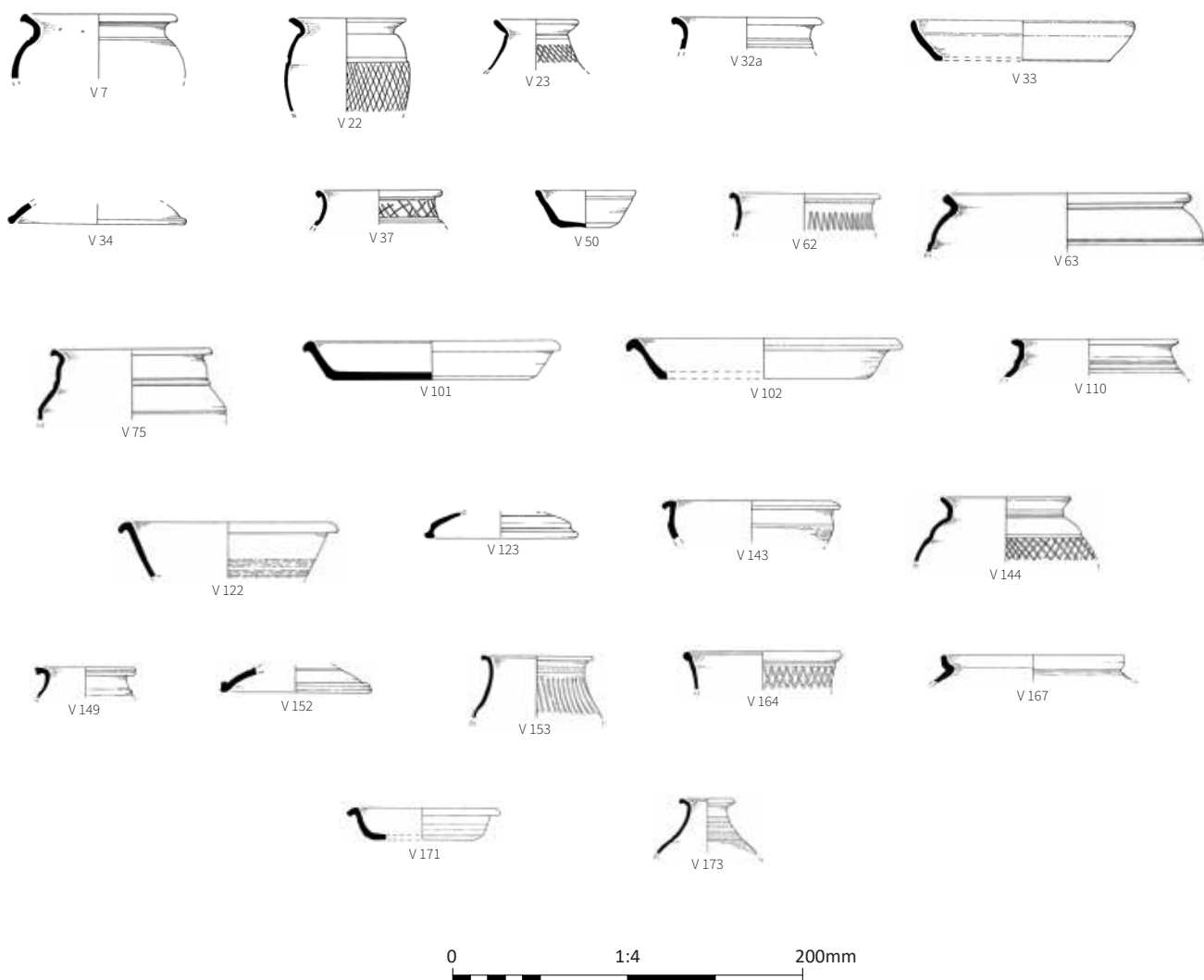


Figure 24: Sandy Grey Wares from the Site

include occasional shallow types with slightly in-turned tips to their rims, most likely derived from platter types and dating to the mid-1st to early / mid-2nd century AD, including examples in cremation C10, pit P18 (Figure 24: V33), ditch D6 and linear RR4. However, these are in the minority and the bulk of dishes exhibit a singular focus on types with a rounded to triangular-bead rim; typically one of the most common utilitarian forms in the 2nd to 3rd centuries AD. A minimum of 21 GRS1 bead-rim 'pie' dishes were recorded and where sufficient profile is extant, they appear to favour shallow dishes (Figure 24: V101 and V102), with only scarce medium (V203) or deep (Figure 24: V122) depth variants recorded. A high proportion of the bead-rim dishes has burnished interiors and exteriors, while occasional examples in the SFB and pit B (three examples, including V164, Figure 24) have burnished lattice on their exterior. The GRS1 bead-rim dishes are supplemented by low quantities of shallow plain-rim 'dog' dishes that are most likely contemporary. None of the dishes exhibit any evidence of soot or burning, thus it is probable that they were serving and eating vessels, potentially included in cremation depositions, or possibly used to present offerings such as foodstuffs.

The bowls in GRS1 exhibit a more equal range of variation. They include tall-necked variants with either burnished lattice or burnished line on the neck; unlikely to post-date the early to mid-2nd century AD; with examples in pit B, pits P17 (Figure 24: V37), P18 (Figure 24: V32a) and P33 (Figure 24: V62). The remaining types have either a reeded or horizontal rim, above a mid-body carination and are commonly burnished. They are closely comparable those produced in white ware at *Verulamium*, and some may have been produced there, or this may demonstrate the influence / input of that production centre on local potters, as at Godmanchester. These bowls are probably entirely of 2nd-century AD date, with reed-rim types including examples in pit B (Figure 24: V153), ditches D4, P9 and linear A4; and horizontal-rim types in pit B (Figure 24: V143 and V171), ditches D4, D6 and oven O1. In contrast to the dishes, sparse bowls exhibit soot under their rim and on external surfaces, suggesting they may have been used in cooking.

The function of lids in Roman consumption and cooking is intriguing, as the number of lids is always far less than the number of lid-seated vessels, thus it is postulated that many lids were wooden, or that organic cloth or plant coverings were utilized. Nonetheless the GRS1 did include lids in pit B (Figure 24: V152), pit P18 (Figure 24: V34), ditches D4, A4 and D22 (Figure 24: V123). One example was slightly domed, but the remainder had shallow splayed profiles, terminating in small bead or bifid lips. In addition to the common utilitarian types, isolated GRS1 vessels appeared to imitate form types in fine or white wares, including the robust strap handle of a flagon in pit P53, a conical cup equivalent to samian Dr.33 in pit P30

(Figure 24: V50), a cornice-rim beaker in pit B and a folded beaker in ditch F1

Shell-Tempered Wares (Figure 25)

Alongside the sandy grey ware, the second major coarseware fabric group was wheel-made shell-tempered ware (ROB SH), which accounts for approximately 25% of the assemblage (Table 3). The production of shell-tempered ware exploiting natural clay deposits containing fossiliferous shell was extensive c. 23–25km to the west, initially in dispersed early kilns along the Ousel Valley, contemporary with kilns at Harrold, which subsequently developed into a major industry that achieved a wide distribution across East Anglia in the Late Roman period. Further shell-tempered ware production has been identified in the fenland south of the River Ouse, notably at Earith, as well as in the Lower Nene Valley. Sandy most likely benefitted from good river and road connections to the Ousel Valley and Harrold area, whose kilns may be considered a 'local' source and clearly provided a large proportion of the utilitarian jars and cooking pots to the site. The most common of these jars were channel-rim lid-seated types, generally dated to the mid-1st to 2nd centuries AD, and declining thereafter. Variations in the channel-rim profile result from individual potter's manufacturing processes rather than any evolution of form, and the bulk of vessels appear to have a fairly ovoid profile with only a slight shoulder; typified by a near-complete jar placed in pit C1 (Figure 25: V136), part of a cremation burial deposit. A minimum of 65 channel-rim lid-seated jars were recorded in the assemblage, varying considerably in size, with rim diameters between 100 and 300mm, but mainly between 160–200mm (Figure 25: V150, V26, V61 and V92), demonstrating their versatility in function. The bulk of lid-seated jars are undecorated with no surface treatment, and only four examples exhibit faintly rilled bodies (i.e., V160 and V677). Possibly slightly anomalously for ROB SH channel-rim jars, only four examples in ditches D18, F3, D22 and pit P73 had soot on their exterior, suggesting the principal use of the bulk of these vessels may not have been as cooking pots, but in this instance as containers or commodities in their own right, but this may also represent a quirk of preservation as evidence of sooting appears relatively rare across the whole assemblage.

The ROB SH channel-rim lid-seated jars were supplemented by modest numbers of jars with everted bead rims; however as with the GRS1 many are limited to small rim fragments of limited diagnostic potential. Examples with grooved / rilled shoulders in pit B and the SFB appear to equate with 'early' products at Harrold, contemporary with the lid-seated jars. Conversely, jars with strongly everted, drooping triangular rims in ditch F6 (Figure 25: V71), ditch D39 and pit B (77) (V161) represent

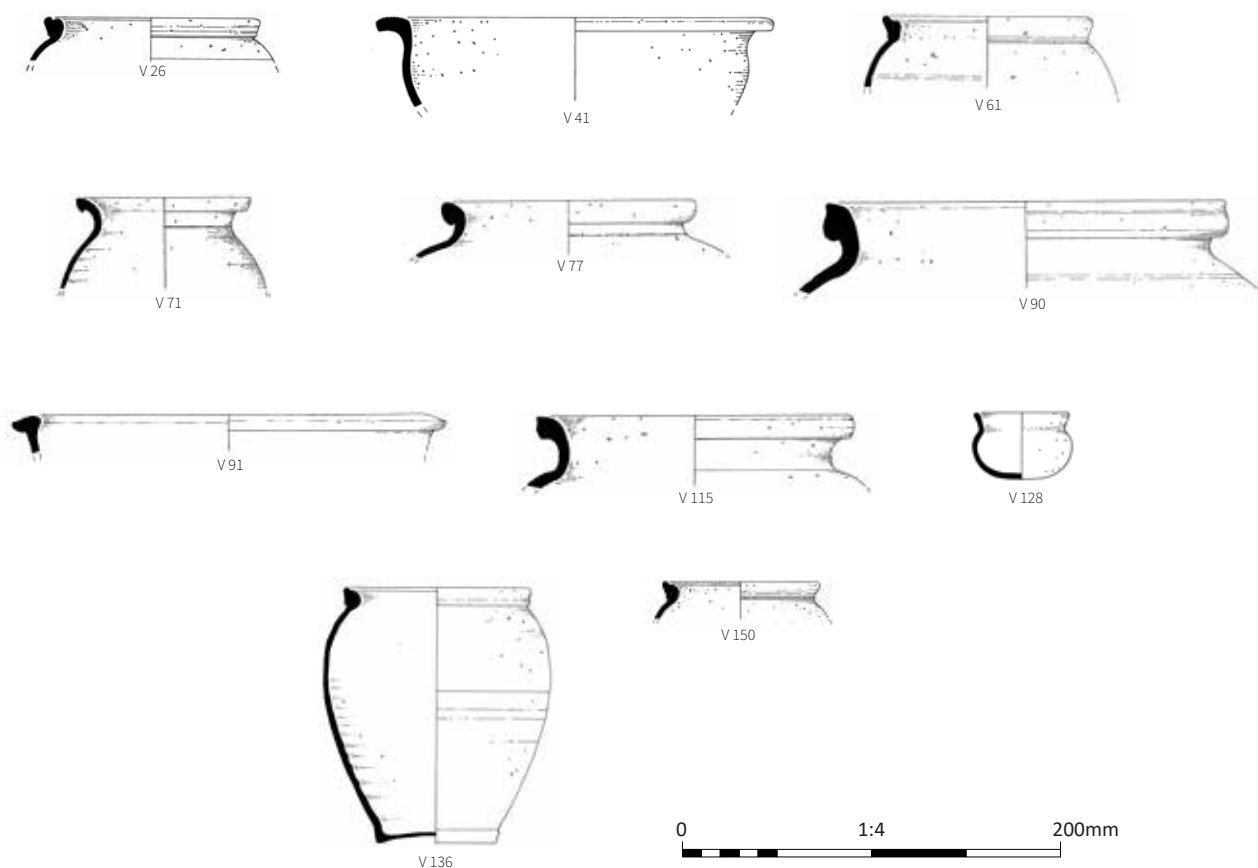


Figure 25: Shell-Tempered Wares from the Site

classic late 3rd to 4th-century Harrold products; the latter with distinctive stabbed decoration around the edge of the rim, comparable to vessels produced in the latter half of the 4th century AD (Brown 1994, 73, fig.38.321). The presence of 'late' Harrold products is confirmed by sparse, distinctive ROB SH bowls and dishes, notably large bowls with heavy flanged rims and rilled exteriors in ditches F1 (Figure 25: V41) and D18 (Figure 25: V91), as well as plain-rim dishes with incurving walls in pit B (77) (V158) and ditch F1. Only a single ROB SH1 resists being placed in this pattern, and that is a small bowl (rim diameter 100mm) that appears to have been deliberately placed (and remains complete) in pit P68 (Figure 25: V128). The bowl has a slightly everted plain rim, a weak neck and squat body; superficially suggesting a fairly Early Roman date but useful comparisons are not forthcoming, and it remains plausible that this vessel is of early Saxon origin.

A significant proportion of the ROB SH is also accounted for by robust sherds from storage jars; generally, very similar to the long-lived types in SOB GT1, and potentially used for storing commodities such as grain and water. Unfortunately, these storage jars tend to be highly fragmented, and it is possible they are over-represented with sherds from the extensive bodies of single vessels dispersed into multiple contexts. Almost all the storage jars had very robust everted bead rims, often tending towards the bulbous; consistent with storage vessels

that had a long currency, most likely spanning the Roman period. They include examples in pit B and one associated stakehole, oven O1, deposit (169), pits P3, P6, P13, P24, [617] (Figure 25: V77), ditches D6, A4 (Figure 25: V115) and D22 (V119). The only exception to this is in ditch D18, comprising a storage jar with a short neck and robust angular, faintly bifid bead rim (Figure 25: V90), a characteristic late 3rd to 4th-century AD product of the Harrold kilns.

Other 'Local' Coarse Wares (Figure 26)

Accounting for approximately 10% of the assemblage (Table 3) is a range of unprovenanced coarse ware fabrics that were most likely produced by a myriad of domestic or small-scale kilns in the local area of Sandy. Chief among them are black-surfaced reduced wares, of which one minor variant with sparse grog inclusions (BSW2) most likely represents a transitional fabric between SOB GT1 and GRS1. BSW2 vessel types are very limited, generally comprising jars with plain shoulder cordons comparable to those in GRS1, but pit P68 contained a barrel jar with burnished hoops around the body that is clearly derived from 'Belgic' precursors. The most common of these fabrics is the sandy variant of the black-surfaced wares (BSW2), which largely mirrors GRS1 but is an equally inhomogeneous group. Common form types in BSW1

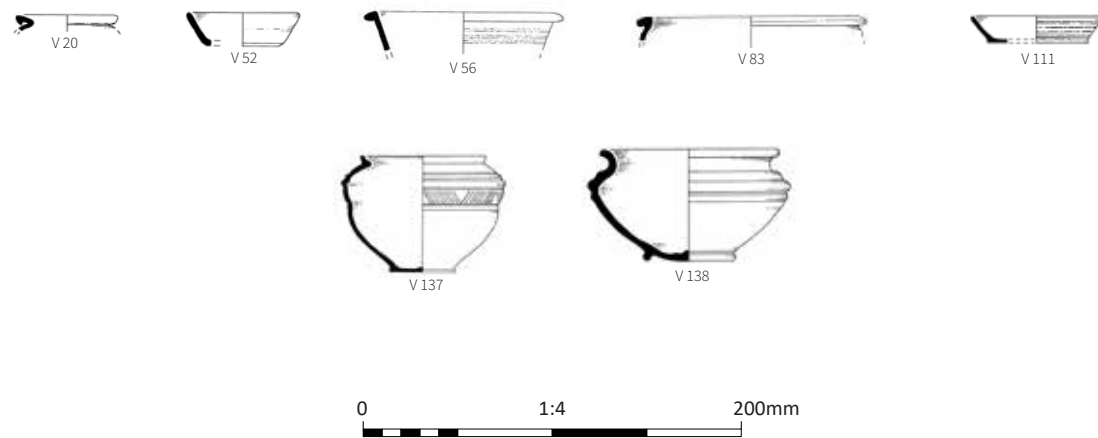


Figure 26: Other Local and Regional Coarse Wares from the Site

reflect those in GRS1 and most likely represent a less-controlled firing or deliberate fuming of surfaces; they include shallow dishes with plain or bead rims, bowls with reeded rims, jars with everted bead or slightly dished rims; all contemporary with their GRS1 counterparts. However, there are some intrinsically interesting BSW1 vessels, notably a complete jar in cremation C11 (Figure 26: V137). The jar is a wide-mouth type with a slightly dished rim and a high carinated shoulder above a cordon decorated with oblique lines; and it is unique in this assemblage. However, a comparable jar was recorded at Love's Farm, St. Neots (Lyons 2018, 222, fig.7.11.18), and as a funerary vessel on the Gt. Barford Bypass where it was interpreted as no later than the mid-2nd century AD (Stansbie 2007, 246, fig.8.11.20). Similarly intriguing is a necked jar in ditch A2 (V114), which has a double shoulder cordon, the lower of which is decorated with vertical stabbed lines, very reminiscent of 'slashed' jars produced in the Lower Nene Valley in the early to mid-2nd century AD. The remaining locally produced coarse ware fabrics (GRC, GRG, OXS1 and OXS2) are relatively rare, and appear to represent transitional Romanising fabrics derived from the Belgic SOB GT1, although some OXS1 may represent a *Verulamium* product. The GRG includes a biconical jar in ditch A3, and a jar with finger-tip-impressed cordon in pit P61; both of which appear to date the mid- to late 1st century AD; and this fabric is perhaps best regarded as a proto grey ware. Similarly, the OXS1 includes a squat-necked bowl in pit C13 (Figure 26: V138) and a channel-rim lid-seated jar in ditch D6; both clearly derived from Belgic SOB GT1 antecedents. However, the OXS1 in ditch D7 also includes a short-neck jar with an everted bifid rim (Figure 26: V20), comparable to those in UNS WH1 of near-certain origin in *Verulamium*.

Regional Coarse Wares (Figure 26)

The assemblage contains a relatively broad suite of regionally-traded coarse wares, but aside from black-burnished ware 2 (BB2), which accounts for nearly 1% of

the assemblage by sherd count (Table 5), each fabric has only a trace presence. The BB2 is principally comprised of bead-rim dishes with burnished lattice on the exterior, typical of the early 2nd to 3rd centuries AD, and including examples in pit B, pits P9, P74 and P53. However, pit B also contained an example with burnished lattice on the interior walls, two bowls with reeded rims, and a jar with a short flaring rim and slightly acute burnished lattice decoration (V49), probably manufactured in the 2nd century AD.

While the black-burnished ware 2 may come from multiple sources, with perhaps the Thameside kilns the most likely, the rare sherds of black-burnished ware 1 are typical of a source in Dorset (DOR BB1). The DOR BB1 includes a shallow plain-rim dish in ditch D12, and a domed lid with a burnished lip, and a row of impressed dots just above the rim, most likely imported to Sandy in the 2nd to 3rd centuries AD.

The presence of fabrics from the Upper and Lower Nene Valleys, as well as the Horningsea kilns to the east in Cambridgeshire is expected, but one may expect them to have had a greater impact on consumption patterns, perhaps attesting to the volume and strength of local kilns and an established supply connection to *Verulamium*. From the Upper Nene Valley came the very hard PNK GT in the form of a large bowl with a grooved rim in linear A4. These bowls were not dissimilar to mortars but were never gritted, and are paralleled extensively at sites such as Higham Ferrers (Timby 2009, figs.5.5.25 and 5.6.45/48) where they are most common in the early to mid-2nd century AD. Sparse sherds of grey ware from the Lower Nene Valley (LNV GW) in pits P30 (Figure 26: V56) and P55 (Figure 26: V83) exhibited the characteristic cream body beneath a burnished grey slip, and were limited to bead-rim dishes comparable to those in GRS1, only with a finer finish. Only a single vessel could be identified with the major industry at Horningsea (HOR RE), a large jar with a robust everted rim in ditch A3, though not as large as the

classic storage jars from that source. It remains possible that other Horningsea vessels could not be distinguished from GRS1, but this jar does appear to have a coarser, more granular feel than the typical locally produced grey wares.

The regionally-traded coarse wares do include a single major outlier in linear [774], a jar manufactured in Derbyshire that is partly distinguished by its pimply near-vitrified fabric (DER CO) and by its form. The jar has a cupped lid-seated rim, often referred to as bell mouthed, the classic form from kilns situated to the north of Derby, probably dating to the mid- to late 2nd to mid-3rd centuries AD (Evans 2006, fig.54.7). This jar is also unusual because it has limescale around the interior of the rim, a phenomena not noted on other vessels in the assemblage and suggesting it was acquired for a specific purpose, potentially acting as a kettle or steamer.

In the Late Roman period, it is typical of the general supply pattern across East Anglia that quantities of both reduced (HAD RE1) and oxidized (HAD OX) wares from the significant industry at Hadham in Hertfordshire become more widely circulated, with their low quantity here relative to the limited amount of well-dated Late Roman pottery. The HAD OX includes a hemispherical bowl imitating samian ware form Dr.38 in ditch D12, and the foot of a flagon or jug in ditch F6, neither of which are most likely to have arrived before the late 3rd century AD.

Amphorae (Figure 27)

Amphorae are modestly well represented in the assemblage, accounting for c.1.6% of the assemblage by sherd count (c.7.4% by weight) (Table 3), potentially representing Sandy's status as a small urban consumer centre. The amphora were used to import a variety of commodities from different regions of southern Spain and appear to favour Early Roman types, although the olive oil amphorae have a lengthy currency. The potentially earliest amphorae imported to the site arrived in the 1st century AD, though probably in the post-Conquest mid- to late 1st century AD and was manufactured in the province of Cadiz, with further kilns in Malaga (CAD AM). Pit P6 contained the slightly flaring plain rim and stump of a thick (65mm) circular-section handle from a Dressel 11 amphorae (Figure 27: V2), which was probably originally used as a container for garum (fish sauce). Also potentially arriving from the mid-1st century AD until the mid- to late 2nd century, were 'early' amphorae from Baetica (BAT AM1), including vessels in pits P18 (V276) and P16 (Figure 27: V25). Both deposits contained part of a slightly everted, deep collared rim of a Haltern 70 amphorae, and it cannot be discounted they are the same vessel; generally, originally used as a container for defructum (grape syrup or cooking wine). The most common amphorae are the

'late' types also from Baetica (BAT AM2) and coincidentally also the common type across Roman Britain. No rim sherds were present, but a handle stump in pit P13 and the internal plug of a basal spike in pit [10] correspond to Dressel 20 amphorae used to import the high volumes of olive oil required for Roman cuisine (and ablutions) in the mid- to late 1st to 3rd centuries AD.

Mortaria (Figure 27)

In addition to the amphorae, the other specialist Roman ware is mortaria, the characteristic gritted and spouted grinding vessels, although relative to the size of the assemblage they appear relatively rare. Mortaria appear to have been supplied from *Verulamium* in the late 1st century AD, the Lower and Upper Nene Valleys in the 2nd to 3rd centuries AD, and Oxfordshire in the late 3rd to 4th centuries AD, a fairly typical supply pattern in eastern England.

The white ware mortaria from *Verulamium* (VER WH (M)) included in ditch D6 the flange of a mortar bearing the counterstamp of a maker's stamp (Figure 27: V174). The stamp read [F.LVGV DV], presumably an abbreviation of *Factum Lugdunum*, with *Lugdunum* postulated as the location of a workshop just outside *Verulamium*. This is a well-documented counterstamp of Albinus, who appears to have a workshop operating c.AD 65 / 75 to 95 / 105 (Wilson 1972, 373, fig.145.6).

The Lower Nene Valley mortaria (LNV WH (M)) demonstrate little consistency other than fabric. A drooping flange in pit B may have been manufactured in the 2nd century AD, while a fractured upright bead in ditch F1 is associated with heavily worn black slag trituration grits, and a reed-rimmed mortar (Figure 27: V60) in pit P30 is typical of the 3rd century AD but does not preserve any extant grits (or sufficient profile for them to be present). Mortaria from the Upper Nene Valley (UNV WH (M)) in pit P3 and the possible SFB appear of a similar type with an upright bead, slightly undercut drooping flange and moderately worn coarse grits typical of the fabric type, probably dating from the mid-2nd to early 3rd centuries AD.

From the mid- to late 3rd century AD, two variants of white mortaria arrived from the Oxford kilns (OXF WH (M) and OXF WS (M)). The latter is represented only by body sherds in ditch D11 with dense but moderately worn trituration grits. The OXF WH (M) includes two form types, with the mortar in ditch F6 (Figure 27: V81) with an upright bead and hooked flange (Young 2000: type M17) possibly arriving slightly earlier than the mortar in pit B (77) (V162) with a tall upright grooved bead and an angular flange (Young 2000). Both exhibit heavily worn, well-sorted quartz trituration grits that suggest they were extensively used prior to breakage and discard.

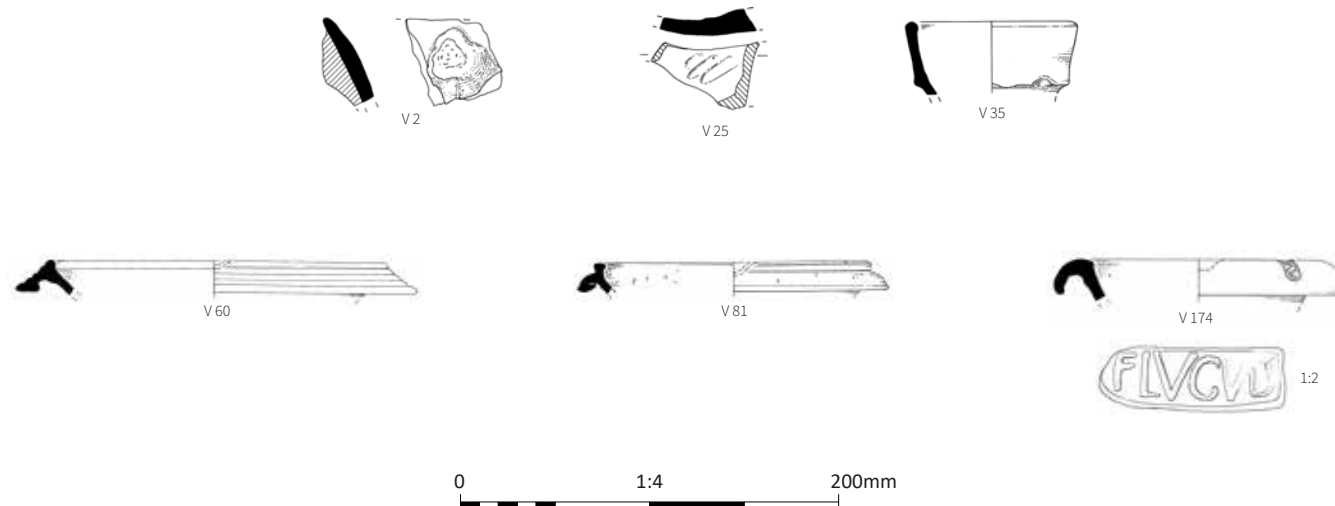


Figure 27: Amphorae and Mortaria from the Site

Discussion of Feature Groups

The distribution of pottery within phased feature groups reveals significant biases associated with different modes of deposition across the site (Table 5). Most notably, Phase 3 (mid- to late 1st to 2nd century AD) includes a spatially distinct group of cremation (accessory) vessels, that may in part be associated with an exceptional concentration of sherds in pit B situated immediately outside the town wall, potentially associated with the ceremonial consumption of pottery. Elsewhere in Phase 3 (mid- to late 1st to 2nd century AD), there are minor groups associated with two sub-phases of roadside ditch, and an anomalous group in a kiln that may represent very early activity within this phase. More substantive groups were contained in a sequence of property boundaries and pits (Table 5), which realistically represent a continuum of urban rubbish deposition, probably domestic in nature but with some clear signifiers of elevated status, perhaps typical of the affluence of this area of the town.

The urban activity and pottery deposition continues in Phase 3 (2nd to 3rd century AD), with the exclusion of any funerary activity, but focussed on the establishment of the 'northern property' and continuing deposition into rubbish pits, that are a continuation of the sequence of disposal evident in Phase 3 (mid- to late 1st to 2nd century AD), with little evidence of a reduction in scale (Table 7). In Phase 4 (3rd to 4th century AD), the 'northern property' continued to be a focal point for deposition but the disposal of pottery into pits appears to have significantly declined; however, there is a notable pottery group present as the backfill of an oven (Table 7).

Phases 3a and 3b (Mid- to Late 1st to 2nd century AD)

Vessels from the Cemetery (Figure 28)

Of 14 cremations, five included ceramic accessory vessels that although widely varying in fabric and form types, appear largely homogenous in indicating a probable date of burial in the mid-2nd century AD, if not the decades immediately preceding; however it is feasible that vessels were interred from the late 2nd century AD. Notably, cremation C14 appears to include a post-conquest SOB GT1 'Belgic' cordoned bowl (V139), while cremation C13 includes an OXS1 cordoned bowl (V138) with clear antecedents in the same tradition. The most substantive cremation group was C1, notably including a Dr.18/31 dish samian ware dish from central Gaul (LEZ SA2) that was stamped by Censorinus ii (V140), therefore does not pre-date c.AD 160, accompanied by a GRF1 poppyhead beaker (Figure 28: V135) and ROB SH channel-rim jar (V136), both of which are common throughout Phase 3 (mid- to late 1st to 2nd century AD) and beyond. Cremation C10 contained two accessory vessels: a GRS1 platter (Figure 28: V134) with a GRF1 beaker (V141), with the latter unlikely to post-date the mid-2nd century AD; while cremation C11 contained a single BSW1 carinated jar (V137) that is unique in this assemblage and also not common after the mid-2nd century AD. The vessels in the cremations, notably the GRF1 poppyhead beaker and ROB SH channel-rim jar are extensively paralleled in Phase 3 (2nd century AD) at Ruxox, where limited funerary evidence included accessory vessels, while the anomalous BSW1 carinated jar is comparable to a vessel at Kempston and a funerary vessel at Gt. Barford Bypass (Parminter and Slowikowski 2004, 477, 485; 480, fig.9.44.251; Stansbie

Phase	Feature Group	Sherd Count	Weight (g)	R.EVE
2 (Prehistory)	Ditch	2	25	0
3a, 3b	Cemetery	113	5902	6.05
(Roman:	Pit B	1494	22689	11.11
M/L 1st-2nd century AD)	Channel / Defensive Ditch	12	381	0.15
	Town Boundary Ditch	35	319	0
	Town Wall	12	115	0
	Roadside Ditch (early / west)	90	2487	1.42
	Roadside Ditch (later / east)	112	1897	0.9
	Property Boundary (1st phase)	106	2613	1.3
	Property Boundary (2nd phase)	84	2010	1.29
	Property Boundary (3rd phase)	179	5005	1.9
	Property Boundary (4th phase)	92	1992	1
	Curvilinear Ditches (internal enclosures)	153	2569	0.57
	Kiln K1	116	1798	0.45
	Pits (1st century AD)	15	351	0.1
	Pits (Mid-1st Early 2nd century AD)	33	711	0.15
	Pits (Mid-1st –2nd century AD)	158	3096	1.8
	Pits (Late 1st –2nd century AD)	71	4031	0.67
	Pits (Early 2nd century AD)	10	756	1
	Pits (2nd century AD)	247	7624	2.25
	Pits (Early–Mid-2nd century AD)	527	10418	2.93
	Pits (Mid–Late 2nd century AD)	325	3859	2.96
	Pits (Late 2nd century AD)	146	4843	2.7
	Pits (indeterminate Late 1st 3rd century AD)	769	15485	7.29
3c, 3d	Northern Property	280	4111	2.65
(Roman:	Pits (Early 2nd 3rd AD)	163	2801	2.32
2nd –3rd century AD)	Pits (Mid-2nd Early 3rd century AD)	46	1115	1.02
	Pits (Mid-2nd Mid-3rd century AD)	41	676	1.4
	Pits (Mid-/ Late 2nd 3rd century AD)	22	580	0.07
	Pits (Late 2nd Mid-3rd century AD)	301	8182	4.56
4	Northern Property	242	4059	1.64
(Roman:				
3rd–4th century AD)	Ovens	289	6002	4.45
	Pits (3rd century AD)	126	1502	0.52
Roman	Pits (indeterminate Roman)	33	461	0
	Tree Pits	6	212	0
Unphased	Various features (Roman?)	1036	18616	11.26
Post-Medieval	Various features (with Roman pottery)	8	128	0
N/A	Unstratified / Topsoil / Subsoil	231	4798	1.95
Total		7725	154219	79.83

Table 7: Quantification of pottery in phased feature groups

2007, 246, fig.8.11.20). The presence of GRF1 beakers and samian ware Dr.18/31 dishes is paralleled at the cremation groups from Harlington (Dawson 2001, 27–8), although the absence of comparably placed flagons at Sandy is marked, while a GRF1 poppyhead beaker is similarly present as an accessory vessel at Warren Farm, Deepdale, where the accessory vessels are less common, rather utilitarian coarse ware vessels used as cremation containers (Dawson and Slowikowski 1988, 27–30). The

following are illustrated on Figure 28:

V134 GRS1. Platter with a slightly in-turned plain rim and burnished exterior. C10 (70).

V135 GRF1. Poppyhead beaker with diamond panels of fine grey barbotine dot decoration over a thin white slip. C1 (21).

V136 ROB SH. Channel-rim, lid-seated jar. C1 (21).

V137 BSW1. Wide-mouth jar with dished rim and high carinated shoulder, above a cordon decorated with alternating panels of opposed, burnished, oblique lines. C11 (72).

V138 OXS1. Necked, cordoned bowl with Belgic antecedents. C13 (90).

V139 SOBGT1. Cordoned bowl, Belgic type (Thompson 1982, 319: type D2-1). Post-Conquest (mid-late 1st century AD). C14 (8).

V140 LEZ SA2. Dr.18/31 dish, stamped with die 1b of Censorinus ii, c.AD 160–190. C1 (21).

V141 GRF1. Beaker with slightly cupped rim, decorated with rouletted lines incorporating a band on the shoulder and zig-zag on the body. C10 (70).

2nd century AD, and most likely included isolated sherds of contemporary vessels recorded in stakeholes [210] and [456] that are cut into the base of the pit. Successively overlying fills (99) and (78) contained c. 200–300 sherds (c.2–3kg) of pottery also of early to mid-2nd-century AD date. Middle fill (95) contained a sparser quantity of 2nd-century AD sherds but was sealed by (48), which contained the highest concentration of sherds in the pit, comprising 599 sherds (8,759g) of early to mid-2nd-century AD date, potentially not significantly post-dating c.AD 130. Fill (48) is sealed by fill (77) which contained a significant quantity of sherds including numerous vessels of 4th-century AD date mixed with those typical of the underlying early to mid-2nd-century AD fills, therefore it may be questioned if this layer represents subsequent infilling and / or levelling separate to primary deposition into pit B. Similarly, layer (362), overlying the pit contained post-medieval sherds associated with early to mid-2nd-century AD vessels.

Vessels from Pit B (Figure 29)

Pit B represents the most enigmatic concentration of pottery in the assemblage, and arguably the foremost point of intrinsic interest relating to the pattern of urban deposition, be it funerary or domestic. The total quantity of pottery in pit B accounts for 19.3% of the assemblage by sherd count (14.7% by weight), with a relatively low for this assemblage mean sherd weight of 15.2g, though in truth this is a modest level of fragmentation that perhaps more reflects the density of packing within the deposits. The basal fill (181) contained relatively sparse sherds but confirms deposition occurred only from the early to mid-

The composition of the Roman pottery in pit B demonstrates an extensive range (Figure 29), and reflects almost the full breadth of fabrics recorded in early to mid-2nd-century AD groups present in rubbish pits and property boundaries within the town wall, in addition to a substantive array of Late Roman fabrics in fill (77). Samian ware accounts for 3.75% of the group by sherd count, principally from central Gaul (LEZ SA2, with sparse LMV SA) and comprised of common Dr.18/31 dishes, including a stamp of Viducus ii (c.AD 100–130), with occasional Dr.27 cups and Dr.38 bowls, but also with small mould-decorated sherds from Dr.37 bowls whose limited decorative motifs probably only emerged in the Antonine period c.AD 150/160. Other imported fine ware has a negligible presence, limited to CNG CC1 beakers

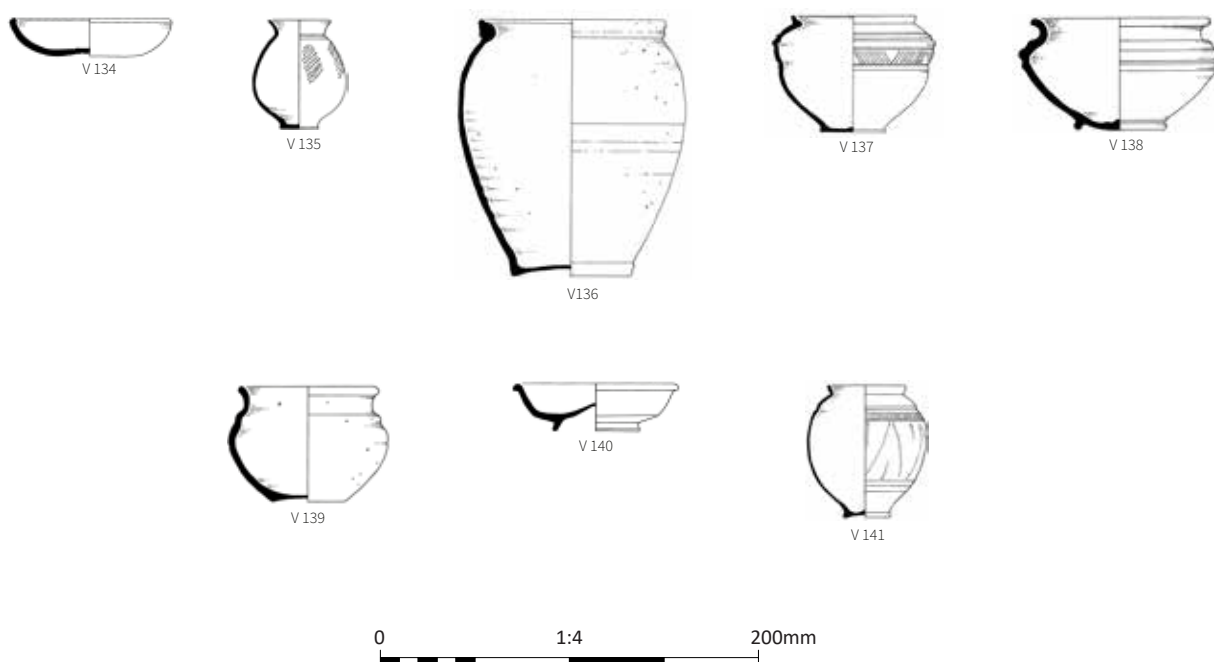


Figure 28: Vessels from the Cemetery

with a cornice rim and roughcast decoration that persist throughout the 2nd century AD. Romano-British fines wares have a more distinctive presence, accounting for 7.03% by sherd count with a strong bias towards GRF1 and UNS MD. The GRF1 occurs as multiple poppyhead beakers, typically with panels of barbotine dot decoration, while COL CC2 is similarly limited to cornice rim, roughcast beakers. However, the UNS MD comprises a more diverse mix of at least 13 beakers and bowls. The beakers all appear to have folded bodies with cornice or small bead rims; while the bowls imitate samian ware Dr.37, including an example with a ring-stamp that is unlikely to post-date the mid-2nd century AD. LNV CC and OXF RS in fill (77) represents 4th-century AD beakers, a bowl, flagon and dish; all common in 4th-century AD groups in the region. White wares are relatively common in pit B, accounting for 10.58% by sherd count, but the UNS WH1, UNS WS2 and GOD WH occur only as a limited range of ring-necked flagons and reed-rimmed bowls, though those in GOD WH may only develop in the mid-2nd century AD.

The most common fabric in pit B, accounting for 37.84% by sherd count is locally produced GRS1, out competing the also common ROB SH, which accounts for 28.47%

(Figure 30). The GRS1 includes a diverse range of utilitarian jars, dishes, bowls and lids; principally with broad 2nd to early 3rd-century AD currencies, although a single jar with burnished lattice decoration imitating BB2 types most likely does not emerge until the mid-2nd century AD. Conversely, the ROB SH has a very narrow range of forms, limited to common jars or cooking pots with lid-seated, channel-rims and sparse storage jars with robust everted bead rims, while the Late Roman fills include contrasting everted bead-rim jars and a large dish. Other coarse wares in the group are limited, principally BSW1 that includes an Early Roman platter, while BB2 dishes and bowls may span the 2nd to 3rd centuries AD. Rare amphorae sherds are limited to body sherds of BAT AM2, while mortaria are limited to the upper / overlying Late Roman layers. Given the striking magnitude and focus of the pit B group, it is slightly surprising that it appears to bear close comparison in composition to the wider assemblage from the excavation (Table 3), especially the Phase 3 pottery groups from the property boundaries and rubbish pits within the town wall (see below), and does not exhibit more precise relationships with the cremation accessory vessels beyond the presence of GRF1 beakers and ROB SH jars that are common in the general assemblage.

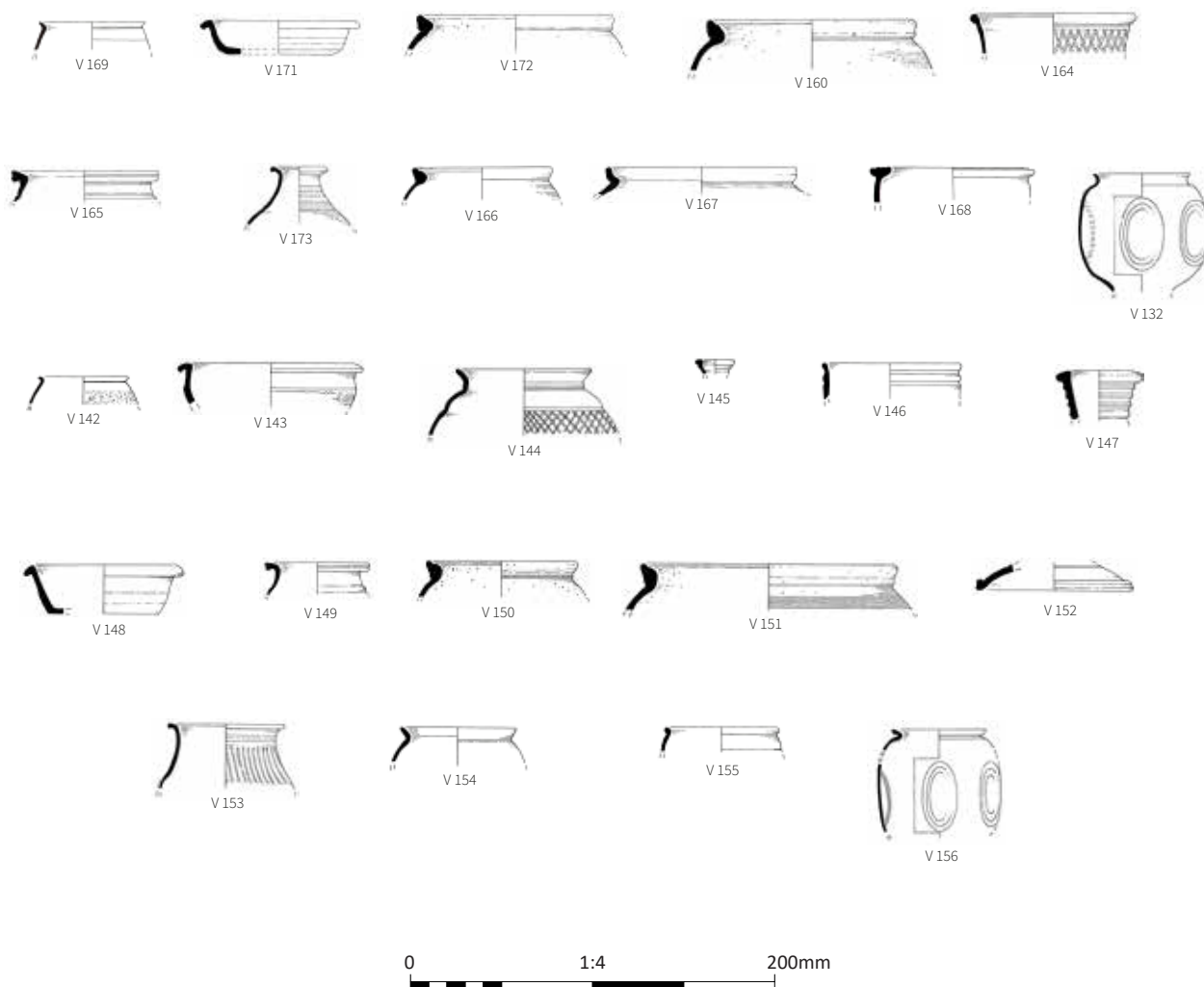


Figure 29: Vessels from Pit B

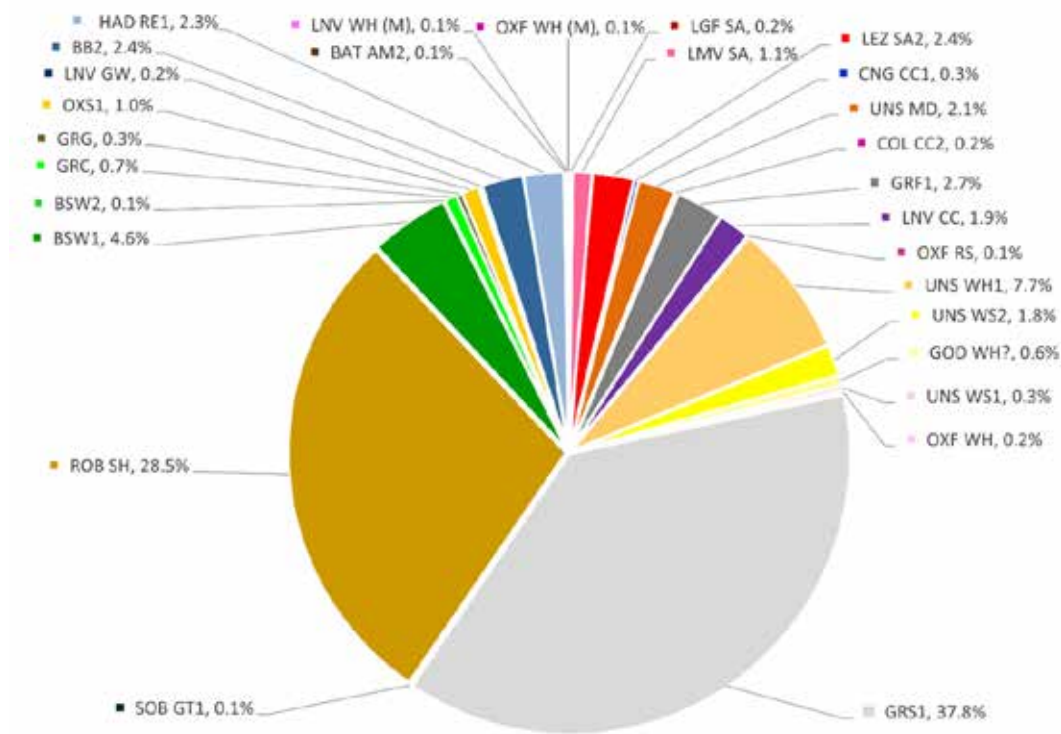


Figure 30: Fabric Types in Pit B by % Sherd Count

There is no evidence any of the vessels in pit B were burnt, though there is also a relative paucity of any sooting that may be associated with cooking vessels. The degrees of fragmentation, lack of complete or near-complete vessels, and near absence of cross-joining sherds between fills mitigates against the deliberate placement of vessels, even if they had been deliberately broken nearby. Furthermore, it may be suggested that the deposition of this group was either the clearance of debris from a narrow episode of conspicuous consumption outside the town walls, potentially associated with the interment of the cremations as they appear contemporary, or perhaps more likely this was actually a deliberate midden situated outside the town wall, to which rubbish was transported contemporary with the growth in urban consumption evident within the town walls.

The basal fill (181) of pit B included a CNG CC1 beaker (Figure 29: V169) that was only imported from the early to mid-2nd century AD, with vessels from (181) including the following (Figure 29):

- V169 CNG CC1. Beaker with cornice rim and roughcast clay pellet decoration. B (181)
- V173 GRS1. Narrow-neck jar with burnished exterior. B (181)
- V171 GRS1. Bowl with horizontal rim, mid-body carination, burnished interior and exterior. B (181)
- V172 ROB SH. Channel-rim, lid-seated jar. B (181)

Pit B (99) contained further CNG CC1 beaker sherds, probably the same vessel as in (181) but non-cross-joining, as well as fragments of COL CC2 cornice-rim beaker and GRF1 poppyhead beakers with barbotine dot decoration, BB2 dishes, a UNS1 ring-necked flagon, and common ROB SH channel-rim jars. Most notable was a LMV SA Dr.30R bowl, suggesting deposition focussed the early 2nd c AD.

A similar pattern continues in fill (78), supplemented by a LEZ SA2 Dr.37 mould-decorated bowl, Dr.18/31 dish and a Dr.38 bowl that suggest continuation into the mid-2nd century AD (Antonine period). Selected vessels from (78) include (Figure 29):

- V165 UNS WH1. Jar with short neck and short, everted bifid rim.
- V167 GRS1. Jar with dished lid-seated rim. B (78)
- V168 GRS1. Bowl with reed rim. B (78)
- V164 GRS1. Shallow dish with bead rim, and burnished lattice on exterior. B (78)
- V166 ROB SH. Channel-rim, lid-seated jar. B (78)
- V160 ROB SH. Channel-rim, lid-seated jar. B (78)

Overlying (78), fill (95) contained a 2nd-century AD UNS WS1 reed-rim bowl associated with common ROB SH jars and a storage jar.

The high concentration of vessels in fill (48) includes a fragment of LEZ SA2 Dr.37 bowl with moulded decoration of Antonine style, perhaps the latest sherd in the group not pre-dating c.AD 150; where as an UNS WH1 flagon with a cupped rim and ring neck (V145) is unlikely to post-date that period. Selected vessels from (48) include (Figure 29):

- V156 UNS MD. Beaker with cornice rim. B (48)
- V132 UNS MD. Beaker with short everted rim and folded body. (cross-joining sherds in layer (362)). B (48)
- V155 UNS MD. Beaker with small bead rim on ovoid / globular body. B (48)
- V146 UNS MD. Bowl with small bead rim and upright wall with a plain cordon, most likely imitating samian form Dr.37. B (48)
- V142 COL CC2. Beaker with cornice rim and fine roughcast decoration. B (48)
- V145 UNS WH1. Flagon with slightly cupped rim and ring neck. B (48)
- V147 UNS WH1. Flagon with expanded bead rim and straight ring neck. B (48)
- V144 GRS1. Jar with plain everted rim, plain burnished shoulder and mid-body zone of burnished lattice; an imitation of BB2 form types. B (48)
- V149 GRS1. Jar with stubby bifid rim. B (48)
- V143 GRS1. Bowl with horizontal rim, mid-body carination, burnished interior and exterior. B (48)
- V153 GRS1. Bowl with tall neck decorated with burnished vertical lines.
- V148 GRS1. Shallow dish with bead rim. B (48)
- V152 GRS1. Lid with faint bifid rim and shallow profile. (cross-joining sherds in layer (362)) B (48)
- V151 ROB SH. Channel-rim, lid-seated jar. B (48)
- V150 ROB SH. Channel-rim, lid-seated jar. B (48)
- V154 BB2. Jar with short everted plain rim; burnished rim and exterior. B (48)

The uppermost fill of pit B, (77) contained numerous vessels consistent with those in the underlying early to mid-2nd-century AD deposits, but most notable for the presence of an LNV CC dish, ROB SH jar with everted bead rim and large dish, OXF WH (M) mortaria that are indicative of the 4th century AD. Selected vessels from (77) include

(Figure 29):

- V159 LNV CC. Dish with bead-and-flange rim. B (77)
- V163 GOD WH. Bowl with stubby reed rim and mid-body carination. B (77)
- V157 BSW1. Shallow dish with plain rim; burnished interior and exterior. B (77)
- V160 ROB SH. Channel-rim, lid-seated jar. B (77)
- V161 ROB SH. Necked jar with everted, slightly undercut bead rim; decorated with stabbing to the lower-outside edge of the rim. B (77)
- V158 ROB SH. Dish; medium depth with a plain rim and slightly incurving walls. B (77)
- V162 OXF WH (M). Mortaria with tall upright bead with groove on top and slightly angular drooping flange; spout pushed through bead only. B (77)

Similarly overlying layer (362) contained early to mid-2nd-century AD vessels, associated with post-medieval pottery, notably sherds from an LMV SA Dr.27 cup, UNS MD and GRF1 beakers, and coarse ware utilitarian vessels, including (Figure 29):

- V170 ROB SH. Channel-rim, lid-seated jar. B (362)

Vesels from Roadside Ditches (Figure 31)

The features that form the 'early' (west) roadside ditch include a modest group in ditch D22, notable for being dominated by ROB SH channel-rim jars, with less SOB GT1, GRS1, and a body sherd of early amphorae (BAT AM1). Thus deposition may have commenced in the mid- to late 1st century AD; however a GRS1 deep-bodied bead rim dish does not pre-date the 2nd century AD, while dishes imitating samian ware Dr.37 in BSW1 (V121) and GRS1, a GRF1 poppyhead beaker (V124) and UNS WH1 bowl (V125) suggest a cessation of deposition by the late 2nd century AD. Selected vessels from ditch D22 include (Figure 31):

- V124 GRF1. Poppyhead beaker with panels of fine grey barbotine dot decoration over a thin white slip. D22 (855)
- V125 UNS WH1. Bowl with reed rim and mid-body carination. D22 (855)
- V121 BSW1. Bowl with upright walls, plain burnished upper cordon and mid-body cordon filled with burnished lattice; probably an imitation of samian from Dr.37. D22 (855)
- V122 GRS1. Deep dish with bead rim; burnished

interior and exterior. D22 (855)

V123 GRS1. Lid with small externally beaded rim, slightly domed body and slight carination between neck and body. D22 (855)

V120 ROB SH. Channel-rim, lid-seated jar. D22 (855)

V119 ROB SH. Storage jar with everted bulbous rim. D22 (855)

The features forming the 'late' (east) roadside ditch present an intriguing group, notably a modest concentration of sherds in ditch D22. A significant component of this group has origins in the 1st century AD, probably post-Roman Conquest, including a SOB GT2 butt beaker (V108), a SOB GT1 barrel jar (V107), a channel-rim jar, made on a slow wheel, and the foot of a pedestal-based urn. However, the presence an OXF1 bowl with white-painted decoration, most likely produced in the Upper Nene Valley (V109), and body sherds from a LNV CC folded beaker with white-painted vine or scroll decoration are typical of deposition in the late 2nd century AD. Selected vessels from ditch D22 include (Figure 31):

V109 OXF1. Bowl, hemispherical body with small internal bead-and-flanged rim decorated with white-painted arcs. D22 (787)

V108 SOB GT2. Butt beaker with tall-neck, out-turned bead rim with internal offset. D22 (787)

V107 SOB GT1. Jar with plain rim and ovoid / barrel body decorated with intersecting arcs of comb strokes. D22 (787)

V110 GRS1. Jar with everted bead rim and plain shoulder cordon between ridges; burnished exterior. D22 (787)

V106 ROB SH. Jar with slightly undercut everted bead rim. D22 (787)

Vesels from Property Boundaries (Figure 31)

A total of 461 sherds (11,620g) were recovered from a four-phase sequence of property boundaries within the town wall, and demonstrated a positive mean sherd weight of 25.2g, slightly above but broadly consistent with that of the contemporary roadside ditches (21.7g) and rubbish pits (22.2g), and significantly above the 15.2g mean sherd weight in pit B; supporting a hypothesis that there is extensive primary rubbish deposition within the town walls, with negligible scouring or cleaning of open ditches (which may nonetheless be recut), while the material in pit B could feasibly have been cleared into a 'midden' deposit. The pottery in the property boundaries

is fairly sparsely distributed with small groups notable in the first phase in ditch D24, in the second phase in ditch A2, in the third phase in ditch A3, and in the fourth phase ditch A4. Deposition in the first phase dates to the late 1st century AD, as defined by body sherds of an LGF SA mould-decorated bowl with a replacement ovolo, and a GRF1 poppyhead beaker with barbotine dot decoration, with selected vessels below (Figure 31):

V112 UNS WS2. Flagon with slightly cupped rim, ringed neck and stump of a 3-rib strap handle. Ditch D24 (813).

V117 GRS1. Jar with short, slightly dished lid-seated rim and a slightly angular shoulder. Ditch D24 (840).

V113 ROB SH. Channel-rim, lid-seated jar. Ditch D24 (813).

The second phase of the property boundaries continues through the late 1st to early 2nd centuries AD with the deposition of channel-rim jars in GRS1, and cordoned jars (Figure 31):

V114 BSW1. Jar with everted bead rim and double shoulder cordon; upper cordon is plain burnished and the lower cordon decorated with stabbed vertical lines. Ditch A2 (816).

V70 GRS1. Jar with everted bead rim, bulging rounded shoulder cordon between ridges on rounded shoulder; burnished rim and exterior. Ditch A2 (543) (cross-joining fragments also in ditch A3).

The third phase of the property boundaries appears to commence at least in the early 2nd century AD based on the presence of body sherds from a COL CC2 folded beaker, perhaps continuing into the mid- to late 2nd century AD, as indicated by the presence of a RHZ SA Dr.31 dish, while HOR RE storage jars are also present but the principle coarse ware vessels do not deviate from those in the previous deposits, with a selection below (Figure 31):

V79 GRF1. Narrow-neck jar with small everted bead rim, globular body and highly burnished exterior. Ditch A3 (625).

V111 BSW2. Shallow dish with out-turned sides and burnished surfaces (possibly a lid?). Ditch A3 (802).

V67 ROB SH. Channel-rim, lid-seated jar. Ditch A3.

V68 ROB SH. Channel-rim, lid-seated jar. Ditch A3.

V69 ROB SH. Channel-rim, lid-seated jar. Ditch A3.

The chronological definition of the final, fourth phase of the property boundaries is less clear, with the bulk of

vessels ROB SH storage jars and channel-rim jars, but the presence of body sherds from a GRF1 beaker with barbotine dot decoration in association with these vessels suggest deposition had declined, if not ceased by the end of the 2nd century AD. Selected vessels from these deposits include (Figure 31):

V116 GRS1. Bowl with in-turned tip to grooved rim; burnished concentric hoops on the interior. Ditch A4 (838).

V78 ROB SH. Channel-rim, lid-seated jar. Ditch A4 (623).

V77 ROB SH. Storage jar with robust everted bead rim. Pit [617] (616).

V115 ROB SH. Storage Jar with everted bulbous rim. Ditch A4 (838).

Situated between these property boundaries and the town wall were a set of curvilinear ditches, potentially internal enclosures, potentially contemporary with the property boundaries in the early to mid-2nd centuries

AD. These included a small group in ditch D1, and though more highly fragmented (mean sherd weight 16.7g), this group included an LMV SA DR.27 cup, a GRF1 beaker with barbotine dot decoration, and a BSW1 reed-rim bowl associated with ROB SH channel-rim jars (Figure 31).

Vessels from Kiln K1 (Figure 31)

Potentially containing the earliest Phase 3 pottery group, kiln K1 is situated 'outside' and adjacent to the southeast of the Phase 3 property boundaries. It contained exclusively slow-wheel manufactured SOB GT1, most likely from only two jars (V39 and V40), with cross-joining sherds from both distributed in fills (480) and (481). These types have a currency that begins prior to the Roman Conquest but they continue as hand-made vessels to c.AD 65 (Thompson I. 1982). It is notable that no other examples of these vessels are present in the assemblage, with only a slow wheel-made SOB GT1 channel-rim jar in pit P35 appearing contemporary, while similar wheel-made barrel jars are very rare as the typologically earliest vessels amongst the mid- to late 1st to early 2nd-century AD

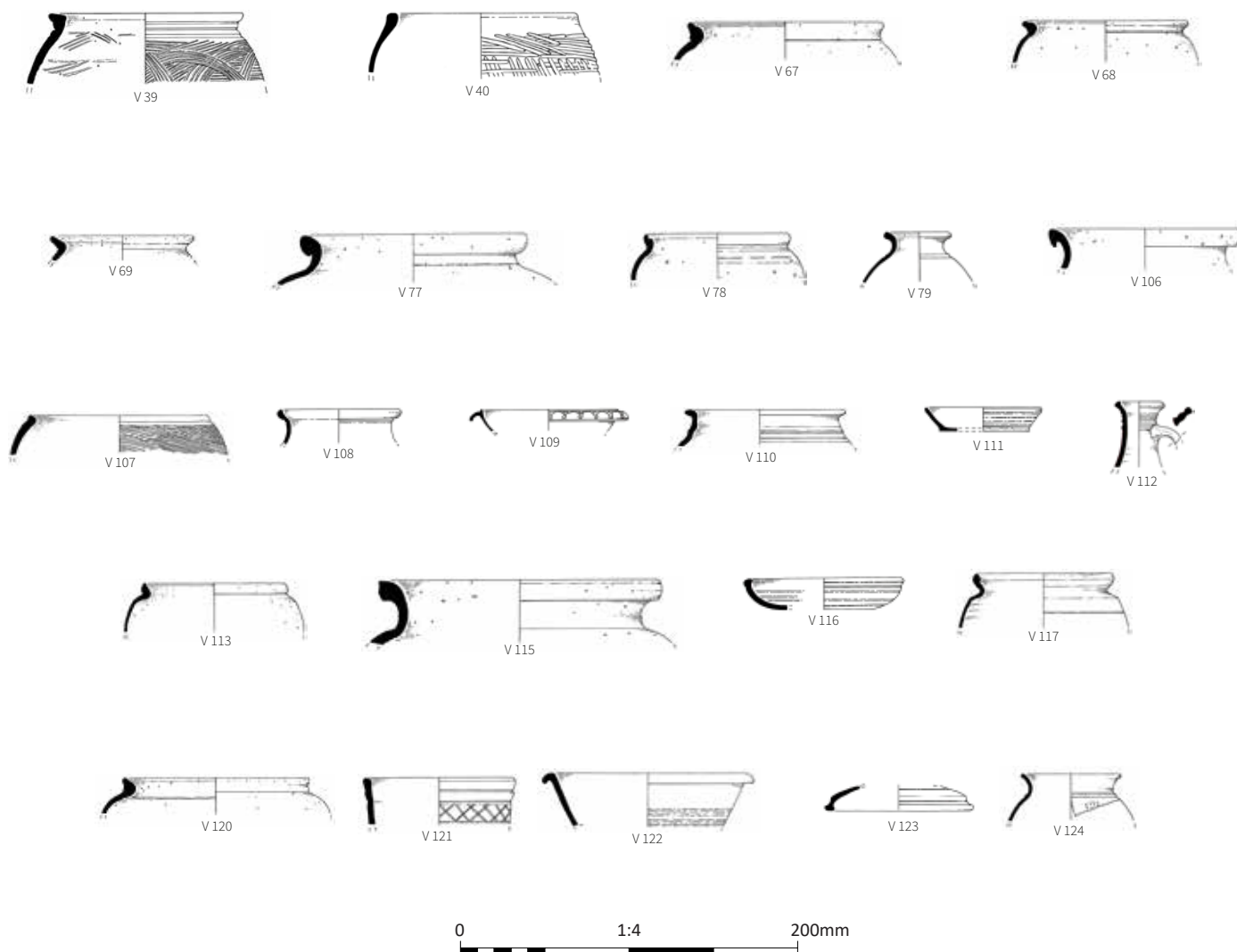


Figure 31: Mid-1st to Early 2nd-Century Vessels from Roadside Ditches, Property Boundaries and Kiln K1

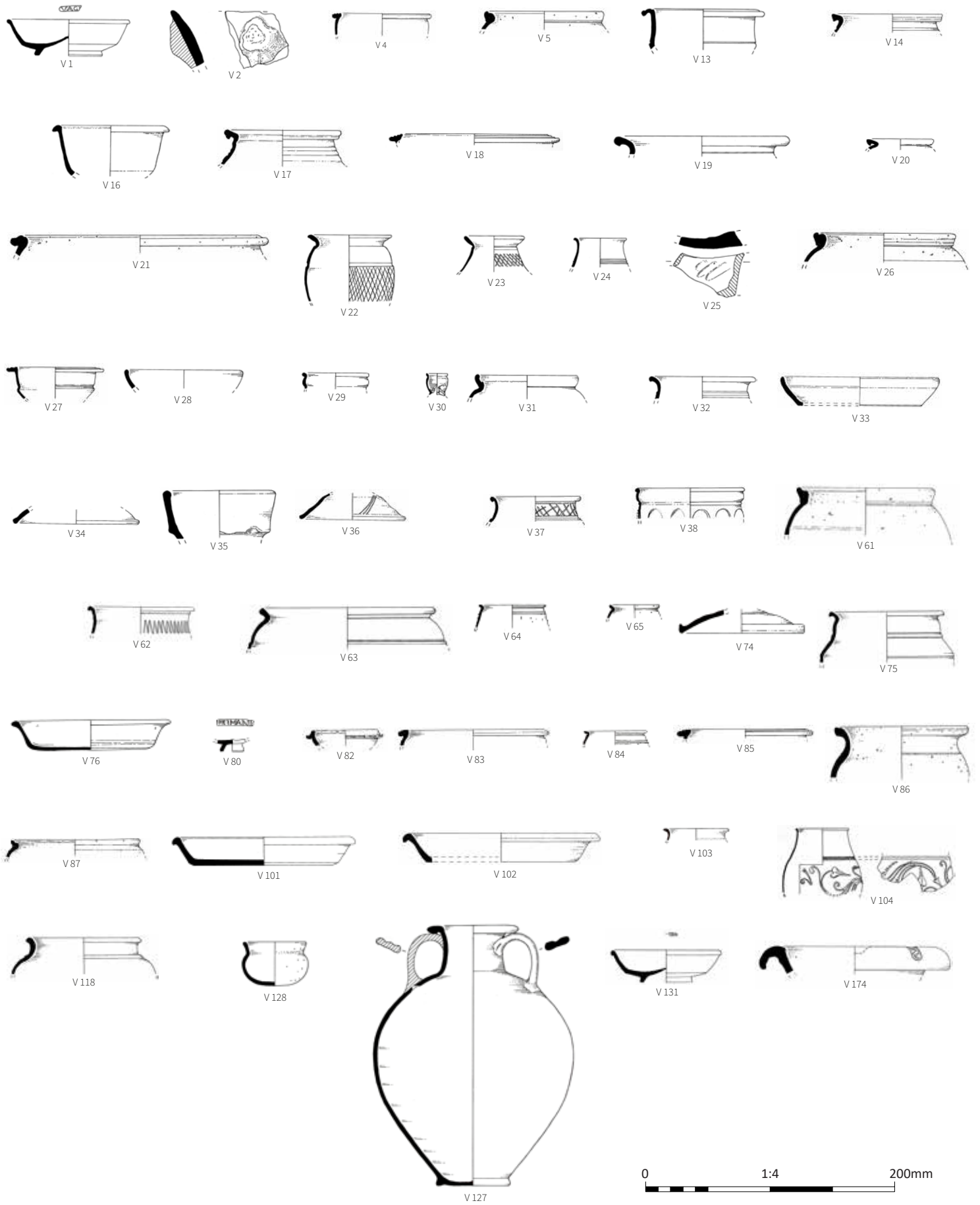


Figure 32: Mid- 1st to 2nd-Century Vessels from Pits

roadside ditches and rubbish pits in Phase 3. Thus, a date for kiln K1 in the mid- to late 1st century AD is appropriate. The SOB GT1 jars from the kiln do not exhibit any traits to suggest they are wasters, but may be postulated as the intended products, and comprise (Figure 31):

V39 SOB GT1. Jar with flat-topped rim, ovoid body decorated with arcs of combed decoration. Made/finished on a slow-wheel. K1 (480) and (481).

V40 SOB GT1. Jar with internally-thickened rim, ovoid body decorated with arcs of combed decoration. Made/finished on a slow-wheel. K1 (481)

Vesels from Pits (Figure 32)

A total of 33 separate pits within the town wall are assigned to Phase 3 (mid- to late 1st to 2nd century AD) and with a relatively high mean sherd weight of 22.2g and high incidence of diagnostic sherds appear to represent the primary deposition (disposal) of rubbish, most likely from domestic activities, within the urban environment. The range of common coarse ware and white ware fabrics disposed of is broadly similar to the pattern of supply evident at Love's Farm, St. Neots (Lyons 2018, 220–7); however the key point of contrast in this assemblage are elevated levels of GRF1, a significantly greater range of samian ware and other fine wares (imported and Romano-British) that indicate correspondingly more affluent households or communities, be that due to the urban markets or relative to status. These pits are not precisely contemporary but appear to represent the sequential use of space for the discard of pottery (and other materials), spanning the mid-1st to late 2nd centuries AD, before continuing in Phase 3 (2nd to 3rd century AD), with a commentary on specific groups with narrow chronological definition or of intrinsic interest presented below.

Mid-1st to 2nd-century AD pits: There is a sparse distribution of sherds in pits that may date to the 1st century AD, including samian ware from south Gaul (MON SA) in pit P1, but diagnostic groups are lacking in the pits until those dated broadly to the mid-1st to early 2nd centuries AD. Pit P67 is assigned this relatively broad Early Roman chronology but the pottery contained within suggests deposition in the decades immediately following the Roman Conquest, being principally comprised of SOB GT jars and necked bowls, albeit highly fragmented, associated with a BSW1 jar (Figure 32):

V118 SOB GT1. Jar with everted bead rim with an offset ridge at the base of the neck, above a rounded shoulder; burnished exterior. P67 (854)

Pit P55 is notable for containing common ROB SH channel-rim jars associated with beakers in COL CC2 and KOL CC that do not pre-date the early 2nd century AD,

with body sherds of an UNS WH2 flagon with red-painted hoop decoration, and most notably the frilled flange of an UNS WH1 tazze (V82), whose chronology is most likely limited to the 2nd century AD. A comparable chronology may also be applied to Ditch(?) D35, assigned to the same chronological group, which includes an 'early' cornice-rim beaker in LNV CC. Selected vessels from fills of pit P55 include (Figure 32):

V84 COL CC2. Beaker with cornice rim and fine roughcast decoration. P55 (640)

V82 UNS WH1. Tazze; down-turned frilled flange on the wall of a hemispherical body. P55 (640)

V85 UNS WH1. Bowl with slightly undercut reed rim. P55 (640)

V83 LNV GW. Bowl with slightly undercut bead rim, most likely above a carinated body. P55 (640)

V87 ROB SH. Channel-rim, lid-seated jar. P55 (641)

V86 ROB SH. Jar with slightly everted bead rim, plain neck cordon above rounded shoulder; burnished exterior. P55 (641)

In addition to the phased pits, posthole [16], just inside the town wall is unphased and contained cross-joining fragments from a single near-complete samian ware (LMV SA) platter of early to mid-2nd-century date (V128), which was notable not only for its preservation but also for the fact that it had been substantially repaired, most likely to extend its life, and presumably it still retained significant related value when it was deposited (Figure 32):

V128 LMV SA. Dr.18/31R dish, stamped with die 1a of Roppus ii (c.AD 110–135), and seemingly broken approximately in half before being repaired with four lead rivets (staples), which remain intact: one through the centre of the base, one through the edge of the floor, and two through opposing walls. (15)

Early to mid- 2nd-century AD pits: pit P13 may date from the late 1st to 2nd centuries AD and includes the handle stump of a BAT AM2 Dressel 20 amphorae associated with ROB SH and SOB GT1 storage jars. However, there is a distinctive presence of substantive diagnostic groups found in association with urban deposition throughout the 2nd-century AD, beginning with an early 2nd-century AD group in pit P50 (Figure 32):

V74 UNS WH1. Lid with upward bead rim and slightly domed profile. P50 (612)

V75 GRS1. Jar with everted bead rim, plain shoulder cordon and slightly angular shoulder. P50 (612)

V76 GRS1. Shallow dish with bead rim; burnished interior and exterior (floor of base burnished laterally by hand). P50 (612)

Pits P14 and P33 contained vessels that may have been deposited from the early 2nd century AD, but with a currency that may extend throughout the 2nd century AD, including samian ware Dr.33 conical cups and mould-decorated Dr.37 bowls from central Gaul (LEZ SA2), with other vessels including (Figure 32):

V15 COL CC2. Beaker with cornice rim and bag-shape body. P14 (199)

V14 UNS WH1. Jar with short neck and everted, short, undercut bifid rim. P14 (199)

V13 BSW1. Bowl with horizontal reed rim, mid-body carination. P14 (199)

V16 GRS1. Dish with triangular bead rim; burnished exterior. P14 (200)

V64 CNG CC1. Beaker with cornice rim and roughcast clay pellet decoration. P33 (519)

V65 UNS WH2. Beaker with cornice rim and bag-shape body. P33 (519)

V63 GRS1. Jar with everted bead rim and plain shoulder cordon; burnished exterior. P33 (519)

V62 GRS1. Bowl with everted plain rim and tall neck decorated with burnished vertical lines. P33 (519)

V61 ROB SH. Channel-rim, lid-seated jar. P33 (519)

Pits P16, P3, and D7 contained groups that included a high incidence of samian ware from central Gaul (LEZ SA2), as well as UNS WH1, UNS WS2 and UNS MD associated with a range of coarse wares that define a chronology of deposition in the early to mid-2nd centuries AD, and seemingly a peak in the disposal of pottery into pits within this area. Selected vessels from these deposits include (Figure 32):

V24 COL CC2. Beaker with out-curved rim and grooves at base of neck. P16 (259)

V127 UNS WS2. Large flagon with horizontal flanged rim, two 2-rib strap handles, a globular body and slight foot ring. P16 (259)

V23 GRS1. Narrow-neck jar small everted plain rim and burnished lattice on neck. P16 (259)

V22 GRS1. Jar with everted plain rim and mid-body zone decorated with burnished lattice, an imitation of jars

in black-burnished ware. P16 (259)

V25 BAT AM1. Amphora (Haltern 70/PandW Class 15); tip of deep collared rim. P16 (259)

V17 UNS WH1. Jar with short neck and everted, short, undercut bifid rim. D7 (215)

V18 UNS WS2. Bowl with reed rim. D7 (215)

V19 UNS WS2. Jar with everted bead rim. D7 (215)

V20 OXS1. Jar with short neck and everted, short, undercut bifid rim. D7 (215)

V21 ROB SH. Channel-rim, lid-seated jar. D7 (215)

Following the apparent flourish of pottery deposition in pits in the early to mid-2nd century AD, similar deposition appears to continue at only a slightly reduced level in the mid- and late 2nd centuries AD. In mid- to late 2nd-century AD pits P18 and P17 this includes conspicuous levels of fine ware, notably at least seven vessels in UNS MD (i.e. V28, V29, V38), and part of an UNS WH2 triple vase (V30), as well as CNG CC1, CNG BS, GRF1 and samian ware from central Gaul (LEZ SA2); all associated with a mix of local coarse wares; once again mirroring the pattern of supply in pit B. This pattern continues in late 2nd-century pits P53, P6, and P62 except for a slightly greater mix of fine wares, which now also include LNV CC and samian ware from east Gaul (TRI SA). Pit P6, which dates to after c.AD 155 based on the presence of a samian ware (LEZ SA2) maker's stamp of Vagiros (Vagirus) (V1), also contains a rare sherd of Dressel 11 amphorae (V2) from Cadiz (CAD AM) that potentially contained fish sauce, made more notable as the deposit is one of the few located outside the town wall, close to the high magnitude group of pit B, potentially representing further evidence of middening. Selected vessels include (Figure 32):

V31 BSW1. Jar with slightly dished lid-seated rim. P18 (274)

V32 GRS1. Necked bowl with a slightly everted bead rim and burnished lattice on the neck. P18 (274)

V33 GRS1. Shallow dish with out-turned sides and an upturned tip to the rim. P18 (274)

V34 GRS1. Lid with slight external bead and splayed profile. P18 (274)

V28 UNS MD. Platter with slightly in-turned plain rim. P17 (266)

V29 UNS MD. Cup with double-curved wall, imitation of samian ware Dr.27. P17 (270)

- V38 UNS MD. Bowl imitating samian ware Dr.37; mid-body decorated with circular bosses. P17 (271)
- V30 UNS WH2. Triple Vase; a small thin-walled cup with a fracture scar towards the base that suggests it was fixed to a wider basal ringing (which presumably held multiple cups). P17 (270)
- V27 UNS WH1. Bowl with reed rim. P17 (266)
- V36 BSW1. Lid with shallow splayed profile; burnished rim with burnished arcs of parallel lines on the upper body. P17 (271)
- V37 GRS1. Necked bowl with a slightly everted bead rim and burnished lattice on the neck. P17 (271)
- V26 ROB SH. Channel-rim, lid-seated jar. P17 (266)
- V35 BAT AM1. Amphora (Haltern 70/PandW Class 15); deep collared rim. P18 (276)
- V80 LEZ SA2. Cup, Dr.33 stamped with die 6d of Primanus iii (c.AD 160–200). P53 (634)
- V1 LEZ SA2. Dish, Dr.18/31 stamped (partial) with die 3a/4a of Vagiuro / Vagirus (c.AD 155–185). (3)
- V4 GOD WH. Bowl with stubby reed rim and carinated body. P6 (3)
- V5 ROB SH. Channel-rim, lid-seated jar. P6 (3)
- V2 CAD AM. Amphora (Dressel 11) with a tapering, slightly flaring plain rim, and the stump of large circular section handle immediately below the rim. P6 (3)
- V104 CNG BS. Beaker with small bead rim, tall neck, bag-shape body decorated with barbotine vine decoration between rouletted bands. Metallic slip. P62 (765)
- V103 LNV PA. Flagon with flaring plain rim and hoop of red-painted decoration on the neck. P62 (765)
- V101 GRS1. Shallow dish with bead rim; burnished interior and exterior (floor of base burnished laterally by hand). P62 (765)
- V102 GRS1. Shallow dish with bead rim; burnished interior and exterior. P62 (765)

In addition to the varying 2nd-century AD pit groups, there are also similar substantive and diagnostic concentrations in three ditches: D4, D6 and D6 that contain comparable vessels in samian ware from central Gaul (LMV SA and LEZ SA2), UNS MD, CNG CC1, UNS WH1, UNS WS2 and GRF1, as well as the common local coarse ware jars, bowls and storage jars. The form types favour deposition

in the earlier half of the 2nd century AD, though ditch D6 (153) contained a central Gaulish (LMV SA) samian ware maker's stamp (V131) that did not enter circulation until c.AD 145, which combined with the evidence of form types (Dr.18/31, Dr.33) in samian ware, a GRF1 poppyhead beaker and coarse ware dishes suggests deposition in the mid-2nd century AD. Ditch D6 (205) is notable for containing a mortaria factory stamp (V174) of late 1st-century AD date, associated with COL CC2 and CNG CC1 beakers, and samian ware that does not enter circulation until at least the early 2nd century AD, as well as a face flagon (V130) of perhaps mid-2nd-century AD date. Selected vessels include (Figure 32):

V131 LEZ SA2. Dr.18/31 dish, partial makers stamp, die 4 of Divixtus (c.AD 145–175). D6 (153)

V174 VER WH (M). Mortaria with a heavy drooping flange, level with a faint internal bead. The flange is stamped [F.LVGVDV]; a counterstamp of Albinus, interpreted as *Factum Lugdunum*, indicative of a workshop that is postulated as around *Verulamium*. D6 (205)

V130 UNS WS2. Flagon; a small applied face that would have adorned the neck; manufactured fairly crudely with small linear impressions forming the hairline, simple dot eyes and a single impression for the mouth, The raised areas appear to have been deliberately blackened to contrast with the white slip. D6 (205)

Phases 3c and 3d (2nd to 3rd centuries AD)

Vessels from the Northern Property (Figure 33)

In the closing decades of the 2nd century AD, the Phase 3 property boundaries are either enhanced or supplanted by further ditches that form the northern property, and contain a modest distribution of sherds, notably in ditches F4, F3 and F6. The pattern of supply is broadly consistent in terms of the common GRS1 and ROB SH fabrics, but demonstrates a subtle change in the minority fabrics, especially fine wares that now develop to reflect the middle to Late Roman supply patterns evident at domestic sites such as Ruxox and Kempston (Parminter and Slowikowski 2004, 494–5). These chronological markers include samian ware Dr.33 cup from east Gaul (RHZ SA), MOS BS (V72) and LNV CC beakers that suggest deposition into the northern property commenced no earlier than the late 2nd century AD, while an Oxfordshire white ware mortaria (OXF WH (M)) (V81) and the foot of a HAD OX flagon or jug may not have arrived until the mid-3rd century AD, when the former form types declined, suggesting the property ditches remained open until that period. However, vessels in ditch F3 including a CNG CC1 beaker were not current significantly beyond the 2nd century AD, suggesting a degree of re-deposition or

residuality. Selected vessels in this group include (Figure 33):

V72 MOS BS. Beaker with a flaring mouth, tall neck, small plain globular body and very small foot. Metallic glaze. F4 (261)

V46 GRS1. Dish with bead rim. F3 (484)

V105 ROB SH. Channel-rim, lid-seated jar. F3 (785)

V71 ROB SH. Jar with everted, undercut triangular bead rim, rounded shoulder and lightly rilled exterior. F6 (599)

V81 OXF WH (M). Mortaria with upright bead, hooked and undercut flange (rolled). F6 (638)

Vessels from Pits (Figure 33)

The pattern of rubbish disposal into pits within the town wall appears to form a continuum that extends into Phase 3 (2nd to 3rd centuries AD), with a total of 16 pits containing pottery assigned to this phase, including diagnostic sherds that indicate deposition between the mid- to late 2nd to early to mid-3rd centuries AD, potentially contemporary or immediately succeeding those in Phase 3 (mid- to late 1st to 2nd centuries AD). With the exception of substantive, albeit possibly chronologically mixed groups in pits P30 and P70, this deposition appears reduced in quantity in comparison with Phase 2. The earliest pits in this group include pit P68, which contains an anomalous ROB SH small bowl (V128), which could feasibly be early Saxon, and whose pottery is perhaps more consistent with the latter half of the 1st century AD; while pits P9, P29, P34 and P69 contained limited groups broadly dated to the mid- to late 2nd to early to mid-3rd centuries AD, of similar composition to those in the latter half of the 2nd century AD in Phase 2, including samian ware from central Gaul (LEZ SA2), LNV CC, GRF1, UNS WH1, UNS WS1, and common coarse ware vessels in GRS1 and ROB SH. The same pattern is evident in the substantive group from pit P30, which includes a LEZ SA2 Dr.33 cup stamped by Maior I (V54) that dates no earlier than c.AD 170, as well as samian ware from east Gaul (RHZ SA), funnel-neck beakers in CNG BS (V53) and LNV CC that decline in the mid-3rd century AD, while it is notable that the ROB SH jars (V47, V48, V49) in this deposit have varying everted rims rather than being channel-rim types. Contemporary pit P70 is more enigmatic, with its chronology defined by a samian ware Dr.45 mortaria from east Gaul (RHZ SA) but otherwise being comprised of a wide range of 1st-century AD 'Belgic' SOB GT1 jars and bowls. Selected vessels include (Figure 33):

V54 LEZ SA2. Cup, base stamped with die 6b of Maior I of Lezoux (c.AD 170–200). P30 (513)

V53 CNG BS. Beaker with slight funnel neck, small bead rim shouldered body with circular folds and three bands of rouletting. P30 (513)

V59 LNV CC. Deep bowl with bead rim and rouletted decoration; possibly imitating samian ware Dr.37. P30 (513)

V10 GRF1. Bowl imitating samian ware Dr.37 with 'London-type' decoration of ring-and-dot stamped motifs in the central decorated zone. P9 (170)

V66 UNS WH1. Candlestick; small cupped socket on a stem, with single grooves on exterior and top of rim. P34 (521)

V57 UNS WS1. Dish with a bead rim. P30 (513)

V51 BSW1. Dish with a bead rim; burnished interior and exterior. P30 (495)

V52 BSW1. Shallow dish with plain rim; burnished interior and exterior. P30 (495)

V50 GRS1. Conical cup imitating samian ware Dr.33, with small groove under the rim; burnished interior and exterior. P30 (495)

V11 GRS1. Bowl with reed rim. P9 (174)

V55 GRS1. Dish with a bead rim. P30 (513)

V56 LNV GW. Dish with a bead rim; burnished interior and exterior. P30 (513)

V58 BB2. Shallow dish with slightly in-turned plain rim; burnished surfaces. P30 (513)

V128 ROB SH. Small bowl with slightly everted plain rim, weak shoulder and squat rounded body. Very similar to early Saxon bowls at Kempton (Parminter and Slowikowski 2004, 489: fig.9.53.399a) but appear made or finished on a potter's wheel. P68 (891)

V47 ROB SH. Necked jar with everted plain rim and plain shoulder. P30 (495)

V48 ROB SH. Jar with an everted bead rim. P30 (495)

V49 ROB SH. Jar with an everted bead rim. P30 (495)

V60 LNV WH (M). Mortaria with upright bead and slightly undercut reeded flange. P30 (513)

Phase 4 (3rd to 4th centuries AD)

Vessels from the Northern Property (Figure 34)

The northern property established in Phase 3 (2nd to 3rd centuries AD) remained open into the Late Roman period, but with the exception of a modest group in ditch F1, comprised a relatively sparse scatter of sherds, with the general pattern of supply as defined by fabric remaining relatively consistent with previous phases except for the introduction of OXF RS. Several form types including an LNV CC funnel-neck beaker (V45) and ROB SH large bowl (V41) indicate deposition probably commenced in the mid- to late 3rd century AD and continued thereafter, but earlier sherds from preceding properties, such as a CNG BS beaker are clearly incorporated in the backfill. Selected vessels include (Figure 34):

V45 LNV CC. Beaker with small bead rim on funnel neck; non-cross-joining body sherds indicate it was decorated with under-slip barbotine vine-and-berry decoration F1 (482)

V44 GRS1. Dish with a bead rim; burnished interior and exterior. F1 (482)

V42 ROB SH. Jar with an everted bead rim. F1 (482)

V43 ROB SH. Jar with an everted bead rim. F1 (482)

V41 ROB SH. Large bowl with heavy flat-topped flange and faint rilling on exterior. F1 (482)

Vessels Associated with Oven O1 (Figure 34)

Oven O1, situated outside the town wall, contained a significant concentration of pottery, including an LNV CC bead-and-flange rim dish and beaker sherds that suggest a chronology in the late 3rd to 4th centuries AD. However, the bulk of the vessels in the oven appear consistent with types common in the first half of the 2nd century AD (Phase 3), potentially comparable with the nearby pit B, or possibly the closer still pit P6, both possibly representing the disposal of urban waste into middens outside the town wall. Selected vessels include (Figure 34):

V6 GRF1. Beaker with short downturned rim and globular body; the neck is decorated with a white-slipped band and the body with a white-slipped, burnished lattice. O1 (89)

V9 GRS1. Bowl with slightly undercut bead rim and mid-body carination; burnished exterior. O1 (89)

V7 GRS1. Jar with plain everted rim, offset neck and faint rilling on the exterior. O1 (89)

V8 ROB SH. Channel-rim, lid-seated jar. O1 (89)

Similarly assigned to Phase 4 are a series of related ditches on the interior of the town wall that appear to contain predominantly earlier vessels, with the exception of large proportions of two large ROB SH vessels: a storage jar (V90) and bowl (V91) in ditch D18 that indicate a date no earlier than the late 3rd century AD. The same observation can

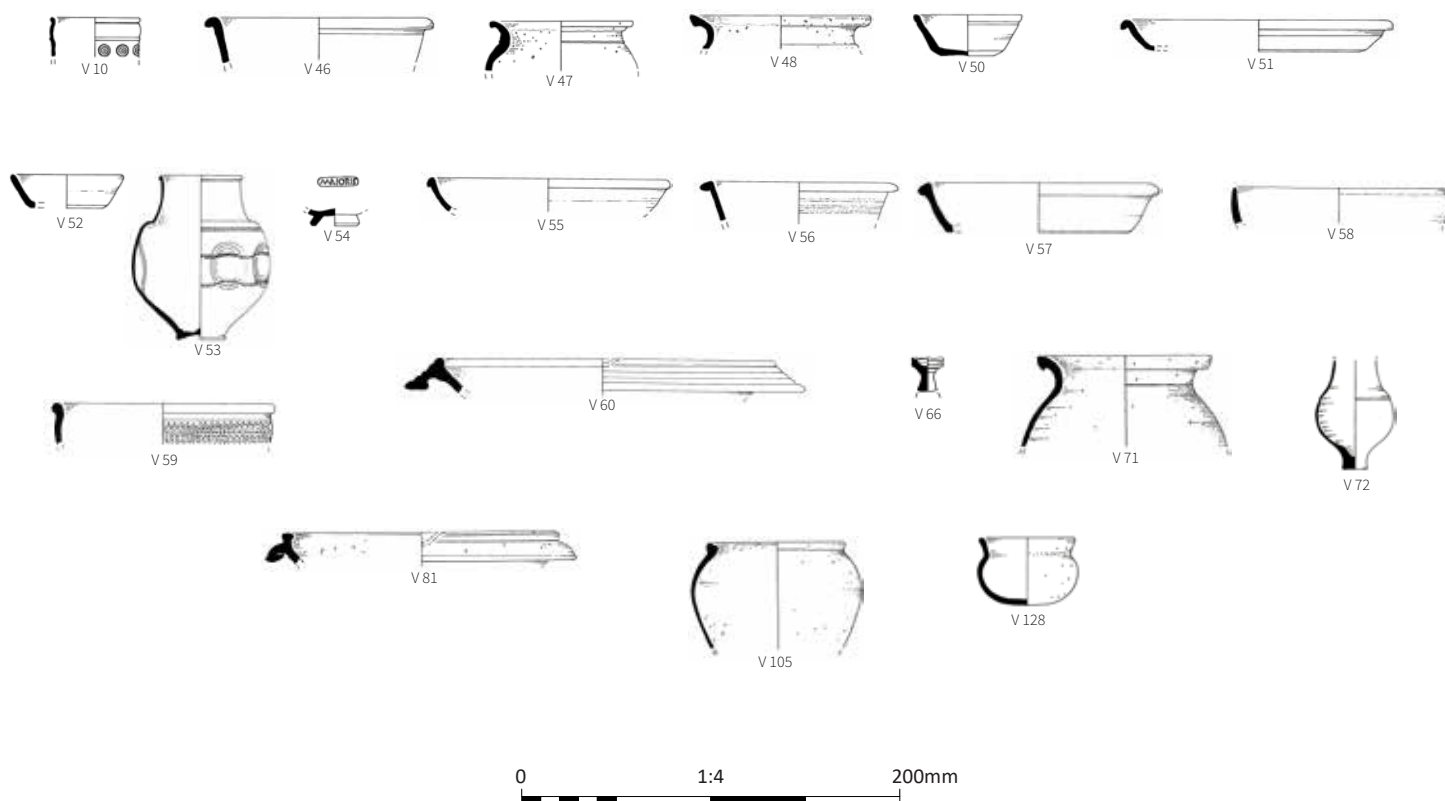


Figure 33: 2nd to 3rd-Century Vessels from the Northern Property and Vessels from Pits

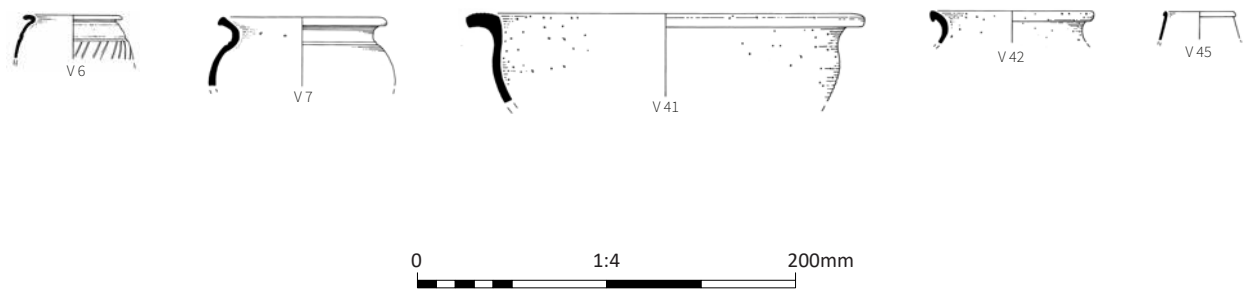


Figure 34: 3rd to 4th-Century Vessels from the Northern Property and Oven O1

be applied to pit P61, assigned to a date in the 3rd century AD, but containing vessels with a currency potentially commencing in the mid- to late 2nd century AD. Selected vessels from the Phase 4 ditches include (Figure 34):

- V73 UNS WH1. Flagon with slightly cupped bead rim, ring neck and stump of a 2-rib strap handle. D18 (610)
- V88 UNS WH1. Flagon with slightly cupped bead rim, tall ring neck and stump of a 3-rib strap handle. D18 (652)
- V95 UNS WH1. Bowl with reeded rim. D18 (676)
- V96 SOB GT1. Jar with short everted plain rim and corrugated shoulder. D18 (676)
- V94 ROB SH. Jar with everted bead rim and narrow ridge at base of neck. D18 (676)
- V92 ROB SH. Channel-rim, lid-seated jar. D18 (676)
- V93 ROB SH. Channel-rim, lid-seated jar. D18 (676)
- V91 ROB SH. Large bowl with horizontal flange (derived from reeded types). D18 (671)
- V90 ROB SH. Giant storage jar with robust angular bead rim on a short neck. D18 (671)

Conclusions on the Roman pottery from Sandy

This assemblage presents a clear picture of relatively intense urban pottery consumption in the corner of the former Roman town, with a focus on deposition into a series of pits distributed either side of the property boundary that separated the northern and southern properties. This spanned the mid- to late 1st to 2nd centuries AD, appearing to tail off from the early 3rd century AD. Related to this occupation may be significant pit groups situated immediately outside the town boundary, whose composition closely parallels that within the wall, potentially representing the deliberate middening of material cleared from the urban space. Supplementing the early occupation activity evidenced in this assemblage is a group of (near) complete accessory vessels contained

with interred cremations, whose character is consistent with the general assemblage.

Throughout this occupation the pottery supply is dominated by approximately equal proportions of locally produced shell-tempered wares, in particular channel-rim jars and storage jars, and sandy grey wares, including utilitarian cordoned or channel-rim jars, bead-rim dishes and reed-rim bowls. However, reflecting its status as an urban consumer with a status emphasised by the presence of a possible *mansio* at a crossing point of the River Ivel (Dawson 2007, 71–2), there is a diverse range of minority fabric and form types present. In the 2nd to early 3rd centuries AD, this includes a considerable input from *Verulamium*, and possibly Godmanchester, which were directly connected by the road network (Johnston 1974, 35–54), in the form of white ware vessels, mainly reed-rim bowls and ring-necked flagons, but also more idiosyncratic forms such as probable candle sticks, triple vases and tazze that may reflect an elevated style and complexity to domestic occupation. This status is also reflected in the fine wares, dominated by fine grey poppyhead beakers but including a significant component of mica-dusted wares, supplemented by beakers from imported continental and regional Romano-British sources, and modest quantities of imported samian ware, mainly common plain wares with sparse mould-decorated bowls. Other specialist vessels include mortaria from expected regional British sources, and relatively limited amphorae from southern Spain (Baetica and Cadiz) that are nonetheless notable because they include not only types associated with the importation of olive oil, but also *defructum* and fish sauce, further highlighting the consumer power and taste of the urban occupants.

Assessing the character of this pattern of supply relative to other areas of occupation in Roman Sandy is difficult as excavations in the urban core adjacent to the west (the Municipal Cemetery) between 1987–91 recovered approximately 1,165kg of pottery, including 2,182 sherds of samian ware and 811 sherds of amphorae (BCAS 1995, 11) but these have only been subject to cursory assessment and not subject to archive-level analysis or reporting. That assemblage includes sherds spanning the Late Iron Age to late 4th to early 5th century AD, but based on spot dating

is dominated by contexts assigned to the 3rd century AD and subsequently, although there is a modest distribution (181 contexts) assigned to the 2nd to 3rd centuries AD, suggesting there may have been a shifting chronological focus of pottery consumption in contrasting urban areas with a moderate degree of contemporaneity in the 2nd century AD, possibly hindered by subsequent Roman redevelopment. It is notable that a significant component of that assemblage was recovered from pits, potentially rubbish pits, that were not intercutting and contained at least 42 'large' (over 50 sherds) groups, which does appear consistent with the pattern of deposition here. As might be expected, sandy grey wares (GRS1) and shell-tempered ware (ROB SH) are abundant, with a preponderance of comparable utilitarian form types, notably channel-rim jars, reed-rim bowls; though there are significantly less bead-rim dishes, and higher proportions of plain rim and flanged dishes, and everted rim jars, probably reflecting the later chronological focus evident there.

The presence of white wares, notably those for *Verulamium*, is closely paralleled in the reed-rim bowls and flagons, but of intrinsic interest is the further presence of isolated tazza and ring-vase vessels that support the suggestion these were a consistent element of urban living in Sandy, rather than anomalies associated with ritual behaviour. Similarly, the fine wares include a substantive distribution of mica-dusted wares, including folded beakers comparable to those in this assemblage, and it must be speculated that such a concentration of a generally scarce fine ware suggests a hitherto unsuspected local source, or whether the status of this urban area (including a mansio) warranted mercantile supply, rather than individuals transporting possessions or traded exotica, from the *Verulamium* region and most likely associated with the supply of white ware and mortaria. Curiously, the fine grey wares common in the present assemblage appear absent from the earlier excavations but poppyhead beakers typical of the fabric are common, so it is probable that in the past assessment this fabric was not distinguished from the general sandy grey wares. Imported 'Rhenish' finewares (i.e. CNG BS, MOS BS) have a modest presence from the adjacent area, and are presumed beakers but their precise form is undefined; while the samian ware was dominated by central Gaulish wares (principally LEZ SA2) with relatively scarce sherds from south and east Gaul. This pattern does not entirely reconcile with the focus on 3rd-century AD occupation there, but full analysis may have elucidated this, and it was noted that there was a modest incidence of samian ware repaired with lead riveting, also present in this assemblage, which may be postulated to relate to the presence of capable artisans associated with metalworkers, also attested to have had a presence in the town. The substantive supply and trade of amphorae to Sandy was also supported, with previous excavations recording dominant Baetican Dressel 20 types associated with the importation of olive oil, but also Gallic types from

southern France associated with the importation of wine and olives.

Prior to the major excavation of the Municipal Cemetery site, and the realisation that Sandy was a Roman town (previously more usually considered a dispersed rural settlement), building works east of St. Neots Road in 1981 recovered a group of 2nd-century AD pottery (Dix and Aird 1983, 3) that includes central Gaulish samian ware from Lezoux, comprising a mould-decorated bowl, Dr.18/31 and Dr.31 dishes, associated with a fine ware cornice-rim beaker with roughcast decoration, shell-tempered, channel-rim jars, a poppyhead beaker, coarse grey ware bead-rim dishes and a reed-rim bowl. This has a composition remarkably consistent with the rubbish pit groups in Phase 3 (mid- to late 1st to 2nd centuries AD). A smaller group containing contemporary samian ware, fine grey ware, black-burnished ware 2, other coarse wares and a single sherd of amphorae was also recovered from an evaluation at Woodside Farm, Sandy (Wells 2002, 12). The economy, or at least pottery consumption, on the site is also closely paralleled in the 2nd to mid-3rd-century (Phase 2–3) deposits at the settlement at Kempston, where there are similarly elevated levels of samian ware, a range of mica-dusted beakers and bowls, fine grey ware poppyhead beakers and Baetican amphora supplementing the expected coarse ware vessel types, notably shell-tempered channel-rim jars (Parminter and Slowikowski 2004, 58, 458–9, 496). Conversely, the contemporary assemblage from Ruxox Farm had much lower proportions of fine ware, albeit still with common whiteware from *Verulamium*, although both sites have more extensive Late Roman components than are evident here (Parminter and Slowikowski 2004, 58, 458–9, 494–5).

In the same area, close to modern Bedford, the bathhouse and estate at Newnham produced an assemblage with slightly higher proportions of shell-tempered ware to sandy grey ware; similarly common fine grey wares but markedly less samian and white ware with only isolated mica-dusted wares (Aird and Slowikowski 2016). The vessels in that assemblage included negligible numbers of beakers and flagons, and relatively sparse dishes and bowls relative to necked bowls and jars, although it is notable that a triple vase is also present. This profile of consumption may reflect the slightly contrasting activity around the particular (bathhouse) building and land slightly removed from the actual villa, with its associated rubbish pits from more domestic consumption, but all-in-all the early to mid-Roman (Phase 2 to 3) pattern of pottery consumption appears for more restrained and limited in scale compared to that at Sandy (Aird and Slowikowski 2016, 11, 15, 26).

This reduced level of consumption is even more apparent in pottery groups recovered from enclosures associated with domestic settlement and an aisled building at

Shefford c.11km south-south-east (Wells 2010, 304), where samian ware accounted for just 2% of the total assemblage, with a comparable range of form types present, but decreasing to a trickle by the mid 2nd century AD. At Shefford, regional and continental imports were poorly-attested, notably lacking many of the slipped and mica-dusted fine ware present at Sandy, rather focussed on fine grey wares; while the regional imports include comparably common levels of *Verulamium* white ware, yet a greater presence of Lower Nene Valley grey wares and pink-grogged wares, possibly out-competed at Sandy by kilns that served the town. It was also notable at Shefford that shell-tempered wares were significantly less common, present in approximately half the proportions at Sandy, which may be a reflection of both the chronology and status of consumption there, with grog-tempered non-storage-jar 'Belgic' vessels maintaining a greater share of the assemblage to at least the early 2nd century AD.

Similarly, excavations of a Roman settlement and associated farmsteads at Biddenham recorded an assemblage in which deposition contemporary with Phase 3 of this assemblage was significantly reduced, and in the mid-1st to 2nd centuries AD more typically in ditch features rather than pits (Wells 2016, 156, 10 and 13). However, the supply pattern has much in common with Sandy with variations reflecting what at Biddenham may be a rural economy derivative of market centres such as Sandy, with trade links that were not local in the 2nd century AD. It may be postulated that these links were dominated by trade with *Verulamium* or came via that town. The Biddenham groups share a closely comparable range of common utilitarian jars, storage jars, dishes and bowls, although again the shell-tempered wares account for a slightly higher proportion of the assemblage than the sandy grey wares, with a similar proportion and range of regionally traded wares, notably from *Verulamium*, the Lower Nene Valley and the Oxford

kilns (Wells 2016, tables 27 and 37), with the latter fabrics perhaps reflecting a location slightly further west but the geographic distinction is marginal. Levels of samian ware per farmstead / settlement at Biddenham are slightly reduced, but in total do not contrast significantly in composition of fabric or form type with that from the urban area of Sandy, notably with the predominance of Dr.18.31 and Dr.31 dishes, Dr.33 cups with mould-decorated Dr.37 bowls modestly represented. The fine wares at Biddenham are similarly dominated by fine grey wares, notably poppyhead and folded beakers, and mica-dusted wares have a lower but still notable presence, including a shallow semi-hemispherical bowl; while white wares have a reduced presence but include a fine oxidised (white-slipped?) candlestick (Wells 2016, vessels P92 and P110), further highlighting the relative affluence of the economy, culture and consumption at Sandy, and the ripple effect its pattern of supply may have had on its rural hinterland.

In conclusion, the pattern of pottery supply at Sandy, as represented by extensive disposal of domestic waste into rubbish pits and property boundaries within the urban environment, a small funerary group, is characteristic of a strongly affluent if not buoyant economy in the 2nd to early 3rd centuries AD, which benefited from close road and river links to major urban consumers, notably *Verulamium*, while also reaping the benefits of local resources that provided an array of sand-tempered and shell-tempered coarse wares. Therefore, kitchen and cooking vessels, notably channel-rim jars, are supplemented by extensive table wares ranging from bead-rim dishes and reed-rim bowls, to a plethora of samian ware, fine grey poppyhead beakers and an intriguing array of mica-dusted wares, imported Rhenish beakers and rare but distinctive examples of candlestick, tazza and triple vase, providing the occupants with the complex equipment to embrace Roman consumerism in the same style as fine villas and townhouses across southern Britain and the western

Appendix B: Post-Roman Pottery

Kylie McDermott (AOC Archaeology Group)

Introduction

A very small assemblage of post-Roman pottery comprised a total of 22 sherds (449g) from an estimated 22 vessels. The pottery examined for this report has been identified and spot dated with the aim of understanding the nature of the assemblage in the overall context of the site.

The pottery assemblage is highly fragmented and consists mostly of undiagnostic sherds.

Methodology

The pottery has been quantified using sherd count (sc) and weight (g), whilst the fabric has been examined under x20 magnification and identified and spot dated with reference to the Bedfordshire Ceramic Type Series (Table 8; Parminter and Slowikowski 2004). All data has been recorded on an excel spreadsheet, to be included with the site archive.

Discussion

Both early and late post-medieval pottery was identified. The earliest fabric in the post-medieval assemblage is one (6g) sherd of a Cistercian-type ware cup (Fabric P12, 1480–1650), followed by a small fragment of tin glazed earthenware (Fabric P33, 1570–1846), recovered from environmental sample RF22. Post-medieval redwares (1580–1900) dominate the assemblage with both black (Fabric P03, two sherds, 21g) and brown glazed sherds (Fabric P01 and P02, five sherds, 271g). The assemblage also includes Staffordshire-type slipwares (Fabric P30, 1850–1900) white salt glazed stoneware (Fabric P37, 1720–1780), English brown glazed stoneware (Fabric P36A, 1700–1900), transfer printed pearl ware (Fabric P42/43, 1770–1840), refined white earthenware with no decoration present (Fabric P55, 1805–1900) and with ‘flow blue’ decoration (Fabric P45, 1830–1900)

The pottery assemblage is small and highly fragmented. The assemblage was recovered from topsoil, subsoil, pits and post-medieval trenches. Whilst the assemblage offers some dating evidence, it has little further archaeological value and is of low significance.

Context	Enviro Sample Number	Fabric	Expansion	form	dec	SC	wt (g)	ENV	E-L DATES
1		P45	refined white ware with underglaze transfer-printed ‘flow blue’ decoration	cup	flow blue	1	16	1	1830–1900
		P42/43	pearlware with transfer-printed decoration		willow pattern	4	65	4	1770–1840
		P36A	English brown salt-glazed stoneware			1	11	1	1700–1900
		P55	refined white earthenware			3	15	3	1805–1900
		P03	Post-medieval red earthenware (black glazed)			1	1	1	1580–1900
		P02	Post-medieval red earthenware			1	19	1	1580–1900
		P30	Staffordshire-slipped ware			2	50	2	1650–1900
2		P02	Post-medieval red earthenware			1	38	1	1580–1900
42	RF22	P33	Tin glazed ware			1	<1	1	1570–1846
79		P01	Post-medieval red earthenware	dish		2	200	2	1580–1900
		P03	Post-medieval red earthenware (black glazed)			1	1	20	1580–1900
		P02	Post-medieval red earthenware			1	14	1	1580–1900
102		P30	Staffordshire-slipped ware	dish		1	13	1	1660–1730
		P37	white salt-glazed stoneware			1	<1	1	1720–1780
206		?P12	?Cistercian ware	?cup		1	6	1	1480–1600

Table 8: The post-roman pottery assemblage from Sandy, Bedfordshire quantified and identified by context, fabric, count, weight, estimated number of vessels (EVN) and spot date (early to late).

Appendix C: The Roman Ceramic Building Materials

Andrew Peachey (External Specialist)

The Roman CBM was manufactured in three fabrics (Table 9), described below, and quantified in Table 10. All three fabrics are well attested in assemblages previously recorded in Roman Sandy (BCAS 1995, 23).

Fabrics CBM1 and CBM2 appear common, principally as tegula roof tile, with sparse imbrex, box flue tile and bessalis also present (Table 10). Fabric CBM3 is only represented by bessalis, with its white colouring possibly providing contrast in visible bonding courses or paving.

Fabric Code	Principal Temper	Fabric Description
CBM1	Sand	Mid- to dark orange-red orange surfaces over an orange-red core. Inclusions comprise moderately-sorted common-abundant quartz (0.2–0.5mm), sparse red iron-rich grains (<1mm, occasionally to 5mm) and occasional flint (0.25–2.5mm).
CBM2	Shell	Pale orange to red brown. Inclusions comprise common to abundant shell (0.5–5mm, occasionally to 10mm). Equivalent to Roman shell-tempered pottery and CBM, notably that produced at Harrold, Bedfordshire[1] (Brown 1994)
CBM3	Sand-and-chalk	Off white; with inclusions of common medium sand (<0.5mm) with sparse chalk and red iron-rich grains (both generally <3mm, occasionally to 7mm)

Table 9: Description of fabric codes

The tegula roof tile present range in thickness between 20–30mm; however only a very low proportion have an extant flanged edge, just eight fragments in pit B, pits P30, P61, ditch F4 and topsoil (1). The flanges are of equal to slightly greater height than the body, with a flat top,

slightly convex inner face, and a shallow groove at the junction with the body (and frequently a sanded base). However, given the preponderance of flat fragments, it cannot be discounted that some of these may be derived from the plain sides of box flue tile, although the lack of obvious sanding on the ‘inner’ face suggests this may be a very limited presence.

The imbrex tile present is slightly thinner than the tegulae, approximately 15mm thick, expanding to 20mm at the basal edges, with faint lengthways ribbing on the upper surface where the tile was pressed over a former (and a finely sanded base to ensure it did not stick). Sparse fragments of this semi-circular roof tile were contained in kiln K1, pits P30, P34 and P69.

Fragments of box flue tile in fabrics CBM1 and CBM2 were present in pit P53, and only in CBM2 in pits D15 and P70. The box flue tile was 20–25mm thick with right-angled edges that would have formed part of a square tubular tile with vents through opposing sides. The perpendicular sides were typically combed or keyed to aid the adherence of plaster and mortar, and this treatment is well defined in D15. The tile was keyed with a closely-spaced lattice pattern made with a 5-tooth comb (45mm wide); while partial key marks were also visible in P53.

The brick fragments recorded were 40mm thick, often with slightly less regular, finger-impressed edges than the tile, suggesting they come from the common bessalis type used to construct pilae in hypocaust heating systems and for bonding courses in walls amongst other functions, rather than one of the larger variants. Small fragments of bessalis in CBM1 were contained in pit P42 and topsoil (1); and in CBM3 in pit B, linear F1 and ditch F6.

The Fired Clay

The fired clay occurs in two fabrics, of which a sand-tempered variant is more common than an organic-tempered variant (Table 11). This conforms with the

Roman CBM type	Fabric CBM1		Fabric CBM2		Fabric CBM3		Total	
	Fragment Count	Weight (g)	Fragment Count	Weight (g)	Fragment Count	Weight (g)	Fragment Count	Weight (g)
Tegula (flanged fragment)	2	698	6	1,153	-	-	8	1,851
Tegula (flat tile only)	137	5,129	97	7,744	-	-	234	12,873
Imbrex	2	163	5	927	-	-	7	1,090
Box Flue tile	1	144	4	340	-	-	5	484
Bessalis	4	4,112	-	-	10	1,788	14	5,900
Misc.	277	2,623	-	-	3	14	280	2,637
Total	423	12,869	112	10,164	13	1,802	548	24,835

Table 10: Quantification of Roman CBM by type and fabric

pattern of fired clay types previously recorded in Roman Sandy (BCAS 1995, 26), where it was observed that the probable functions included uses as daub in walls and as lining for oven or hearths, the presence of both of which are supported by the small fragments present here.

Fabric Code	Fabric Description	Fragment Count	Weight (g)
Fabric 1	Mid-dark orange, with inclusions of common fine silty sand (<0.2mm) and sparse chalk / voids and iron-rich grains (1–5mm)	231	5395
Fabric 2	Pale-mid-orange surfaces over a redder core; with inclusions of fine silty quartz (<0.2mm) and common voids of chopped linear organic material, most likely grass (2–7mm)	145	1164

Table 11: Quantification of fired clay.

A single fragment of Fabric 1 in pit P67 exhibits a 15mm wide rod impression, most likely from a wattle panel or similar structural support, while sparse fragments throughout the assemblage have slightly heat-altered, crudely smoothed 'external' surfaces that may suggest they once lined an oven chamber or flue. A single fragment in ditch D18 also exhibits the partial footprint of a relatively large dog, which may have walked over the lining of a hearth before it had been allowed to dry. The only substantive group of fired clay is comprised of 123 fragments (1705g) contained in pit B, potentially part of a midden, therefore while indeterminate, the fired clay may have formed part of an object, support or small structure that was partly or wholly disposed of into this deposit.

The Mortar

A total of 54 fragments (3719g) of lime mortar were recovered from Roman deposits, but these are principally comprised of large fragments recovered from a mortar spread over town wall [5], pit B and ditch D12, with only very small and sparsely distributed fragments elsewhere. The mortar typically has a fine powdery fabric and no extant surfaces, plaster or paint are present. However, that in pit B is slightly contrasting in that appears tempered with common coarse rounded chalk (5–40mm), perhaps indicative of an attempt to manufacture a stronger cement-like mortar that may have formed part of a structure.

Distribution

The CBM, fired clay and mortar was very sparsely distributed and lacked any substantive concentrations that may be indicative of demolition debris or even packing; a curious paucity given the urban environs of the site and presumed proximity of major structures, including

the town wall (Table 12). The total amount of tegula roof tile is perhaps equivalent to only three complete tiles, and the bessalis to a single brick, therefore this fragmented assemblage most likely represents detritus scattered in an urban environment, probably as disposed rubbish, but possibly deliberately as rubble to enhance surfaces or drainage.

In Phase 3 (mid- to late 1st to 2nd century AD), pit B contained a mixed group of relatively small fragments from tegula roof tile and bessalis brick in varying fabrics, as well as daub / oven lining and mortar with coarse chalk temper; all consistent with the clearance, if not re-disposal of general rubble associated with a local building(s). Substantial fragments of lime mortar were, perhaps not surprisingly contained in mortar spread (5) associated with the town wall, albeit in limited quantity. Within the (rubbish) pits, occasional deposits contained modest quantities of tegula roof tile, perhaps amounting to packing material or perhaps as none equate to more than half a complete tegula roof tile merely discarded rubble, including in pits D7 and P73. A similar pattern is evident in Phase 3 (2nd to 3rd century AD), where a group of tegula fragments in pit P30 equate to nearly complete tegula roof tile and are associated with fragments of imbrex roof tile; while relatively sparse fragments of tegula roof tile in the northern property may have been scattered to assist drainage.

In Phase 4 (3rd to 4th century AD) there continues to be a sparse scatter of tegula and imbrex roof tile fragments in the northern property, notably ditch F1; while an Oven contained a plethora of small (miscellaneous) fragments of Roman CBM, which suggest they may have been deliberately broken down to be incorporated in the lining and superstructure, perhaps as both temper and insulation. A relatively anomalous presence in the assemblage is two substantial fragments of bessalis brick in unphased (Roman) pit P37, with a further comparable fragment of bessalis brick recovered from the topsoil. This was perhaps associated with a building but equally could derive from a bonding course in the town wall.

The limited magnitude of the CBM assemblage, notably the presence of tegula roof tile and box flue tile is quite contrasting with the 2,260 fragments recovered from adjacent Municipal Cemetery excavations in 1987–1991, although it was noted that quantities of CBM in the previous excavations increased in the Late Roman phases (BCAS 1995, 15, 24), which are little evidenced in this area. As the previous material was only subject to a basic assessment and not full analysis, a close comparison of technological aspects cannot be made, though the CBM from previous excavations appear to incorporate a wider range of fabrics and notably dominant proportions of shell-tempered variants potentially produced in the Harrold kilns, whose prevalence may also reflect the contrasting chronological

Phase	Feature Group	CBM		Fired Clay and Mortar	
		Fragment Count	Weight (g)	Fragment Count	Weight (g)
Phase 3a, 3b	Cemetery			4	23
(mid- to late C1st to C2nd AD)	Pit B	43	2,885		
	Channel/Defensive Ditch	1	49		
	Town Wall	4	240	4	1,075
	Roadside ditch (early/west)			7	105
	Roadside ditch (late/east)	6	101		
	Property Boundary (1st phase)	3	25		
	Property Boundary (2nd phase)	1	36	3	54
	Property Boundary (3rd phase)			2	91
	Property Boundary (4th phase)				
	Kiln K1			11	131
	Pits (mid-1st 2nd century AD)	18	236	21	765
	Pits (late 1st 2nd century AD)			1	7
	Pits (2nd century AD)			5	54
	Pits (early-mid-2nd century AD)	99	1,903	4	8
	Pits (mid-late 2nd century AD)	16	1,079	18	200
	Pits (late 2nd century AD)	4	453		
	Pits (late 1st mid-3rd century AD)	3	84	46	315
Phase 3c, 3d	Northern Property	11	1,026	6	58
(C2nd to C3rd AD)	Pits (early 2nd 3rd century AD)	54	603	2	45
	Pits (mid-2nd early 3rd century AD)	4	315		
	Pits (mid-2nd mid-3rd century AD)	6	582	1	9
	Pits (mid-2nd mid-3rd century AD)	1	12	12	257
	Pits (late 2nd mid-3rd century AD)	41	2,657		
Phase 4	Northern Property	23	2,133	6	50
(C3rd to C4th AD)	Ovens	158	1636	27	403
	Pits (3rd century AD)	2	357	7	15
Unphased (Roman)		41	4,787	69	2,794
Post-Medieval		10	536		
Unstratified		7	3,621		
Total		556	25,356	256	6,459

Table 12: Distribution of CBM, fired clay and mortar in feature groups

ranges. The prevalence of shell-tempered fabrics was also observed at settlements at Ruxox and Kempston, although sand-tempered variants were dominant at Aston Well, where both tegulae and imbrices appear to have been manufactured with broadly comparable sizes and profiles, while bessalis bricks had an equally negligible presence (Wells 2004, 504). Compared to these settlements, the box flue tile exhibits a narrower range of fabrics, key marks and an absence of roller stamping (Wells 2004, 508); while the scarcity of bessalis contrasts with those associated with the pilae of bathhouses such as those at Newnham (Ingham *et al.* 2016, 34). This may reflect the actual proximity of hypocausts or bathhouses at these nuclei

of rural settlements and estate centres compared to the relative distance that may be between properties within this site and a bath house in the urban area of Sandy. In further contrast, the settlement at Biddenham produced higher quantities of tegula and imbrex roof tile than at Sandy, but technologically had a narrower range of form types (Wells 2016 2–3), further highlighting that the scale of this CBM assemblage is slightly incongruous from within the corner of an affluent Roman small town.

Appendix D: Osteoarchaeological Report on the Cremated Human Skeletal Remains

Alexandra Johnson (AOC Archaeology Group) and Mara Tesorieri (External Specialist)

Introduction

According to McKinley, '[cremation] was expensive in terms of (at least) time and effort and had the potential to create a variety of deposit and feature types for which we may recover archaeological evidence' (McKinley 2013). What can be interpreted of the cremation as a burial rite thousands of years later is limited to the archaeological evidence- principally the bones, associated artefacts, and any preserved evidence of a pyre (e.g., heat-affected soils or rocks, charcoal, fuel ash slag, etc.). Despite the common occurrence of cremations in Roman Britain, relatively few pyre sites have been identified, as evidence of burning is only preserved if covered immediately after use (Medina-Pettersson 2013).

With the burning of the body and associated material, the organic components of the body and bones are stripped away, and the inorganic components are transformed. The bone is dehydrated and oxidated, the hydroxyapatite within turned into tricalcium phosphate at temperatures of 800°C or higher (McKinley 2013). The results (colouration, fragmentation, and warping or cracking of the bone) allow for osteologists to interpret pyre technology and burial

practices, even when osteological analysis of age, sex, and pathology can be difficult or even impossible (Schultz *et al.* 2008, 75–94). The final appearance of bone can vary in colour and fragmentation depending on various factors including the temperature and length of time the body was exposed to heat, as well as the materials and techniques used to build the pyre.

Colouration

As modern studies have shown a correlation between colouration and exposure to heat, a colour gradient has been put forward for interpreting pyre technology involved (Walker *et al.* 2008, 129–35). While temperatures of 400°C or less only blacken the outer periosteum, without affecting the inner cortical surface or trabecular bone, temperatures between 500°C and 700°C burn more of the surrounding organic material, leaving the bone a blue to grey colour. Once temperatures reach 800°C or higher, fragments begin to turn cream to white with a chalky texture (Plate 34). Once the bone reaches this stage, it is fully calcined (Schultz *et al.* 2008). The average temperature for archaeological cremations has been estimated to have ranged between 1000°C and 1100°C (McKinley 2006, 81–8). In interpreting cremation practices from the bone, it is important to consider the effects of variables including depositional environment, soil staining, the positioning of the body, and any artefacts that were incorporated as either pyre or grave goods.



Plate 33: Mid-excavation of the only urned cremation C1 at Sandy

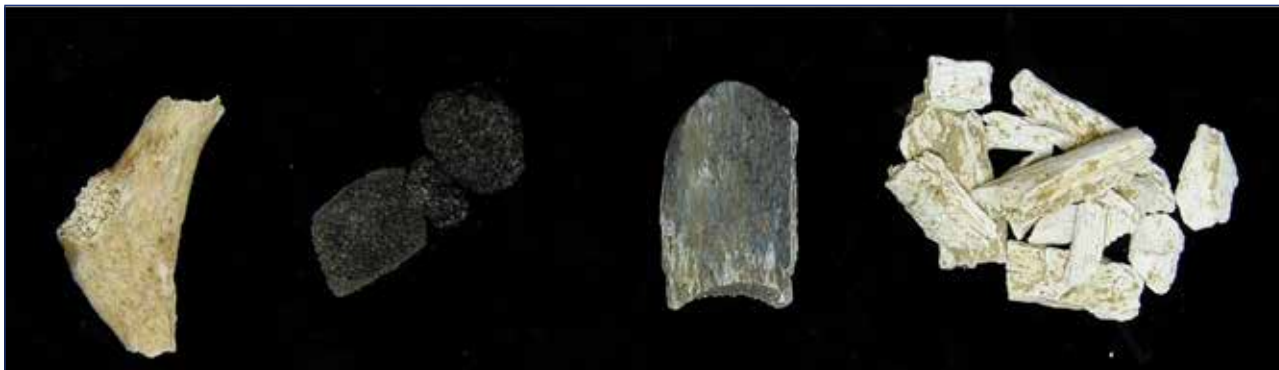


Plate 34: Colour chart left to right: orange (unburnt, approximately 0–400°C), black (charred, approximately 400°C), blue-grey (incompletely oxidised, approximately 500–700°C), white (completely oxidised, over 800°C).

Weight and Fragmentation

Like colouration, the weight of a cremation deposit can provide information on burial practices or on the number of individuals included (McKinley 1993 283–7). Differences between biological sex have also been noted in studies such as those by Bass and Jantz (2004, 901–4) and Ubelaker (2009, 1–5), where the cremations of male individuals typically weighed more than those of females. The ranges for each sex vary considerably between studies however, and the total weight of a cremation deposit is subject to various other factors including the method of remains retrieval, reburial after the cremation process and excavation and post-excavation processes. In other studies, the weight of cremation deposits has been suggested to reflect the level of care involved in remains collection and in some cases a reflection of social status (Brück 2006, 297–315; McKinley 1997, 129–45). Deposits weighing less than 57g have been interpreted as representing token deposits, however, such deposits could also represent the burials of infants or children (Mays 1998).

Prior to osteological analysis, the cremation deposits were dry sieved using 2mm, 5mm, and 10mm metal mesh sieves. The categorising of fragment size can provide information on any post-cremation processes such as crushing or grinding of the bone fragments. Fragmentation can also be the result of tending to the pyre, when replacing or moving bones or fuel, for example. The collection of the cremated remains after cremation can also result in fragmentation, if for example, the remains are collected from the pyre and brought to another location for burial (McKinley 1994 339–42). When comparing fragmentation size of cremation assemblages, it is necessary to consider the type of deposit, whether urned or unurned, for example, as urned deposits typically have better preservation and greater weights of bone deposits than earthen deposits in pits. Typically, 50% or more of bone fragments recovered from most British or European cremations are over 10mm (McKinley 1994; McKinley 2016, 17–41; Tesorieri, 2014).

Bone Dehydration, Warping and Cracking

As bone dehydrates during the cremation process, it begins to shrink, warp and crack. Once bone reaches 800°C fragments shrink an average of 10–12% and as much as 25%. While warping can help indicate the temperature the remains were exposed to, cracking patterns are used to provide information on the state of the bone at the time of cremation, whether dry and excarnated or fleshed. Bones which are dried or de-fleshed before cremation typically form a ‘checked’ pattern of horizontal and vertical cracks, with little or no warping. Bones which are fleshed at the time of cremation, on the other hand, typically exhibit more disorganised cracking and warping patterns (Buikstra and Ubelaker 1994). While it was once thought that traditional ‘thumbnail’ cracking only occurred when bone was cremated while fleshed, a study by Gonçalves and colleagues demonstrated that even dried bone can exhibit thumbnail cracking as a result of the cremation process (Gonçalves *et al.* 2011, 1308–13).

Methodology

All contexts containing bone material were sent to the author after careful sieving, washing, and weighing of the material, with any known animal bone, charcoal, or finds removed and sent to the appropriate specialist. All methods of excavation, recording, cleaning and analysis follow the code of practice laid out by BABAO / CifA (Brickley and McKinley 2004; Mitchell and Brickley 2018).

Processing of Cremated Remains

Each spit from each cremation deposit was dry sieved through 2mm, 5mm, and 10mm sieves, and the longest fragment was measured. The colour of the bone fragments was then recorded before being categorised by anatomical region, including skull, vertebrae, thorax, upper and lower limbs, shoulder girdle, pelvic girdle, unidentified long bones, and hand / foot bones. Once fragments were sorted by anatomical region, each category was weighed to calculate the total percentage

of identifiable fragments within the assemblage and where possible, identified to element. Any surviving morphological features from identifiable elements were recorded and used to determine MNI, age-at-death, biological sex, and / or pathology.

Minimum Number of Individuals (MNI)

Determining the minimum number of individuals (MNI) in a cremation deposit is done primarily by identifying multiple skeletal elements (e.g., more than two left (or right) mastoid processes would mean more than one individual is represented). Another way to determine whether there are multiple individuals within the deposit is if there are apparent age-at-death differences. Differences in age-at-death are most readily apparent in the timing of tooth development or epiphyseal fusion (Scheuer and Black 2004). Caution must be exercised when trying to determine age-at-death based on cranial suture closure, as exposure to heat during the cremation process can cause a partially fused suture to reopen. The same can be the case with centres of epiphyseal fusion. Due to shrinkage and warping of bone during the cremation process, identifying multiple individuals based solely on differences in robusticity between elements can also be problematic, as elements positioned around the periphery of the pyre (such as the head, hands, and feet) generally experience less shrinking than elements exposed to higher heat.

Biological Sex and Age-at-Death

Unfortunately, fragmentation and warping / shrinking of bone during the cremation process often make age-at-death and biological sex difficult to confirm. Determination of biological sex and estimation of age-at-death was carried out using standard methodologies and included known sexually dimorphic cranial and / or postcranial features of bones present (Buikstra and Ubelaker 1994). Where possible, dimorphic features were recorded for objective comparison (Bass and Jantz 2004). Estimation of age-at-death of infants and children (up to approximately 21 years of age) can be determined using epiphyseal fusion rates, dental formation and eruption timing (Bass and Jantz 2004; Scheuer and Black 2004). Stages of adolescence and sexual maturity can be determined based on formation of the hamate, cervical vertebrae maturation, and fusion of the iliac crest. After epiphyseal fusion is complete in adulthood, age-at-death is determined primarily based on morphological stage of the pubic symphysis, auricular surface, sternal clavicular end, ecto- and endocranial suture closure and metatarsal formation.

Scientific Analyses

Unfortunately, the cremation process limits microscopic or biomolecular analysis of cremated remains. Due to the high temperatures involved, aDNA and stable isotope analysis is not possible (McKinley 2013). As yet, aDNA analysis is only possible on human bone exposed to heat lower than 600°C (Walker *et al.* 2008). Recent advances in radiocarbon dating, however, have made it possible to date fully calcined bone, providing invaluable information on the historical context of the burial. Recent studies have also shown that strontium isotope analysis of calcined bone is also possible and can provide invaluable information as to an individual's geographic origin. Analysis of the cremated remains from Sandy used a comparative approach to interpreting heat exposure from bone colouration and fragmentation. Any discernible osteological information was then recorded, including age, sex, and any indicators of pathology. A sample of bone was taken from eight of the cremation deposits for radiocarbon dating.

Inhumation Analysis

The unburnt human bone collected from the site (including fragments collected during dry sieving and bulk sample processing) were cleaned and sent to the specialist for analysis. The remains were recorded following the codes of ethics and practice laid out by CIFA and BABAO (Mitchell and Brickley 2018; British Association of Biological Anthropology and Osteoarchaeology 2019). Any skeletal fragments identified as animal were separated and sent to the appropriate specialist. Preliminary skeletal analysis included the evaluation of bone surface preservation, fragmentation, and completeness of the remains; including evidence of taphonomic damage, consideration of which is critical and can severely limit further analysis. Evidence of taphonomic damage includes signs of weathering (including cracking, bleaching and staining), scavenging by animals (including gnawing or scratching), or damage by surrounding vegetation (roots) were also recorded (Buikstra and Ubelaker 1994). Classification of bone surface preservation followed Brickley and McKinley (2004) stages:

0 = Clearly visible surface morphology

1 = Slight and patchy surface erosion only

2 = More extensive surface erosion with deeper surface penetration

3 = Most surface is eroded and details of parts of surface are masked by erosion

4 = All of surface is eroded to various depths but general bone profile maintained

5 = Heavy erosion across whole surface, masking surface morphology and modifying profile

Fragmentation of the remains considers the completeness of each element (in percentages), where present. The presence and fusion stages of epiphyses and the proportion of diaphysis were recorded for each bone. Overall completeness of each skeleton was calculated on the basis that the skull equates to 20% of the skeleton, the upper limbs 20%, the torso 40%, and the lower limbs 20%.

Determination of biological sex and estimation of age-at-death was carried out using standard methodologies outlined by Buikstra and Ubelaker (1994) and included any known sexually dimorphic cranial and / or postcranial features of present bones (Berrizbeitia 1989; Phenice 1969, 297–301). Where possible, metrics of dimorphic features were recorded for objective comparison (Berrizbeitia 1989; Krogman and Iscan 1986). Estimation of age-at-death of infants and children (up to approximately 21 years of age) can be determined using epiphyseal fusion rates, dental development and eruption timing, and metric analysis (Scheuer and Black 2004). Stages of adolescence and sexual maturity can be determined based on formation of the hamate, cervical vertebrae maturation, and fusion of the iliac crest. After epiphyseal fusion is complete in adulthood, age-at-death is determined primarily based on morphological stage of the pubic symphysis auricular surface, sternal clavicular end (Falys and Prangle 2015), ecto- and endocranial suture closure and metatarsal formation.

The Cremation Assemblage

Cremated human remains were recovered from 17 deposits, including one urned (RF2 from pit C1), and all in earthen pits. Following the osteological assessment, further analysis was recommended for 13 of the deposits. Of these 13 deposits, a minimum number of 15 cremated individuals were observed, comprising five non-adults, two males, two females, three adults of unknown sex, and three individuals of unknown age.

Cremation C1

Cremation deposit (21) was recovered from pit C1. The pit was oval in shape with rounded sides, a flat base, and measured 0.68m x 0.53m and 0.21m deep. The urn (RF2) in which the cremated remains were deposited was a channel-rim, lid-seated jar dated to the mid-1st to 2nd century AD (Peachey 2019). Along with the cremated remains were two unburnt pottery dishes (one a samian dish) and one shattered glass jug or flask. Neither the pottery nor the glass jug appeared to be heat affected

and were most likely incorporated into the burial after the cremation process as a grave good. Fill (21) comprised mid-dark yellowish brown silty sand with occasional local ironstone and very occasional small sandstone. A summary of the bone weight and contents by spit is provided in the primary archive..

A total of 461g of cremated bone were analysed from five 20mm spits. A small collection of unstratified human remains associated with the deposit were also included (0.8g). The cremated remains in the first and fifth spits were creamy white, though the bone from spits 2–4 varied in colour from dark grey to white, indicating differential exposure to heat between approximately 500°C and above (Walker *et al.* 2008). The highest proportion of bone fragments were recovered from the 5–10mm sieve (175.7g or 38%), followed by the >10mm sieve (166.5g or 36%), then the 2–5mm sieve (90.4g or 19.6%), and the least were recovered from the 0–2mm sieve (29.3g or 6.3%) (Plate 35). The smallest fragments of bone were observed from the upper two to three spits with the larger fragments in the lower 2 to 3 spits. Thumbnail cracking of long bones and slight warping of bones with thin cortical surfaces was observed. The largest bone fragment from the deposit was 48.65mm, from spit 4. Approximately 239.6g or 51.9% of bone fragments from all spits were identifiable to anatomical region. Spit 4 also had the highest proportion of fragments identifiable to anatomical region (60.35%). Most of the fragments identifiable to anatomical region were skull portions (56.1g or 23.4%), followed by lower limb long bones (23g or 9.6%), pelvic girdle (18.6g or 7.8%), hands / feet (16g or 6.7%), upper limb long bones (14.7g or 6.2%), thorax (14.1g or 5.9%), vertebral column (5g or 2.1%), and finally shoulder girdle (2.5g or 1.0%). A total of 89.6g or 37.4% of the identifiable bone was only discernible as long bone.



Plate 35: Cremation deposit (21), spit 4 with fragments from >10mm sieve (top left), 5–10mm sieve (top right), 2–5mm sieve (bottom left) and 0–2mm sieve (bottom right)

Of the bone identified as belonging to the skull, fragments identifiable to element included two parts of petrous portions, a fragment of occipital exhibiting the cruciform eminence, parietal and cranial vault fragments, and a root fragment from a fully-formed permanent molar, indicating the individual was at least nine years old at time of death. Fragments identifiable as belonging to the lower limb bones included an unfused proximal femoral epiphysis and a portion of the distal tibial diaphysis exhibiting lack of fusion to the distal epiphysis. These unfused lower limb long bones indicate the individual was under the age of 18 years at time of death. Fragments from the pelvic girdle included portions of acetabulum, ischium and an unfused iliac crest. Thoracic bone comprised rib body fragments, while vertebral column portions represented two vertebral centra and an arch fragment. Hand / feet bone included two portions of a calcaneus and carpal / tarsal fragments, while shoulder girdle fragments included a distal portion of a clavicle. A minimum of one individual was identified within deposit (21), a juvenile or adolescent between the ages of nine and 18 years old at the time of death.

Cremation C2

The cremated remains recovered from the fill (32) of pit C2 comprised 1,302.9g of human remains. The pit measured 0.37m by 0.31m in plan and approximately 0.24m in depth. The pit was excavated as one spit with a fill of mid-brown silty sand containing approximately 70% cremated bone. Several finds were recovered from the fill, comprising pottery sherds (fabric-BSW2) dating to the Roman period, as well as six nails and three stakes (possibly heat affected). In addition to the 4.5g of fuel ash slag recovered during the osteological assessment, 7.6g was recovered during further analysis. The remains were predominantly creamy white in colour, exhibiting typical thumbnail cracking of long bones and longitudinal cracking and splitting of ribs. There was relatively low fragmentation, with 522.3g or 40.1% of the bone recovered from the >10mm sieve, followed by the 5–10mm sieve (512.2g or 39.3%), the 2–5mm sieve (212.8g or 16.3%), and the 0–2mm sieve (55.6g or 4.3%). The remains were uniform in colour, except for the tooth roots which were charred. This uniformity suggests the individual was exposed fairly evenly to the heat from the pyre, with the tooth roots within the alveolus protected from the higher temperatures. The largest fragment was a portion of a lower limb bone measuring 69.2mm long. Approximately 736.8g or 56.5% of the cremated remains were identifiable to anatomical region. Of these, 157.6g (21.4%) were attributable to the skull, 56.1g (7.6%) to the vertebral column, 33.3g (4.5%) were from the thorax, 56.7g (7.7%) from the upper limb long bones, 27.7g (3.8%) from the pelvic girdle, 253.4g (16.7%) from the lower limb long bones, 22.2g (3%) from hands / feet and 122.6g (34.4%) were from unidentifiable fragments of long bones. A table

of weights and bone contents for deposit (32) is provided in Appendix 2.

Identifiable fragments from the skull included portions of the occipital exhibiting the protuberance, cruciform eminence, and part of the margin of the foramen magnum. Other fragments of cranium included the left mastoid process, a medial portion of the left orbital margin, and a cranial vault fragment exhibiting retention of the metopic suture (Plate 36). Identifiable elements of the mandible included a fragment of a condyle, the mental process, and parts of the alveolar margin. A total of 29 fragments of teeth were recovered, including 18 tooth roots or portions of roots and 11 crown fragments. Identifiable teeth included one third molar, two maxillary incisors, two mandibular incisors, eight single-root teeth most likely to be premolars or canines, and five molars (Plate 37). Identifiable thorax portions included two rib heads, and the rest were various body fragments. Among the fragments of pelvic girdle included a portion of an auricular surface and a pubic symphysis, at least five portions of acetabula, one fragment of the ischio-pubic ramus and several fragments of the ilia. Of the fragments of vertebral column, included were five spinous processes, seven superior facets, the dens process from the axis, and various arch and body fragments. Three of the lumbar or lower thoracic vertebral bodies exhibited evidence of degenerative joint disease, with increased porosity of the inferior body surface and osteophytic growth along the inferior margin of the body. From the upper limb bones, three fragments of distal humerus (including the right capitulum and trochlea), one fragment of a proximal humeral shaft and a fragment of a humeral head were present, along with the left ulnar coronoid process, two fragments from a proximal radial end and two distal fragments of a right radius. From the lower limbs, four fragments of a patella, three fragments of a proximal femur (including the linea aspera) were represented, as well as four fragments of the proximal tibial end and multiple fragments of long bone joint surfaces.



Plate 36: Juncture of coronal and sagittal sutures with retained metopic suture from cremation 32



Plate 37: Tooth roots and crown fragments recovered from cremation 32

The presence of fused epiphyseal ends indicates the individual was an adult at the time of death. The large occipital protuberance visible on a portion of the parietal suggests they were possibly male, though the size of the mastoid process makes this less certain. Unfortunately, the lack of preserved morphological features, particularly of the pelvis, limit sex determination to probable male.

Cremation C3

The cremation from fill (34) comprised 88.2g of human bone from pit C3, a small, shallow, oval pit measuring 0.31m x 0.26m and 0.08m deep. Pit C3 an uneven base biased by approximately 30° with the deeper end to the west. Its fill (34) was friable mottled dark brown / blackish



Plate 38: Cremation deposit (34), with fragments from >10mm sieve (top left), 5-10mm sieve (top right), 2-5mm sieve (bottom left) and 0-2mm sieve (bottom right)

brown silty sand with only approximately 10% burnt bone and occasional charcoal. Sherds of Roman pottery were also recovered from pit C3. Deposit (34) was not excavated in spits, but a summary of the bone weight and contents is provided in Appendix 3. The bone fragments were cream to white throughout (most likely heated to at least 800°C), with some thumbnail cracking of long bones observed. Fragments were generally small throughout, with the maximum bone fragment measuring 29.8mm in length. The highest proportion of bone was recovered from the 5-10mm sieve (37.2g or 42.2%), followed by the 2-5mm sieve (28.5g or 32.3%), the >10mm sieve (16.4g or 18.6%) and lastly the 0-2mm sieve (6.1g or 6.9%) (Plate 38).

A total of 41.2g (46.7%) of the recovered bone was identifiable to anatomical region. This included 8.21g (or 9.3%) belonging to the lower limb long bones, 4.79g (or 5.4%) to the skull, 4.2g (4.8%) to the upper limb long bones, 3.7g (4.2%) to the thorax, 1.1g (1.2%) to the vertebral column and 0.5g (5.7%) from the shoulder girdle. A total of 18.7g (21.2%) of bone fragments were only identifiable as long bone fragments. Only a few teeth and a small portion of clavicle were able to be identified to element, along with some fragments of humeral and radial or ulnar shaft. Recovered tooth fragments included the fully-formed root of a third molar, as well as a root fragment from a canine or premolar and a fragment of enamel (Plate 39). Based on this, the individual was at least 21 years old at the time of death. Unfortunately, it was not possible to determine the individual's biological sex due to the high fragmentation and small amount of preserved bone in the deposit.



Plate 39: Tooth fragments from cremation (34)

Cremation C4

Cremation deposit (38) comprised 431.3g of human bone from fill (38), excavated from pit C4. Pit C4 was a large, round pit measuring 0.67m in diameter and 0.22m deep with concave sides and a rounded base. It was notably large with fill (38) comprising dark brown / blackish brown silty sand with approximately 15% powdery charcoal and 10% burnt bone. Cremation (38) was not excavated in

spits, but as one fill in the field. A total of 4.6g of fuel ash slag (in addition to the 1.2g collected during assessment) and 3.2g of rocks were separated from the deposit and subtracted from the deposit weight. Several iron nails and chisel headed tacks (some of which appeared to be heat affected) and eight copper-alloy fragments (perhaps representing a part of an item used for personal adornment) were recovered from fill (38), as well as a copper-alloy fantail brooch with cast embellishment (also exhibiting evidence of being heat affected). A summary of the bone weight and contents is provided in Appendix D4.

The bone was white in colour and chalky in texture, but with some slightly darker cream-coloured fragments, indicating the bone was exposed to heat of over 800°C. The largest bone fragment within deposit (38) measured 54.5mm. The highest proportion of bone was recovered from the 5–10mm sieve (179.6g or 41.6%), followed by the 2–5mm sieve (131g or 30.4%), the >10mm sieve (102.8g or 23.8%), and lastly the 0–2mm sieve (25.8g or 56%). A total of 284g or 65% of the bone fragments were identifiable to anatomical region, which included skull fragments (112.5g or 40.1%), portions of thorax (43.8g or 15.6%), upper limb long bone (19.6g or 7%), pelvic girdle (14.3g or 5.1%), shoulder girdle (8.2g or 2.9%), vertebral column (also 8.2g or 2.9%), lower limb long bones (5.3g or 1.9%), and hand / foot bones (4.5g or 1.6%). A total of 64.2g (22.9%) of the bone fragments were only identifiable as being from a long bone.

Identifiable elements from the skull included a right mastoid process, the robusticity of which suggested the individual was a female, however warping during the cremation process means sex determination based on this one feature is less than certain. Also identified was a petrous portion, maxillary alveola, a mandibular condyle, and several tooth fragments which included twelve



Plate 40: Tooth fragments from (38)

root portions from single-rooted teeth and eleven root fragments from teeth with multiple roots, all permanent teeth (Plate 40). Root fragments from single-rooted teeth included two mandibular incisors, three maxillary incisors, six portions of canine or premolar roots. Among the fragments of multiple-rooted teeth were root portions from a fully-formed third molar and two fully-formed first or second molars. Several (c.20+) fragments of enamel were recovered, including half of a molar crown.

Identifiable elements belonging to the shoulder girdle included a fragment of scapula and one of a clavicle, while elements from the hands and feet included four distal fragments of medial or proximal phalanges, two distal portions of distal phalanges, five distal ends of metacarpals or metatarsals and one capitate. Vertebral column elements included the body of one cervical vertebra, an arch fragment from the axis, and several superior articular facets as well as arch and centra fragments of unidentified vertebrae. Upper and lower long bone limb fragments comprised chiefly portions of diaphyses.

During analysis it became clear than more than one individual was represented in the deposit, an adult and an infant or foetus. In addition, faunal skeletal elements including a vertebra and long bone fragments were also recovered and separated out. Where possible, human bone fragments were separated by individual based on size and morphology. Of the bone fragments identifiable to anatomical region, 112.45g (26.1%) belonged to the skull. Of these, 68.4g were most likely belonging to an adult individual, while 44.1g probably belonged to a non-adult. Among recognisable foetal remains included vertebral arch fragments (x3), part of the alveolar process, finger or toe bones, and ribs (Plate 41). An incus was found in the deposit, though it is unclear whether from the foetus or adult. Due to the level of fragmentation, many of the fragments may have been identifiable to anatomical region but may not have been identifiable to adult or infant and vice versa. The remains appeared to be very porous in texture (possibly pathological), and were mostly white in colour, as opposed to the adult remains which were creamy white. There were some long bone portions and vertebrae that were probably animal but the exact amount of animal bone in the deposit was not able to be confirmed, as it may have been indistinguishable from some of the infant bone.

A minimum of two individuals were observed in deposit (38), including a possible female adult and a non-adult. This deposit was the only context which produced evidence of grapes. This, and the presence of charred small animal remains indicate feasting was a significant part of the burial ritual. The evidence for feasting and the incorporation of the fantail brooch (the only one at the site) suggests this death was one of significance, perhaps the death of a young mother-to-be.



Plate 41: Vertebral arch halves from infant / neonate in deposit (38)

Cremation C5

The cremation from fill (40), was recovered from within pit C5, a sub-rounded pit measuring 220mm x 250mm and 70mm deep with gradual sides and a concave or rounded base. Fill (40) comprised soft, dark brown sand with occasional small stones and 75% burnt bone and charcoal. Deposit (40) was one of the three deposits (also including (46), and (68)) at Sandy that did not have any grave or pyre goods associated with it. A total of 359.9g of human remains were recovered from the deposit, along with 1.8g of fuel ash slag and 1.3g of rocks, which were subtracted from the original deposit weight. A summary of the bone weight and contents is provided in Appendix 5. The deposit was not excavated in spits but was cream to white in colour with dark grey inner bone surfaces throughout, suggesting the bone was probably exposed to heat of at least 800°C but perhaps not over a period of time long enough to completely oxidise the inner cortical bone. Slight warping and thumbnail cracking of long bones was observed. The largest bone fragment measured 39.3mm in length. The largest percentage of bone was retrieved



Plate 42: Cremated remains from deposit (40), with fragments from >10mm sieve (top left), 5–10mm sieve (top right), 2–5mm sieve (bottom left) and 0–2mm sieve (bottom right)

from the 5–10mm sieve (169.8g or 47.2%), followed by the 2–5mm sieve (112g or 31.1%), the >10mm sieve (61.2g or 17%), and lastly the 0–2mm sieve (20.4g or 5.7%) (Plate 42).

A total of 156.1g or 43.4% of the bone was identifiable to anatomical region, including portions of the skull (35.6g or 22.8%), pelvic girdle (10.2g or 6.5%), thorax (9.8g or 6.3%), vertebral column (9.5g or 6.1%), shoulder girdle (3.4g or 2.2%), and hand / foot (0.7g or 0.5%). A total of 86.9g (55.7%) was recognisable only as pertaining to a long bone. Fragments of the skull that were identifiable to element included parietal and cranial vault fragments as well as five root fragments from fully-formed, permanent multiple-rooted teeth and seven fragments of enamel (Plate 43). While the type of molars was not identified, completed formation of the root indicates the individual was at least nine years old at the time of death. Identifiable elements of the vertebral column included arch and body fragments from thoracic vertebrae, as well as a transverse process and two thoracic laminae. From the hands / feet, a distal portion of a distal phalanx, three proximal ends of phalanges and one distal end of a proximal phalanx were identified. From the shoulder girdle, part of a scapula and fragments of a clavicle were observed, while portions of the pelvic girdle included fragments of the iliac crest. A minimum of one individual was represented in the deposit, an individual of at least nine years old at the time of death.



Plate 43: Tooth fragments from deposit (40)

Cremation C6

The cremation from fill (46) was recovered from pit C6, a small, sub-square pit measuring 0.18m x 0.18m and 0.09m deep with a rounded base. Fill (46) was comprised of soft, blackish brown silty sand with approximately 10% burnt bone and 10% charcoal. A total of 85.5g of cremated human remains were recovered from the deposit. No artefacts were recovered from the fill (46). The pit was not excavated in spits, but a summary of the bone weight and contents is provided in Appendix 6. The bone was charred black throughout, indicating the bone was exposed to

a low temperature of heat, somewhere between 400° and 600°C. Hardly any fragments were identifiable to anatomical region, with the largest fragment measuring 26.1mm in length. The highest percentage of the bone fragments were recovered from the 2–5mm sieve (28.6g, 33.4%), followed by the 0–2mm sieve (26g or 30.4%), the 5–10mm sieve (24.4g or 28.5%) and the >10mm sieve (6.5g or 7.6%) (Plate 44). A total of 32.6g (38.4%) of the bone fragments were identifiable to anatomical region, which included skull portions (mainly cranial vault fragments weighing 13.5g or 41.3%), thorax (rib body fragments comprising 7g or 21.3%), lower limb long bones (2.3g or 7%), hands / feet (1.3g or 3.8%), and vertebral column (0.9g or 2.6%). A total of 7.9g or 24.1% of identifiable fragments were only discernible as belonging to long bones. Of the few fragments identifiable to element included an unfused proximal diaphysis of a tibia or femur. From the skull, a part of a petrous portion, as well as fragments of cranial vault and sphenoid or maxilla were identified. One unfused vertebral arch fragment was identified (from vertebral column), as well as a portion of the navicular, and rib body fragments. The unfused lower limb bone and vertebral arch, the small amount of cremated bone in the deposit, and the size of the remains suggest the individual may have been a nonadult, possibly an infant or young non-adult.



Plate 44: Deposit (46), with fragments from >10mm sieve (top left), 5–10mm sieve (top right), 2–5mm sieve (bottom left) and 0–2mm sieve (bottom right)

Cremation C7

The cremation deposit within fill (50) was found in pit C7, a sub-circular pit measuring 0.56m x 0.57m and 0.2m deep with moderately steep sides and a concave base. The fill (50) comprised moderately friable mid-brownish grey silty sand with occasional charcoal and burnt bone. No

pottery fragments were found within the fill, but according to the excavator, the positioning of the deposit suggests it was possible the cremated remains had been placed inside a bag, basket or box made of organic material that was not preserved. Eight iron nails were also recovered from the deposit and appeared heat-affected, suggesting they were on or placed with the body in the pyre or that they formed part of the pyre construction. A total of 4.5g of fuel ash slag were separated out during osteological assessment and analysis. The cremated remains deposit weighed a total of 142g and was not excavated in spits. The bone was uniformly cream to white in colour and chalky in texture, indicating exposure to heat of at least 800°C (Walker *et al.* 2008). The highest percentage of bone fragments were recovered from the 5–10mm spit (73.5g or 51.8%), followed by the >10mm spit (34.9g or 24.6%), the 2–5mm spit (31.1g or 21.9%), and lastly the 0–2mm sieve (2.5g or 1.8%) (Plate 45). The largest bone fragment measured 45.3mm in length. A summary of the bone weight and contents is provided in Appendix 7.

Approximately 102.9g (72.4%) of the bone was identifiable to anatomical region, among which 24.3g (23.6%) belonged to the thorax (predominantly rib body fragments), 21.2g (20.6%) belonged to the skull, 14.3g (13.9%) to the hands / feet, 13.7g (13.3%) to the upper limb long bones, 10.4g (10.1%) to the lower limb long bones, 2.9g (2.9%) to the vertebral column, and 2.6g (2.5%) to the shoulder girdle. No fragments were identified as pelvic girdle fragments. There was a relatively high proportion of hand / feet fragments for such a small deposit, most of which included the shafts and distal ends of phalanges, one distal phalanx, three medial phalanges, one sesamoid, and fragments of metacarpals or metatarsals. Identifiable elements from the upper limb long bones included the distal end of the right humerus (fused), as well as humeral, ulnar and radial shaft portions. Fragments of the shoulder girdle included a distal portion of a clavicle and inferior portion of a scapula blade; vertebral column fragments



Plate 45: Cremation deposit (50)

included one thoracic centrum, three arch fragments and two superior articular facets. Fragments of skull included portions of the parietals, a mandibular condyle, and nine tooth root fragments comprising two third molars (fully formed), a mandibular first molar root, two mandibular incisor roots, two maxillary incisor roots, two root fragments from canines or premolars, and two fragments of enamel (Plate 46).

A minimum of one individual was represented in the cremation deposit. Complete formation of both third molars indicates the individual was at least 21 years old at the time of death, though no cranial or post-cranial morphological features were able to provide information on the individual's biological sex.

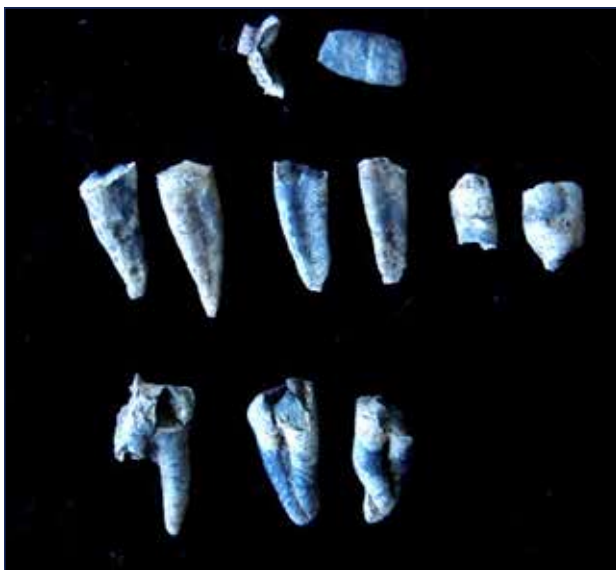


Plate 46: Teeth from deposit (50), including enamel fragments (top row), root fragments from single-rooted teeth (middle row), and root fragments from multiple-rooted teeth (bottom row)

Cremation C8

The cremation from fill (54) was recovered from a plain earthen irregularly ovoid pit C8, which measured 0.46m x 0.37m and 0.14m deep (roughly aligned E-W). The pit had steep, sharp sides with an irregular, slightly concave base. There was a single fill (54) of moderately friable dark brownish grey silty sand with occasional charcoal and cremated bone. The cremation was not excavated in spits; however, it was recorded on site that fragments of copper alloy were recovered from the top half of the cremation. These fragments were identified during the assessment phase as probably belonging to a nail cleaner tool or similar implement (Chittock 2019). A single iron nail was also found with no evidence of being heat-affected. While no pottery was identified during excavation, processing of the cremation revealed several Roman pottery fragments, with an additional two fragments (weighting 0.9g) identified during analysis. A total of 1016.6g of cremated bone fragments was

recovered from the pit, with the fragments predominately cream in colour and significantly stained by soil, which is not surprising given the pit had been disturbed by root activity. While most of the fragments were cream in colour, several fragments appeared to have been exposed to much higher temperatures, as evident by their white, chalky texture. Fragmentation was relatively high, with the largest fragment measuring 71.8mm in length and the largest number of fragments recovered from the 5–10mm sieve (443.1g, 43% of the total cremation weight), followed by the >10mm sieve (346.3g or 32.6%), the 2–5mm sieve (226.9g or 21.3%) and lastly the 0–2mm sieve (45.6g or 4.3%). A summary of the bone weight and contents is provided in Appendix 8. Of the remains, a total of 408.9g (40.2%) were possible to identify to element. This included 103.99g (25.4% of identifiable fragments) of skull, where fragments included right parietal, occipital, petrous bone, ossicles, and 38 tooth fragments (Plate 47) including two mandibular incisors, one premolar cusp and one molar cusp fragment.

Other identifiable fragments were recovered from the thorax (25.97g or 6.4%), pelvic girdle (14.30g or 3.5%) shoulder girdle (8.58g or 2.1%) and vertebral column (21.53g or 5.3%) areas. Most interestingly however, were the upper and lower limbs. Of the 36.24g identified as belonging to the upper limb, an unfused left humerus proximal epiphysis was identified. Similarly, within the hands and feet (40.5g or 9.9%), three epiphyses, including one possibly from a proximal phalanx and two possibly belonging to either middle or distal phalanges and six fragments of distal epiphyses (either metacarpals or metatarsals) were also identified (Plate 48). The unfused



Plate 47: Identified tooth fragments from cremation pit [C18]. Bottom row includes single root teeth, middle rows include multiple root teeth and top row includes cusp fragments.

epiphyses would indicate the presence of an individual under the age of 16 years at the time of death. Within the identified lower limb fragments (34.2g or 8.4%), an unfused distal femur epiphysis was also identified. A second fragment belonging to the distal femur epiphysis was tentatively identified. This fragment belonged to a larger epicondyle and could not be part of the smaller epiphysis. If correctly identified as part of an epicondyle, then a minimum of two individuals are represented in the cremation: one individual of unknown age and a second individual under the age of 16 years (younger juvenile to late adolescent).



Plate 48: Top row - three proximal epiphyses of hand phalanges. Bottom row: three distal epiphyses

Cremation C9

The cremation from fill (68) was recovered from circular pit C9. Pit C9 was very small, measuring 0.14m in diameter and only 50mm deep. The pit had sharp, steep sides and a concave base while its single fill (68) was firm very dark brownish grey silty sand. No artefacts were recovered from fill (68). Only 26.2g of cremated human bone were recovered (largest fragment measuring 38.8mm long). During assessment, the remains were identified as human based on the presence of a possible navicular, though further osteological analysis was not recommended (Tesoriere 2019).

Cremation C10, Appendix D9

The cremation deposit from fill (70) was from pit C10, which also contained a complete platter / dish (RF8) dating to the late 1st or 2nd century AD, a beaker and some iron objects. The dish was sandy greyware with an everted, slightly in-turned plain rim and burnished exterior. A fragmented fineware beaker with a slightly cupped rim, a groove above the rouletted band on the shoulder, and a rouletted zigzag on the globular body was also recovered from pit C10, having been positioned

above the cremation deposit and against the southern side of the pit, adjacent to the platter. Several broken iron nails, a small chisel, an iron fragment (with no evidence of being heat-affected) possibly belonging to a tool, and 37.9g of fuel ash slag were also recovered from the deposit. An additional 12g of fuel ash slag were separated from the deposit during osteological analysis. The pit C10 itself was an irregular ovoid shape in plan with rounded corners, measuring 0.57m x 0.68m and 0.13m deep. It had steep, concave sides and a concave base. Its single fill (70) was a moderately firm mid-brownish grey silty sand with occasional charcoal and burnt bone. Approximately 1158.2g of cremated human remains were recovered from fill (68), comprising fragments cream to white and dark grey. The differences in colour between fragments suggests different areas of the body were subjected to slightly different heat temperatures, ranging between 700°C and possibly over 800°C. A summary of the bone weight and contents is provided in Appendix 9.

The highest percentage of bone was recovered from the 5–10mm sieve (433.4g or 37.4%), while 353g (30.5%) was recovered from the >10mm sieve, 325.7g (28.1%) from the 2–5mm sieve, and 45.9g (4%) from the 0–2mm sieve (Plate 49). The largest bone fragment measured 37mm in length. Only 549.4g (47.9%) of the bone fragments were identifiable to anatomical region, including 234.4g (42.7%) from the skull, 62.4g (11.4%) from the thorax, 31.5g (5.7%) from upper limb long bones, 19.1g (3.5%) from the vertebral column, 19g (3.4%) from hands / feet, 17.7g (3.2%) from lower limb long bones, 11.6g (2.1%) from the pelvic girdle, and 9.8g (1.8%) from the shoulder girdle. Approximately 144g (26.2%) of bone fragments were only identifiable as belonging to long bones.

A large proportion of the identifiable bone fragments belonged to the skull, with identifiable elements including two portions of temporals above the external auditory meatus (EAMs), a portion of the occipital exhibiting the cruciform eminence and another including the posterior margin of the foramen magnum, a portion of zygomatic arch (un-sided), a portion of the mandibular alveolus with three tooth crypts visible, part of a mandibular condyle, and a malleus. A total of 26 tooth root fragments were also recovered, including 13 fragments of roots from single-rooted teeth and 13 from multiple-rooted teeth. Roots from single-rooted teeth comprised two mandibular incisors, at least two maxillary incisors, two canines or premolars, while roots from multiple-rooted teeth included one premolar and at least ten molars, all fully formed (Plate 50). Full formation of third molar roots indicates the individual was at least 21 years old at the time of death.

Identifiable elements from the hands / feet included one



Plate 49: Deposit (70), fragments from >10mm sieve (top left), 5–10mm sieve (top right), 2–5mm sieve (bottom left) and 0–2mm sieve (bottom right)

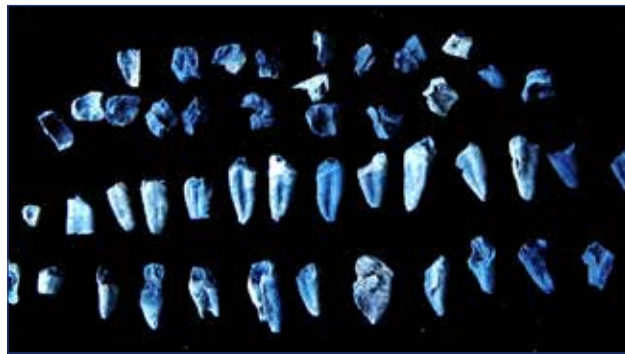


Plate 50: Tooth fragments from deposit (70)

talus, two lunates, one navicular, ten phalangeal shafts, two proximal and nine distal ends of metacarpals or metatarsals, six distal phalanges, 16 portions of medial or proximal phalanges, and several fragments of carpals or tarsals. Elements identified belonging to the vertebral column included various (20+) arch and body fragments, four superior articular facets and three transverse processes. From the lower limb bones, the distal end of a tibia, two portions of an un-sided patella, the (fused) distal epiphysis of a femur, and three fragments of femoral and tibial shaft were identified. Lastly, fragments of the shoulder girdle included two distal fragments of clavicles and the inferior angle of a scapula blade.

Although the minimum number of individuals represented in the deposit is one, there is more likely to be at least two based on the size of the deposit. Although dental development indicated the individual was an adult of at least 21 years old, there were no sexually dimorphic indications observable to determine the individual's biological sex. No pathological lesions or evidence of trauma were observed.

Cremation C11

The cremation deposit from (72) was recovered from an irregular ovoid pit C11 measuring 0.43m x 0.68m and 0.24m deep. Pit C11 had steep, straight sides and a flat base, its single fill (72) comprising moderately firm mid-brownish grey silty sand with occasional charcoal. A complete coarseware jar (RF9) measuring approximately 0.2m tall was found in the pit, possibly having served as an urn for the cremated remains. The jar is a local 2nd-century AD wide-mouthed jar with a dished rim and carinated angular shoulder above a cordon, decorated with alternating opposed panels of oblique lines. An iron chisel head tack was also found in the deposit, exhibiting no evidence of being heat affected. While 0.2g of fuel ash slag were collected during osteological assessment, a further 2.1g were recovered during further analysis. The deposit weighed 744.5g and comprised cream to white bone fragments that were chalky in texture, indicating exposure to at least 800°C. A summary of the bone weight and contents is provided in Appendix D10.

Fragmentation of this deposit was low relative to the other deposits in the assemblage, with most of the bone being recovered from the >10mm sieve (328.4g or 44.1%). The rest of the bone was recovered from the 5–10mm spit (194.9g or 26.2%), the 2–5mm spit (168.4g or 22.6%), and the 0–2mm sieve (52.8g or 7.1%), in descending order of volume (Plate 51). The largest bone fragment measured 49.8mm in length. Approximately 502.6g or 66.5% of the bone fragments from fill (72) were identifiable to anatomical region. Of these, 110.2g (21.9%) were from the skull, 64.7g (12.9%) were from lower limb long bones, 49g (9.7%) were from the pelvic girdle, 48.1g (9.6%) were from the thorax, 41.8g (8.3%) from upper limb long bones, 28g (5.6%) from the vertebral column, 24.1g (4.8%) from the shoulder girdle, and 15.2g (3%) were from hands / feet.

Several fragments were identifiable to element. From the skull, these included portions of parietal, occipital, and temporal, a portion of the sphenoid body and greater wing, and part of a petrous. A total of 12 root fragments from multiple rooted teeth were present (Plate 52), including fully-formed permanent molars (either first or second molar), and six root fragments from single-rooted teeth including two canines or premolars, one maxillary incisor, and two mandibular incisors. Four unidentified root fragments and at least eleven enamel fragments were also recovered including the fully-formed crown of a molar, possibly a first molar. Lower limb fragments included two fragments of patella, three fragments of tibial shaft, two portions of proximal tibial epiphysis, a fragment of a distal femoral epiphysis, and a femoral neck. Portions of the pelvic girdle included part of an auricular surface, part of the left acetabulum, the superior portion of the sacrum, and the greater sciatic notch. Although morphological features such as the greater sciatic notch



Plate 51: Cremation deposit (72) with fragments from >10mm sieve (top left), 5–10mm sieve (top right), 2–5mm sieve (bottom left) and 0–2mm sieve (bottom right)

are subject to warping and distortion during the cremation process, its breadth suggested the individual might have been a female. Hand / foot fragments included a portion of the talus or calcaneus, a right lunate, seven distal phalanges, one sesamoid, and numerous (20+) fragments of metacarpals, metatarsals, and phalanges. Fragments of the vertebral column, which included two thoracic vertebrae exhibited mild degenerative joint disease (DJD). Other vertebral column fragments included multiple superior articular facets and two transverse processes. A minimum of one individual was represented in deposit (72). Based on tooth formation, the presence of DJD, and morphology of identifiable pelvic fragments, the individual was determined to have been an adult, probable female.

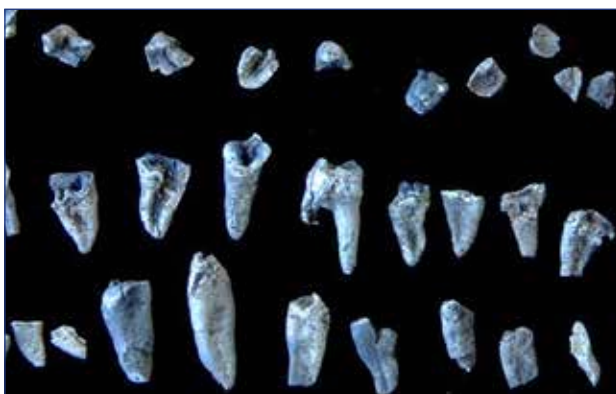


Plate 52: Tooth fragments from deposit (72)

Cremation C12

Cremation deposits (74–75) were found in pit C12, an irregular ovoid pit measuring 0.96m x 0.64m and 0.26m deep. The pit had rounded corners and steep, slightly concave sides with an irregular base. It had two fills both

containing cremated remains; an upper fill (74) comprising a firm, mixed dark brownish grey and mid-grey-brown silty sand with occasional charcoal up to 0.18m deep, and a lower (basal) fill (75) comprising a firm, mid-orange-brown silty clay also with occasional charcoal. It is possible the two different fills represent two different events, though the excavator notes disturbance from roots may have been a factor in disturbing the original fill. Both fills contained fuel ash slag, (a combined 2.7g) that was recovered during osteological analysis, in addition to the 1.45g recovered during the preliminary assessment (Tesoreri 2019). Several nails (possibly heat affected) were recovered from (74), and a possible corroded nail shank was retrieved from (75). The two fills produced a combined 1,571.5g of cremated bone (1,384.3g from (74) and 189.4g from (75)). Each fill was excavated as one spit. Between the two fills, most bone fragments were recovered from the >10mm sieve (665.9g or 42.4%), followed by the 5–10mm sieve (538.9g or 34.3%), then the 2–5mm sieve (304.8g or 19.4%), and then the 0–2mm sieve (71.3g or 4.5%) (Plate 53). Throughout the two fills, bone fragments were cream to white in colour, with some fragments that were lighter to darker grey in colour. Colouration and fragmentation were similar between the two fills, though (75) contained more fragments from the 5–10mm sieve (73g) than the >10mm sieve (58.3g) and contained some fragments that were slightly darker grey in colour. The largest bone fragment measured 60.8mm in length, from within (74).

A total of 928.4g or 59.1% of the cremated remains in the deposit were attributable to an anatomical region. Most of which belonged to the skull (248.5g or 26.8%), followed by the thorax (105.7g or 11.4%), the lower limb long bones (78.5g or 8.5%), the pelvic girdle (72.9g or 7.9%), the vertebral column (71.6g or 7.7%), the upper limb long bones (47.7g or 5.1%), the shoulder girdle (28.4g or 3.1%)



Plate 53: Deposit from fill (75), with fragments from >10mm sieve (top left), 5–10mm sieve (top right), 2–5mm sieve (bottom left) and 0–2mm sieve (bottom right)

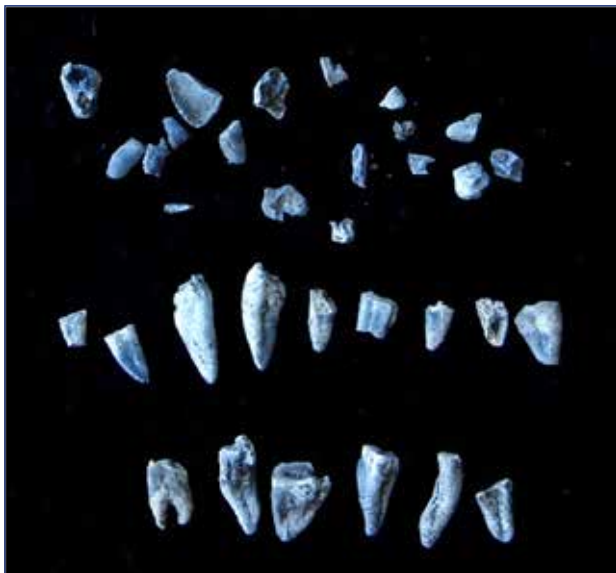


Plate 54: Tooth fragments from (74)

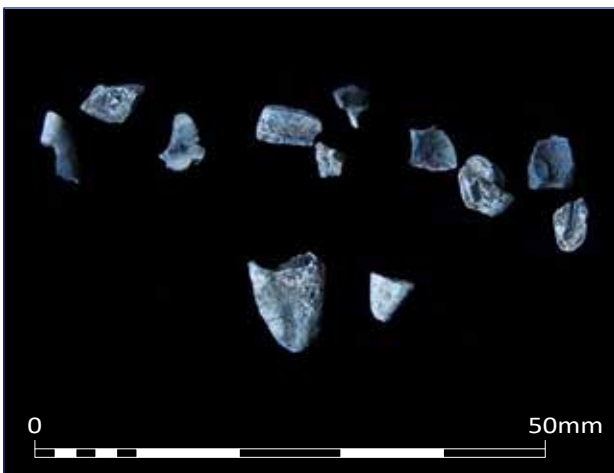


Plate 55: Tooth fragments from (75)

and hands / feet (27.9g or 3%). Unfortunately, 247.2g (26.7%) of identifiable fragments were only discernible as long bone. Of the elements identified as belonging to the skull were a portion of the right palate with two tooth crypts observable, a portion of the left palate with five tooth crypts observable, and portions of maxilla, temporal and supraorbital margin (un-sided). Additional portions of the skull included the right mandibular condyle, a left portion of the frontal exhibiting the frontal line, and a robust glabella. The robusticity of the supraorbital margin and glabella both suggest the individual was male, though determination of sex based on only two morphological traits is to be interpreted with caution. Teeth included root fragments of eight single-rooted teeth including one mandibular incisor, one maxillary incisor, three root fragments from canines or premolars, seven root fragments from multiple rooted teeth, and (x20+) fragment of enamel (Plates 54 and 55). Of the represented multiple-rooted teeth within fill (74) was a fully-formed third molar (indicating an individual of at least 21 years old) as well as a fully-formed deciduous first molar (indicating another individual between two and 10.5 years

old). Of the recovered vertebral column elements, two C2 vertebrae in the deposit indicate the presence of at least two individuals. It is possible (74) and (75) were initially one deposit but were disturbed by root damage, as noted in the excavator's context sheets.

Cremation C13

The cremation from fill (90) was recovered from an irregularly round pit C13, measuring 0.55m x 0.6m and up to 0.08m deep. Pit C13 had been truncated by C10 and had a single fill of friable mid-greyish brown silty sand with dark mottling. The fill also contained several ceramic sherds from one vessel which had been badly damaged. Only 4.13g of cremated bone were recovered (largest fragment measuring 11.8mm long). During assessment, possible fragments of vertebrae and hand / foot bones were identified, indicating at least one individual was represented. Further osteological analysis was not recommended, however (Tesoreri 2019).

Cremation C14

The cremated deposit recovered from fill (8), within cut C14, was a round cut with steep sides and a rounded base, measuring 0.27m in diameter and 0.27m deep. Fragments of an urn were identified in the pit. Fill (8) comprised firm, dark black silty sand with a high concentration of burnt bone. Cremation C14 weighed 417.2g, comprising cream to white bone fragments with dark grey interior surfaces and some dark grey cranial vault and long bone fragments. The colouration of the remains suggests they were exposed to heat of over 800°C, but not for a period of time long enough to completely oxidise the inner table of cortical bone. Exposure to heat may have differed between body parts, based on the presence of cranial vault exhibiting incompletely oxidised areas. Thumbnail cracking was observed on long bones, as well as splitting of rib bodies and warping of cranial vault and long bones. The deposit was not excavated in spits; a summary of the bone weight and contents is provided in Appendix 12. Similar to C11, most of the remains were recovered from the >10mm sieve (199g or 47.7%), followed by the 5–10mm sieve (139.2g or 33.4%), the 2–5mm sieve (60.7g or 14.5%), and lastly the 0–2mm sieve (18.3g or 4.4%) (Plate 56). The largest bone fragment from the deposit measured 94.1mm.

Of the cremated bone, 222.8g or 53.4% was identifiable to anatomical region. Most of the identifiable bone was from the lower limb long bones (32.5g or 15.6%), 30.3g (or 13.6%) were from the skull, 26.6g (12%) were from upper limb long bones, 16.2g (7.3%) were from the pelvic girdle, 12g (5.4%) were from the thorax, 11.2g (5%) were from the vertebral column, 9.2g (4.1%) from the shoulder girdle, and 6.1g (2.8%) were from hands / feet. A total of 32.5g



Plate 56: Cremated remains from (8), with fragments from >10mm sieve (top left), 5–10mm sieve (top right), 2–5mm sieve (bottom left) and 0–2mm sieve (bottom right)

(14.6%) of bone was only identifiable as long bone. Of the bone fragments that were identifiable to element, those from the skull included portions of parietal exhibiting endocranial porosity, as well as a portion of the right temporal with the mandibular fossa, and several tooth fragments including one root fragment from a permanent incisor, one root fragment from a permanent premolar, and three fragments of enamel (Plate 57). Full formation of the permanent premolar indicates the individual was at least 11 years old at the time of death.

Identifiable elements from the lower limb bones included two portions of a patella, three portions of distal femoral epiphysis (fusion stage unclear), two tibial shaft portions exhibiting lamellar bone. Hand / foot elements included the distal ends of four medial phalanges, the distal ends of two metacarpals / metatarsals, one sesamoid, and four fragments of carpals or tarsals; vertebral column elements included two centra from upper thoracic vertebrae, as well as 21 portions of arch fragments and superior articular facets. Pelvic girdle bone included three portions of ischium, while the shoulder girdle fragments

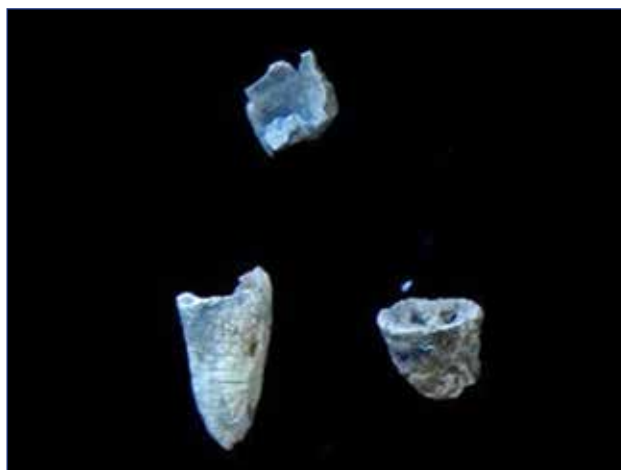


Plate 57: Tooth fragments from deposit (8)

included three portions of clavicle shafts and one distal and one medial portion of a clavicle. A minimum of one individual of at least 11–12 years old is represented in deposit (8), though the biological sex of the individual were not determined. The presence of lamellar bone along the anterior tibial shaft suggests the individual was healing from localised infection, though the nature of the infection was not discernible (Plate 58).



Plate 58: Tibial shaft fragment exhibiting lamellar bone formation (left) and fragment of parietal exhibiting endocranial porosity (right), deposit (8)

Inhumation (SK59)

A single inhumation (SK59), supine and extended, was uncovered from grave cut [60]. The burial was aligned NW–SE, with the head at the NW end. The head was positioned with the face to the south, the right arm flexed over the thorax, and the right hand positioned over the left ribs. The left hand was flexed and positioned over the upper thoracic vertebrae. Both legs were extended, with the plantar surface of the feet flat against the southern end of the grave cut.

The surface preservation of the remains was fair to good (Grade 2), with approximately 40% of the elements represented, though none of the elements were intact. A visual inventory of the elements, and tables of metrics and dentition are provided in the primary archive. It was not possible to calculate stature based on the preserved elements.

Biological sex was determined based on sexually dimorphic traits of the cranium, namely the nuchal crest, external occipital protuberance, mental eminence, mastoid processes, and post zygomatic arches (Plate 59). The robusticity of each of these features suggests the individual was male. None of the dimorphic traits of the

pelvis were observable to confirm this determination, however.

All 32 permanent teeth were preserved, with generally mild to moderate stages of dental attrition. Based on the fully-formed third molars and overall stages of attrition, the individual was probably a young adult between the ages of 21 and 34 years old at the time of death. Slight periodontitis was observed on mesial portions of both the



Plate 59: Left: frontal exhibiting a robust glabella/supraorbital ridge; Right: pronounced nuchal crest visible on fragments of the occipital, inhumation (SK59)

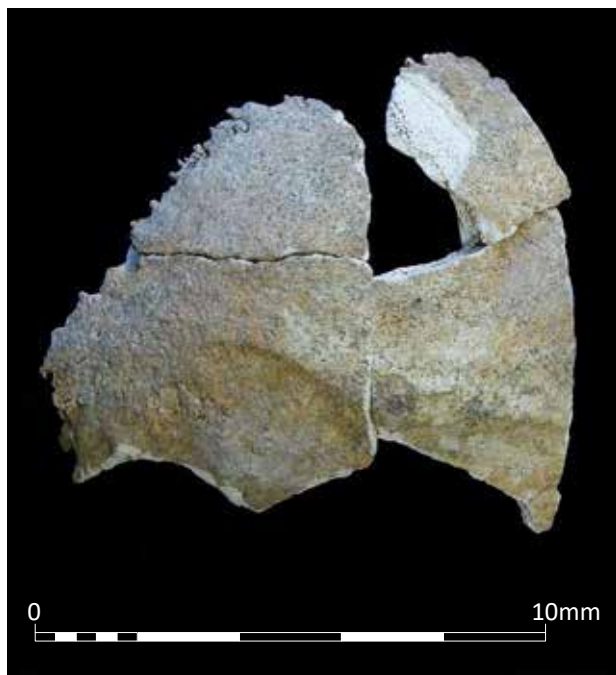


Plate 59: Left: frontal exhibiting a robust glabella/supraorbital ridge; Right: pronounced nuchal crest visible on fragments of the occipital, inhumation (SK59)

maxillary and mandibular alveolae. Eleven maxillary and mandibular teeth exhibited slight levels of dental calculus, affecting more teeth on the right side of the jaw. Maxillary teeth with calculus included premolars (24 and 25) and molars (16, 17, 18, and 26), while mandibular teeth with calculus included canines (33 and 43), a premolar (45) and a first molar (46). The mandibular left first molar (36) exhibited a pinpoint-sized dental caries on the occlusal surface. The slight levels of calculus and tiny pinpoint-sized caries suggests fairly good oral hygiene practices. The two mandibular canines also exhibited dental enamel hypoplasias (grooves) at both $\frac{1}{2}$ crown and $\frac{1}{4}$ crown, while the maxillary incisors and canines exhibited three linear hypoplasias each at $\frac{1}{2}$ crown, $\frac{1}{3}$ crown, and $\frac{1}{4}$ crown. The location of dental enamel hypoplasias on the tooth crown is indicative of the timing of developmental stress (Reid and Dean 2000). Based on tooth formation timing. This individual probably experienced at least three episodes of severe physiological stress- at around the ages of 2.5–3 years old, 3–3.5 years old, and then again at 4–4.5 years old. Physiological stress at these ages is common, frequently brought on by the complications of weaning and childhood diseases (Amoroso *et al.* 2014; Goodman *et al.* 1991).

While neither orbit was present to check for cribra orbitalia, both parietals and the superior aspect of the occipital exhibited moderate porosity, possibly the result of nutritional deficiency. Fragmentary preservation of the cranial elements, however, limits interpretation of these lesions. Observable cranial non-metric traits included an ossicle at asterion (left side, right side not observable), bilateral accessory infraorbital foramen, and a right supraorbital foramen (left side was not observable).

The observable post-cranial remains comprised portions of the thorax (ribs), both upper and lower limb long bones, the shoulder girdle (scapulae and clavicles), and limited portions of the pelvic girdle, vertebral column (including C1 and C2), and hands / feet. Unfortunately, stages of epiphysial fusion were not recordable to refine the age-at-death, due to the fragmentary nature of the elements.

Discussion

The Cremation Assemblage

Cremation severely limits the osteological data that can be gathered from an individual (and thus a population at large) but can also provide insight into pyre technology and burial rituals. Shrinking and warping of bone can muddle interpretation of morphological traits traditionally used in assessment of age-at-death and confirmation of biological sex, not to mention obscure the presence and / or nature of pathological lesions. Represented in the assemblage was a minimum number of 17 individuals,

with at least two individuals in deposits (38), (55), and (74 / 75), each. The remaining deposits contained a minimum of one individual each. Among them, there were five non-adults in (21), (38), (46), (55), and (74 / 75) and five individuals of unknown age (8), (40), (55), (68), and (90), though (8) was at least eleven years old and (40) was at least 9 years old. Of the seven adults, two were male, two were female and four were of unknown sex.

Pathology is typically difficult to identify and interpret on cremated human remains. Of the Sandy individuals, four exhibited abnormal bone morphology. Two of the adults ((32) and (72)) exhibited porosity on the inferior surfaces of thoracic vertebral centra indicative of degenerative joint disease affecting at least one vertebra each (Plate 60). Additionally, the individual in deposit (8) exhibited lamellar bone formation on the anterior tibia and endocranial porosity.



Plate 60: Inferior surface of lumbar vertebrae exhibiting degenerative joint changes, cremation (32)

Burial Practice and Pyre Technology

Cremated human remains were recovered from 17 separate deposits, and following assessment by a specialist, thirteen of them were sufficiently well preserved to warrant analysis. Only one of the deposits (21) was within an urn, though many of them contained pyre or grave goods including 1st or 2nd-century ceramics, iron nails, a glass vessel, and a copper-alloy fantail brooch. Evidence of feasting was also recovered from some of the deposits, which contained ecofactual material comprising burnt animal remains and the charred remains of grains like spelt, grapes, chickweed, and apples, pears or hawthorn. Interestingly, some of the artefacts (and ecofactual remains) including the nails and the brooch exhibited evidence of being heat-affected and were probably parts of objects for personal adornment that accompanied the body on the pyre (pyre goods). Some of the other artefacts including the nail-cleaning tool, ceramic pots and glass vessel, however,

did not appear to be heat-affected, indicating they were probably added to the burial deposit as grave goods after the cremation process was complete. Fuel ash slag was present in most (eight) of the cremation deposits. A porous and lightweight residue, fuel ash slag (or cramp) is produced when alkaline fuel ash and siliceous material (like clay) are heated to a high temperature (Keys 2012, 2). The material is not yet well understood but has also been found associated with various prehistoric hearth sites and accidental fires, as well as with seaweed-fuelled cremation sites in Orkney (Keys 2012, 2; Photos-Jones *et al.* 2007, 1–23).

While cremation was a common form of burial in pre-Roman Britain, the incorporation of ceramic vessels either as urns or grave goods was largely introduced during the Roman period (Williams 2004, 417–27). According to Williams, ‘many of the ceramics placed with the dead were not ‘ritual’ artefacts created especially for funerals, but items employed in daily social and economic life...’ (Williams 2004, 419). Furthermore, Williams argues that the deliberate choice to include ceramics in Romano-British cremation burials (either as urns or as grave goods) relates to ritual feasting of the living as part of the burial rites, in a way of ‘selectively remembering and forgetting the dead... and sustain[ing] relationships between the living and the dead’ (Williams 2004, 419). The incorporation of ecofactual evidence in the deposits at Sandy—both charred animal bone and plant material—substantiates the notional importance of feasting as a funerary rite.

A crucial part of the funerary rite would have been the cremation process itself and the transfer of the remains to the final burial place, or locus religiosus (Carroll 2006). Different methods may have been used for collection of the ashes and bone fragments from the pyre site, and in some cases only small portions of the remains may have been selected for interment (token deposits). Some of the excavated cuts at Sandy were quite shallow or small in diameter (including pits C3, C6, P55, and C13), with modest amounts of bone recovered. It is possible some of these features had been truncated by agricultural activity, but some of these may also have originally only comprised a small amount of remains, intended as a type of token deposit. Another possibility is that the deposit represents the waste from the pyre that was cleaned out prior to the next cremation.

The average proportion of bone fragments recovered from the >10mm sieve was 30.4%, while 35.4% was recovered from the 5–10mm sieve, 24.2% from the 2–5mm sieve, and 7.1% from the 0–2mm sieve (Figure 35). Differences in fragmentation can be the result of many variables including (as previously mentioned) collection and burial, but also the cremation process and perhaps even differences in bone structure between sexes. As McKinley (1994) emphasises though, it is important to acknowledge that

fragment sizes are analysed only during post-excavation, and the excavation and post-excavation processes could have a significant impact on fragmentation.

The percentage of identifiable remains within each deposit varied between 38.4% (46) and 72.4% (50), with a mean of 53.3% (Figure 36). The only urned deposit, (21) produced a percentage of 52% identifiable bone fragments, just below the site mean. Of the analysed deposits, two ((34) and (46)) weighed less than 100g, potentially representing ‘token’ deposits (McKinley 2013). These two deposits contained 47.2% and 38.4% identifiable bone fragments, respectively. While (46) had the site’s lowest proportion of identifiable bone, (34) was one of the five deposits with the lowest identification proportion.

All remains from Sandy showed evidence of the traditional thumbnail cracking pattern, with some warping of cranial vault fragments and splitting of rib body fragments. Unfortunately, the direct causes of some of these typical warping and cracking signs are not fully understood; they were predominately white in colour with a chalky

texture, suggesting that the remains were exposed to temperatures of at least 800°C and / or higher. Some of the deposits, however, such as (21), (40), (70), and (74 / 75) exhibited slight variation in colouring, with light to dark grey medullary / inner cortical surfaces. While colouration reflects heat temperature, various factors can have an effect on both pyre temperature and the body’s exposure to heat, not to mention post-depositional colouration of the bones (Walker *et al.* 2008). Aside from pyre temperature, duration of burning and availability of oxygen are understood to affect the colour of cremated remains, while the positioning of the body or its placement within a container or coffin could affect its exposure to the heat.

Of the ceramics and glass, including possible urns, plates, or dishes, none exhibited evidence of being heat affected. Likewise, none of the chisel and tack remains appeared to be heat affected, suggesting these items were only included with the body after the cremation process had been completed. Small nails (potentially from shoes or coffins) and items of personal adornment such as the brooch, had been exposed to heat, however, suggesting these items were on or with the body as it was cremated on the pyre.

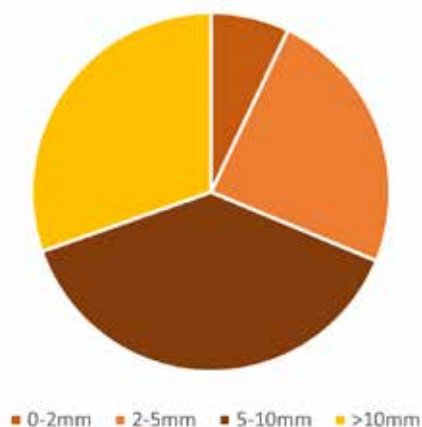


Figure 35: Average Proportions of Bone Fragment Sizes Recovered from the Cremation Deposits

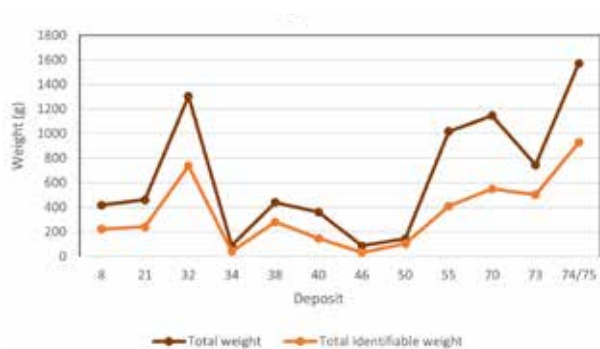


Figure 36: Proportions of Bone Fragments Identifiable to Anatomical Region from each Cremation

Inhumation (SK59)

The additional find of a single inhumation (SK59) dating to the Anglo-Saxon period (539 cal. AD) provides another layer of complexity to the Sandy assemblage. The individual was confirmed to be male, aged between 21 and 35 at the time of death. (SK59) exhibited indicators of physiological stress both during childhood (multiple dental enamel hypoplasias) and in adulthood (moderate ecto-cranial porosity). Radiocarbon dating and stable isotope analysis have been completed on a molar from the inhumation, which produced a date range of 539 cal. AD (95.4% probability). Interestingly, while the pottery sherds from the cremation burials dates them to the 1st to 3rd centuries (Roman period), the inhumation dates to the 6th century (Anglo-Saxon period). The difference in burial rites from furnished cremations to unfurnished inhumation could reflect socio-cultural changes through this time or simply differences in preferential treatment of the dead. Stable carbon and nitrogen isotopes (-20.4‰ and 11.8‰, respectively) suggest a terrestrial-based diet, with a marine protein component of only roughly 6.7% ± 10%. These are similar isotopic values to those found in past dietary studies of Romano-British populations throughout Britain, including that at Queensford Farm (Oxfordshire), which exhibited adult male carbon and nitrogen isotope means of -19.7±0.3‰ and 10.6±0.5‰, respectively (the adult male nitrogen mean was slightly higher than the adult female nitrogen value of 9.9±0.9‰; Fuller *et al.* 2006, 45–54; Redfern *et al.* 2019, 378–87), also

similar to the carbon and nitrogen isotope values from young adults at Raunds Furnells in Northamptonshire (-19.8‰ and 11.2‰, respectively; Haydock *et al.* 2013, 604–12). Despite representing the only Anglo-Saxon inhumation at the site, they fit into the larger picture of Anglo-Saxon burial practice and way of life within the broader landscape.

Comparative Sites

Several previously excavated Romano-British cemetery sites in the region provide parallels for comparison with Sandy, including the Roman cremation assemblage at Luton Vale Cemetery by Oxford Archaeology in 2013 (Oxford Archaeology 2023). This multi-phase site contained evidence of having been in use from the Neolithic and Bronze Age through the later medieval period. Like Sandy, a substantial amount of Roman pottery, as well as brooches and a bath flask were recovered from the seven urned cremation deposits. A full report has yet to be released.

Another Romano-British cremation and inhumation cemetery was excavated at College Road, Aston Clinton, Buckinghamshire by Northamptonshire Archaeology in 2011–12. This cemetery comprised ten inhumations and three cremations, with three of the inhumations exhibiting evidence of decapitation (Inskip 2014). Similar to Sandy, the College Road cemetery was found at the edge of the Roman settlement and comprised a mix of both inhumation and cremation as burial rites. Other similarly placed Romano-British cemetery sites include Watling Street, London (Mackinder 2000), Skeleton Green, Hertfordshire (Partridge 1981), Tolpuddle bypass in Dorset (Hearne and Birbeck 1999), Duxford in Cambridgeshire (Duhig 2011), and Walden Road, Essex (Moan 2018). Nearly all of these sites also contained burnt and / or unburnt animal bone within the cremation deposits, suggesting feasting as part of the burial ritual.

Thorpe Lea Cemetery on Walden Road, Great Chesterford, Essex comprised a furnished Roman cremation cemetery with seven individuals (Moan 2018). The inhumation of

a foetus beside the adult cremation deposits suggests different burial rites based on age (*ibid.*, Pearce 2000), a concept also suggested at sites like Vicar's Farm, Cambridge (Dodwell 2001). While palaeopathological analysis is difficult on cremated remains, at least one individual (Cremation C2) exhibited evidence of degenerative joint disease of the spine similar to that observed in one of the examples from Sandy. Like Cremation C1 from Sandy, a samian dish and a glass vessel were incorporated into one of the deposits. According to Angela Wardle, glass is rare in Roman burials with parallels including sites at Skeleton Green, Dunstable and *Verulamium* (Wardle 2022; Charlesworth 1972; 1981; Matthews 1981). Interestingly, some of the vessels from Thorpe Lea appeared to have been 'ritually killed'; evidence for which was not observed among the Sandy assemblage.

Conclusion

Archaeological works undertaken by AOC Archaeology on behalf of Sandy Town Council in 2018 uncovered the remains of a Romano-British settlement, wall and extra-mural cremation cemetery. Settlement evidence included features such as pits, ditches and postholes. A total of 17 discrete cremation deposits were recorded, which comprised a minimum number of 17 individuals, including two adult males, two adult females, and at least five non-adults. While only one of the deposits was urned (21), several others contained both pyre and grave goods (goods with and without evidence of being heat affected) as well as ecofactual remains of cremated animals and plant material. In addition to the cremation cemetery, a single inhumation dating to the 5th century was recovered and analysed. The inclusion of more than one individual in some of the deposits, as well as the inclusion of evidence for feasting as a burial rite make it a noteworthy site both locally and regionally, as it offers complex evidence for Romano-British funerary practices as well as a limited insight into how these funerary practices changed into the Anglo-Saxon period.

Appendix E: Animal Bone

Matilda Holmes (External Specialist)

Introduction

A moderate assemblage of 6,386 refitted fragments of hand-collected animal bones and teeth was recovered from Roman features dated to the 1st to 4th centuries AD. The animal remains were analysed in line with recommendations made in the assessment, with particular emphasis on diet, food ways, status, economy and a consideration of how these changed with time and in comparison with other sites in the region. Findings are consistent with the deposition of food waste, typical of lower status urban households reflected by small groups of high-meat value bones and an abundance of cattle. It is likely that the town was supplied with older cattle from the hinterland, as well as sheep and pigs bred for meat or culled as a surplus.

Methodology

Bones were identified using the author's reference collection. Due to anatomical similarities between sheep and goat, bones of this type were assigned to the category 'sheep / goat,' unless a definite identification could be made (Zeder and Lapham 2010, 2887–905; Zeder and Pilaar, 2010, 225–42). Horses, donkeys and mules were separated based on long bone measurements and teeth (Davis *et al.* 2008, 183–258; Eisenmann 1986, 67–116; Johnstone 2006, 183–91), as were dogs and foxes using metapodial measurements (Ratjen and Heinrich 1978), wild and domestic cats and corvids using long bone measurements (O'Connor 2007, 581–95; Tomek and Zbigniew 2000). Only the pelvis and humeri of amphibians were recorded in detail. Frogs and toads were separated following criteria in Ratnikov (2001, 1–23). Bones that could not be identified to species were, where possible, categorised according to the relative size of the animal represented (micro- rat/ vole size; small- cat / rabbit size; medium- sheep / pig / dog size; or large- cattle / horse size). Due to ambiguity in the identification of post cranial bones of micro-mammals, only their mandibles and maxillae were identified to taxa.

A method for rapidly recording animal bones was adopted based on Davis (1992) where only 'countable' fragments were fully recorded to reduce fragmentation bias. 'Countable' fragments are those which contained at least half the epiphysis or metaphysis (the ends) of any long bone, scapula, phalanx, and vertebra; the acetabulum of the pelvis; tuber calcis of the calcaneus; and the astragalus where over half was present. The zygomatic arch and occipital areas of the skull were recorded if present, as were mandibular deciduous 4th premolars

and permanent third molars (either loose or *in situ*) and pig and equid canines. To allow for damage to the ends of bones through canid gnawing, bones were also recorded when the following extra diagnostic features were present: the acromion process of the scapula; lateral supracondylar crest of the humerus; nutrient fossa and ulna scar on the radius; trochlear notch of the ulna; lateral fossa of the distal femur; tibial nutrient foramen; and distal foramen of the metapodials. Any other bone fragments that could be identified to taxon were quantified but not recorded in detail.

Tooth wear and eruption were recorded using guidelines from Grant (1982, 91–108) and Payne (1973, 281–303), as were bone fusion, metrical data (von den Driesch 1976), anatomy, size, zone (Serjeantson 1996 194–223) and any evidence of pathological changes, butchery (Lauwerier 1988) and working. The condition of bones was noted on a scale of 0–5, where 0 is fresh bone and 5, the bone is falling apart (Lyman 1994, 355). Other taphonomic factors included the incidence of burning, gnawing, recent breakage and refitted fragments. All fragments were quantified, although articulated or associated fragments were entered as a count of 1, so not to bias the relative frequency of species present. Details of Associated Bone Groups (ABGs) were recorded in a separate table. Where bones from both sides of the body of a single individual could be identified from an ABG, only one set of bones were measured. A number of sieved samples were collected but because of the highly fragmentary nature of such samples a selective process was undertaken, whereby fragments were recorded only if they could be identified to species and / or element, or showed signs of taphonomic processes.

Bones were included in analysis if they came from Roman features securely dated to a single phase. Quantification of taxa used a count of all fragments (NISP- number of identified specimens), and that of anatomical elements was done using a restricted count of epiphyses only, based on Grant (1975, 378–408). Redistribution of different carcass parts was investigated, whereby the more robust, dense elements are most likely to survive in terms of preservation if whole carcasses are disposed of (Brain 1981). Mortality profiles were constructed based on tooth eruption and wear of mandibles and bone fusion (O'Connor 2003). Cattle and sheep / goats were sexed by the morphology of pelvis, pigs by their canines (Schmid 1972) and domestic fowl based on the presence or absence of the spur on the tarsometatarsal, although it must be noted that the hens of some modern breeds also have a spur (West 1982 255–60). The incidence of female birds in lay was determined by the presence of medullary bone in the femur and tibiotarsus (Driver 1982, 251–54). Wither heights were calculated for cattle (Matolcsi 1970, 89–137), sheep / goats, dogs and horses (Teichert 1975, 51–69; Harcourt, 1974, 151–75; Kiesewalter 1888).

Taphonomy and Condition

Bones were in good to fair condition, but friable upon excavation, with a third to a half of all bones exhibiting recent breaks and a high proportion of refitted fragments. Approximately a quarter to a third of features included material that was in both good and poor condition, which suggests that much of the material was mixed, having different taphonomic pathways. This may have been due to the incorporation of fresh waste with that from a midden, residual material during the cutting or recutting of features, or from the exposure of the top layer of a deposit to the elements, rather than being buried immediately. Observations of weathering further suggests that not all bones were covered but were exposed, possibly when on a midden, or following deposition. The low proportion of loose teeth compared to those remaining in the mandible suggests that there was minimal post-depositional movement of animal remains, again making it less likely that a sizeable proportion of the assemblage was residual. A relatively low incidence of canid gnawing further implies that bones were not easily accessed by dogs while fresh, which makes it less likely to have come from midden deposits. It is therefore most likely that many deposits were not buried but left open to the elements for some time.

Butchery marks were most common on 1st to 2nd-century deposits, the majority of which were observed on cattle bones in all phases. Some sheep / goat and pig bones were butchered, and occasionally equid (horse or donkey) and canid (dog or fox), even though these animals were not commonly eaten. These comprised a 1st to 2nd-century AD canid cervical vertebra, 2nd to 3rd-century AD equid phalanx and tibia and 3rd to 4th-century AD equid radius. Most stages of carcass reduction were represented, from horn, skin, brain and marrow removal to disarticulation, jointing and filleting. There were no large deposits of primary butchery waste to indicate the almost industrial scale of butchery observed in some large Roman towns such as Lincoln, Dorchester and Winchester (Dobney *et al.* 1996; Maltby 1989, 75–106; 1994, 85–102; Seetah 2006, 109–16). At Sandy Municipal Cemetery, some small-scale, systematic repetition of heavy chop marks could be observed, which suggests that a dedicated butchery trade may have been present in the town, consistently processing carcasses in a similar manner. This was particularly notable in the 1st to 2nd century as heavy chop marks to the humeral / radial joint affecting the articulation of the radius (17 incidences), including an ulna and distal humerus as well as the shafts of the distal humerus and proximal radius. Similar repeated butchery of the metapodials included removal of part of the proximal end of the metacarpal and metatarsal and chopping through the mid-shaft to access marrow and facilitate jointing. Marrow removal was also commonly observed as splitting of the tibia.

Burnt bones were rare, suggesting that they were not routinely exposed to fire either during cooking, disposal or as cremations. The samples produced a few larger groups of burnt and calcined material, from 2nd to 3rd-century AD pit P70 (43 small fragments) and 3rd to 4th-century AD oven O1 (74 small fragments), which implies that bones were sometimes used as fuel or represent waste from cooking that was accidentally burnt.

There were no obvious, singular deposits of primary butchery, craft-working or skin-processing waste, most of the zooarchaeology typical of the deposition of material from a mixture of butchery, kitchen and table waste. Two sheep / goat metatarsals from the 1st to 2nd and 3rd to 4th centuries AD were recovered with holes in the proximal aspect of the proximal end, which can be indicative of their use as pegs during skin processing (Yeomans 2006). Two further 1st to 2nd-century AD metacarpals and a 2nd to 3rd-century AD metatarsal had polish on the shaft. Also of note is a dog mandible recovered from context (494), P30, with another from the same animal coming from context (495), suggesting that they were originally the same fill.

Evidence of primary contexts came from two sources, the presence of loose epiphyses (growth plates) alongside their corresponding metaphyses (long bone shaft) and ABGs, both of which imply minimal post-depositional movement. Loose epiphyses came from contexts (187), (200), (206), (259), (489), (493), (700), (727), (732), (884), (885) and (913). Pit B contained the remains of at least two dogs, one an adult (context 48) and the other a juvenile (context 77), two articulated metatarsals (context 362) were probably also from the juvenile animal. Further disarticulated canid remains, and a skull came from the pit, which could also have been associated with the two partially complete dogs. Gnaw marks on some of the bones from context (48) suggest that the animal was not completely buried, consistent with other evidence described above that many deposits were left open. Pit B also contained the remains of the left lower leg of a horse. Other partial skeletons from non-funerary features included cattle vertebrae, neck and hind leg bones, which may represent butchery waste or cuts of meat. The five frog skeletons from pit P3 were most likely pit falls, while the axial skeleton of a dog from ditch 18, (context 610) may have been a deliberate deposit, or the opportune burial of a non-food animal.

A group of domestic fowl bones, most likely chicken, and a pig molar came from cremation C4. They were fragmentary and calcined and may have been cremated with the person. The presence of wing and leg bones in association with a vertebra suggests that it was not originally an offering of a small joint, but either the whole bird or at least the dressed carcass, minus the head and feet. Also of note was a pharyngeal from a cyprinid, possibly chub that was found in association with C1. It

may have been caught from a local river.

Several skulls were recovered, some of which may have been deliberate deposits such as the cattle skull in 3rd to 4th-century AD ditch D18, and the two cattle and two pig fragmentary skulls from gullies A4 and A5 making up the 1st to 2nd-century AD property boundary. The origin of the other skulls is more ambiguous, they may have been discarded as butchery waste, or represent symbolic depositions.

1st to 2nd Centuries

The greatest quantity of animal remains was recovered from this period, the majority coming from features related to the northern property. A large deposit was recovered from pit B on the valley floor, with other sizeable deposits (≥ 30 identified fragments) coming from D6, P33 and P17 of the northern property, P67 and K1 of the southern property and A6 of the area's property boundary. Smaller deposits were recorded from the property boundary (A1, A3, A4, A5, D24), northern property (D1, D16, D36, D38, D4, D7, D8, P12, P13, P14, P16, P18, P24, P26, P38, P42, P53, P54, P55, P60, P74, P77, PH10, PH11, PH12, PH21, PH9, Q1), infrastructure (road, roadside ditch, town wall, town boundary), southern property (D2, D33, P35, P50, P73, PH16), the cemetery (P6, C1) and the valley floor (P1).

Cattle were more common than sheep / goats, followed by pigs. Smaller quantities of canid, equid and domestic fowl were present, as were occasional finds of wild animals (rabbit / hare, crow, fish). Micro-mammals (including field vole, common shrew and wood mouse), frogs and toads and fish (including cyprinid, small gadid and eel) came from samples. Oyster shell was also abundant, as well as a few mussel fragments. Terrestrial snails were present in the form of a possible wetland species, *Oxyloma elegans* and a few small discoidal shells that were probably the widely distributed *Discus rotundatus*. The frogs / toads also indicate a water source close by, but the micro-mammals are less specific, and can be found in a range of habitats that provide cover, such as scrub, woodland, grassland and gardens.

There were no large deposits of any one taxon and cattle and sheep / goat remains dominated all features. Occasionally sheep / goats were recovered in greater proportions than cattle (D1, P16, Q1, K1 and P73), but this is most likely a product of normal variation over the site. The relatively high number of disarticulated canid bones in pit B are probably related to the two dog burials described above.

Anatomical elements were generally present in expected proportions if whole animals were culled, processed and consumed on site, although a greater number of cattle proximal radii were recorded. Thirteen of these

(representing at least five individuals) came from pit B, which implies that the type of rubbish disposed of in this feature included some high-meat-value joints. Similar but smaller deposits came from pit P19 context (274), where two left pig scapulae were noted, and RR1 road cut [859], context (860) that contained three cattle humeri (from at least two individuals), all of which imply the procurement of a large quantity of meat from shoulder joints.

Two peaks in cattle ages were observed; most were either culled as younger adults at wear stage E or older adults at wear stage G, with a few older animals also present. The porous bones of some perinates were recorded, and both older and younger animals are reflected in the fusion data. Male and female animals were identified from pelvis fragments. Several bones bore signs of wear and tear, such as two instances of eburnation and exostosis to the acetabulum, and one first phalanx and a metatarsal with lipping and exostosis. These may be related to age, but could also indicate the loading of animals during their use for traction. Two mandibles had alveolar recession, one stage 3 affecting the 4th premolar, and another severe example at stage 4 in the area of the third molar and stage 5 in the area of the 4th premolar (Levitani 1985, 41–54). Cattle were all of the small horn type (Sykes and Symmons 2007, 514–23), curved with no twist.

Sheep / goats were culled at all ages, with a peak of immature animals at wear stage C, and young adults at wear stage E, which is reflected in the long bone fusion data, in both sets of data only a few older adults are evident, suggesting an emphasis on animals raised for meat. Female sheep were best represented in the pelvis data. A polled sheep skull (without horns) was recorded, which is a naturally occurring trait (Armitage and Goodall 1977, 73–89). A range of long bone measurements were available, indicating animals between 0.53 and 0.63m tall with a mean of 0.59m.

Pigs were culled as sub- or young adults at wear stages D and E and the intermediate fusion stage; these animals would have been at prime meat age as they neared maturity. Both male and female animals were recorded, although males were better represented. A third metacarpal had thickened bone on the distal shaft, suggesting it had suffered a trauma or infection.

All equid bones were fused, indicating that they were important for secondary products such as transport and draught work. All first phalanges were within the range of horses rather than donkeys. Three wither heights were calculated, consistent with ponies c. 12.1hh to 13.1hh.

Most canid bones were identified as dogs, although a probable fox radius came from pit P18. Most bones were fused, except for the juvenile dog in pit B, and the tooth wear produced evidence for one animal that died in the

first year, three before reaching two years and one older than four years (Horard-Herbin 2000). Two shoulder heights were calculated from disarticulated bones, both from small animals, and a dog skull from a small, short-snouted animal was noted. This animal also had alveolar recession affecting the molars and ante-mortem loss of the premolars on the right side, and just the first premolar on the left, the alveoli having healed over. Two further incidences of alveolar recession were noted, one mandible at stage 1, another mandible with the entire right side tooth row affected and the second and third molars lost, the first molar with a large cavity.

Most domestic fowl bones were from adult birds, though the porous bones of juveniles were also present indicating that some were raised close by. The presence of a tarsometatarsus with no spur represents a hen.

2nd to 3rd Centuries

A moderate assemblage was recovered from a relatively small number of features, the majority associated with the northern property. Large quantities of animal remains came from P70, F6 and P30 in the northern property, P76 in the southern property and D22, the roadside ditch. Smaller deposits came from the northern property (D20, D35, F2, F4, P27, P34, P57, P68, P9), roadside ditches (D15, RR3) and the southern property (D12, P69).

Cattle and sheep / goats were recovered in similar quantities, with fewer finds of pig remains. Domestic fowl were next most common, followed by equid, canid and goose, as well as occasional remains of wild mammals (roe deer (metacarpal), shrew), crane, frog / toad and eel and numerous oyster shells. Field vole, herring and small passerine bones were also identified from the samples. Despite the general trend in species proportions, most features contained a greater proportion of cattle, except for pit P70 where sheep / goats were more common and F6 where a larger than usual proportion of sheep / goats and pigs were recovered. In these deposits sheep / goat remains came from all parts of the carcass, but with a greater proportion of meat-bearing bones. The sheep / goat remains in F6 nearly all came from context (599), and were dominated by pelvis and tibia fragments as well as scapulae, radii, humeri and ulnae. In P70 mandible, scapula, humerus and pelvis fragments were most abundant, but also radius and tibia. The majority came from fills (907), (911) and (913), the latter two contained ccess, and may represent the deposition of domestic or table waste, which are more likely to contain the smaller bones of sheep / goat and pigs than larger cattle bones that would perhaps not be taken home but left with the butcher.

One further deposit of interest comes from pit P29 context (491) in the southern property, which contained nearly

all the domestic fowl and goose bones from the period, and very few other taxa. At least one mature goose was present, with bones coming from the wing and pelvis. The bones of at least four domestic fowl were recorded, two hens in lay at the time of death, one bird not in lay- the presence of a male tarsometatarsal with a spur may belong to this bird- and one juvenile. The hens in lay and juvenile bird suggest a probable spring to autumn season of deposition, as hens tend not to lay as many eggs in winter, and the Roman writer Varro suggests that 'the best incubation period is between spring and autumn equinoxes' (Hans 2009, 1-6). Bones come from legs and wings, as well as the pelvis, and a skull fragment may also have been from one of these birds.

Cattle remains were recovered in proportions expected if whole animals were disposed of on site, with the exception of a peak in proximal radii. Ten of these came from roadside ditch D22 (seven from roadside ditch D22), which implies the inclusion of waste from a large number of high-meat-value joints. Sheep / goat remains also produced greater proportions of meat-bearing long bones, particularly the scapula, distal humerus and pelvis. As noted previously, a large group of these (five scapulae, nine humeri and four pelvises) came from pit P70 adjacent to the section of roadside ditch that held the cattle radii.

Cattle were mostly culled as young adults at wear stage E, or older adults at wear stage G and G/H, although a calf is indicated by a mandible at stage B and finds of porous long bones. The fusion data also imply a cull of animals at the late and final stages as they approach maturity. One female pelvis was identified. Cattle had small, curved horns.

Sheep / goats were nearly all culled prior to maturity, at tooth wear stage E, and with no final-fusing vertebrae fused. Lambs were observed from a mandible at wear stage B and the presence of porous bones, which further implies that some animals were bred close by. Both males and females were identified, the latter being more common. Three long bones were complete enough to calculate shoulder heights between 0.55m and 0.63m. One horn core had depressions on it, which may be an indicator of poor nutrition (Albarella 1995, 699-704).

Pigs were culled at a variety of sub-adult ages, suggesting an emphasis on meat. Canines were largely from males.

All equid bones were fused, consistent with their use for transport and hauling. A canid mandible from a very old individual was recovered, several teeth were missing ante-mortem, with rehealed alveoli, and the fourth premolar was worn to stumps, although an unfused vertebra would have been from a younger animal.

Domestic fowl were largely mature at death, though some

porous bones of juveniles were recovered. A capon or young male bird was represented by a tarsometatarsal with a spur scar, and a hen by one which was absent. Further indication of female birds came from several bones containing medullary bone that is indicative of birds in lay. All geese were mature.

3rd to 4th Centuries

The smallest assemblage was dated to this period, though a large deposit came from northern property F1 and ditch D18. Smaller quantities were recovered from other areas of the northern property (C4, D39, F5, P40, P61, PH1, PH26). Cattle remains dominated, although substantial deposits of sheep / goats were also present. Pigs were next most common followed by equids, canids and domestic fowl as well as a few cat, frog / toad bones and several oyster shells. The samples produced a few further finds of eel. This general pattern is reflected in most features, only smaller samples from P61 and C4 having greater quantities of sheep / goats and pigs. Ditch 18 context (610) included two left and one right equid pelvis and two left cattle pelvis. The presence of the latter in the same fill as a fragmentary cattle skull and the axial skeleton of a dog suggests there may have been some deliberate choice in these deposits.

Sample sizes were too small to provide reliable trends in the redistribution of carcass parts, although there is a potential over-representation of cattle proximal radii and pelvis fragments and sheep / goat proximal radii, pelvis and distal tibiae. There were no concentrations of these elements in any one feature, although two left cattle scapulae were recovered from ditch 18, which implies the deposition of remains from the consumption of a large quantity of meat.

Both the tooth wear and fusion data suggest that cattle were culled prior to maturity, at wear stages D and E, and before reaching the final fusion stage, although one very old adult animal is evident with a wear stage of J. Two male animals were recorded from pelvis morphology. A short horn type of cattle was recorded, with a curved, untwisted horn and two wither heights reflected animals just over one metre tall. Two first phalanges bore severe deformations that may indicate draught use, one providing the highest possible pathological index score of 1 (Bartosiewicz *et al.* 1997).

Sheep / goats were culled at a range of ages, including those in their first year at tooth wear stage B, subadults at wear stage D and older adults at stage G. This is reflected in the fusion data, with small culls of animals at each stage, and the porous bones of lambs indicating perinatal mortalities. A sheep / goat tibia had been broken and rehealed, and a mandible had considerable evidence for periodontal disease, with stage 2 alveolar recession below

the fourth premolar and stage 3 below the first molar, as well as resultant malocclusion in the fourth premolar and second and third molars.

Only one tooth wear stage could be calculated for pigs, which came from a young animal at wear stage C, which is consistent with the fusion data that had no evidence for animals kept alive later than the intermediate fusion stage. A male canine was recovered.

Nearly all canid bones were fused, although a single unfused vertebra indicates a subadult animal. Several dogs were identified, but no foxes. One animal was short, with bandy legs similar to a small terrier.

All equid bones were fused, reflecting their importance for secondary products, although the presence of a loose tooth (third or fourth premolar or first or second molar) that was just in wear represents a subadult animal. All domestic fowl bones were from adults, and a tarsometatarsal with a spur implies a male bird.

Discussion

A sizeable zooarchaeological assemblage was produced, particularly for the Early Roman period. The findings will be discussed in relation to local themes such as diet, food ways, status and the animal economy of the site, and considered in relation to contemporary sites in the area. There are no other Roman towns which have been comprehensively investigated within Bedfordshire, so data from neighbouring counties have been included as comparanda.

Diet and Status

In all phases the meat diet of those living at Sandy was dominated by beef and lamb, with occasional additions of pork, chicken, goose and fish. Given the relative carcass sizes, beef would have been most commonly consumed, even when the proportion of cattle decreased slightly in the 2nd to 3rd century as pig remains increased. This dip in cattle numbers was short lived, as they subsequently increase in relation to a decrease in sheep / goats and pigs. Low proportions of domestic fowl, wild animals and fish suggest that there was little variation in the diet, with limited opportunity for the inhabitants of this area of the settlement to have procured game or fish for the table. There is nothing to suggest that the refuse disposed of on site was from high-status households.

Beef is largely acknowledged to have been the most commonly consumed meat on most Roman period sites (King 1999, 168–202; Maltby 2016 791–807). Cattle numbers on Roman urban sites tend to be greater than at rural sites (King 1984, 187–217; King 1999), but this has more recently been shown to be subject to considerable

variation, the very high proportions of cattle often coming from groups of specialist butchery debris (Maltby 2010; 2016). Indeed, the data from the nearby Roman towns at Puckeridge-Braughing and Great Chesterford exhibit some of the lowest proportions of cattle in their respective periods.

The meat diet of other Early Roman (1st to 2nd century) sites in the region is similar, although the proportion of cattle and pigs at Sandy is towards the higher end of the range. This changes from the 2nd to 3rd century, when the proportion of cattle is lower than those recorded from other sites in the area, with sheep / goats and pigs being more common. The increase in cattle observed at Sandy in 3rd to 4th-century deposits once again makes it more comparable with other sites in the region.

Economy

There was striking evidence for cattle to have been subject to two culls coinciding with wear stages E (2–3 years) and G (4.5 to 6.5 years), which suggests that the town was supplied with animals at prime meat age, and older animals that had been used for secondary products such as draught work or milking. Although there was some evidence for calves in all periods, this is not a population that represents a breeding herd, given the very low number of subadult animals. A greater proportion of juvenile and subadult cattle were observed at Early Roman rural settlements (Birchfield Road and Water End East), but at the town of Puckeridge-Braughing most cattle were adult, as at Sandy, which suggests that some urban sites were supplied with older animals from the hinterland. By the Late Roman period adults were more common on urban and rural sites alike, as the need for increased arable production led to a requirement for working cattle to be kept longer (Allen and Lodwick 2017, 142–77). The use of cattle for traction such as ploughing or carting is implied by the presence of pathologies affecting the bones of the lower legs and feet of animals in the 1st to 2nd and 3rd to 4th centuries.

Sheep / goats exhibited a broader cull profile, with peak culls at stages C (6 months to 1 year) and E (c.2–3 years), suggesting that the emphasis was on young animals culled for meat, either as a surplus or as they approached maturity and became full grown. Despite these peaks, smaller numbers of sheep / goats were culled steadily between birth and old age—particularly evident in the large sample from the 1st to 2nd century. This pattern is not unusual and similar mortality profiles are reported at many contemporary sites (Maltby 2016), suggesting that although a few clips of wool would be provided, these animals were of greater importance for food. The predominance of female sheep / goats in the 1st to 2nd and 2nd to 3rd centuries suggests that males were either culled earlier before the pelvises were fused, or were kept

back on rural sites, perhaps as a preference for meat or because of an emphasis on wool production.

The onus on meat from pigs is unsurprising, as pigs have little value for secondary products beyond manure, and the cull of immature and subadult animals reflects this.

Heavy butchery of cattle bones meant that few metrical data were available for comparison with other sites. A good sample of complete sheep / goat distal tibia measurements could be compared with those from Elms Farm, Essex that provided evidence for an increase in the size of livestock over the course of the Roman period (Albarella *et al.* 2008, 1828–48). Although the sheep measurements from Sandy were within the ranges observed at Elms Farm there was no evidence for an increase in the size of sheep stock over time. However, the high proportion of female sheep may have reduced this mean if more male sheep / goats were present at Elms Farm.

A combination of adult and juvenile domestic fowl, and evidence of hens in lay in the 1st to 2nd and 2nd to 3rd centuries suggests that they were bred locally, and that eggs and meat were consumed within the town.

Food Ways

In all phases, small groups of (sometimes heavily butchered) meat-bearing long bones have been recognised, which represent the deposition of waste from joints of meat from numerous animals. Although these do not compare with the large deposits of industrial butchery waste observed on some urban sites (Maltby 2010), they are not typical of deposits recovered on rural settlements. Rather, they imply the processing and consumption of large numbers of livestock by a large population on a scale not sustainable at rural producer sites (Baxter 2006, 12–23). With the exception of these deposits that suggest the redistribution of joints of meat, the underlying trend is for cattle, sheep / goats and pigs to have been culled, processed and consumed in the area.

Attitudes Towards Dogs

The presence of two dogs in a ditch that were subject to some post-depositional movement and at least partially exposed to the elements is not reminiscent of the careful burial of small pet dogs alongside their owners (Baxter 2006, 12–23). This, combined with the presence numerous disarticulated dog remains scattered throughout the site, suggests the opportune disposal of non-food animals with little sentiment. Several dog mandibles showed signs of oral pathologies. Although one very old animal was recorded that may have been a favourite pet or working dog, most died as young animals, which makes the high proportion of oral pathologies surprising as this trait is more common in older animals (Holmes *et al.* 2021, 43–

Appendix F: Worked Shale and Bone

The Shale Bangle

Fraser Hunter (External Specialist)

Introduction

Two joining fragments of a Romano-British lathe-turned shale bangle were recovered from ditch F5, fill (604) of 3rd to 4th-century date (Figure 37). The angular inner face reflects where the core was removed without extensive subsequent smoothing, and is a characteristic feature of lathe turning (Lawson 1975 241–75; Calkin 1953 45–71). The colour and character suggest it is Kimmeridge Shale. There was a large-scale Iron Age industry based around the main sources in Dorset which continued throughout the Roman period, expanding its repertoire (Cox and Woodward 1987). Its products were extensively distributed across Roman Britain, as far as the northern frontier (Allason-Jones and Jones 1994 265–72; Hunter 2014, 152–65). One needs to be a little cautious in assuming all the products are necessarily from Dorset, as there is evidence for the movement of blocks of raw material as well as finished products (Allason-Jones 2002, 125–32), while similar raw materials outcrop in a band running northeast to Yorkshire (Allason-Jones 2011). It is in Dorset, however, that production evidence is concentrated (Calkin 1953; Cox and Woodward 1987). There has been no synthetic study of these bangles, but use of the material in Bedfordshire may be demonstrated, *inter alia*, by shale bangles from a burial at Dunstable (Matthews 1981, 45 fig 30 nos 21–2); they were a common find across the province.

Catalogue

Two joining fragments of a lathe-turned shale bangle, with rounded exterior and characteristically asymmetrical angled interior, the latter arising from the lathe turning; a slight ridge marks where the core was detached. Its grey, laminar character identifies it as shale, most likely Kimmeridge shale. Internal diameter 60–65mm (29% survives), W 7mm, H 7.5mm, L 58mm

The Worked Bone

Helen Chittock and Alice Fraser

Introduction

The worked bone assemblage from Sandy consists of eight objects, weighing a total of 28.70g.

Hairpins and Probable Hairpins

Four of the worked bone objects from Sandy were identifiable as Roman hairpins and have been categorized via Crummy's typology (Crummy 1983). RF10, RF12 (Figure 37) and RF13 belong to Crummy's Type 2, which is characterised by 1–4 grooves around a conical head (Crummy 1983, 21). In Colchester, this type dates to before AD 200, dating that is also reflected elsewhere in England (Crummy 1983, 21). Similar Type 2 hairpins were recovered from the Roman settlement at Baldock (Stead and Rigby 1986, 164), which lay to the southeast of Sandy and was connected by road (Fitzpatrick-Matthews 2016). Type 3 hairpins, dating to after c. AD 200 (Crummy 1983, 22) were also recovered from Baldock (Stead and Rigby 1986, 164), but were absent from Sandy.

RF11 probably represents the head of a Type 1 hairpin, with a plain conical head. This type dates more broadly to between the later 1st and the 4th centuries (Crummy 1983, 20). Alternatively, it could be the sharpened point of another type of pin, or other implement.

Three objects from the assemblage have been classified as probable Roman hairpins: RF23, RF35 and an object from deposit (99). They are missing their heads and tips, but their appearances are consistent with the shafts of hairpins. Alternatively, they could be fragments from bone needles or other implements.

Of the group of objects described above, RF10 and a probable hairpin fragment were recovered from deposit (99), a fill within a large late 1st to 2nd-century pit B, cut into a slope outside the town wall with a retaining fence. Fill (99) appeared heat affected, but the worked bone finds within it had not been burnt. If this finds-rich pit is interpreted as a rubbish pit, it seems likely that these finds were discarded there deliberately, particularly in the case of the broken fragment of probable hairpin, although a question could be raised about why intact hairpin RF10 was discarded there.

Hairpins RF11 and RF12 were recovered from fill (108) of terminus of curvilinear ditch D1, which demarked an enclosure. Hairpin RF13 was recovered from the fill (111) of linear feature D4, provisionally dated to between the late 1st and mid-2nd centuries. Probable hairpin RF35 was recovered from the fill of a pit that is likely to be of late 1st to mid-3rd-century date, while probable hairpin RF23 was unstratified.

Thread Picker

The eighth object of worked bone from the site was a smooth, polished cigar-shaped object with pointed ends. Facets from knife working are visible and striations at each end are suggestive of wear. This is a thread picker or pin

beater, an object used for separating the warp threads on a loom. This form of cigar-shaped thread picker first appeared in Britain in the Roman period and continued in use throughout the early medieval period (Walton Rogers 1997, 1755–7), with examples known from early Saxon London (Cowie and Blackmore 2008, 210).

The thread picker RF14 was recovered from (138), the fill of narrow, flat-bottomed enclosure ditch D1. The feature may be related to an upstanding device such as a loom (2022, 15). The feature also contained a single sherd of Roman pottery and a single fragment of Roman glass.

Discussion

This is a small assemblage of worked bone objects, which contribute to the understanding of the site at Sandy. A number of the finds are indicative of date, with the diagnostic hairpins suggesting the site was occupied before 200 AD, which is concurrent with the early dates of Roman metal objects from the site and those from the excavation of the part of the Roman settlement directly to the southeast (Johnston 1974). Interestingly, no worked bone objects were reported during the excavations on this neighbouring piece of land, which may be a reflection of different taphonomic conditions, or of the way the wider Roman town at Sandy was used. The find of a thread picker or pin beater RF14 is indicative of industry carried out on site.

Catalogue

Measurements given:

Wt = weight.

L = length.

W = width.

T = thickness.

Hairpin RF10

Intact Crummy Type 2 hair pin with three grooves beneath a pointed conical head. Date: pre- AD 200 (Crummy 1983, 21)

Wt: 1.30g. L: 104.10mm. T: 3.30mm.

(99) fill in pit B.

Hairpin RF11

Either the head of a Crummy Type 1 bone hairpin or the sharp end of another type. Date: pre- 4th century AD (Crummy 1983, 21).

Wt: 0.20g. L: 22.60mm. T: 3.20mm.

(108) fill of terminus of curvilinear ditch D1.

Hairpin RF12 (Figure 37)

Intact Crummy Type 2 hair pin with two grooves beneath a rounded conical head. Date: pre- AD 200 (Crummy 1983, 21).

Wt: 1.3g. L: 104.10mm. T: 3.30mm.

(108) fill of terminus of curvilinear ditch D1.

Hairpin RF13

The head end of a Crummy Type 2 hairpin with two grooves beneath a conical head. Date: pre-AD 200 (Crummy 1983, 21).

Wt: 0.90g. L: 43.70mm. T: 3.90mm.

(111) fill of linear D4.

Thread Picker or Pin Beater RF14

A thread picker or pin beater, used in weaving. A smooth, cigar-shaped, oval sectioned length of bone that tapers to a point at both ends. Facets from knife working are present and striations are visible at both ends, suggestive of wear during use. While this type of find can be Roman or early medieval in date, a Roman date is suggested for this example (see the discussion of this find above).

Wt: 24.3g. L: 153mm. W: 16.40mm. T: 12.20mm.

(138) fill of flat-bottomed rectangular feature J1.

?Hairpin RF23

A section of probable bone hairpin with the head and tip missing. This could also be part of a needle or other bone implement.

Wt: 0.10g. L: 37.70mm. T: 2.10mm.

Unstratified.

?Hairpin RF35

A section of probable bone hairpin with the head and tip missing. This could also be part of a needle or other bone implement.

Wt: 0.50g. L: 47.50mm. T: 3.00mm.

(335) fill of pit P24.

?Hairpin

A section of probable bone hairpin with the head and tip missing. This could also be part of a needle or other bone implement.

Wt: 0.10g. L: 32.70mm. T: 2.30mm.

(99) fill in pit B.

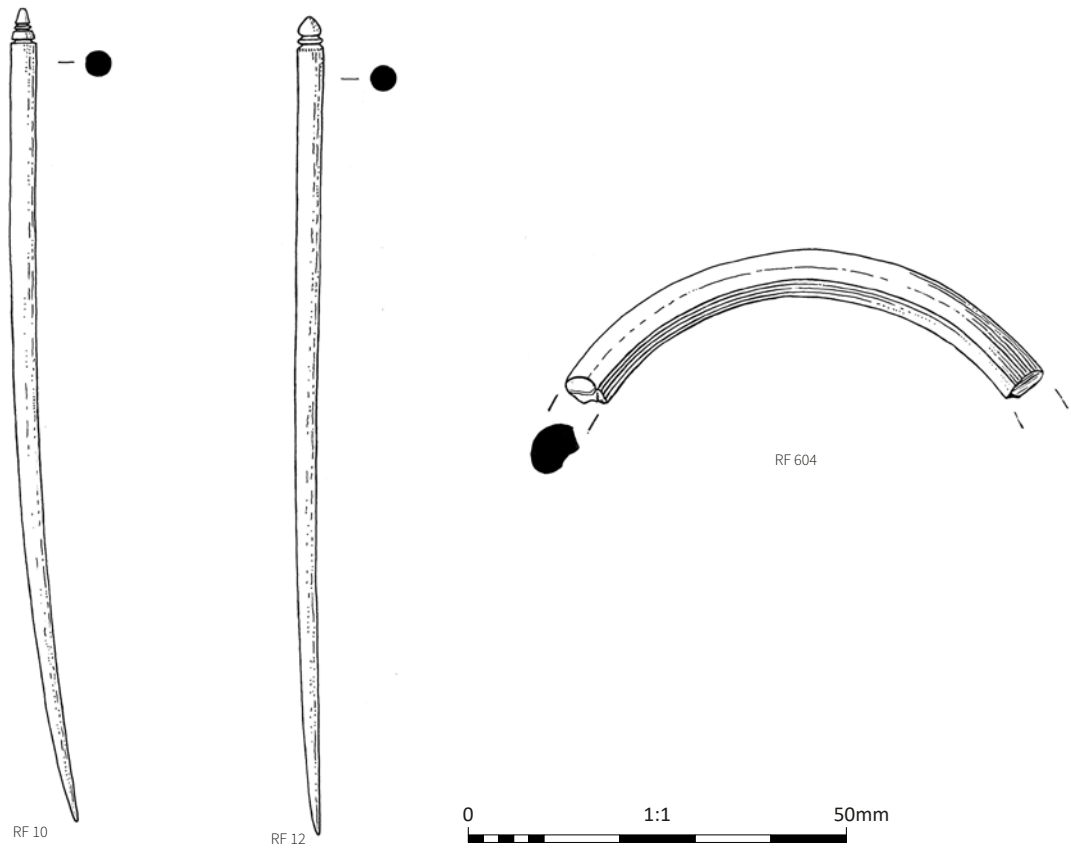


Figure 37: Hairpins RF10, RF12 and the Shale Bracelet from Ditch F5

Appendix G: Glass

Angela Wardle (External Specialist)

Introduction

The site lies on the north-eastern edge of the Roman town at Sandy and includes part of the cemetery which lay outside the town. The excavations produced 86 fragments of glass from 29 contexts, of which 22 were classified as accessioned finds, a small but potentially significant assemblage. It is primarily of Roman date, with a few post-medieval forms. Most of the Roman glass sits comfortably within the 1st to 2nd centuries (Period 3), with a very little later material in Period 4 contexts, conforming to the period of settlement activity observed in the excavations, where there was marked decline in the later Roman period.

Discussion of the Glass

The most significant vessels are from Cremation 1, (21) RF5, RF5a. A jug RF5 with a pinched spout, is a form which dates from the late 1st to the early 3rd century, but here is likely to be from the late 1st to 2nd century, supporting the ceramic dating (Figure 38). It is incomplete, but part of the rim with funnel mouth, concave base, and ribbon handle survive. In a discussion of spouted jugs from Colchester, Cool and Price note that they are sometimes found in cremations (Cool and Price 1995, 131–4), with examples from Skeleton Green (Charlesworth 1981, 271, fig 106.12) and *Verulamium* (Charlesworth 1972, 204, fig 76.24), both in Hertfordshire.

Fragments of a thin-walled colourless vessel were recovered from the same deposit. None is diagnostic, but it is likely to be a globular flask and the colour and quality of the glass indicate a date in the 2nd century. The two vessels were clearly deposited after cremation of the body, as accessories for use in the afterlife. Although damaged and incomplete, both are better preserved than any in the remainder of the assemblage, reflecting the fact that they were deposited complete, and perhaps containing provisions for the afterlife. The cremated individual is a juvenile under the age of 19. Grave goods are, in general, more common in juvenile burials, perhaps because of understandable sentiment, but also perhaps due to the belief that the spirits of the young, and children in particular, could wander and exert a malign influence.

The only other fragment which may originally have been from a burial comes from the side of a small square-bodied flask in good quality colourless glass RF72 (590) (Figure 38). This may be from a 'Mercury flask' Isings form 84 (Price and Cottam 1998, 179). The form dates from the 2nd century and is sometimes found in burials, but here is

from pit P46, located south of the northern ditch.

In addition, there is tenuous evidence for a glass vessel burnt on the pyre from Cremation 7, (50), which also contained heat-affected nails and tacks. Various small fragments thought to be glass at excavation but fuel ash slag. However one small, irregular piece from Sample 5 appears to be molten naturally coloured blue-green glass and may have been from a vessel placed with the body on the pyre. This is however, very slender evidence on which to postulate a glass vessel and it may be purely incidental.

The remaining fragments of Roman date are all small and only a few can be ascribed to specific forms, catalogued below. All are domestic utilitarian glassware, with a date range which covers most of the Roman period. Four small fragments are from square bottles of Isings form 50, in use from the mid-1st until the end of the 2nd century AD, one from Phase 3, pit P29 and the others from unphased contexts (138), (773), (491). Other identified forms comprise a jar, or possibly a bowl RF1 (17), identified by a small fragment of tubular rim (Figure 38). This is from a Phase 2 context, but is within the upper fill of Ditch 3 and is likely to be intrusive.

The other domestic vessels, all single fragments, include a jar or flask RF101(484), from Ditch F3 (Figure 38), neck fragments from jugs or flasks, RF77 (647), pit P55, and

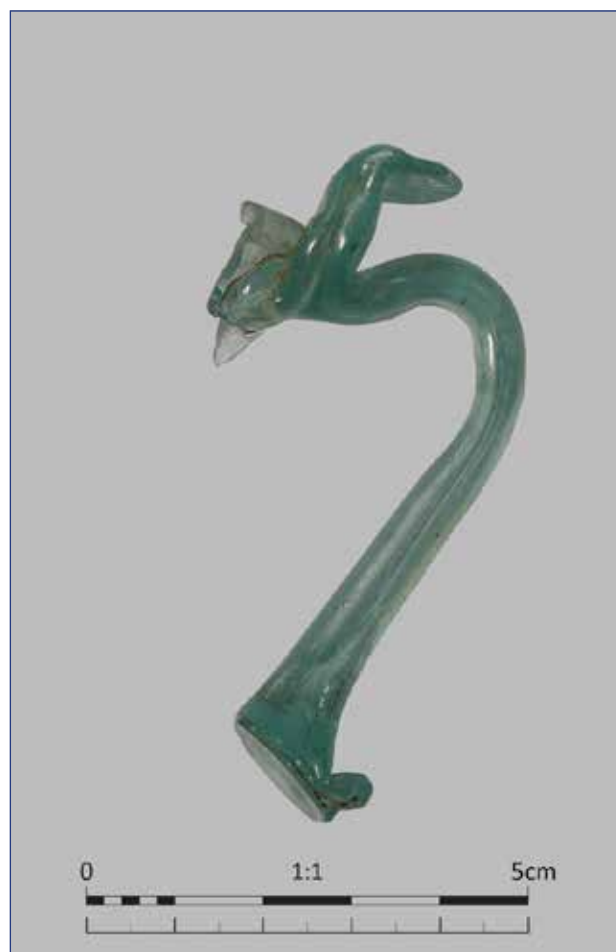


Plate 61: Glass handle from RF5

RF83 (727), unphased, and part of a convex phial or flask RF6 (18), also unphased.

Glass use continued into the 4th century, as evidenced by RF76 (629) from Ditch 11 (Figure 38). This, the latest datable fragment, is the only glass drinking vessel from the site and perhaps reflects an increasing use of glass for cups in the later Roman period.

The remaining fragments of vessel glass, comprising both colourless and naturally-coloured blue-green glass cannot be identified and many are minute splinters, but their presence in pits and ditch fills points to general glass use in the community.

The assemblage includes one fragment of cast matt / glossy window glass RF81 (732), of 1st to 2nd-century date, implying some degree of sophistication within the settlement.

Conclusion

Previous excavations at Sandy, located in the south-east quadrant of the Sandy Town Cemetery, carried out from 1987 to 1991 produced a much larger assemblage of Roman glass. This comprised over 660 fragments dating from the later 1st to the late 4th to 5th century (Price and Cottam 1996). The late Roman group was one of the largest from an occupation site in Britain, with some unusual forms and would have afforded a good opportunity for study the development and chronology of Late Roman forms. Although recorded for assessment, it remains unpublished.

The present assemblage bears little direct comparison to the former. It is far smaller, reflecting the smaller scale of the new excavations and, presumably, their location within the settlement area. The date range is similar, with vessels dating from the late 1st to the 4th century, but there is only one Late Roman vessel, a relatively common form of cup RF76 (Figure 38). Roman glass is normally comparatively rare in rural contexts and in smaller towns, as opposed to major urban centres, so is always of interest in these contexts. Although, after the adoption of glass blowing in the 1st century AD, glass could be mass-produced, it was always more expensive than other materials and was more readily available in larger towns. Its presence in a smaller settlement is therefore of local significance and of limited interest in the wider context. It is noticeable that, with the exception of the two vessels from Cremation 1, all glass fragments are very small and appear to be incidental finds from pits and ditches. It should perhaps be remembered that in the Roman period, glass was regularly recycled and did not therefore enter the archaeological record. This is clearly of greater significance in large towns where both markets and glass workers were situated (Wardle *et al.* 2015, 5), but may be a contributory factor in the scarcity of

glass in smaller settlements.

The cremation burial with grave goods is of interest in the wider field of Roman burial practice. Glass vessels are comparatively rare in Roman burials, even in towns with, for example, only one beaker from the large later cemetery at Dunstable (Matthews 1981, 48). There are relatively local parallels for the spouted jug from Cremation 1, with parallels in Hertfordshire from Skeleton Green (Charlesworth 1981, 271, fig 106.12) and *Verulamium* (Charlesworth 1972, 204, fig 76.24).

Catalogue of identified forms

Vessel Glass

Jug RF5 (21) Fill of (22), Phase 3, Cremation 1 (Figure 38)

Natural green blue. Six fragments from a spouted jug, some joining. This is a globular jug with pinched-in spout, of Isings form 56/88a-b (Isings 1957). Three rim fragments join, with the suggestion that it turns in to form the spout; rim edge rolled in. It is just possible that this is a pulled-out spout (Isings form 88c) which succeeded 88a/b, as it is difficult to distinguish the rim forms from small fragments. The jug has a funnel mouth, short cylindrical neck, a wide convex body and a concave base, which survives here. The surviving rod handle, which was applied to the upper body, has a folded thumb rest. Base diam c 80mm. Late 1st to early 3rd c AD.

Flask RF5 (21) Fill of (22), Phase 3, Cremation 1

Colourless, bubbly glass. 37 fragments, including a very small fragment of concave base, from a thin-walled flask or possibly a jug. One fragment appears to have a slight shoulder but there are no diagnostic fragments which can determine the form. The colour and general shape would suggest a date in the 2nd-century AD.

Flask RF72 (590) Fill of Cut (591), Phase 3, Pit P46 (Figure 38)

Colourless, good quality glass. Mould blown. Width 32.5mm; H (surviving) 18.9mm; Th 2.5mm.

Fragment from the side of a small flask with square body, the full width remaining, with traces of the turn on each side. This is probably from a 'Mercury flask,' of Isings form 84, so called as designs on the base, here missing, often depicted the god (Price and Cottam 1998, 179). The vessel had a horizontal folded rim, cylindrical neck, a square or hexagonal body and a flat base. The body and base were blown into a mould. The form, which is not common, is

often found in burials and was in use during the second half of the 2nd-century AD.

Cup RF76 (629) Phase 4, Fill of Ditch 11 (Figure 38)

Colourless, greenish, bubbly (Late Roman green glass). Fragment of curved rim, the edge cracked off, with bands of horizontal abrasion below, above the convex body. Rim diam 90mm Th 1mm. Isings form 96 (Price and Cottam 1998, 117). 4th century AD.

Jar RF1 (17) Phase 2, Upper fill Ditch 3

Natural green blue. Fragment of tubular rim from a jar, eg Isings form 67C, or bowl eg Isings form 44. Rim diam c 120mm. Late 1st to 2nd century

Jar or flask RF101 (484) Phase 3, Fill of Ditch F3 (Figure 38)

Colourless. Fragment from the fire-rounded, thickened out-turned rim of a jar or flask. Rim Diam c 55mm. Late 1st to 2nd century AD? Exact form difficult to determine from the rim alone.

Jug or flask RF77 (647) Phase 3, Pit 55

Natural green blue. Fragment of neck from bottle, jug or flask. 1st to 2nd century AD.

Vessel RF83 (727) Unphased

Natural green blue. Fragment from the neck of a vessel, possibly a jug or flask.

Vessel RF6 (18) Unphased

Natural green blue. Body fragment from thin convex vessel, possibly a phial or flask, bubbly, poor quality glass.

Bottle Class

All natural blue green glass.

RF15 (138) Unphased

Isings 50. Small body fragment

RF63 (491) Phase 3

Pit 29 Isings 50. Fragment from the side of the body, with part of edge.

(945) Phase 3c

Isings 50. Small body fragment, edge

RF104 (773) Unphased

Isings 50/51 Rim fragments

Window Glass

RF81 (732) Phase 3, Ditch 35

Colourless. Incomplete. Surviving L 41mm; thickness 4mm

Fragment of window glass, with one matt and one glossy surface, due to the manufacturing technique of casting. Most glass made in this way dates from AD 43–200.

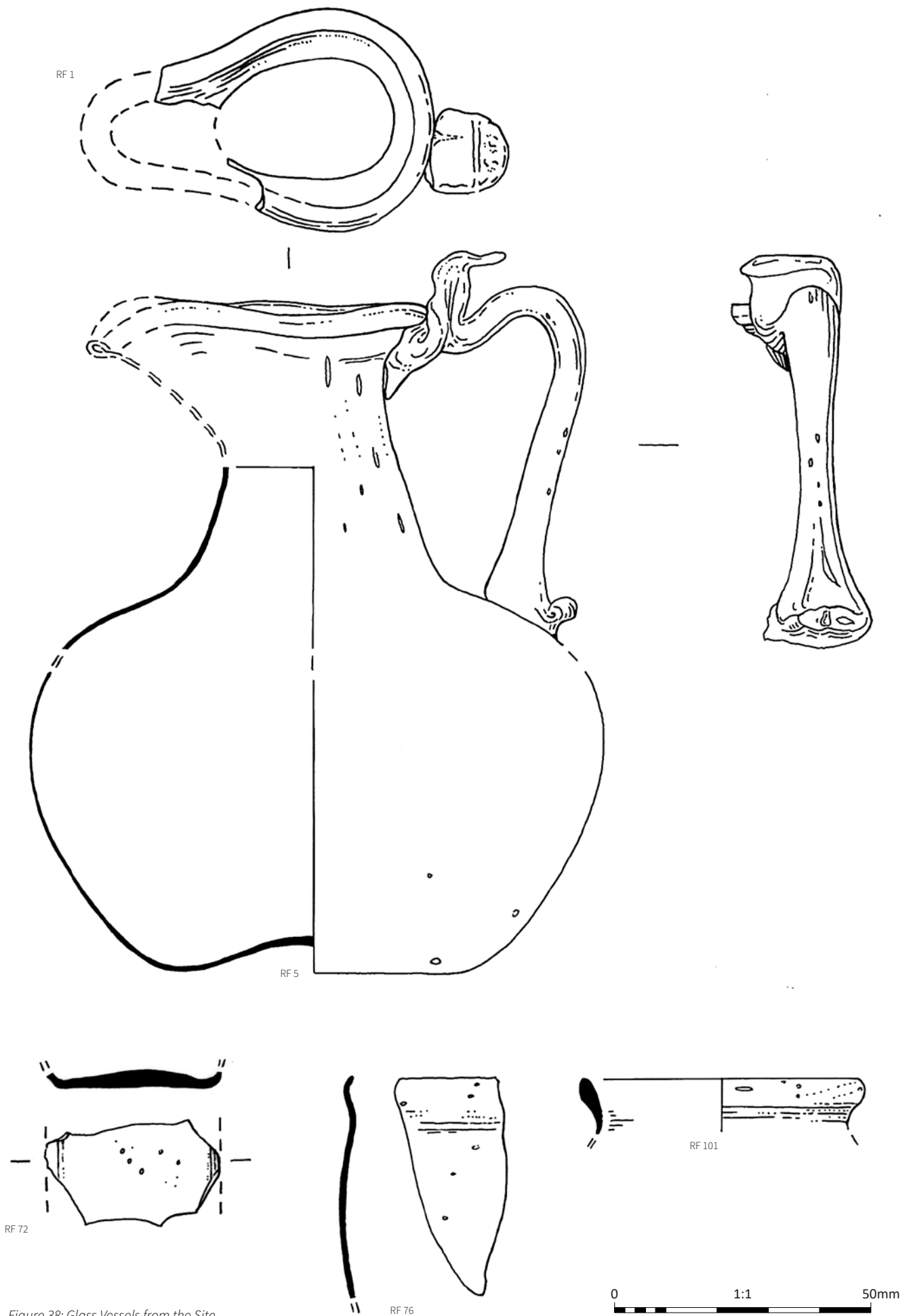


Figure 38: Glass Vessels from the Site

Appendix H: Roman Metal

Helen Chittock (External Specialist)

Introduction

326 metal objects were collected from the excavations, from metal detecting, hand excavations and sample processing. The full catalogue including nails and miscellaneous unidentified objects is available in the archive.

The Assemblage

Lead Finds

Six Roman lead objects weighing a total of 361.10g were recovered.

Two objects recovered from subsoil (2) were weights. The largest example was a steelyard weight, weighing 233.3g. This was roughly biconical in form, with the remains of two iron bars passing through a central perforation. Also from subsoil (2) was another perforated and roughly formed biconical weight RF68 (26.0g). A third weight RF90 was recovered from the fill (697) of Roman ditch A3 and was conical in form with a narrow perforation, weighing just 7.1g.



Plate 62: Steelyard weight

A single lead repair from a Roman ceramic vessel was present within this assemblage, also within ditch fill (697). Pieces of the ceramic still remained and may have been local sandy greyware from a fairly thick-walled vessel. This

repair is part of an assemblage of ceramic repairs from the site, most of which have been carried out on samian ware vessels, making this repair on a greyware vessel unusual



Plate 63: Lead weight RF90

The topsoil (1) contained a lead spill weighing 52.1g, which provides evidence of lead casting on site, though its date is unknown. A further piece of lead from fill (482) of ditch F1 was probably also a piece of waste from lead working and weighed 19.7g.

Copper-Alloy Finds

62 Roman copper-alloy objects, weighing a total of 162.59g were recovered from Sandy. This assemblage is discussed below in six categories: personal ornament; toilet instruments; figurine; ligula; fittings; and miscellaneous.

Personal Ornament

Items of copper-alloy personal ornament from Sandy included three brooches, a brooch spring, a pin and a bracelet terminal, in addition to a small fragment that may have derived from a more complete object of personal ornament. This may also be the case for a number of the additional small fragments of copper alloy discussed as miscellaneous objects.

Two near-complete Rosette brooches, missing their pins, RF18 and RF69 (Figure 39), were recovered from subsoil (2) and the fill (567) of a mid-2nd-century AD pit P42, respectively. RF18 had a curving bow between its cylindrical spring cover and a central circular plate. It was decorated with linear grooves running along its bow to create a reeded effect, and concentric grooves on its central disc. Interestingly, fine chased lines could be seen on the back of the brooch, seemingly marking out its overall shape.

Brooch RF69 was constructed from four pieces of bronze. The cylindrical spring cover extended into a moulded bow, which was joined to the fan-shaped tail, central disc and an applied decorative openwork ring overlying the central disc via a rivet visible on the back of the central disc (see catalogue for further details).

Rosette brooches are present at other Late Iron Age and Early Romano-British sites in southeast England, with some representing probable continental imports. The type is abundant at the Late Iron Age cremation cemetery at King Harry Lane, *Verulamium*, which was in use from c. AD 1–60 and several examples from this site form parallels with RF178 (Stead and Rigby 1989). At Colchester, Crummy places the date range of simple Rosette brooches with applied moulded plates between the pre-conquest period and c. AD 50, this type representing a probably pre-conquest import, being found mainly in oppida (Crummy 1983, 8). Two rosette brooches found within cremation burials at Wootton, Bedfordshire, date to c. AD 20s–30s and c. AD 50–60 respectively, and were imported from

northeast Gaul (Sharrock, 2019, 78). Both brooches RF18 and RF96 from Sandy are paralleled in Mackreth's group of Rosette brooches with circular plates (Mackreth 2011, plates 16 and 17). Examples in this group are from early and mid-1st-century contexts at sites in southeast England, with one example from Braughing, Hertfordshire, dating from as early as the late 1st century BC (Mackreth 2011, plates 16 and 17).

A third brooch was recovered from fill (38) of human cremation burial C4, RF35 (Figure 39). Close parallels for this brooch have not been identified, but it may be a Fantail Foot brooch, which is an undated form of Colchester Derivative (Mackreth 2011, 68). It is also similar to some Aesica brooches, which date to the 1st–2nd centuries AD (Hattatt 2000, 309–15; Mackreth 2011, 46–7). The fanned shape of the brooch is also suggestive of a relationship to Fantail brooches, which have the same date range. The brooch consists of a triangular plate with a large ball at the head, decorated with a moulded triskele. The spring and pin are missing, but part of the spring casing remains on the back of the brooch head and an additional probable fragment of spring casing is present. A small knop is present on the left corner of the fantail. The knop at the right corner is missing, while a third knop sits on the bottom edge of the brooch between them. The flat, triangular plate that forms the main body of the brooch is decorated with cast and possibly also tooled embellishment, with the remains of heat-affected enamelling visible within a series of tapering triangular fields.

The heat-affected appearance of the brooch suggests that it was burnt in the cremation along with the adult individual, before being deposited in the burial along with other unburnt grave goods. Eight fragments of a small copper-alloy object weighing 1g were also recovered from this context. One of the fragments had a discernible form and appeared to be a piece of looped wire with a copper-alloy collar joining the two ends of the loop. Whilst these fragments are not derived from the brooch, they may come from another item of personal ornament, potentially a fine chain.

Interestingly, the brooch types recovered were not seen amongst the 10 brooches recovered during excavations on another part of Sandy's Roman settlement directly to the southeast. These were mainly Hod Hill, Nauheim derivative and Aesica types, which date to the pre-conquest period in the early 1st century AD (Johnston 1974, 42).

The terminal of a penannular bracelet RF59 (Figure 39) was recovered from the fill (489) of a late 2nd to early 3rd-century ditch D12. It weighed 3.6g and was decorated with incised geometric decoration. The end of the terminal was decorated with three grooves, followed by a saltire

formed from double lines, followed by a series of slightly diagonal grooves. Whilst bracelets were generally most popular in Roman Britain during the 4th century AD, penannular examples are proportionally common in the earlier centuries of the Romano-British period (Cool 2019, 4), suggesting this example is more likely to be of an earlier Romano-British date. The form and decoration-type of this bracelet are known at other Early Romano-British settlement sites in southeast England such as *Camulodunum* and *Verulamium* (Crummy 1983; Stead and Rigby 1989, 23).

A complete bronze pin RF34 (Figure 39) was recovered from (259), the top fill of a large mid- to late 2nd-century pit P16. This type of pin is usually thought of as being a hairpin (Cool 1990, 148–82), but they may also have been used as dress fasteners (Webley 2019). Its head was an elongated cone-type shape, decorated with three deep horizontal grooves and an incised lattice pattern. Its shank was deliberately slightly bent in the middle, as is the case with many metal hairpins (Cool 1990). This hairpin fits most comfortably within Cool's Group 5, Sub-Group D (simple grooved heads with one or more horizontal grooves), which is most popular during the 2nd century (Cool 1990, 157). Direct parallels for this object have not been identified, but hairpins with similar cone-shaped heads are present at Colchester and *Verulamium*. A small fragment of copper-alloy shank from (755), a fill of linear F1, weighing 1g, may also have been part of a similar type of object, or a brooch pin or other copper-alloy fine rod or wire.

The bracelet and hairpin from the site were, similarly to the brooches, not directly paralleled in the assemblage from the neighbouring site at Sandy, which includes a diverse selection of these object types (Cool 1990, 157).

Toilet Instruments

Two objects from the assemblage were identified as being Roman nail cleaners, probably originating from toilet sets. Nail cleaner RF67 was recovered from the fill (523) of a mid- to late 2nd-century pit P33 and nail cleaner RF41 was recovered from subsoil (2). RF41 was intact. It had a stylised leaf-shaped blade with an almost circular disc towards the looped end, decorated with four ring-and-dot motifs arranged in an irregular diamond formation (Figure 39). A baluster-style moulded collar is present below the perforated looped end, which is orientated on the same axis as the blade. This example may be a variant on Crummy Type 2a, which has a tapering, leaf-shaped blade and often a moulded collar, although the looped end is often set at a right-angle to the blade. At Colchester, this type dates to the mid- to late 1st century and into the 2nd century (Crummy 1983, 58). RF67 consists of the remains of two small prongs at one end of a leaf-shaped blade, which broadens into a thickened waist section, orientated at 90 degrees to the forked end. The butt end is missing. This falls into Crummy and Eckhardt's Baldock Type, dating to the 1st to 2nd century, which is concentrated in Hertfordshire (Crummy and Eckardt 2003, 51–3).



Plate 64: Anthropomorphic figurine RF102 from subsoil (2)

It is plausible that a fine wire ring from fill (567) of pit P42 was used to hold the items of a toilet set together, though it could have had multiple other uses.

Figurine

A single anthropomorphic figurine RF102 (Figure 39) was recovered from subsoil (2). The figurine is hollow with a fine strip of bar projecting from the base of the hollow void and out of the top of a smooth-edged irregular hole at the neck, potentially representing an attachment mechanism for a removable head. The hands and feet are missing, and the breaks are fairly abraded. The figurine is wearing a baggy, draped sleeveless cloak with a border at the hem represented on the front of the cloak. It has no other features suggestive of its identity.

Small anthropomorphic and zoomorphic copper-alloy figurines are known across Britain, but this example's hollow body with its projecting fine bar is unusual. While its draped, sleeveless garment would be consistent with a Roman date, and no parallels for its design or construction have been identified. This, along with its recovery from subsoil make its dating uncertain.)

Ligula

An incomplete ligula RF30 (Figure 39) was found in (99), a fill in large, finds-rich pit B. This consisted of a small, flattened sub-circular scoop at the end of a fine circular sectioned rod. The handle end is broken. This find resembles examples from the Roman settlement at nearby Baldock (Stead and Rigby 1986, 132).

Fittings

A number of small copper-alloy fittings were present in the assemblage. Four tiny rivets or studs from (911), a fill of large pit P70, weighing less than 1g combined, may have derived from jewellery or other delicate composite objects. Similarly, a small circular rivet head from fill (479) of kiln K1, weighing <1g, may have been part of an intricate object or mechanism. A small rivet or tack with a straight shank and small, flat, circular head, also weighing <1g was recovered from (87), the fill of an oven O1.

A flattened, decorated copper-alloy loop formed from a coiled strip may represent a fitting from a belt or strap RF66. This was recovered from fill (516) of ditch D14, weighing 4.0g.

Miscellaneous

The remainder of the assemblage of copper-alloy objects largely comprised small fragments of unidentified

objects. Heat-affected fragments from the fills of cremation burials C8 and C10 are likely to derive from objects burnt as part of the cremation process. Fragments from top fill (855) of pit PM11, fill (99) a fill in large, finds-rich pit B and fill (523) of pit P33 appeared to be derived from fine rods or shanks. A loosely coiled strip, weighing 1.2g, had one scalloped edge, and may have been a piece of a decorative border, a piece of scrap, or perhaps destined to be used as a repair patch. Another small piece of folded sheet with uneven edges RF88 was recovered from (711), the collapsed roof of an oven. Two fragments of sheet bronze, one with a small rivet passing through it, were recovered from fill (700) of ditch F1, RF79. Further tiny fragments were recovered from (77) RF37, (205) RF31 and (231). A slightly larger fragment from fill (271) of pit P17 weighed 1.3g and had a degraded, laminated appearance. This may also be heat affected.

A more intact unknown object was made from sheet bronze, curved to create part of a conical shape, which is broken RF362. A small area of iron corrosion suggests this had an iron component. This object may have been a bell, missing its iron clapper. Crummy (1983, 127) has identified several copper-alloy bells from Colchester, suggesting that they will have been attached to the collars of sheep or goats, as well as smaller bells interpreted as personal ornament, one of which has an iron clapper (Crummy 1983, 51). This object was recovered from (362), a fill in large pit B.

Iron Finds

258 Roman iron objects weighing a total of 1193.65g were recovered from Sandy. They are discussed below in the following categories: nails and tacks; hobnails; tools; fittings; miscellaneous.

Nails and tacks

168 of the iron objects recovered were nails or probable nails and a further seven were classified as possible nails. They varied in condition and completeness, but the assemblage included a number of exceptionally well preserved, complete examples (see below). Where the forms survive sufficiently, the nails from this assemblage can generally be equated with Manning's Type 1b: examples with square sectioned, tapering shanks under c. 150mm in length with flat sub-rectangular or sub-circular heads (Manning, 133–4). Of the 31 complete nails from Sandy, 61% measured between 45mm and 65mm long with the majority of the remainder close to this range. One upper outlier measured 108.75mm, with two nails also measuring 20–25mm long. A group of 39 unusual tacks with chisel-shaped heads and square sectioned shanks were also recovered from six separate contexts at Sandy, five of which were cremation burials. These tacks

measured between 16.90mm and 39.01mm in length. Direct parallels for these tacks have not been identified; the possible reasons for this are discussed below.

Generally, the nails were distributed fairly evenly across the site, however concentrations were present in the fills of unurned cremation burials. Fill (74), which filled cremation burial C12, contained six nails, and (38), which filled cremation burial C4, contained 43 nails in addition to 25 tacks. In addition, fill (48) in large pit B, contained 12 nails. Other cremation contexts that included smaller numbers of nails and tacks were (32), (50) and (72).

The inclusion of nails in Roman cremation burials has been noted and discussed elsewhere, seemingly being a practice that was fairly widespread in time and space in Roman Britain, and across the wider Roman Empire (Alfayé Villa, 2010 417–56). At Passenham Quarry, Calverton, Buckinghamshire, 1385 nails were recovered from a single urned cremation deposit, and it is posited that they originated from the bier or pyre on which the body was placed prior to cremation (Walker, 2011, 26). Nails were also present in an urned cremation burial at Wootton, Bedfordshire (Hylton, 2019) and in multiple urned cremations at nearby Wallington Road, Baldock, Hertfordshire (Marshall 2019, 97–115).

Of the 22 complete nails from cremations at Sandy, 55% measure up to 51mm in length while 45% measure longer than 51mm. Comparing their lengths to those from the cremations at Wallington Road, Baldock shows a differing size distribution, with almost 90% of the nails from Baldock cremations measuring up to 51mm long (Marshall 2019, 105). Marshall suggests that smaller Type 1b nails in cremations may have been used in the construction of specific funerary equipment, such as upholstered biers (Marshall 2019, 106) and it is suggested that the tacks found in these contexts at Sandy fulfilled similar roles. It is also possible, given the small sizes of the tacks, that they were used in the construction of small wooden boxes or similar wooden items, such as those found in graves at Butt Road, Colchester (Crummy 1983, 85–7). The chisel-shaped heads suggest they were intended to be hammered into wood, creating an invisible effect. Several of the tacks from cremation fill (50) bore possible traces of mineralised organic material, suggesting that they were either deposited or cremated as parts of these boxes or other wooden items. The smaller nails at Sandy may have been used in similar ways. The clenched, heat-affected nails from cremation contexts at Sandy may also indicate the use of recycled wood as fuel in cremations, or their use in pyres (Marshall 2019, 104–5), although their sizes do not appear sufficiently large to have been used in the construction of any substantial structures. However, distorted nails that had been removed from wood and straight nails, which may have been used or unused, were also present, suggesting a possible mix of

functions for the nails from cremation burials at Sandy. More subtle reasons for the inclusion of nails in Roman cremation burials have been suggested. Marshall posits that nails may sometimes have represented the small boxes or other wooden items described above in a *pars pro toto* fashion (Marshall 2019, 106). The idea that nails possessed their own magical properties in the Roman empire, relating to their material and symbolic capacities, has also been discussed (Dungworth 1998, 148–59; Alfayé Villa 2010). These aspects of Roman nails are, arguably, understudied (Marshall 2019). The well-preserved examples from Sandy and the mix of nails from funerary and non-funerary contexts will make this assemblage useful for further studies of the functions of Roman nails in southeast England.

It is significant that, at Sandy, a number of the nails and tacks from cremations were unusually well preserved, showing no signs of corrosion, with some also bearing a distinctive red colouration. A similar situation occurred at Passenham Quarry, where this was attributed to the preservation action that high temperatures have on iron (Walker 2011, 26). Red colouration of the nails from this site was attributed to the presence of haematite, indicating that the pyre temperature exceeded 200 degrees centigrade, suggesting that the cremation pyre at Sandy also reached high temperatures. Parallels for the chisel-headed tacks from Sandy have not been identified. Rather than these tacks being unique, it may be that chisel headed tacks like those from Sandy do not usually survive in the conditions most often seen on Romano-British sites due to their small size. In other words, it may be the preservation and survival of the tacks from Sandy that is unusual, rather than the tack type.

Hobnails

22 hobnails and probable hobnails were recovered from Sandy, indicating the presence of hobnail boots or caligae. Three were recovered from cremation burial C4 and one from inhumation burial [60]. This may suggest that the shoes were worn at the time of cremation or burial, or that the hobnails themselves were deposited within the burials as individual objects. The remainder of the hobnails were recovered from pit fills. The shanks of the hobnails were in mixed condition, but the majority were curved, clenched or distorted, indicating they had been used, although several straight examples were present. Traces of mineralised leather were observed on some examples.

Tools

Five iron objects from Sandy were identified as potentially being tools. Two examples were small, chisel like objects. One example, weighing 6.4g from cremation

burial fill (74) was very corroded but broadened at one end to form a chisel-like tip. The second example from cremation burial fill (70) was better preserved. This was a length of slightly distorted, square-sectioned iron bar, also weighing 6.4g and tapering to a chisel-like point with possible burring at the opposite end. It is significant that both tools were found in cremation burials and perhaps also that they both weigh the same amount. Other, more ambiguous objects from the assemblage may also have been tools, or tool components

Fittings

A handle from a small container, weighing 61.0g was recovered from fill (513) of pit P30 (Manning 1985, 102). This may also be from a piece of furniture (Crummy 1983, 80). An item from fill (715) of linear feature F1, weighing 17.70g may also represent a small part of a similar handle, consisting of the partial round sectioned hooked end of a short length of iron bar. A small iron strip, tapering at both ends and bent at 90 degrees towards its mid-point may be an angle binding from a wooden box (Manning 1985, 142). This object weighed 7.9g (fill 042). An iron ring RF36 from (77), a fill of pit B, could have had one of many functions (Manning 1985, 140). Other iron fittings and possible fittings included iron ring RF36 from the fill of large pit B, a possible piece of angle binding and a possible chain link fragment from pit P45.

Miscellaneous

The remainder of the iron assemblage from Sandy comprised unidentified fragments and parts of ambiguous objects, such as short sections of fine iron bar from cremation burial fills (70) and (48); a small shank fragment with a possible triangular section from ditch fill (108); and pieces of iron strip from cremation burial fill (95) and pit fill (945).

Discussion

The assemblage of metal objects from Sandy is of local and regional significance. It includes objects from both settlement and funerary contexts, which fit into southern British typologies. In the context of the site, its potential date very early in the Romano-British period provide new insights on the transition into life in a walled Roman town in Bedfordshire. The assemblage from the site makes for an interesting comparison with the assemblage from the adjacent site (Johnston 1974), with the inclusion of different but contemporary brooch types.

Of particular significance within the assemblage are the exceptionally well-preserved nails and tacks, probably preserved through heating as part of the cremation process. The chisel headed tacks are potentially

unparalleled, possibly because of their good survival, but are interpreted as having been used in the construction of small boxes or other wooden items. The assemblage of nails is a good demonstration of the poorly understood practice of including nails within cremation burials. Some nails may have been included in recycled wood used on cremation pyres, but others are interpreted as having been included in the cremation burials more deliberately.

The dates of the metal objects from Sandy seems to indicate that both the settlement and cremation cemetery were in use during the earliest part of the Romano-British period. The diagnostic objects of the assemblage- the brooches, bracelet terminal and toilet instruments-together suggest dates in the 1st century AD, with some of these objects showing major similarities to those from pre-conquest period sites in southeast England, such as King Harry Lane (*Verulamium*), Colchester and Baldock.

Catalogue

Measurements given:

Wt = weight.

L = length.

W = width.

D = diameter.

T = thickness.

Lead

Weights

Biconical Weight RF68

Biconical weight with a wide central perforation. Flattened at one end and fairly rough in form.

Wt: 24.8g. D: 19.8mm. T: 14.6mm. D of perforation: 7.2mm.

(2) Subsoil.

Steelyard Weight

Steelyard weight with two iron shanks or bars passing through a central perforation, one larger and amorphous, the other small and square sectioned. The weight itself is fairly amorphous, asymmetrical and possibly roughly biconical.

Wt: 233.30g. D: 42.6mm. T of lead weight component: 34.9mm. Total L (including Fe): 40.3mm. Fe in perforation: Larger bar: max w: 8.10mm, max l: 9.40mm. Smaller bar: max w: 3.90mm, max l: 4.1mm

(2) Subsoil.

Conical weight RF90

Tiny conical weight with a slightly off-centre perforation.

Wt: 6.90g. D: 14.1mm. T: 9.3mm. D of perforation: 4.0mm.

(697) fill in ditch A3.

Repairs

Lead repair on a piece of ceramic, created using molten lead. Consists of two outer supports and an element that runs between them through the centre of the break.

Wt: 24.1g. L: 43.0mm x W: 17.8mm

(697) fill in ditch A3.

Copper Alloy**Personal Ornament****Brooches****Brooch RF18 (Figure 39)**

Rosette brooch. The spring is housed within a cylindrical casing at the head. The remains of the spring are present, but the pin is missing. The catch plate is intact. The head, bow and foot of the brooch are made from a single piece of bronze. Decorative detail consists of a series of grooves running down the arched bow and squared, slightly fanned foot end. The central circular disc is bordered by concentric grooves and the front of the cylindrical head is also bordered by grooves. On the back of the brooch, fine chased lines are present, seemingly marking out the overall form. It is probably mid-1st-century AD in date (see discussion of brooches above).

Wt: 8.80g. Total L: 42.3mm. W of head: 18.5mm, T of head: 7.3mm. W of central disk: 21.6mm. T of central disc: 1.2mm.

(2) Subsoil.

Brooch RF69 (Figure 39)

Rosette brooch. The spring is housed within a cylindrical casing at the head. The casing is open at each end. The spring remains (distorted on x-ray), but the pin is missing. The catch plate is complete. The brooch was constructed from four pieces of copper alloy in addition to the spring. The cylindrical spring casing extended into a moulded bow, which was joined to the fan-shaped tail, central disc and an applied decorative openwork ring overlaying the central disc via a rivet visible on the back of the central disc. The openwork ring was decorated with a sunburst pattern and raised to form a semi-circular sectioned cage forming

the ring. The fan-shaped tail is decorated with two linear fields containing lateral raised lines and grooves. Similar grooved decoration is present around the outside of the central disc. Some grooved decoration is also visible at the head, at one end of the cylindrical spring casing, but this area is worn. Probably mid-1st-century AD in date (see discussion of brooches above).

Wt: 6.60g. Total L: 41.4mm. W of central disc: 21.1mm. T of central disc: 0.5mm. W of head: 17.7mm. T of head: 6.4mm.

(567) fill of pit P42.

Brooch Spring RF103

Two refitting pieces of a brooch spring formed from robust round sectioned wire.

Fragment 1: straight length

Wt: 1.1g. L: 16.9mm. Wire T: 2.7mm

Fragment 2: coiled fragment

Wt: 2.20g. Spring L: 11.8mm. Spring W: 11.1. Spring T: 9.5mm x max Wire T: 2.6mm

(907) fill in pit P70.

Brooch (Figure 39)

Brooch, heat affected. This consists of a triangular plate with a large ball at the head. The large ball at the head displays the remains of an indented triskele with a central raised pellet. It is possible that enamel once filled the triskele. A small knob is present on the left corner of the fantail. The knob at the right corner is missing, while a third knob sits on the bottom edge of the brooch between them. The brooch is decorated with cast and possibly also tooled embellishment. A tapering triangular field runs from the brooch head to the centre of the fantail. Within it, fields are filled with enamel, alternating with white and another colour. The enamel appears heat affected and aerated. Two additional triangular fields sit either side of this central field. Their surfaces are also aerated, potentially indicating the presence of further enamel. The borders of the fields are raised and decorated with very fine ribbing. The spring and pin are missing, but part of the spring casing remains on the back of the brooch head and an additional probable fragment of spring casing is present. An irregular copper-alloy ball is also present along with other very small fragments of copper alloy, but it does not appear this was part of the brooch. The type of this brooch is unconfirmed, but it shares characteristics with Fantail, Aesica and Fantail Foot types, which are of 1st to 2nd-century date (Mackreth 2011; Hattatt 2000).

Wt: 16.00g. Brooch: Total L: 34.2mm. W (fantail end): 22.2mm. W (head end): 13.8mm.

(38) fill of cremation burial C4.

Hairpins

Hairpin RF34 (Figure 39)

Intact, round sectioned, tapering pin. This type of objects is usually classified as a hairpin, although it may also have been used as a garment pin. The head is an elongated cone-like shape decorated with three grooves. Lattice decoration is present between the grooves. It is slightly bent in the middle, as with many Roman copper-alloy pins of this type. This fits most comfortably into Cool's Group 5, sub-group D (Cool 1990), although no direct parallels have been identified.

Wt: 3.50g. Total L: 109.4mm. L of head: 9.7mm. Shank W: 2.6mm. Head W: 3.5mm

(259) fill of pit P16.

Bracelets

Bracelet RF59 (Figure 39)

Terminal of a penannular bracelet. Semi-circular sectioned, and slightly flattened towards the end. Decorated with incised geometric decoration. The end of the terminal is decorated with three grooves, followed by a saltire formed from double lines, followed by a series of slightly diagonal grooves. Potential wear is visible on the grooved areas.

Wt: 3.70g. L: 39.2mm. W: 5.8mm. T: 2.9mm

(489) fill of ditch D12.

Possible Personal Ornament

?Personal Ornament.

Eight tiny, heat-affected copper-alloy fragments. One has a discernible form and appears to be a piece of looped wire with a copper-alloy collar joining the two ends of the loop. Probably part of an item of personal ornament.

Wt: 1.08g. L: 1.97–2.21mm. W: 1.50–2.02mm.

(38) fill of cremation burial C4.

Toilet Instruments

Nail Cleaners

Nail Cleaner RF41 (Figure 39)

Complete nail cleaner. A lead-shaped blade broadens into a flattened disc close to the butt end, decorated with four ring and dot motifs arranged in an irregular diamond shape. A groove runs down the centre line of the blade. A perforated looped end if set on the same axis as the blade and a moulded baluster-style collar links this to the blade. This may be a variant on Crummy's Type 2a (mid- to late 1st century into the 2nd century) or potentially 2b (2nd and possibly 3rd century; Crummy 1983, 58).

Wt: 5.00g. L: 56.8mm. D of perforation: 3.2mm. Max W: 13.6mm. T: 1.7mm.

(2) Subsoil.

Nail Cleaner RF67

Incomplete nail cleaner. The remains of two small prongs are present at one end of a leaf-shaped blade, which broadens into a thickened waist section, orientated at 90 degrees to the forked end. The butt end is missing. Appears to be heat affected. This falls into Crummy and Eckardt's Baldock Type, dating to the 1st to 2nd century (Crummy and Eckardt 2003).

Wt: 1.60g. L: 30.8mm. T (pronged end): 5.5mm

(523) fill in large pit P33.

Figurines

Figurine RF102 (Figure 39)

Anthropomorphic figurine. The hands and feet are missing, and the breaks are fairly abraded. The body of the figurine is hollow with no head. It has a smooth-edged irregular hole at the base of the neck. A fine strip of bar projects from the base of the hollow void and out of the top of the hole at the neck, potentially representing an attachment mechanism for a removable head. The figurine is wearing a baggy, sleeveless cloak with a border at the hem represented on the front of the cloak. It has no other features suggestive of its identity. There is damage to the back of the figurine- it appears to have been attached to something and ripped off with force. A potential method of attachment can be seen on the back.

Although anthropomorphic and zoomorphic figurines are well-known from Roman Britain, no parallels have been

identified for this figurine or for its more general structure, making its date uncertain.

Wt: 53.50g. L: 58.2mm. W: 31.7mm. T: 14.00mm. L of arms: 19.8mm.

(2) Subsoil.

Ligulae

Ligula RF30 (Figure 39)

Ligula. A flattened sub-circular scoop projecting from a round sectioned rod at around 45 degrees. The handle is incomplete. This example resembles examples from Baldock (Stead and Rigby 1986, 132).

Wt: 1.10g. L: 48.2mm. Rod W: 2.2mm. Bowl W: 4.8mm.

(99) fill in large pit B

Fittings

Looped Fittings

Ring RF56

A copper-alloy ring, lenticular in section. Fine concentric grooves are present on both faces. The ring is worn, which has affected the visibility of the grooves. Wear of the ring has also thinned the ring in one place, making appear slightly distorted.

Wt: 4.32g. Outer D: 32.39mm. Inner D: 24.51mm. T: 1.97mm.

(2) Subsoil.

Decorative looped fitting RF66

A strip that tapers at each end, decorated by two grooves running along its length. It is wrapped into a flattened semi-lenticular loop, which bulges at each end. The curved outer face has a groove running along its centre. The flat face is decorated with two grooves. Between them is a series of fine lateral grooves / stipples. At each end is a reel and bead groove and a bulbous triskele shape which continues into the groove on the curved face. This object may be a fitting from a belt or strap.

Wt: 4.30g. L: 57.2mm. W: 5.3mm. T: 13.9mm. T of metal: 1.1mm

(516) fill of linear D14.

Straps, Rivets, Tacks and Studs

Strap

Thick piece of tapering copper-alloy strap with a bend at the wider end, which is broken. Possibly angle binding or another type of fitting.

Wt: 32.1g. L: 53.7mm. W: 22.8mm. T: 5.0mm.

(1) Topsoil.

Rivet / Tack

Small rivet or tack with straight tapering shank and small, flat sub-circular head, which appears distorted. Appears to be heat affected.

Wt: 0.05g. L: 9.41mm. Shank T: 2.83mm. Head T: 1.18mm. D of head: 5.22mm.

(87) fill of circular oven O1.

Rivet / Tack

Small circular head from a rivet or tack. Heat affected with possible mineralised organics present.

Wt: 0.26g. W: 6.92mm. T: 5.22mm

(479) fill of kiln K1.

Rivets / Studs

Four tiny rivets, studs or other fittings.

Total wt: 0.07g. L: 1.97–2.21mm, W: 1.50–2.02mm.

(911) fill in pit P70.

Miscellaneous

Sheet Fragment RF37

Fragment of bronze sheet. Two intact edges, one straight and one curved. Slightly convex / concave overall form.

Wt: 1.50g. L: 27.40mm. W: 19.60mm. T: 1.20mm

(77) fill in cut B.

?Bell RF39

The distorted remains of a conical sheet bronze object. Iron corrosion on the inner edges suggests this had an iron component. It is possible this was a small bell, missing an iron clapper.

Wt: 3.00g. L: 25.60mm. W: 24.20mm. Sheet T: 0.60mm.

(362) fill of pit B.

Waste / melted object RF44

Amorphous small, hardened puddle of bronze. There are impressions on the reverse from the surface it hardened on and impressions on the upper surface- possibly from organic material such as grass or straw.

Wt: 4.50g. L: 24.10mm. W: 13.10mm. T: 4.30mm

(2) Subsoil.

Wire Ring RF71

A short length of fine, square sectioned wire. Appears to thicken slightly at the ends, which are broken. The overall form is that of a distorted penannular ring. This object may have once been an annular ring, which has broken.

Wt: <1.00g. W: 14.00mm. T of wire: 1.10mm

(567) fill of pit P42.

Sheet and Rivet RF79

Two fragments of sheet bronze, one with a small rivet or plug passing through it. Potentially a fragment of a repair patch. Poorly preserved and probably heat affected.

Total Wt: 0.60g. Fragment 1 16.80mm x 11.80mm; Fragment 2 11.70mm x 8.90mm.

(700) fill of ditch F1.

Strip RF87

A loosely coiled strip. One side is irregularly scalloped. Possibly a piece of scrap or a discarded decorative border.

Wt: 0.70g. Coil W: 20.30mm. Strip W: 6.50mm. Strip T: 0.70mm.

(760) fill of gully F1.

Sheet Fragment RF88

Small piece of folded sheet with uneven edges. Poorly preserved and probably heat affected.

Wt: <1.00g. L: 15.80mm. W: 7.30mm. T: 3.50mm.

(711) oven roof.

Shank / Pin Fragment RF89

Small fragment of bronze shank or pin. Poorly preserved and probably heat affected.

Wt: <1.00g. L: 12.10mm. W 3.50mm.

(755) middle fill of pit P76.

Shank / Wire Fragment

Tiny fragment, possibly from a fine shank or pin.

Wt: <0.01g. L: 5.12mm. T: 1.26mm

(99) fill in large pit B

?Rod / Shank Fragment.

Three tiny fragments from a fine copper-alloy rod or shank. Heat affected. Possibly from a fine pin or brooch spring.

Wt: <0.01g. W: 1.37–1.60mm. L: Fragment 1 2.11mm; Fragment 2 2.01mm; Fragment 3 2.75mm.

(523) fill associated with the town wall.

?Fitting / Personal Ornament

A small, severely heat-affected strip which branches into two. Potentially part of a jewellery item or fitting, or potentially part of the blade of a nail cleaner.

Wt: 0.12g. L: 11.97mm. W (bifurcating end): 6.10mm.

(755) middle fill of pit P76.

Bronze Dish

The damaged remains of a flattened, hemispherical bronze dish with a slightly lipped edge and a rivet / nail hole made by driving a rivet / nail through the inside of the dish at point of its shoulder.

Wt: 4.90g. L: 40.20mm. W: 22.40mm x max T (of object): 7.10mm. T (of metal): 0.80mm.

(1) Topsoil.

Iron

Miscellaneous Tools and Fittings

Fittings

Ring RF36

Plain iron ring with a circular section.

Wt: 21.70g. Outer D: 41.5mm. Inner D: 30.2mm.

(77) fill of large pit B.

Fitting / component RF86

Section of fine, curving iron strip, forming part of an irregular circle. Both ends are broken.

Wt: 3.67g. L: 39.47mm, max W: 5.88mm, max T: 2.46mm.

(748) upper fill of pit P61.

Handle

Curving iron bar, which thins slightly towards its ends. The ends may be incomplete but curve back on themselves slightly. This is most likely from a small container or piece of furniture (Manning 1985, 102; Crummy 1983, 80).

Wt: 48.70g. L: 103.50mm. T: 7.10mm.

(513) fill of pit P30.

?Spring

Corroded object, possibly part of a spring. A round sectioned piece of rod or wire, potentially coiled at one end.

Wt: 2.80g. L: 23.70mm, max D of coil: 9.62mm, max T of wire: 1.95mm

(755) middle fill of pit P76.

?Angle Binding

Small iron strip, tapering to a point at both ends and bent in the middle at 90 degrees. Possibly an angle binding from a wooden box, or other type of fitting.

Wt: 6.29g. L: 62.35mm. W: 3.89mm.

(42) fill of small pit P4.

?Chain Link

Square sectioned shank or bar, extremely distorted almost into an oval ring shape. May be a broken oval-shaped chain link, but may also be a very distorted nail or bar.

Wt: 6.26g. L: 74.95mm. T: 4.59mm.

(586) fill in pit P45.

Possible Tools

Tool

Short length of rectangular sectioned bar, tapering to a chisel-like point. Possibly the tip of a chisel, set or punch, all used in metalworking, or part of another type of tool.

Wt: 6.40g. L: 31.8mm. Shank W: 8.4mm. Shank T: 7.00mm.

(70) fill of cremation C10.

?Nail / Tool / Fitting

Well-preserved tip of tapering, thick round-sectioned shank. Potentially a nail or tool.

Wt: 1.60g. L: 22.45mm. Shank T: 4.92mm.

(74) fill of cremation C12.

Hooked Tool / Fitting

Tool or fitting, consisting of a broken, circular sectioned shank that is hooked at one end. The other end is straight and transitions into a rectangular sectioned bar. This may be a small piece of the handle of a bucket or other similar vessel.

Wt: 17.33g. L: 68.37mm. L: 68.37mm. Max T: (curved end): 9.32mm max W: (curved end): 10.79mm. Max T (straight end): 5.45mm, max W (straight end): 7.40mm

(715) fill of linear F1.

?Tool

Very corroded, tapering rectangular sectioned shank, with a wedge-shaped profile. Possibly the tip of a chisel, set or punch, all used in metalworking, or part of another type of tool.

Wt: 4.41g. L: 27.17mm. T: 6.52mm.

(75) fill of cremation C12.

?Tool / Fitting

Tubular object with circular opening one end, distorted at the other end.

Wt: 53.27g. L: 68.5mm, max D at open end: 22.18mm, max internal D of opening: 13.53mm

(528) fill of pit P35.

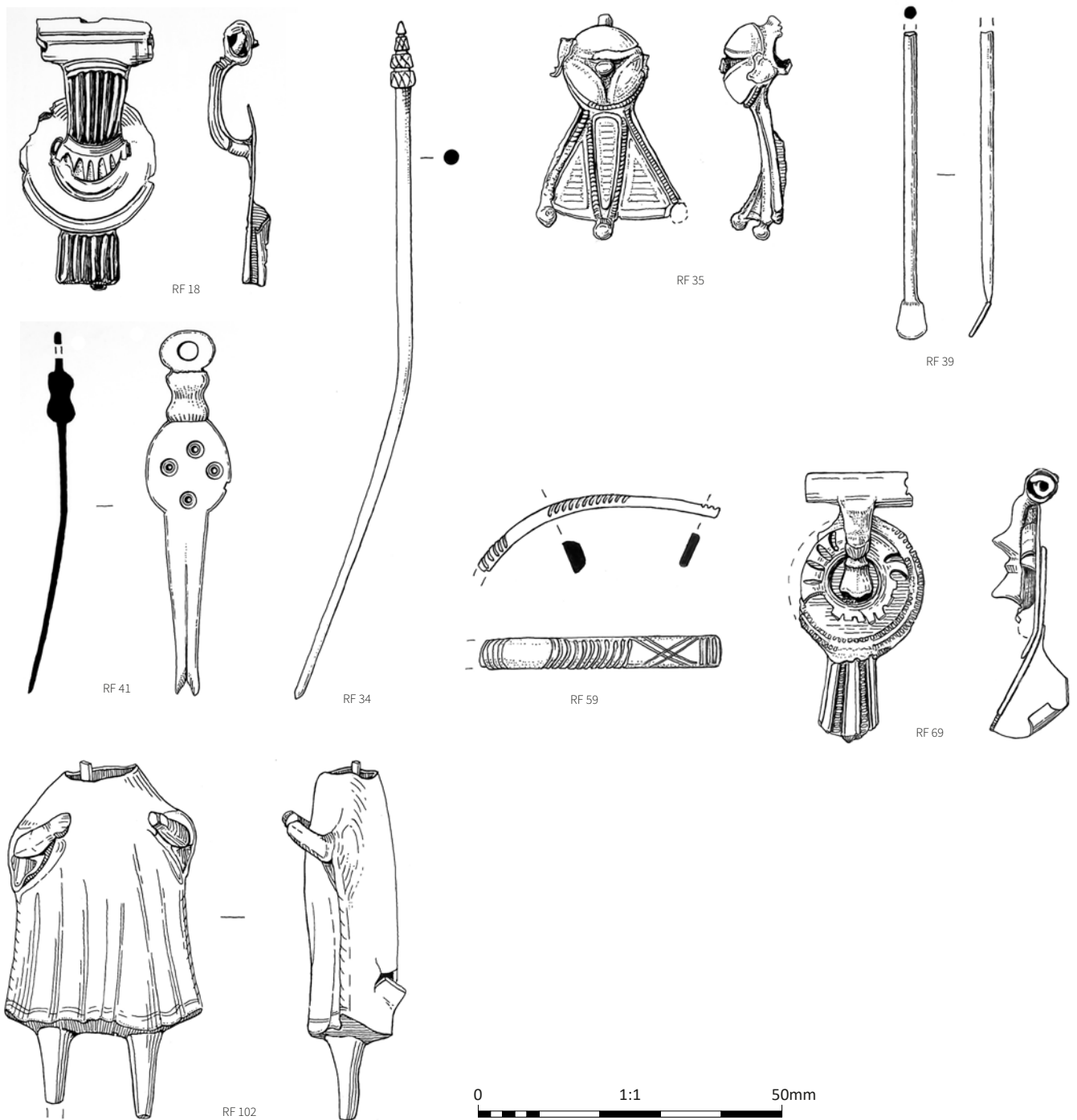


Figure 39: Selection of Metal Registered Finds from the Site

Appendix I: Coins

Richard Henry (External Specialist)

A total of 23 coins and one trade token were recovered from the excavations. These coins consist of: sixteen Roman coins; six post-medieval; and two modern coins. The post-medieval and modern coins consist of pennies and halfpennies from AD 1694–1965 and a trade token struck at Macclesfield. All of the coins were recovered as registered finds, these included one unstratified coin, 11 coins from subsoil, five coins from topsoil, two from deposit (169), and two from fill (489), of ditch D12). The remaining three coins were recorded from three unstratified contexts..

Methodology

The coins have been catalogued after conservation. The coins were X-rayed, photographed, measured using a 0–150mm digital calliper with 0.01mm accuracy, weighed using a digital scale accurate to 0.01g and visually examined using a loupe with magnification.

The Assemblage

Roman

The assemblage of 16 Roman coins from the excavations consist of: one silver denarius; two copper-alloy sestertii; six copper-alloy radiates; six copper-alloy nummi and one copper-alloy radiate or nummus which would not be identified further. The datable coins span the years AD 140–402. The assemblage includes a coin of numismatic interest: A sestertius of Commodus (RF19) dating to the period AD 180–192 which depicts *Britannia* seated right inscribing a shield (RIC no. 440) and is a scarce issue.

When examining the majority of rural sites from Roman Britain there is a substantial increase in coin loss from the 260s onwards. The increase in coin loss is partly due to the fact that the radiate was so heavily debased that it was effectively a copper-alloy issue. The purchasing power of the copper-alloy radiate and the later nummus was so low that a larger number of coins was required for transactions and significant quantities were produced. The assemblage includes nummi of the House of Theodosius which indicates that there was coin use and supply to the very end of the 4th century.

Richard Reece divided coinage from Roman Britain into 21 periods to enable comparison of assemblages of varying sizes against the national mean or other assemblages (Reece 1995, 179–206). This is undertaken per mill (Number of coins from an issue period / total assemblage

x 1000). Within the assemblage fifteen of the Roman coins could be assigned to a Reece issue period. This allows for comparison between the assemblage from the excavation against the national mean and a regional mean for Bedfordshire from a recent study compiling over 440,000 site finds from Britain (Henry, 2022).

The Reece Issue period analysis (Figure 40) should be used with a note of caution. Although assemblages of at least 12 coins have been considered statistically by Moorhead (2010, 143–60), 20 or more coins provides clearer results. The main peak from the Roman coins recorded from this site is in Reece Issue period 13 with further lower peaks in periods 17 and 19. The interpretation of the coinage has been considered in conjunction with other material from Sandy.

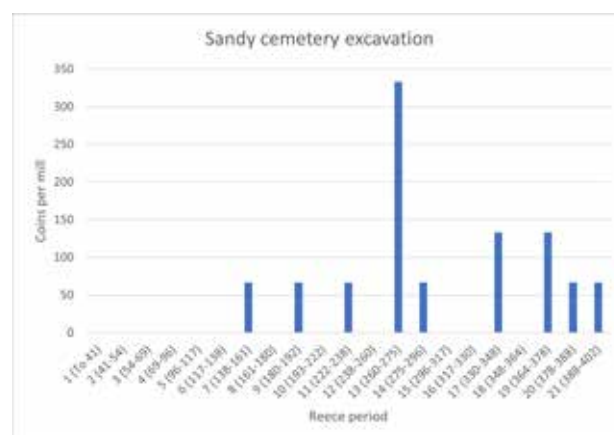


Figure 40: Coinage from the Site by Reece Issue Period

Coins Recorded from the Roman Town of Sandy as a Whole

A total of 1,155 Roman coins have been recorded from the Municipal Cemetery site at Sandy primarily by Dawson (Dawson 1996). This material will be considered against the Bedfordshire mean compiled by Henry (2022) and against other nucleated settlements within the region. When the material recorded from Sandy is compared with the Bedfordshire mean the profiles are broadly similar with the exception of a large peak in period 21 and an initial peak of coins from period 1 (coinage issued prior to AD 41) is of interest (Figure 41). This is consistent with the evidence of 1st-century BC activity in the vicinity of the site which expanded post-conquest.

The majority of the assemblage is formed of coinage from the 3rd and 4th centuries which often reflects the rural nature of a site. In Reece period 13 the coin loss for the roadside settlement is below the county average and there are limited numbers of coins from periods 15 and 16. The profile for the mid- to late 4th century is consistent with the county mean although the quantity of coins from period 15 and 16 is below average.

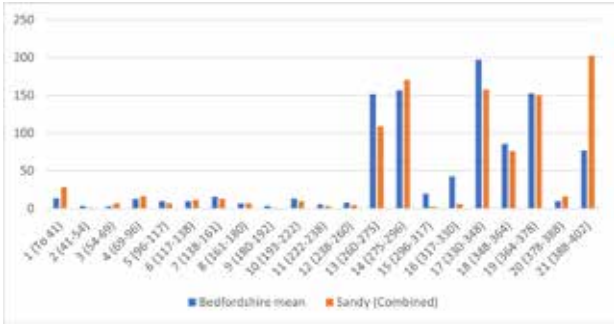


Figure 41: Comparison of the Roman Coins from Sandy (Combined) with the Bedfordshire Mean (Henry 2022)

Copper-alloy nummi of the House of Theodosius (issue period 21) have been recorded in significant quantities from Sandy (Figure 41). These coins represent the last copper-alloy Roman coins to reach Britain in large numbers as in the western mints the production of bronze nummi ceased in Trier, Arles and Lyon around AD 395. Moorhead and Walton (2014, 99–116) highlighted that these coins tend to be recorded near to Roman roads but trends have been noted where a number of nucleated settlements located on the road network have weak coin loss at the end of Roman Britain in the southwest of Britain and in East Anglia (Brindle 2017; Smith and Henry 2020, 190–201). The coin profile from Sandy has been compared with Baldock and Welwyn to consider if Sandy remained prosperous while other similar sites in the environs declined or did the trend noted in other regions not occur.

Baldock is situated on the same Roman road to the south of Sandy while Welwyn is located c. 30 miles to the south of Sandy. The coin assemblages from Baldock and Sandy both follow a similar pattern demonstrating significant peaks in coin loss in period 19 and 21 that differs to the pattern seen at nucleated settlements in other regions (Figure 42). These sites are situated within distinct group of sites with above average coin loss in Bedfordshire, Cambridgeshire and Northamptonshire generally between the Nene and the Great Ouse (Henry 2021). A weaker phase in coin loss at the end of the 4th century (similar to the pattern noted elsewhere) occurs at Welwyn which is located further to the south.

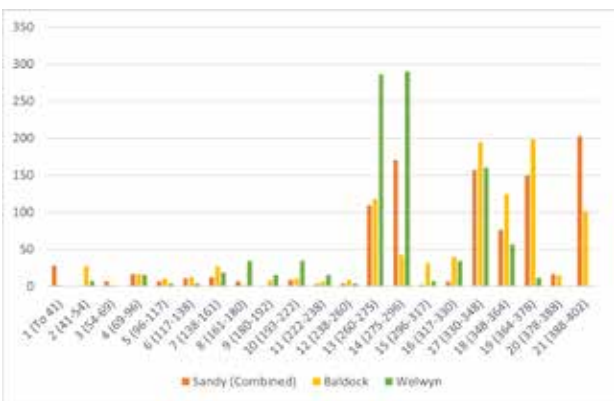


Figure 42: Comparison of the Coin Profiles for the Nucleated Settlements at Sandy, Baldock and Welwyn Derived from Data (Henry 2021)

This distinct group of sites can be noted in Figure 43 where the upper quartile of all sites in Britain has been mapped by a modified version of Reece’s ABCD Phases (Reece 1973, 227–51). Here Phase D has been split into two (Phase D: AD 330–364 and Phase E: AD 364–402) to evaluate coin supply in the late 4th century. Figure 43 demonstrates that sites with above average coin loss in the later 4th century has retracted to the south and south east, in the environs of Richborough in Kent, a cluster in Bedfordshire, Cambridgeshire and Northamptonshire and along Ermine and Dere Street.

Phase E upper quartile (>228.571 pm)

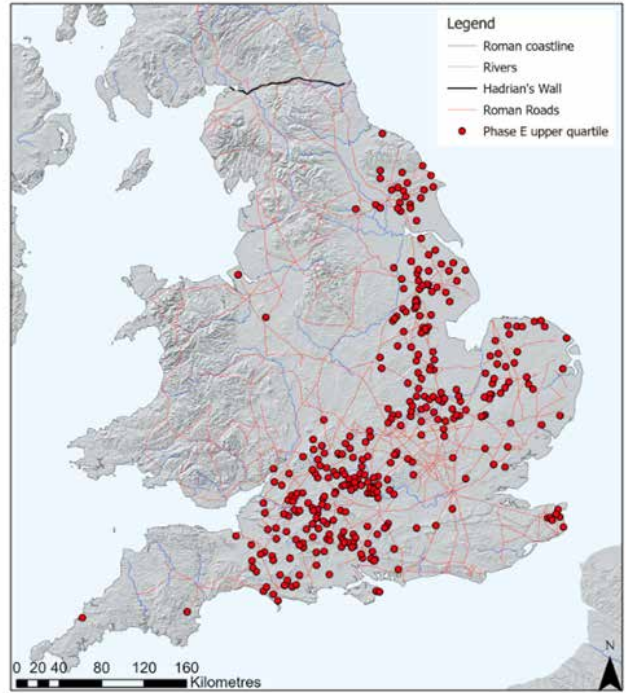


Figure 43: The Distribution of the Upper Quartile of Sites by Coin Loss in Phase E (AD 364–402). The Per Mill Coin Loss for Sandy in Phase E is 368.831

Post-medieval and Modern

Three halfpennies dating from the 17th or 18th century, two modern pennies and two uncertain post-medieval to modern coins were recovered from the excavation. The Macclesfield trade token dates from 1789 and was produced for use in Macclesfield, Liverpool or Congleton (RF19).

With the exception of RF43 (an uncertain post-medieval or modern coin) fill (42) of Pit P4, the remainder of the post-medieval and modern coinage was recovered from topsoil and subsoil.

Summary of the contexts

17 of the coins were unstratified, from topsoil (1) or subsoil (2). Of the remaining coins, two were recovered from (169); two from (489) fill of ditch D12, one from (42), fill of cut P4, one from (482); fill of ditch F1 and one from

(629), fill of ditch D11. Three coins from the fills of ditches are Roman radiates dating to the 3rd century.

RF	Denomination	Ruler	Date	Reverse Type	Mint	Reference	Weight
16 (1)	Sestertius	Antoninus Pius	140–144	PROVIDENTIAE DEORVM S C	Rome	Cf RIC III no. 618	24.76
19 (2)	Sestertius	Commodus	180–192	PM TR P VIII IMP VII COS IIII PP	Rome	Cf RIC III no. 440	15.34
49 (2)	Denarius	Severus Alexander	228–231	ABVNDANTIA AVG	Rome	RIC 184	2.99
80 (629)	Radiate	Gallienus (Sole reign)	260–268	PROVID AVG	Rome	Cf Cunetio 1276	2.57
24 (169)	Radiate/nummus	Uncertain	260–402	Illegible			1.94
48 (2)	Radiate	Victorinus	269–271	PAX AVG	Gallic mint I	Cunetio 2530, Normanby 1406	3.38
13 (2)	Radiate	Victorinus	269–271	Illegible	Gallic mint		0.59
3 (482)	Radiate	Tetricus I	271–274	LAETITIA AVGG	Gallic mint II	Cf Cunetio 2645, Normanby 1515	1.92
61 (489)	Radiate	Tetricus I (barbarous)	275–285	LAETITIA AVG N/AVGG	Gallic mint	Cf Normanby 1955	1.75
60 (489)	Radiate	Uncertain (barbarous)	275–285	Illegible	Uncertain		0.47
12 (2)	Nummus	Constantius II	347–348	VICTORIAE DD AVGG Q NN	Arles	RIC 86 LRBC 449	1.38
21 (169)	Nummus	Constans	347–348	VICTORIAE DD AVGG Q NN	Lyon	RIC 41LRBC 258	1.36
1 (1)	Nummus	Valens	364–375	SECVRITAS REIPVBLICAE	Aquileia	LRBC 1021	2.59
42 (2)	Nummus	Gratian	367–378	GLORIA NOVI SAECVLI	Arles	RIC 15, LRBC 529	1.79
62 (U/S)	Nummus	Magnus Maximus	387–388	SPES ROMANORVM	Arles	LRBC 560	1.14
22 (1)	Nummus	Arcadius	388–395	VICTORIA AVGGG	Uncertain	LRBC 562–572	0.99
43 (43)	Uncertain	Uncertain	1600–1900	Illegible			1.18
52 (2)	Uncertain	Uncertain	1660–1900	Illegible			8.57
54 (2)	Half penny	William III	1694–1701	BRITANNIA			9.13
53 (2)	Half penny	George II	1740–1749	BRITANNIA			8.6
17 (2)	Half penny	George II	1750–1759	BRITANNIA			9.65
19 (1)	Half penny	Macclesfield trade token	1789			DH 11 Macclesfield	12.7
58 (2)	Penny	Victoria	1887				8.79
15 (1)	Penny	Elizabeth II	1965				9.4

Table 13: The catalogue of coins

Reece period	Sandy Cemetery Excavation	Sandy Combined	Bedfordshire Mean	Baldock	Welwyn
1 (To 41)	0	33	64	1	0
2 (41–54)	0	1	17	13	2
3 (54–69)	0	8	15	1	0
4 (69–96)	0	19	60	8	4
5 (96–117)	0	8	46	5	1
6 (117–138)	0	13	46	6	1
7 (138–161)	1	15	75	13	5
8 (161–180)	0	8	33	1	9
9 (180–192)	1	1	17	4	4
10 (193–222)	0	11	62	5	9
11 (222–238)	1	4	26	3	4
12 (238–260)	0	5	39	4	1
13 (260–275)	5	126	712	56	75
14 (275–296)	1	197	737	20	76
15 (296–317)	0	3	93	15	2
16 (317–330)	0	7	200	19	9
17 (330–348)	2	182	927	92	42
18 (348–364)	0	88	402	59	15
19 (364–378)	2	173	716	94	3
20 (378–388)	1	19	46	7	0
21 (388–402)	1	234	361	48	0

Table 14: Coinage from the sites and regions mentioned in the text. Data derived from Henry (2022)

Appendix J: Vitrified Material

Dawn McLaren (AOC Archaeology Group)

Introduction

A total quantity of 92 fragments of vitrified, heat-affected and associated materials, weighing 540.49g, were submitted for assessment. Most of the waste (72% of the assemblage by weight) was recovered as hand-retrieved bulk finds, whilst the remaining 28% by weight of fragments were extracted during soil sample processing.

Until the development of blast furnace technology during the medieval period, iron was produced by smelting high-yield ferruginous rocks or bog ore in a clay and / or stone-lined furnace to produce an iron bloom (McDonnell 1994, 228–34; Starley 2000, 337–47). This bloom was iron-rich but typically contained impurities in the form of gangue, flecks of ore, natural grits and fuel residues (e.g. charcoal). The bloom would undergo primary smithing after extraction from the furnace in an attempt to remove as much of these impurities as possible before being forged, using a smithing hearth, into the desired product. During these stages of ironworking, several forms of fused, vitrified and heat-affected materials are produced but only a few types are considered to be morphologically diagnostic of smelting and smithing (e.g. tapped slag and hammerscale). In addition to these waste products (e.g. slags) produced during ironworking, vitrified materials are produced during a range of other high-temperature pyrotechnic activities and are not necessarily related to metalworking.

Type	Quantity	Mass (g)
Slags indicative of metalworking		
Possible smelting slags	2	242.4
Smithing slags	1	52.7
Hammerscale	12	0.02
Unclassified iron slag	17	226.21
Other vitrified materials		
Magnetic vitrified residues	20	1.52
Fuel ash slag	1	16.7
Other		
Copper-alloy flecks	5	0.01
Anthracite	34	0.93
Total	92	540.49

Table 15: Summary of vitrified and associated materials by type

The vitrified materials recovered from Sandy, summarised in Table 15, comprise three main categories of waste: slags related or possibility related to ironworking activities (521.33g) including evidence of smithing in the form of smithing slags and hammerscale; other vitrified materials

(18.22g) such as fuel ash slag which is not diagnostic by form alone of metalworking activities; and other non-vitrified materials (541.85) including flecks of degraded copper alloy.

Methodology

Identification of the vitrified material was based on macroscopic visual examination allowing the categorisation of the material into broad groups based on the density, colour, morphology, vesicularity and response to a magnet. Scientific analysis of the chemical composition and microstructure of individual pieces in combination with macroscopic examination would be required to classify the slag more closely but this was not attempted in this instance. A catalogue of the vitrified material is summarised in Table 15.

Evidence of Metalworking

A total of 521.33g of waste from Sandy is indicative or suggestive of debris produced during ironworking. Four types of slag are recognised amongst this group: a fragment of smithing slag formed within a bowl-shaped smithing hearth (52.7g); hammerscale flakes (0.05g) which are small flecks of iron expelled from the surface of a bloom, iron billet or object in the process of being forged (Bayley *et al.* 2001; Dungworth and Wilkes 2009, 33–46; Young 2011, 26–41); unclassified iron slags (226.21g) which are amorphous fragments of iron-rich vitrified material which can be produced during both smelting and smithing and are common components within any slag assemblage (Crew and Rehren 2002, 84); and two possible fragments of molten-looking smelting slag (242.4g).

The most compelling evidence of ironworking present amongst this group is the evidence for smithing which comes in the form of a single fragment of smithing slag and a low-density scatter of hammerscale flakes. The smithing slag came from context (18); although this piece is just a fragment of a larger accumulation of slag examination of the surfaces with the aid of a binocular microscope has identified hammerscale flakes and spheres adhering and fused into the surfaces confirming this formed during smithing. Yet, the lack of associated hammerscale flakes or spheres from the soils from this context suggest that this smithing waste was probably residual. If it had been found within a smithing hearth or structure related to smithing, a dense concentration of micro-debris would be anticipated but this was absent (Bayley *et al.* 2001; Dungworth and Wilkes 2009). There was a low-density scatter of hammerscale on the site with small quantities of flakes (no spheres) coming from contexts (87), (713), (755) and (891). Although indicative of blacksmithing activities, the quantities involved are so limited that this cannot be taken as evidence of *in situ* metalworking.

The unclassified iron slag, suggestive of ironworking but not a specific stage in this process, came from four contexts: (122), (205), (525) and (610).

The final type of slag is possible smelting slag. It should be noted that the identification of two fragments deriving from context (7) is not confident as the form of the voids and the composition of the material under magnification is unusual.

Other Materials

Five small flecks of copper alloy were recovered during soil sample processing from context (8). These flecks are most likely to have detached from the surface of a degraded copper-alloy object but they are now amorphous in form and unidentifiable.

A significant proportion of the 'slag' assemblage from Sandy appears superficially to be platelets or flows of molten-looking runned slag suggestive of waste 'tapped' from a smelting furnace. Such slags are commonplace on sites of Roman date and are indicative of the smelting of ore into iron blooms. Yet, after surface cleaning of these fragments it became apparent that these were geological in origin representing dense undulating layers or amorphous nodules of dense siliceous sandy rock, often with plant debris voids and clasts, which derive from a ferruginous sandstone, consistent with Lower Greensands Formations native to the wider area around Sandy in Bedfordshire. Also present are a number of rounded pebbles of an agglomerate rock, again showing no signs of working nor the effects of heat. These natural stones were recovered from seven contexts: (3), (9), (87), (360), (523) and (596). Also recognised are 34 small angular flecks of anthracite or hard coal which were recovered from contexts (21), (87) and (99). These natural stones have been recorded in the catalogue but have been discarded as they have no further potential for future study.

Metalworking at Sandy: Chronology and Significance

Ironworking slags such as these recognised at Sandy are not inherently datable on form alone and the stratigraphic context as well as any associated datable artefacts will inform the date range of this material. As the majority of this metalworking waste came from features thought to relate to the Romano-British settlement at Sandy, it is likely that much, if not all, of the vitrified material dates to the Roman period.

The recognition of iron working waste and other 'vitreous slags' has previously been noted during excavations of the Romano-British settlement at Sandy (Johnston 1974, 39). This, and evidence of other crafts has suggested that Sandy was a centre for consumption and redistribution of goods and that it may have been a centre of production of ironworking (Johnston 1974, 51). The quantity of metalworking waste recovered during the current excavation is small and the range of slags recognised is fairly limited. This suggests that the focus of the ironworking activities represented by the waste sits beyond the excavated area. It is possible however to be certain that blacksmithing was undertaken in the vicinity due to the presence of smithing slags and diagnostic microdebris in the form of hammerscale flakes.

Recovery of ironworking slags from archaeological sites of Romano-British date is commonplace as each settlement would have probably produced and maintained most of the iron tools, fittings and equipment that were required by the community. In some instances, such as that of the roadside settlement at Westhawk Farm, Ashford, Kent (1st to late 4th century AD) where over 1.5 tonnes of ironworking debris was found, the quantity of waste and evidence of the *in situ* remains of multiple furnaces and hearths imply both concentrated and extensive ironworking activities (Paynter 2008, 267–301).

Appendix K: Post-Medieval Metal

Andrew Morrison (AOC Archaeology Group)

The Assemblage

The post-medieval and modern non-ferrous metal finds assemblage comprises a total of 39 objects and fragments (Mass: 325.8g) recovered from both the topsoil (1) and subsoil deposits (2) that were present across the site. The vast majority of the finds recovered are copper alloy (Q: 33) (Mass: 265.5g), with four lead objects (Mass: 55.5g), one aluminium object (Mass: 0.4g), and one zinc or white metal-alloy object (Mass: 4.4g) also retrieved. The copper-alloy assemblage comprises a total of 13 buttons and 6 buckles, as well as a number of furniture fittings, personal items, military ammunition, and various other objects and non-classifiable fragments. Other materials recovered include two lead weights, a lead cloth seal, and a zinc or white metal-alloy button, amongst others. Objects such as the military ammunition, furniture fittings, working waste, non-classifiable fragments, and coin have received catalogue entries below, but will not be discussed further here. This report focuses on consideration of the post-medieval and modern dress accessories and personal items, as well as the cloth seal and weights, which are discussed by classification below.

Buttons

A total of 14 buttons were recovered from the topsoil and subsoil across the site, 13 of which are of copper alloy, with one zinc or white metal-alloy button also identified. All of the buttons are dateable to the 18th century or later, and include a number of different types, classifications, and shank forms. Two of the buttons survive in a heavily corroded state (although they have been conserved and stabilised), with the loss of material precluding more accurate identification and dating. These comprise a flat, slightly biconvex copper-alloy disc (Diam: 20.2mm) (Cat. 6) most likely dating from the 17th century or later, and a zinc-alloy or white metal-alloy domed button (Diam: 21.2) (Cat. 36), most likely dating from the 18th century or later.

The 18th-century button forms present include a small circular button (Diam: 12.4mm) with a raised floral design and fixture wire still *in situ* (Cat. 2; Bailey 2004, 49, fig. 9.61), and one with a solid domed head (Diam: 15.2mm) and partially intact alpha shank (Cat. 20; Bailey 2004, fig. 9.66). Other buttons dateable to the 18th century or later include a flat, plain and undecorated button (Diam 18.0mm) with soldered on perforated shank (Cat. 28), and a plain flat disc (Diam: 15.6mm) with a slightly dished reverse and cone shank (Cat. 22) that most likely dates from the 18th to 19th centuries (Garratt 1994,105).

Four of the buttons within the assemblage date from the 19th century. These comprise a two-hole sew-through type (Diam: 17.3mm) (Cat. 5), and a four-hole sew-through type that retains remnants of black paint (Diam: 17.6mm) (Cat. 7), both of which were recovered from the subsoil (2), as well as a plain and undecorated, plated button with a slightly domed face (Diam: 19.6mm) (Cat. 17) and a flat disc with bevelled edge and domed centre (Diam: 20.3mm) with traces of gilding surviving (Cat. 21) that were both retrieved from the topsoil (1).

A total of four complete and intact three-piece military buttons with domed, embossed heads and loop shanks are present within the assemblage, all of which were retrieved from the topsoil (1). These have been identified as 19th to early 20th-century general service military buttons depicting a rampant lion and unicorn flanking a central crowned crest. Three of the buttons are of similar diameters ranging from 23.5mm–24.3mm (Cat. 15, Cat. 16, Cat. 18) which most likely represent the larger, tunic buttons (Ripley 1979, 8–9), while the fourth is of a smaller diameter (Diam: 16.6mm) (Cat. 19) and may represent a cap button.

Buttons often perform a dual role, acting as both decorative expressions of fashion, taste, and identity, and also functioning as a fastener (Cox 1996, 53). Beginning around the 17th century, a more standardised men's fashion of waistcoats, jackets, and breeches became the norm (all of which required numerous buttons), with women's fashion also featuring buttons for fastening and decoration. By the 18th century, the British button-making industry had reached a peak, and the vast range of different styles and types of buttons were seen and proudly displayed as status symbols from around the mid-18th to mid-19th centuries (Bailey 2004, 40; White 1977, 70). By the 19th century, buttons played a big role in both men's and women's fashion, although beginning around the 1840's, their numbers began to decrease and became more discreet in line with the requirements of Victorian fashions at the time (Cox 1996, 53; White 1977, 70).

Buttons could be both practical and extravagant and could be used with any number of garments from coats and waistcoats, to hats, shirts, cuffs, pockets, leggings, breeches, and shoes to name a few (Bailey 2004, 40). While most buttons were sewn on with thread, a number of different attachment types could be employed, including the use of a split metal pin, as seen on the 18th-century floral design example (Cat. 2), which would have allowed the button to be easily removed and changed from one garment to another, and also prior to the garment being cleaned (Bailey 2004, 44). This ease of removal may also explain the circumstance of deposition relating to the example from Sandy (Cat. 2).

Buckles

A total of six copper-alloy buckles and buckle fragments were recovered from the topsoil and subsoil deposits and are dateable from around the 16th century onwards. The earliest buckle form present within the assemblage is the intact cast annular buckle with integral central bar (Cat. 25) recovered from the topsoil (1), which typologically, is known to span from around the 14th to 17th centuries, and may have functioned as a waistbelt or shoe buckle (Whitehead 2003, 44), or possibly as a knee buckle similar to one recovered from a pre-17th-century context at Aldgate (Thompson *et al.* 1984, 106).

Other post-medieval buckle forms recovered comprise a complete and intact cast copper-alloy double loop belt buckle with trapezoidal frame (Cat. 1) that most likely dates to the 17th century, although some 15th and 16th-century examples are known (Whitehead 2003, 81), and a complete and intact Jacobean shoe buckle with an elaborate cast floral decoration and Type II anchor chape dating from the late 17th to 18th century (Whitehead 2003, 94) that were both retrieved from the subsoil (2), as well as a rectangular frame fragment with a cast rope-like pattern (Cat. 26) from a two-piece Georgian shoe buckle that was recovered from the topsoil (1).

Two modern buckles datable to the 19th century or later were retrieved from the topsoil (1), and are both probably identifiable as horse harness buckles. One has a D-shaped frame with a recessed bar (Cat. 31), while the other has a double loop frame with recessed central bar (Cat. 35) that has been distorted and elongated by a pulling force to one side. The recessed bars present on both buckles are suggestive of thick straps which, combined with the forces displayed, are suggestive of horse equipment and use as harness buckles (Walker 2007).

Like buttons, buckles act as functional means of attachment and adjustment, but can also become items of elaborate personal expression reflecting both personal taste in fashion as well as status. With the wide range of buckle materials, forms, and decorations available, they can present an opportunity for expression at all social levels (Egan, 2002, 50). Buckles can be employed in a wide range of functions from any number of uses in personal dress, including purely decorative ones (Whitehead 2003, 115), to the more utilitarian roles in horse equipment and other areas where any strap may need fastening or adjusting. Because of the wide range of uses, large numbers of buckles and buckle fragments are often recovered during both excavations and metal detecting, and are ubiquitous on most post-medieval and modern sites (Whitehead 2003, 115).

Personal equipment and other finds

In addition to the buttons and buckles, other finds of note recovered include a copper-alloy thimble (Cat. 3) retrieved from the subsoil (2), and a lead cloth seal (Cat. 37) and two lead fishing weights (Cat. 38, Cat. 39) from the topsoil (1). The thimble is complete and intact, though has been damaged with a compressed rim. Most likely machine made, it has a separate crown and body soldered together, with circular dimples covering the body, and square dimples across the crown. Used in sewing, thimbles are common finds on post-medieval sites, with similar examples known from 17th and 18th-century contexts, including machine-made thimbles from a 17th-century well deposit at St Paul-in-the-Bail, Lincoln (Egan, 2008, 52), and from late 17th to mid-18th-century deposits at Aldgate (Thompson *et al.* 1984, 114).

The cloth seal (Cat. 37) is considered to be modern in date based on form, however the scant remnants of lettering remaining on both faces are completely illegible, it is most likely associated with an agricultural role such as sealing a bag of animal feed or similar (Bishenden, 2021). Also thought to be modern in date are the two spherical, perforated lead weights (Cat. 38, Cat. 39) that were recovered from the topsoil. Although spherical lead weights dating to the Romano-British period and later are known (Booth 2014), the two examples here show close similarities to modern bullet ball fishing sinkers, by the mode of production exemplified by the observed circumferential mould seam and the size of the perforation displayed on the smaller diameter example (Cat. 39). The presence of fishing weights within the topsoil deposit on site is not considered to be unusual, as the River Ivel and a number of small lakes, including Swan Lake, located approximately 500m west and south of the site are popular fishing spots.

Summary and Discussion

Overall, the post-medieval and modern non-ferrous metal assemblage from Sandy represents the remains of dress accessories, personal equipment, furniture fixtures and fittings, military equipment, and items also reflecting hobbies, subsistence, and agriculture that became incorporated within the topsoils and subsoils across the site. Although the site is characteristically Romano-British and Saxon in date, the objects described here represent activity taking place from around the 16th century onwards.

The buttons and buckles reflect items of both function and fashion which help to chart the changing tastes and styles over the recent centuries, and probably represent casual losses, or perhaps in certain instances, especially with the group of military buttons, may represent the deposition of garments or garment fragments with the buttons still

attached. It is possible, with the presence of the late 19th-century or later military buttons, along with the four .303 blank bullet cartridges all recovered from the topsoil, that military training may have taken place on site, or perhaps may be associated with the commonwealth war graves within the Sandy Municipal Cemetery to the immediate east.

Other finds like the cloth seal, and perhaps the 19th-century harness buckles are suggestive of modern agricultural practices, while the two probable fishing-line sinkers reflect the exploitation of the nearby water sources in the River Ivel to the south and west, and the lakes, including Swan Lake, to the south.

Catalogue

Cat. 1 Buckle.

Copper Alloy. Complete and intact trapezium-shaped double loop frame with an integral central bar. Possibly a slightly angled frame though probably exaggerated by distortion. A partial pin with missing tip remains looped around the central bar. The frame is triangular in section with a flat base forming a near 90-degree angle to the internal surface, sloping down to the edge. No evidence of decoration is present, though some finishing marks are noted on the upper surface. The reverse is roughly finished with slightly raised edges from casting. L 16th–17th century L 36.4mm, W 25.0mm, Th 3.0mm, Pin W 2.8mm, Aperture 16.5mm, Mass 7.3g. RF20, Bag 1. Context (2)

Cat. 2 Button.

Copper alloy. Small circular button with a pronounced rim and raised central portion consisting of a stylised circular head with stamped face forming an eight-petal flower shape with a flat face. The flat face contains a central circular groove containing a flower pattern with concentric short grooves forming the petals and a concave divot in the middle with a raised central dot. The reverse is concave with a separate soldered-on perforated shank containing a fine fixture wire *in situ*. 18th century Diam 12.4mm, Th 2.1mm, Shank H 3.5mm, Mass 0.8g. RF25, Bag 2. Context (2)

Cat. 3 Thimble.

Copper alloy. Intact but with a damaged, compressed rim. Rounded rim with circular dimples covering the body and square-shaped dimples covering the soldered-on domed cap. Most likely 17th century or later. L 21.2mm, W 8.8mm, H 16.5mm, Th 0.8mm, Top Diam 11.8mm, Mass 3.5g. RF26, Bag 3. Context (2)

Cat. 4 Buckle.

Copper alloy. Complete and intact double oval loop frame with a separate iron spindle and anchor chape. The frame has an elaborate cast floral, vine, and shell decoration with dotted external in internal edges. Broad, but flat frame with a curved profile. Flat reverse face with signs of finishing. L 17th–18th century L 28.7mm, W 21.8mm, Th 1.2mm, Aperture 11.6mm, Pin Diam 1.6mm, Chape L 13.8mm, Th 1.3mm, Mass 4.3 RF45, Bag 4. Context (2)

Cat. 5 Button.

Copper alloy. Complete and intact small, circular two-hole sew-through type button. Flat recessed face with a raised rim. Formed from copper-alloy sheet, most likely punched, and has a reinforced rim with the edges folded over a thin ring. The central holes have been punched through from the reverse. 19th century Diam 17.3mm, Th 1.2mm, Hole Diam 2.2mm, Mass 0.7g. RF46, Bag 5. Context (2)

Cat. 6 Button.

Copper alloy. Circular probable button with a flat slightly biconvex cross-section tapering to a pointed edge. There is a slight divot in the centre of one side with potential solder remnants possibly indicating the attachment point of a shank. Heavily corroded with a missing shank. 17th century or later. Diam 20.2mm, Th 1.8mm, Mass 3.5g. RF51, Bag 6. Context (2)

Cat. 7 Button.

Copper alloy. Complete and intact flat, circular four-hole sew-through type. Flat rim face with a toothed central band framing four holes. The reverse face of the rim is slightly recessed. Remnants of black paint surviving. 19th century Diam 17.6mm, Th 1.0mm, Hole Diam 1.6mm, Mass 1.6g. RF57, Bag 7. Context (2)

Cat. 8 Blank bullet.

Copper alloy. Complete and intact blank bullet cartridge. Probably .303. Head stamp visible. 'RL C IV'. Pin indent from firing. L 19th century or later. L 55.7mm, Head Diam 13.4mm, Mass 12.3g. Bag 8. Context (1)

Cat. 9 Blank bullet.

Copper alloy. Complete and intact blank bullet cartridge. Probably .303. Head stamp visible 'I C II'. Pin indent from firing. L 19th century or later. L 56.0mm, Head Diam 13.4mm, Mass 11.4g. Bag 8. Context (1)

Cat. 10 Working waste.

Lead. Molten lead spill. Amorphous with one point of surface contact and one breakage point. Not closely dateable. L 23.4mm, W 12.6mm, Th 9.5mm, Mass 7.6g. Bag 8. Context (1)

Cat. 11 Medicinal bottle cover.

Aluminium. Cover / tab probably for an Aspirin bottle. Stamped with crossed script 'BAYER'. Flat, circular with stamped indented lettering and a projecting rectangular tab. Mid-20th century or later. L 38.9mm, Th 0.1mm, Diam 26.4mm, Mass 0.4g. Bag 8. Context (1)

Cat. 12 Coin.

Copper alloy. Intact George VI One Shilling. Lion facing left over a crown on the obverse. 1948. Diam 23.3mm, Th 1.7mm, Mass 5.6g. Bag 8. Context (1)

Cat. 13 Non-classifiable.

Copper alloy. Possible vessel fragment. No original edges surviving. Slightly curved, though may be the result of damage. Unidentifiable. Not closely dateable. L 26.6mm, W 20.2mm, Th 2.4mm, Mass 4.4g. Bag 9. Context (1)

Cat. 14 Working waste.

Copper alloy. Molten spill of copper-alloy working waste. Probably casting overflow. Amorphous. Not closely dateable. L 23.9mm, W 12.4mm, Th 7.5mm, Mass 4.9g. Bag 9. Context (1)

Cat. 15 Button.

Copper alloy. Complete and intact Military button. Three-piece with loop shank. Loop shank remains free and loose. Domed head with a stamped decoration of the Royal coat of arms. Rampant lion on the left and a unicorn on the right, with a central slightly ovoid crest topped by a crown and standing lion. Twinned short scrolls below with illegible lettering. 19th– E 20th century Diam 23.5mm, Th 8.3mm, Shank Th 1.7mm, Mass 4.0g. Bag 10. Context (1)

Cat. 16 Button.

Copper alloy. Complete and intact Military button with slight damage to the face. Three-piece with loop shank. Loop shank remains free and loose. Domed head with a stamped decoration of the Royal coat of arms. Rampant lion on the left and a unicorn on the right, with a central circular crest topped by a crown and standing lion. Twinned long scrolls below with illegible lettering. 19th– E 20th century Diam 24.3mm, Th 6.8mm, Shank Th 1.7mm,

Mass 4.0g. Bag 10. Context (1)

Cat. 17 Button.

Copper alloy. Complete and intact two-piece button with loop shank. Plain, undecorated slightly domed face, and a stepped reverse with laurel leaves below and 'PLATED' above in the centre. Separate soldered loop shank. 19th century Diam 19.6mm, Th 2.2mm, Shank Th 0.9mm, Mass 2.9g. Bag 10. Context (1)

Cat. 18 Button.

Copper alloy. Complete and intact Military button. Three-piece loop shank. Loop shank remains free and loose. Domed head with a stamped decoration of the Royal coat of arms. Rampant lion on the left and a unicorn on the right, with a central circular crest topped by a crown and standing lion. Twinned long scrolls below with illegible lettering. 19th– E 20th century Diam 23.9mm, Th 6.7mm, Shank Th 1.7mm, Mass 4.4g. Bag 11. Context (1)

Cat. 19 Button.

Copper alloy. Complete and intact Military button. Three-piece loop shank. Loop shank remains free and loose. Domed head with a stamped decoration of the Royal coat of arms. Rampant lion on the left and a unicorn on the right, with a central circular crest topped by a crown and standing lion. Twinned long scrolls below with illegible lettering. Makers mark on reverse, R Gaunt and Son, London. 19th– E 20th century Diam 16.6mm, Th 5.2mm, Shank Th 1.7mm, Mass 2.3g. Bag 11. Context (1)

Cat. 20 Button.

Copper alloy. Domed, plain solid head. Plano-convex in cross-section with a separate, soldered alpha shank, which is only partially intact. 18th century Diam 15.2mm, Th 5.3mm, Shank Th 1.4mm, Mass 5.3g. Bag 11. Context (1)

Cat. 21 Button.

Copper alloy. Complete and intact flat disc with a domed centre and a slightly bevelled edge. Traces of possible gilding surviving on the top face. Separate soldered alpha shank. 19th century Diam 20.3mm, Th 2.6mm, Shank Th 1.4mm, Mass 3.2g. Bag 11. Context (1)

Cat. 22 Button.

Copper alloy. Complete and intact plain and undecorated flat disc with a slightly dished reverse and a cone shank. 18th–19th century Diam 15.6mm, Th 1.3mm, Shank H 6.5mm, Th 2.2mm, Mass 2.1g. Bag 11. Context (1)

Cat. 23 Blank bullet.

Copper alloy. Complete and intact blank bullet cartridge. Probably .303. Head stamp visible. 'RL C IV'. Pin imprint from firing. L 19th century or later. L 55.9mm, Head Diam 13.0mm, Mass 13.0g. Bag 12. Context (1)

Cat. 24 Blank bullet.

Copper alloy. Complete and intact blank bullet cartridge. Probably .303. Head stamp visible. 'I C II'. Pin imprint from firing. L 19th century or later. L 56.2mm, Head Diam 13.4mm, Mass 13.1g. Bag 12. Context (1)

Cat. 25 Buckle.

Copper alloy. Complete and intact annular frame with an integral central bar. Slight angle is probably due to damage and distortion. Cast triangular cross-sectioned frame sloping to the outside edge, and a rough triangular cross-sectioned central bar. Probably 16th century or later. Diam 31.1mm x 30.7mm, Th 3.1mm, Aperture 19.6mm, Mass 8.3g. Bag 12. Context (1)

Cat. 26 Buckle.

Copper alloy. Buckle frame fragment. Flat rectangular cross-sectioned frame, with a rounded corner. Central rope decoration on the buckle face, with a secondary rope-like pattern along the outer edge. The frame expands towards the centre for the spindle attachment. Finishing marks along the reverse. 18th century L 40.9, W 30.4, Th 1.5, Frame W 6.8mm, Extrapolated buckle L c. 80mm, Mass 5.3g. Bag 12. Context (1)

Cat. 27 Furniture knob.

Copper alloy. Complete and intact small handle or knob for a cabinet, dresser, or similar. Rounded oval head, constricted neck, and flat round foot. The foot has a square hole to attach to a door mechanism, and a round hole on the handle face. Designed to turn to open. Probably 3-piece welded. 19th–20th century L 34.3mm, W 27.5mm, H 33.9mm, Th 20.3mm, Base Diam 18.1mm, Neck Diam 8.0mm, Mass 26.0g. Bag 12. Context (1)

Cat. 28 Button.

Copper alloy. Complete and intact plain undecorated flat disc with a soldered-on perforated shank. Hand finished with working marks visible on the shank. L 18th century or later. Diam 18.0mm, Th 1.8mm, Shank H 7.1mm, W 6.5mm, Th 2.1mm, Aperture 3.7mm, Mass 4.2g. Bag 12. Context (1)

Cat. 29 Non-classifiable.

Copper alloy. Possible bullet casing. Completely flattened, probable cylindrical body with a tapering tip. The tip has a series of horizontal striations. Probably 19th–20th century L 19.0mm, W 12.4mm, Th 1.3mm, Mass 1.3g. Bag 12. Context (1)

Cat. 30 Bullet.

Copper alloy. Complete and intact long bullet, with a dished depression in the rear, a ring around the base, and a rounded tip. Slight damage to the tip is Probably the result of impaction. 19th–20th century L 29.6, Diam 6.6mm, Mass 8.4g. Bag 13. Context (1)

Cat. 31 Buckle.

Copper alloy. Complete and intact though slightly distorted. D-shaped frame, plano-convex in section with an integral bar underneath that is offset slightly from the frame terminals. Finishing marks visible and is distorted. 19th century or later. L 34.4mm, W 44.2mm, H 11.1mm, Th 3.7mm, Frame W 5.2mm, Bar Diam 4.3mm, Aperture 32.3mm, Mass 20.1g. Bag 13. Context (1)

Cat. 32 Non-classifiable.

Copper alloy. Cap fragment. Approximately 1/4 diameter of a circular, tapering brass cap. Exact function unclear. 19th century or later. H 20.5mm, Th 0.4mm, Mass 0.9g. Bag 13. Context (1)

Cat. 33 Plaque furniture fitting.

Copper alloy. Complete and intact rectangular plaque with chamfered edges and a circular cut out at each corner. The plaque is undecorated. Four thin, tapering attachment shanks on the underside, only one of which remains intact. Possible box fitting, furniture, or award fitting for engraving. Finishing marks visible along the edges. 19th century or later. L 50.0mm, W 43.3mm, Th 3.5mm, Mass 30.1g. Bag 14. Context (1)

Cat. 34 Ground marker.

Copper alloy. Complete and intact flat oval with a tapering tab projecting from the base. '764' stamped on face. Possible ground marker or distance marker. 19th century or later. L 74.0mm, W 59.6mm, Th 0.9mm, Mass 12.7g. Bag 14. Context (1)

Cat. 35 Buckle.

Copper alloy. Complete and intact, though distorted. Rectangular frame with rounded corners and a slightly ovoid cross-section. The integral bar is set below the frame. The bar contains remnants of an iron pin loop, and the frame has been distorted by elongation through pulling which has collapsed the bar. There is a central indent in the frame from the buckle pin. 19th century or later. L 58.2mm, W 35.8mm, H 12.7mm, Th 4.6mm, Frame W 5.1mm, Pin W 6.3mm, Aperture 25.6mm, Mass 33.6g. Bag 15. Context (1)

Cat. 36 Button.

Zinc alloy or other white metal alloy. Probable three-piece construction. Domed head, shank not visible / present. Heavily corroded. L 18th century or later. Diam 21.2mm, Th 9.4mm, Mass 4.4g. Bag 16. Context (1)

Cat. 37 Cloth seal.

Lead. Largely complete. Circular with possible stamped script on both sides, though illegible. Folded over with edge damage. Modern. Diam 16.9mm, Th 6.1mm, Stamp Diam 14.3mm, Mass 5.7g. Bag 17. Context (1)

Cat. 38 Weight.

Lead. Complete and intact spherical weight with a central perforation and a stippled surface. Most likely a drilled bullet ball fishing weight / sinker. Modern. H 17.5mm, Diam 19.4mm, Perforation Diam 3.3mm, Mass 33.9g. Bag 18. Context (1)

Cat. 39 Weight. Lead.

Complete and intact spherical with a central perforation and stippled surface. Most likely a drilled bullet ball fishing weight / sinker. Modern. H 13.9mm, Diam 14.0mm, Perforation Diam 1.7mm, Mass 8.3g. Bag 18. Context (1)

Appendix L: Ecofactual Analysis

Jackaline Robertson (AOC Archaeology Group)

Introduction and Quantification

A total of 72 wash over samples were submitted for environmental analysis in June 2022 from the archaeological works undertaken at Sandy, Central Bedfordshire. The samples were collected from a series of cremation pits, deposits, ditches, kilns, ovens, pits, postholes and stakeholes. These archaeological features were collected from a multi-phase site with most of the deposits dated to the Roman period with a smaller number recorded as Saxon. From these samples both carbonised macroplant and charcoal were recovered.

The aim of this analysis was to study the role of plants at Sandy during the Roman phase of occupation. Carbonised macroplants were noted in a single Saxon deposit and this material while examined was insufficient to fully contribute to understanding the changing role of plants between the earlier and later phase of occupation. To understand the relationship between the Roman population and the available plant resources, several research questions were applied to the ecofact assemblages. This involved analysing the cereal crops cultivated, which species if any was more important and whether they represented a processing, consumer or mixed economy. Identifying evidence for the exploitation of wild plants used for food, fuel and building material was also considered, as was what information could be gathered from the weed assemblage concerning the development of the surrounding landscape. Recognising spatial deposition of plant remains within specific deposits and whether this represented ritual deposition within the Roman cremations is an additional research question that is addressed herein.

Methodology

The bulk samples were processed at AOC London in their entirety in laboratory conditions using a floatation method designed to retrieve both ecofacts and artefacts (Kenward *et al.* 1980, 3–15). The residues were analysed at AOC London and the wash overs were submitted to AOC Edinburgh for analysis. The washovers were assessed using a low-powered microscope at x10–x40 magnification.

The plant macrofossils were examined at magnifications of x10 and up to x450 using a high-powered microscope. Macroplant identifications were confirmed using modern reference material and seed atlases stored at AOC Edinburgh (Cappers *et al.* 2006; Cappers and Neef 2012;

Cappers and Bekker 2013; Jacomet 2006). Taxonomy and nomenclature for plants follows Stace (2010).

Charcoal fragments larger than 4mm were retained for species identification. A maximum of ten fragments were identified to species per context. The charcoal identifications were confirmed by analysing the transverse, tangential and radial sections at x70–x450 magnification and using keys and texts stored at AOC Edinburgh (Schweingruber 1990; Hather 2000; Schweingruber 1990).

Results and observations

The Macroplant

A total of 5,844 carbonised macroplants were analysed from 51 Roman contexts and one Saxon deposit. The heather and charred peat fragments were semi-quantified due to their fragile condition which prevented them from being counted in full. The plant assemblage was composed of cereals, fruits, vegetables, economically useful plants, turves, woodland taxa and weeds. Preservation ranged from poor to excellent with most recorded as adequate to good. It was noted that large numbers of cereal caryopses and fruit remains recovered from the cremation deposits and midden pit had been carbonised at an extremely high temperature and these were more noticeably poorly preserved.

Cereal was present in 48 Roman features and in one Saxon deposit and these formed the largest component of the assemblage totalling 4,447 remains. These were composed of 4,357 caryopses, 45 chaff fragments, 25 culm nodes and 20 straw fragments. The species were oat (*Avena* sp), six-row hulled barley (*Hordeum vulgare* L), two-row hulled barley (*Hordeum distichon* L), bread / club wheat (*Triticum aestivum* / *compactum* L), spelt (*Triticum spelta* L) and emmer / spelt (*Triticum dicoccum* / *spelta* L). The cereal was concentrated within five Roman and one Saxon features recorded as a midden pit B, ditch D4, kiln K1, oven O2, pit P68 and the possible SFB. The rest of the assemblage was scattered throughout the site in much smaller quantities.

The remains of fruits were noted in eight Roman features and one Saxon deposit. The species were 20 crowberry (*Empetrum nigrum* L) seeds, 13 exocarp fragments of apple / pear / hawthorn (*Maloideae* sp) along with six seeds, 15 elderberry (*Sambucus nigrum* L) seeds and three grapes (*Vitis vinifera* L). The fruit remains were concentrated within one Roman cremation C4 and one midden pit B with smaller quantities present in two ditches D4, D6, pit P4 and the possible SFB. The remainder were recovered from the possible Saxon SFB. There is evidence the apple / pear / hawthorn and grapes were purposely disposed of

within the cremation deposits as these finds were absent from any other feature on site.

Vegetables totalling 577 seeds were recovered from 19 Roman deposits and one Saxon context. The species were cabbage (*Brassica sp*), pea (*Lathyrus sp*), common vetch (*Vicia sativaria L*), tufted vetch (*Vicia cracca L*), smooth tare (*Vicia tetrasperma L*) and vetch. These finds were concentrated within Roman midden pit B and the possible SFB.

Other evidence of economically useful plants in the Roman period was a hemlock fruit (*Conium maculatum L*) in midden pit B and four henbane (*Hyoscyamus niger L*) capsules dispersed among ditch D4 and pit P4.

Evidence of turves formed of heather (*Calluna vulgaris L*) and peat were noted in three features from Roman ditches D4, D6 and pit P17.

Three tree buds were identified within Roman midden pit B and pit P3. These are probably accidental inclusions introduced to the site as a by product of the wood used for fuel and building.

The weed assemblage was varied in terms of species diversity and 465 weeds were scattered among 38 contexts. The weeds are a mix of corncockle (*Agrostemma githago L*), bromes (*Bromus sp*), sedge (*Carex sp*), pink family (*Caryophyllaceae sp*), cornflower (*Centaurea cyanus L*), mouse-ears (*Cerastium sp*), fat hen (*Chenopodium album L*), goosefoot (*Chenopodium sp*), wild carrot (*Daucus carota L*), black-bindweed (*Fallopia convolvulus L*), hemp-nettles (*Galeopsis L*), cleavers (*Galium aparine L*), rush (*Juncus sp*), knotweeds (*Persicaria sp*), ribwort plantain (*Plantago lanceolata L*), grass (*Poaceae sp*), knotgrass (*Polygonum aviculare L*), knotweed (*Polygonum sp*), buttercup (*Ranunculus sp*), wild radish (*Raphanus raphanistrum L*), sheep's sorrel (*Rumex acetosella L*), dock (*Rumex sp*), ragged-robin (*Silene flos-cuculi L*), common chickweed (*Stellaria media sp*), stitchworts (*Stellaria sp*) and violet (*Viola sp*). Other finds include the remains of two tubers in Roman pit C14. The weeds were mostly concentrated within Roman midden pit B, ditches D4, D6, pits P4, P68 and the possible SFB. Only two weeds were noted in the possible Saxon SFB.

The Charcoal

The charcoal assemblage (587.6g) was recovered from 50 Roman contexts and 381 fragments were identified. The species were field maple (*Acer campestre L*), alder (*Alnus glutinosa L*), birch (*Betula sp*), heather (*Calluna vulgaris L*), hazel (*Corylus avellana L*), ash (*Fraxinus sp*), apple / pear / hawthorn (*Maloideae sp*), blackthorn (*Prunus spinosa L*), cherry (*Prunus sp*), oak (*Quercus sp*) and buckthorn (*Rhamnus cathartica L*). The dominant species was oak

(61%) along with much smaller quantities of ash (11%), cherry (7%), apple / pear / hawthorn (6%), heather (6%), hazel (5%), blackthorn (3%), field maple (0.4%), alder (0.2%), birch (0.2%) and buckthorn (0.2%).

Preservation of the fragments ranged from poor to good. Those described as poor were noticeably vitrified and abraded. These fragments were recovered exclusively from the Roman deposits and were concentrated within cremations C4, C7, C10, C12, C13 and C14, midden pit B, ditches D4, D6 and pits P67 and P73. The remainder of the fragments were scattered throughout the site in reduced concentrations.

Summary of the Contextual Units by Phase and Feature Type

Roman Cremations

Context: (38) Roman Cremation Pit C4

Macroplant: There was one emmer / spelt caryopsis, 15 fragments of apple / pear / hawthorn and three grape seeds.

Charcoal: The charcoal (69.0g) was composed entirely of large fragments of vitrified oak.

Synthesis: The cereal and fruit remains are ritual food offerings associated with this cremation. This was the only deposit from which grape seeds were recovered. The grapes may have been imported as raisins from abroad and represent a luxury food item, or could have been grown locally. The inclusion of the fruits indicate that the people who prepared this burial took consideration when preparing their offering to the cremated individuals. The large fragments of oak were used as the fuel source to power this cremation.

Context: (50) Roman Cremation Pit C7

Macroplant: There were four weeds recorded as one sedge, one common chickweed and two which could not be identified further due to poor preservation.

Charcoal: The charcoal (91.0g) was formed entirely of large splinters of oak.

Synthesis: The macroplant assemblage is intrusive from plants that grew nearby that were accidentally charred. This large concentration of oak has derived from fuel used within the cremation.

Context: (52) Roman Cremation Pit C15

Macroplant: No charred macroplant was recovered from this deposit.

Charcoal: There were two fragments of oak (0.6g).

Synthesis: This was described as a very small cremation pit and the oak charcoal is probably residual fuel debris.

Context: (54) Roman Cremation Pit C8

Macroplant: There was no macroplant noted in this cremation pit.

Charcoal: The charcoal (1.5g) was formed of small splinters of oak that were poorly preserved.

Synthesis: The oak charcoal is residual fuel debris associated with the cremation deposit.

Context: (70) Roman Cremation Pit C10

Macroplant: The only find was a single stitchwort.

Charcoal: The charcoal (81.0g) was composed of oak.

Synthesis: The weed was probably from a plant that grew nearby and was accidentally burnt. The oak charcoal has been selected to provide fuel for this cremation.

Context: (72) Roman Cremation Pit C11

Macroplant: No macroplant was recovered from this pit.

Charcoal: The charcoal (7.0g) was formed entirely of oak.

Synthesis: The oak charcoal is fuel debris associated with use of the cremation pit.

Contexts: (74) and (75) Roman Cremation Pit C12

Macroplant: There was one bread / club wheat caryopsis in upper deposit (74).

Charcoal: In context (74) the charcoal (12.0g) was composed of oak (70%) and cherry (30%). In (75) the charcoal (3.0g) was dominated by oak (80%) and cherry (20%).

Synthesis: There is evidence from one other cremation deposit that cereal was deliberately included as a grave offering. As only one cereal caryopsis was noted this find is more likely to represent redeposited material rather than deliberate deposition. The charcoal is fuel debris used within this cremation. Oak seems to have been

preferred with cherry having a more marginal role. This was the only other deposit in which a wood species besides oak was used within a cremation and it is possible it was deliberately selected to provide a certain aroma or reflects the status in which this person was viewed by their community.

Contexts: (90) and (75) Roman Cremation Pit C13

Macroplant: There was one poorly preserved cereal caryopses.

Charcoal: The charcoal (105.0g) was formed of small splinters of oak.

Synthesis: The cereal may be redeposited whereas the oak charcoal is residual fuel waste associated with the cremation.

Contexts: (48), (78), (95), (99) Roman Midden Pit B

Macroplant: The carbonised plant remains totalled 1,688 and these were recovered from four deposits (48), (78), (95) and (98). The assemblage was dominated by 1,296 cereal caryopses followed by seven cereal nodes, 16 fruit remains, 221 vegetables, one economically useful taxa, one bud and 146 weeds. Analysis of spatial deposition within the feature revealed the plant taxa was clearly concentrated in deposit (99) which had 50% compared to smaller quantities in (95) that had 25%, in (78) there was 16% and 9% in (48).

The crop species were wheat (28%), bread / club wheat (18%), oat (2%), barley (2%), emmer / spelt (2%), six-row hulled barley (1%), and cereal (47%). The fruits were formed of five crowberry seeds, four fragments of apple / pear / hawthorn and seven elderberry seeds. The vegetables numbered 221 and were a mix of tufted vetch (55%), smooth tare (26%), common vetch (10%), cabbage (1%), and vetch (8%). Evidence for the exploitation of a potentially useful economic plant was a single hemlock fruit in (95). Other finds were one tree bud. The 146 weeds were a mix of black bindweed (26%), sedge (22.5%), dock (18%), sheep's sorrel (4.8%), knotweed (4.1%), grass (2.7%), knotgrass (2.7%), cleavers (2%), ribwort plantain (2%), fat hen (1.4%), corncockle (0.7%), bromus (0.7%), pink family (0.7%), cornflower (0.7%), goosefoot (0.7%), knotweeds (0.7%) and violet (0.7%). The rest of the weeds (8.9%) were not identifiable.

Charcoal: The charcoal assemblage (36.0g) was recovered from all four deposits and a total of 28 fragments were identified as oak (39%), ash (21%), cherry (19%), apple / pear / hawthorn (14%), field maple (3.5%) and alder (3.5%). In (48) the charcoal (1.0g) was ash (66%), cherry (17%) and oak (17%). From deposit (78) the charcoal (9.0g) was

a mix of field maple (20%), alder (20%), cherry (20%) and oak (40%). Cherry (10%) and oak (10%) roundwood was recorded in this context. The largest concentration of charcoal (21.0g) was recovered from (95) and the species were oak (70%), cherry (20%) and ash (10%). In deposit (99) the charcoal (5.0g) was dominated by fragments of apple / pear / hawthorn (58%), ash (14%), cherry roundwood (14%) and oak roundwood (14%).

Synthesis: This deposit was described as a midden pit or possibly an offerings pit in association with the cremation cemetery and the cereal, fruit and vegetables could represent offerings or domestic waste. If the former interpretation is favoured then the wood species could have been used to fuel cremation. Wheat was clearly the more economically important cereal and the oats and barley either had a more secondary role or these species were weeds that grew alongside the wheat. Some of these weeds may have been collected deliberately as an offering of food and flowers. The grass and sedge may have been an additional source of fuel or kindling used alongside the wood species. Hemlock could have been used as a form of medicine and could have been deliberately incorporated within the cremation as a ritual act. Corncockle is a common agricultural contaminant that was poisonous and was unlikely to have been collected deliberately as a food offering. Instead, it was either introduced accidentally to the deposit as a byproduct of the crops or was chosen because it has a colourful flower.

Roman Ditches

Contexts: (111) and (122) Roman Ditch D4

Macroplant: The macroplant was concentrated within deposit (111), of ditch D4 from which 954 plant remains were analysed. The largest component was cereal remains and there were 803 caryopses, seven chaff fragments, one culm node and three fragments of straw. The species were wheat (62%), bread / club wheat (12%), emmer / spelt (12%), oat (0.5%), spelt (0.5%) and cereal (13%). There were also inclusions of fruit in the form of one crowberry seed and vegetables such as one cabbage, one tufted vetch and three vetch seeds. Heather, which may have been inclusions within turves, were also noted. Other potentially economically useful plants were one henbane capsule. The 33 weeds were a mix of wild carrot (37%), fat hen (21%), black bindweed (6%), knotweed (6%), dock (6%), buttercup (6%), sedge (6%), cornflower (3%), knotgrass (3%), grass (3%) and ragged-robin (3%).

In context (122) of ditch D4 there were 27 caryopses recorded as bread / club wheat (30%), oat (15%), wheat (11%), six-row hulled barley (7%) and cereal (37%). There were three weeds identified as one sedge, one fat hen and one sheep's sorrel.

Charcoal: The charcoal (2.0g) in (111) was dominated by heather roundwood (80%) along with smaller inclusions of hazel roundwood (10%) and fragments of oak (10%). In (122) the charcoal (10.0g) was oak (90%) and cherry (10%).

Synthesis: Context (111) was purposely used for the disposal of domestic food refuse including cereal and vegetables. The small number of chaff and straw fragments may be evidence that some crop processing waste was disposed of within this ditch but only on a very small scale. The crowberry could be from berries that were collected for use as a food source or were inclusions within the turf. The henbane could have derived from a plant that was gathered for medical purposes. Some of these weeds such as sedge and grass may have been used for fuel and building material whereas others such as fat hen, black bindweed and dock could be the remnants of food. The cereal and weeds from context (122) are redeposited food and intrusive finds from deposit (111).

The charcoal has derived from the deliberate disposal of fuel debris alongside other household refuse. The heather may have originally formed part of turves that were used as a building and or fuel material before being dumped in this ditch.

Contexts: (205) and (233) Roman Ditch D6

Macroplant: In deposit (205) there were 18 cereal caryopses, two crowberry seeds, 13 vegetables, 73 weeds and a large quantity of heather stems alongside some inclusions of heather flowers and peat fragments. The cereal species were oat (28%), bread / club wheat (22%), barley (11%) and cereal (39%). The vegetables were identified as tufted vetch (38%), cabbage (31%), common vetch (8%) and vetch (23%). The weeds were varied and were a mix of sedge (32%), grass (23%), dock (14%), fat hen (8%), ribwort plantain (4%), mouse-ears (3%), buttercup (3%), violet (3%), cleavers (1%) and grass stems (1%). The remaining weeds (8%) could not be identified.

From (233) there were 100 cereal caryopses identified as bread / club wheat (36%), wheat (28%), oat (6%), six-row hulled barley (2%), barley (1%), emmer / spelt (1%) and cereal (26%). Other edible finds were 13 vegetables composed of tufted vetch (85%) and smooth tare (15%). There was also a small quantity of heather stems. There were 21 weeds recorded as goosefoot (48%), fat hen (24%), bromes (9%), grass (9%), cleavers (5%) and dock (5%).

Charcoal: From (205) the charcoal (2.0g) was made up of one piece of heather roundwood along with one fragment of blackthorn and one of oak. The charcoal (15.0g) in (233) was formed of heather roundwood (50%), oak (30%) of which 20% was roundwood, birch (10%) and ash (10%).

Synthesis: The cereal, vegetables and charcoal have derived from the deliberate disposal of domestic food and fuel refuse. The heather remains may be inclusions of turf that were used as a building and fuel material that were later dumped in this feature. The weeds are varied and there are several taphonomic pathways that may explain their presence. The crowberry could have been deliberately collected for food or may have been an accidental inclusion with the turf. The weed species identified favour a variety of landscapes including arable fields, waste ground, damp habitats, grassland and meadows. These weeds could have been introduced as contaminants of the cereal crops or grew nearby and were accidentally charred. Plants such as fat hen, goosefoot and dock are all edible and sedge and grass have long been used as a building material or fuel resource. Given the small size of the weed assemblage it is difficult to state with any certainty what economic role if any the weeds recovered from this ditch may have had.

Context: (596) Roman Ditch D1

Macroplant: The only finds were 17 cereal caryopses identified as bread / club wheat (41%), wheat (12%), barley (12%) and cereal (35%).

Charcoal: There was no charcoal recovered from this context.

Synthesis: the cereal are food waste deposited within this ditch.

Context: (610) Roman Ditch D18

Macroplant: There were 22 cereal caryopses identified as wheat (23%), six-row hulled barley (18%), bread / club wheat (5%) and cereal (54%). Other finds included two tufted vetch, three sedge, two grass and three weeds that could not be identified further.

Charcoal: The charcoal (2.5g) was oak (60%) and ash (40%). Oak roundwood (20%) was present.

Synthesis: This small accumulation of finds represents the disposal of food and fuel debris. The weeds are probably accidental inclusions.

Roman Kiln

Contexts: (479), (481) and (762) Roman Kiln K1

Macroplant: The macroplant assemblage numbered 393 and these were concentrated within deposit (479) which had 374 compared to 14 in (481) and five in (762). Crops made up the largest component of 369 caryopses, one chaff and two culm nodes. The species were wheat (33%),

bread / club wheat (6%), emmer / spelt (2%), six-row hulled barley (2%), barley (2%), oat (1%) and cereal (54%). The only other plant remains totalling 21 present in deposit (479). The species were one tufted vetch, eight sedge, four fat hen, one ribwort plantain and one black bindweed. The remaining three weeds could not be identified due to poor preservation.

Charcoal: In (479) the charcoal (6.0g) was formed of oak (90%) and apple / pear / hawthorn. There were four fragments of oak (0.1g) in (481).

Synthesis: The cereal and charcoal are residual crop drying waste and fuel associated with use of the kiln. The weeds are agricultural contaminants which is why they were concentrated within deposit (479) which also had the largest number of cereals.

Roman Oven

Contexts: (87) and (89) Roman Oven O1

Macroplant: A total of 165 cereal caryopses and one chaff fragment were scattered among the two deposits with 55 noted in (87) and 111 in (89). The species were wheat (34%), bread/club wheat (30%), emmer / spelt (1%), barley (1%) and cereal (34%). Other edible remains in both deposits included two tufted vetch and three vetch. There were 12 weeds in (89) formed of sedge (25%), dock (25%), common chickweed (8%), ribwort plantain (8%), knotgrass (8%) and wild radish (8%). The remaining weeds (18%) were not recognisable.

Charcoal: The charcoal assemblage was small (0.1g) and a single fragment of oak was present in (87).

Synthesis: The cereal and vetch are most likely residual food waste prepared within this feature and subsequently overlooked during later cleaning. The weeds may be food refuse or agricultural contaminants that were accidentally charred.

Contexts: (709), (710), (711), (712), (713) and (755) (Deposits Associated with Oven Lid)

Macroplant: A total of 236 cereal caryopses were scattered among contexts (709), (710), (711), (712), (713) and (755) with no evidence of selective disposal within any context. The species were bread / club wheat (27%), wheat (17%), oat (14%), six-row hulled barley (4%), emmer / spelt (2%), barley (1%) and cereal (35%). The only other evidence of possible edible food items was a single vetch in (710). Nine weeds were dispersed among four of the contexts except for (713) from which no weed taxa was present. The weeds were two bromes, two sedge, three black bindweed, one dock and one indeterminate.

Charcoal: A small assemblage of charcoal (12.5g) was dispersed throughout contexts (709), (710), (711), (712), (713) and (755) with no evidence of selective or deliberate disposal. The species were oak (55%), hazel (11%), apple / pear / hawthorn (11%), blackthorn (11%), ash (6%) and cherry (6%). Hazel roundwood formed 7% of the identified assemblage.

Synthesis: The cereal and charcoal are residual food and fuel associated with the use of the oven. The weeds are invasive.

Roman Pits

Context: (8) Roman Pit C14

Macroplant: The only finds were the remains of two charred tubers.

Charcoal: The charcoal (29.0g) was formed entirely of oak.

Synthesis: It is possible this feature was a cremation pit, and the oak was the fuel source used to heat it.

Context: (23) Roman Pit P3

Macroplant: There were 36 cereal caryopses, two elderberry, one piece of heather, two buds and six weeds. The crops were bread / club wheat (67%), wheat (8%), oat (8%), six-row hulled barley (6%) and cereal (11%). The weeds were one bromes and three grass. The last two seeds could not be identified.

Charcoal: There were three pieces of hazel (1.0g) of which two were roundwood.

Synthesis: The cereal and charcoal are a small mix of food and fuel debris disposed of within the pit. The elderberry may represent food waste or was from an invasive plant that grew nearby. The heather and grass may have been used as fuel or were components of turves.

Context: (42) Roman Pit P4

Macroplant: The assemblage was formed of 147 cereal caryopses, three fruit, four vegetables, three economically usefully plants and 32 weeds. The crops were bread / club wheat (47%), wheat (19%), emmer / spelt (1%) and cereal (33%). Evidence of other edible and useful plants were three elderberry, one tufted vetch, three vetch and three henbane. The 35 weeds were a mix of bromes, sedge, stitchwort, goosefoot, rush, ribwort plantain, grass, knotgrass, buttercup and wild radish.

Charcoal: The charcoal (2.0g) was oak (80%) and cherry (20%).

Synthesis: The cereal, fruit, vegetables and charcoal have derived from the disposal of domestic food and fuel residue. The henbane may have been exploited for medical purposes. The sedge and grass may have been used for fuel whereas the other weeds were most likely intrusive.

Context: (259) Roman Pit P16

Macroplant: There was no macroplant recovered from this pit.

Charcoal: There were two fragments of oak charcoal (0.3g)

Synthesis: The charcoal was of little archaeological import in understanding the function of this feature.

Context: (270) Roman Pit P17

Macroplant: The largest component of this assemblage was the remains of heather which due to their fragile nature were semi-quantified. Other finds were four wheat, one bread / club wheat, one barley and six cereal. The ten weeds were a mix of cleavers, grass, black bindweed, dock and wild radish.

Charcoal: The charcoal (12.0g) was dominated by heather roundwood (80%) along with apple / pear / hawthorn (20) of which 10% was roundwood.

Synthesis: This large quantity of heather may be the remnants of turf brought to site for use as a building and fuel material before being disposed of within this pit when no longer needed. The cereal is food debris and the weeds are accidental inclusions.

Context: (283) Roman Pit P4

Macroplant: There was one six-row hulled barley and one cereal caryopsis.

Charcoal: No charcoal was recovered from this pit.

Synthesis: The cereal is redeposited domestic waste.

Contexts: (338) and (339) Roman Pit P25

Macroplant: In deposit (338) there were five cereal caryopses identified as one barley, one bread / club wheat and three cereal.

Charcoal: From context (339) the charcoal (5.0g) was oak (80%) and apple / pear / hawthorn (20%).

Synthesis: The cereal and charcoal are food and fuel debris reworked into this pit.

Context: (375) Roman Pit PH3

Macroplant: The cereal assemblage was composed of seven caryopses, three chaff fragments, two culm nodes and a small quantity of straw fragments that were semi-quantified. The species were spelt (25%), oat (8%), six-row hulled barley (8%), emmer / spelt (8%), wheat (8%) and cereal (43%). There were a mix of seven weeds recorded as two sedge, one common chickweed, one hemp-nettle, two black bindweed and one buttercup.

Charcoal: The only species noted was splinters of oak (6.0g).

Synthesis: While this is a very small ecofact assemblage this mix of caryopses, chaff fragments and straw most likely derived from the disposal of small-scale crop processing waste. The weeds are probably agricultural contaminants. The oak may be part of a small structural component.

Contexts: (519) and (523) Roman Pit P33

Macroplant: A total of 57 cereal caryopses and two culm nodes were dispersed among contexts (519) and (523). The species were bread / club wheat (32%), wheat (28%), barley (3%), emmer / spelt (3%), oat (2%), and cereal (32%). Other edible items include five crowberry seeds along with one pea, two tufted vetch, two common vetch and two vetch. The weeds were a minor component composed of one sedge, one cleaver, one grass and one that could not be identified further.

Charcoal: In (519) the charcoal (3.0g) was a mix of hazel (50%) field maple (12.5%), ash (12.5%), blackthorn (12.5%) and oak (12.5%). Both hazel (12.5%) and blackthorn (12.5%) roundwood were present. From context (523) the charcoal (7.0g) was recorded as oak (70%) and ash (30%). Roundwood was made up of ash (20%) and oak (10%).

Synthesis: The cereal, fruit, vegetable and charcoal are the remains of domestic food and fuel waste disposed of within this pit. The weeds are intrusive.

Context: (675) Roman Pit P53

Macroplant: There were 21 cereal caryopses recorded as six-row hulled barley (14%), bread / club wheat (9%), oat (5%) barley (5%) and cereal (67%).

Charcoal: There were two fragments of oak (1.0g).

Synthesis: The cereal and charcoal are food and fuel debris reworked into this pit.

Context: (635) Roman Pit P54

Macroplant: The only finds were one wheat and six cereal caryopses.

Charcoal: Oak (2.0g) was the only species identified of which 40% was roundwood.

Synthesis: The cereal and charcoal are redeposited food and fuel waste.

Context: (651) Pit P55

Macroplant: The only find was one grass caryopsis.

Charcoal: There was no charcoal recovered from this deposit.

Synthesis: This material was of little archaeological help in understanding the formation and function of this pit.

Context: (759) Pit P76

Macroplant: There were four cereal caryopses.

Charcoal: No charcoal was noted within this feature.

Synthesis: The cereal was redeposited domestic waste of little archaeological value.

Contexts: (748) and (758) Roman Pit P61

Macroplant: In deposit (748) there were 51 caryopses recorded as bread / club wheat (21%), six-row hulled barley (6%), barley (6%), oat (4%), emmer / spelt (4%) and cereal (59%).

Charcoal: From deposit (748) the charcoal (5.0g) was oak (50%), cherry (40%) and buckthorn (10%). In lower fill (758) there was three fragments (4.0g) recorded as two pieces of apple / pear / hawthorn and one oak.

Synthesis: The cereal and charcoal have derived from the disposal of food and fuel debris.

Context: (885) Roman Pit P67

Macroplant: There were seven bread / club wheat, five cereal and one knotweed.

Charcoal: The charcoal (19.0g) was composed of large fragments of oak.

Synthesis: The oak may have formed part of a discrete structural element such as a post or stake. The cereal caryopses are food waste reworked into this pit whereas the weed is intrusive.

Contexts: (891) and (892) Roman Pit P68

Macroplant: A total of 501 macroplants were dispersed equally among contexts (891) and (892) with no evidence of selective disposal in either deposit. The largest component was 468 cereal caryopses followed by much smaller inclusions of two chaff fragments, one culm node, two vegetables and 28 weeds. The crops were oat (38%), bread / club wheat (16%), wheat (9%), six-row hulled barley (7%), emmer / spelt (2%), barley (1%) and cereal (27%). Some of the wheat caryopses displayed evidence of a possible fungal infection. Other potential edible items were one cabbage and one vetch seed. The weeds were a mix of black bindweed (28%), sedge (18%), knotgrass (18%), bromes (11%), dock (11%), ribwort plantain (8%), goosefoot (3%) and cleavers (3%).

Charcoal: In (891) the charcoal (2.0g) was ash (60%), oak (30%) and cherry (10%). From (892) the charcoal (2.0g) was dominated by hazel (60%) followed by cherry (30%) and oak (10%). Roundwood from (892) was formed of hazel (60%) cherry (10%) and oak (10%).

Synthesis: There is no evidence to suggest that most of the grain was diseased and was deliberately destroyed. Instead, it appears that while some of the grain may have been spoiled the remainder were still edible and these finds have derived from the disposal of domestic food residue alongside some fuel waste. The weeds may be intrusive and were introduced as agricultural contaminants and from plants that grew nearby on waste ground.

Contexts: (898), (903), (911) and (912) Roman Pit P70

Macroplant: A total of 97 cereal caryopses were scattered among deposits (898), (903), (911) and (912) with no evidence of selective deposition within any specific context within the pit. The species were six-row hulled barley (18%), oat (13%), bread / club wheat (11%), wheat (6%), barley (4%) and cereal (48%). A single common vetch was noted in (911). The five weeds were dispersed among (898), (903) and (912) and were one fat hen, two goosefoot, and one cleaver. The final weed could not be identified to species.

Charcoal: Charcoal (17.0g) was recovered from (898), (903), (911) and (912). The wood species (80g) were concentrated within deposit (898) from which ash (80%), apple / pear / hawthorn (10%) and oak (10%) was recovered. The next largest quantity of charcoal (6.0g) was noted in (611) formed of ash (60%), cherry (20%) and oak (20%). In (903) the species (2.0g) were apple / pear / hawthorn (50%), blackthorn (30%) and oak (20%). Apple / pear / hawthorn (10%), blackthorn (10%) and oak roundwood were present in (893). The charcoal (1.0g) in (912) was oak (60%) and ash (40%).

Synthesis: This pit was used for the disposal of domestic food and fuel waste. The weeds are intrusive.

Context: (945) Roman Pit P73

Macroplant: There were three cereal caryopses.

Charcoal: The charcoal (12.0g) was formed entirely of oak.

Synthesis: The cereal is redeposited food debris. The charcoal may have derived from a small structural element such as a post or stake.

Roman Posthole

Context: (98) Roman Posthole [96]

Macroplant: There was no macroplant recovered from this deposit.

Charcoal: There were three large fragments of ash (2.0g).

Synthesis: This is a small quantity of charcoal and is of little archaeological value in understanding the function of this feature.

Context: (770) Roman Industrial Deposit (769)

Macroplant: There was a large assemblage of 401 cereal remains, nine fruit, 302 vegetables and 22 weeds. The cereal was formed of 359 caryopses and 42 chaff fragments recorded as wheat (45%), bread / club wheat (18%), spelt (4%), emmer / spelt (4%), six-row hulled barley (2%), oat (1%), emmer (0.5%), barley (0.5%) and cereal (25%). Fruits included seven crowberry and two elderberry seeds. There was a large concentration of mixed vegetable seeds composed of common vetch, tufted vetch and vetch with over 300 seeds semi-quantified. There were also the remains of two peas. The weed assemblage was small with 22 finds recorded as dock (46%), grass (32%), black bindweed (10%), sedge (4%), and sheep's sorrel (4%). The remaining weeds (4%) were unidentifiable.

Charcoal: The charcoal (2.0g) was dominated by oak (70%) followed by heather (20%) and ash (10%). Roundwood was formed of heather (20%) and oak (10%).

Synthesis: The cereal, fruit and vegetables represents the deliberate disposal of domestic food waste. The charcoal is residual fuel debris deposited alongside the other domestic debris. The weeds are most likely invasive although some of these species such as grass and sedge have been used as a building and fuel material and dock and black bindweed are edible and have been collected for food.

Saxon Period

Context: (18) Possible Saxon SFB

Macroplant: There were 13 cereal caryopses identified as one oat, six bread / club wheat, one emmer / spelt, one wheat and four cereal. The other finds were one elderberry and two sedge.

Charcoal: There was no charcoal recovered from this ditch.

Synthesis: The cereal is food waste redeposited within this pit. The sedge may have grown alongside the edges of the ditch before being accidentally carbonised. The elderberry could be food waste or was a weed from plants that grew on nearby waste ground.

Discussion

Crops

From the Roman period the cereal assemblage totalled 4,447 caryopses, chaff, culm nodes and straw. The dominant cereal was wheat (32%) followed by bread / club wheat (18%), oat (7%), emmer / spelt (4%), six-row hulled barley (2%), barley (1.3%), emmer (0.1%), spelt (0.5%) and two-row barley (0.1%). These crops were all cultivated throughout Roman Britain (Renfrew 1993, 68–9; van der Veen, 1992). The results recovered from this period of occupation at Sandy are consistent with other similar sites in Bedfordshire in that wheat and six-row hulled barley were all cultivated and were mainstays within the diet and type of agriculture practised (Robinson 1995).

Wheat in particular (bread / club wheat) appears to have been the principal crop during this period with oat, emmer / spelt and barley having a much more secondary role. It was not possible to identify if the oat belonged to the cultivated or wild variety. The oat, emmer / spelt and six-row hulled barley were either cultivated as a marginal companion crop of the bread / club wheat or were arable weeds that were harvested accidentally alongside the wheat crop. The two-row barley was insignificant and is a weed of no agricultural importance. The cereal assemblage accrued from activities that may have included such as from grain drying, disposal of domestic food waste and from the ritual deposition of grave offerings within cremation deposits.

Cereal totalling 770 caryopses, two chaff and two culm nodes were concentrated within kiln K1 and from deposits associated with oven O1. The near absence of any chaff within these two features demonstrates that this material had already been threshed and winnowed prior to being dried. Grain before it can be stored long term or made into flour must be dried as otherwise it may become mouldy

and inedible. These cereal remains are residual crop drying and food waste overlooked within the kiln and oven when the two features were periodically cleaned.

Domestic food waste and some small-scale processing debris was disposed of within four ditches, one deposit and 15 pits but the most significant quantities occurred within ditches D4, D6, the possible SFB, pits P68 and P70. These five features were used for the deliberate disposal of domestic food waste composed mostly of wheat and bread / club wheat alongside smaller inclusions of oat, six-row hulled barley, barley and emmer / spelt. The cereal in the remaining features mostly accumulated through the accidental redeposition of domestic rubbish rather than representing long term or purposeful disposal of food and cooking debris.

Of note was the presence of a large quantity of grain within pit B which could represent an offering. The absence of any chaff fragments demonstrates that the grain included within this pit was formed exclusively of loose processed caryopses. It was noted that the cereal from this deposit was poorly preserved, and this has been noted at other cremation sites where it was speculated the grains had been precooked prior to their inclusion within the grave (Preiss *et al.* 2005, 368). It is therefore possible the grain from this pit B had undergone some form of cooking preparation before the final burning event.

A further three caryopses were scattered among cremation deposits C4, C12 and C13. Unlike the cereal from the large pit B which has the clearest evidence of a possible ritual offering, the caryopses from C4, C12 and C13 are more representative of redeposited material. The ritualistic role of grain within cremation deposits has previously been noted at other Roman sites throughout Europe and this activity was a common symbol of honouring the dead (Preiss *et al.* 2005, 362).

From the Saxon SFB the only finds were a small number of cereal caryopses. This assemblage is too small to provide any useful comparison with the results analysed from the Roman deposits.

Fruits

The small size of the fruit assemblage is not unsurprising as these plants, due to their fragile structure, tend to be underrepresented within most carbonised archaeobotanical assemblages (Zohary and Hopf 1993, 181). One reason for their survival at Sandy is perhaps their inclusion within cremation deposits.

In the Roman period the fruit remains were composed of crowberry, apple / pear / hawthorn, elderberry and grape which were concentrated within very specific features that was indicative of purposeful deposition. From cremation

C4 the remains of apple / pear / hawthorn and grapes were recovered. This was the only feature from which grapes were noted.

The recovery of the grapes could be evidence that this cremation held a special significance within the community. Grapes and raisins have been recovered from other cremations in Europe and this resource may have been perceived as a higher-status offering within this community (Preiss, *et al* 368–9). There is a small but growing body of evidence that grapes were cultivated in Southern England during the Roman period perhaps primarily for the production of wine but they may still have not been as readily available as they were in Europe (Renfrew 1993, 72). Crowberry, apple / pear / hawthorn and elderberry were present in Pit B and these berries and fruits would all have grown locally and consequently may not have the same economic value as the grapes.

The inclusion of fruit within these two features could be representative of deliberate offerings. Other evidence for the use and disposal of fruits was within ditches D4, D6, pits P3, P4, P33 and the possible SFB from which a small scattering of crowberry and elderberry were recovered. These seeds were present in features which were also used for the disposal of other food remains and these fruits are inclusions within general domestic debris.

Most of the fruits would have been gathered when seasonally available. The grapes and apple / pear / hawthorn were only recovered from cremation deposits suggesting that these individuals had some importance to the people who prepared their burials. Both crowberry and elderberry were recovered from cremation deposits but also from more general pits and ditches. This indicates that while crowberry and elderberry were incorporated within ritual offerings their presence at other parts of the site may be as inclusions of domestic debris. Elderberry also produces a dye and has been used as a diuretic and sudorific so it possible this species was employed for more than just food at Sandy (Dickson and Dickson 2000, 138).

Elderberry was noted in the Saxon SFB, which could be the remnants of food present within this feature alongside other redeposited domestic waste.

Vegetables

The recovery of vegetable remains are normally underrepresented within many carbonised assemblages, but their inclusion within specific contexts at Sandy may have contributed to their survival. (Zohary *et al* 1993, 181). The vegetables were concentrated within pit B and the possible SFB. In Pit B the remains of cabbage, common vetch, tufted vetch, smooth tare and vetch were all recovered and these are the remnants of food deposited as a possible offering within the feature. This

was the only deposit from which evidence of vegetables had survived. Peas, common vetch, tufted vetch and vetch were deliberately disposed of within the possible SFB alongside other domestic food debris. Vegetable remains were scattered in much smaller quantities among Roman ditches D4, D6, D18, kiln K1, oven O1, pits P33, P68 and P70. These finds accumulated through the disposal and reworking of domestic food debris.

Some of these vegetables such as pea, common vetch and tufted vetch may have been cultivated as a companion crop together with the cereal. Cabbage and smooth tare could have been gathered as a source of greens but perhaps more likely these species were introduced accidentally as a weed of one of the cultivated crops.

Economically Useful Plants

A single example of hemlock was present in pit B. This plant has been used from the classical period onwards as a painkiller, a sedative, to ease swollen joints and as a recreational drug (Bevan-Jones 2009, 68; Dickson and Dickson 2000, 127, 138). This species has previously been recorded at the Iron Age and Romano-British enclosed settlement at Watkins Farm, Oxfordshire (Bevan-Jones 2009, 67). This plant may have been used at Sandy during the Roman period for its medical properties and would have been available from the surrounding landscape (Stace 2010, 818). Its inclusion within pit B was probably deliberate and may have been a component of the ritual offering. It is also possible the elderberry from this same feature was also selected for its medical properties.

There was one henbane in ditch D4 and three in pit P4. This species while not native to Britain was believed to have been introduced during the Bronze age and was exploited from the Roman period onwards and probably earlier (Bevan-Jones 2009, 76; Dickson and Dickson 2000, 1223). This plant was widely used for anaesthesia and to treat travel sickness, tooth ache and stomach problems. This plant was either imported from abroad or may have been collected from the wild elsewhere as it does grow in the south of England.

Turf

The remains of heather were noted in ditches D4, D6 and pit P17 and these could be the remnants of turves. This material has long been collected for use as a building material and for fuel. It is likely that the turves were first used for construction during the Roman period and were later recycled as a fuel source when no longer needed. The absence of any heather and peat in the cremation deposits indicates that turves were not used as a fuel source within these types of features.

Woodland

The inclusion of one bud in pit B and two in pit P3 were probably introduced accidentally as a byproduct of the wood used as a fuel resource.

Weeds

Many of the weeds recorded were accidental inclusions from plants that grew on arable fields, waste ground, meadows and damp habitats. They could have been introduced as agricultural weeds transported to the site as an inclusion within the grain or they grew nearby on waste ground and along the silty edges of any ditches and pits before becoming accidentally charred and trapped within the confines of these features.

It is however possible some of these plants may have been gathered deliberately and used as a food resource, ritual offering, building material or for fuel. Species such as fat hen, goosefoot, black-bindweed, knotweed and dock are all edible and have been collected to supplement both human and animal diets (Renfrew, 1993. 26 and 71). Sedge, rush and grass have been used to provide flooring material, thatching, bedding and fuel. Species such as corncockle are agricultural contaminants which are toxic to both humans and animals if consumed so they are not likely to have been gathered deliberately in most circumstances.

In pit B it is possible that the weeds were gathered intentionally to fulfil a ritual role. A wide range of weeds were present and while some may be intrusive others may have been collected deliberately. Corncockle, pink family, cornflower and violet all produce colourful flowers that may have been deemed as suitable offerings. Corncockle would not have been selected as a food source as it is toxic but its inclusion within the pit was either as an accidental inclusion of the crops or it was chosen for its flower. Species such as sedge and grass may represent an additional fuel source alongside the wood. The fat hen, goosefoot and black bindweed may have been selected to provide additional sources of vegetables. It is also feasible that many of these weeds were in fact accidental inclusions but given the possible ritualistic nature of this deposit some of the plants could have been purposely selected. The weed assemblage recovered from the other Roman and Saxon deposits is generally dispersed throughout the site with no real evidence of deliberate or selective disposal.

The Charcoal

The tree species are all native and would have been accessible in the landscape surrounding Sandy. Alder and birch favour more damp habitats. Field maple,

hazel, ash, apple / pear / hawthorn, blackthorn, cherry and buckthorn are usually found in hedgerows, scrub or more open woods. Heather prefers more sandy or peaty soil and oak is adaptable to a variety of growing and soil conditions (Linford 2009).

The tree species utilised throughout the Roman phase of occupation was dominated by oak (61%) with much smaller quantities of ash (11%), cherry (7%), apple / pear / hawthorn (6%), heather (6%), hazel (5%), blackthorn (3%), field maple (0.4%), alder (0.2%), birch (0.2%) and buckthorn (0.2%) used. The deposits from which this material was collected was from a mix of cremation pits, ditches, kilns, ovens, pits and a posthole and there is clear evidence of cultural selection based on specific activities.

From the nine Roman cremations, oak was the sole species used in deposits C4, C7, C15, C8, C10, C11 and C13. In pits, B and C12 oak was present along with other wood species. Within pit B the fuel material was composed of field maple, alder, ash, apple / pear / hawthorn, cherry and oak. It is also possible field maple, ash and apple / pear / hawthorn and cherry were deliberately selected for use as these species produce a pleasant aroma when burnt. This may also explain why a mix of cherry and oak were used within cremation C12. The dominant fuel source used within all nine cremations was clearly oak which is a versatile wood that heats evenly and produces an agreeable scent when burnt.

Evidence of structural elements were noted in pits PH3, P67 and P73 and in all instances oak was the preferred species. A wider range of wood resources were selected for fuel. Buckthorn formed only a minor component of the assemblage and this was probably because this species does not burn well and produces excessive smoke. Alder and birch which do make for good firewood were also minimal components of this assemblage and this is either because these trees were not easily accessible within the surrounding landscape or that other wood species were preferred.

Conclusion

The taphonomic pathways that created the ecofact assemblage has allowed for the economic and ritual role of the macroplants in the Roman phase of occupation to be more fully understood. Certain food items composed of grain, fruits, vegetables, medicine and possibly flowers may have been deliberately incorporated within some of the cremation deposits as grave offerings. The remainder of the macroplant assemblage accumulated from corn drying waste left *in situ* along with the disposal of domestic food debris, small-scale processing waste and turves in the surrounding pits and ditches. The macroplant dated to the Saxon feature is representative of redeposited domestic food debris.

The charcoal assemblage has mostly derived from fuel debris associated either with human cremations or domestic fires although there is some evidence that some small structural elements constructed from oak were also present. The preferred wood species throughout the Roman occupation was oak with the other wood species having a much more marginal role as a fuel resource.

Analysis of the two ecofact assemblages clearly demonstrated that the occupants who lived and were ultimately buried at this site had access to a wide range of plant resources that were both locally sourced and perhaps imported from abroad. The grapes and possibly

the hemlock may have been imported to this site from elsewhere in Britain or abroad. The local Roman population had continued access to a wide range of crops, fruits, vegetables and woodland resources that they were able to exploit for food, medicine, fuel, building and to provide ritual offerings used to honour the individuals interred at the settlement. Given the small size of the of the Saxon ecofact assemblage it was not possible to draw any useful comparison between this phase of occupation and the earlier Roman period.

Appendix M: The Struck Flint

Andrew Peachey (External Specialist)

Introduction

Excavations recovered a total of ten pieces (153g) of struck flint (33g), predominantly exhibiting technological traits indicative of the Mesolithic period, but with sparse Neolithic to early Bronze Age flakes also present (Table 16).

Period of Origin	Implement / Flake Type	Frequency	Weight (g)
Mesolithic	Core	1	30
	Crested blade	1	66
	Blade	1	9
	Microburin	1	2
Early Neolithic	Blade	2	7
	Debitage	1	1
Late Neolithic to Early Bronze Age	Debitage	3	38
Total		10	153

Table 16: Quantification of struck flint

The assemblage was manufactured using good quality flint that ranges in colour from mid- to dark grey to near black with, where extant, a thin white chalky cortex.

It generally occurs in an unpatinated condition; however with the exception of a single Mesolithic core recovered from a deposit overlying the natural geology, the assemblage was recovered as residual material from Roman features or the topsoil / subsoil.

Methodology

The flint was quantified by fragment count and weight (g), with all data entered into a Microsoft Excel spreadsheet that will be deposited as part of the archive. Flake type (see 'Dorsal cortex,' below) or implement type, patination, colour and condition were also recorded as part of this data set, along with free-text comments.

The term 'cortex' refers to the natural weathered exterior surface of a piece of flint, and the term 'patination' to the colouration of a flaked surface exposed by human or natural agency. Dorsal cortex is categorised after Andrefsky (2005, 104, 115) with 'primary flake' referring to those with cortex covering 100% of the dorsal face; 'secondary flake' with 50–99%; 'tertiary' with 1–49% and 'uncorticated' to those with no dorsal cortex. A 'blade' is defined as an elongated flake whose length is at least twice as great

as its breadth, often exhibiting parallel dorsal flake scars (a feature that can assist in the identification of broken blades that, by definition, have an indeterminate length / breadth ratio). Terms used to describe implement and core types follow the system adopted by Healy (1988, 48–9).

Commentary on Implements and Technology

The Mesolithic flint work demonstrates multiple stages in the systematic production of blades, and possibly their modification into microliths. Central to this is a core recovered from deposit (167), which overlies the natural (168), thus may be *in situ*. The core is a bipolar type with blades removed from approximately half of the circumference of each of the opposed faces. However, its size (30g) suggests it was extensively reduced and rejuvenated to the point of being exhausted. When such cores were much larger, they needed to be carefully shaped in order to allow for systematic blade production; and one method of commencing the exploitation of the required striking platform was through the removal of a crested blade, such as that in pit P33. Once production had commenced, large quantities of regular blades could be removed with periodic rotation of the core through 1800, resulting in blades such as that in pit P27 which has dorsal scars from the opposed platforms of a bipolar core. Many blades could be used as simple unmodified hand or hafted implements, but a key component of Mesolithic assemblages are microliths produced by truncating and retouching blades to create points and barbs for projectiles. The principle method of truncating a blade is to work a notch into one lateral face and then snap it over an anvil. The biproducts of this are microburins, such as that in Oven O1, which represents the seemingly discarded distal section of such a blade.

In contrast to the Mesolithic blade, blades recovered from topsoil (1) and subsoil (2) exhibited unidirectional parallel dorsal scars, suggesting they were removed from a single platform core, more common in the early Neolithic period. While both blades were removed by soft-hammer percussion from a systematic core, there are no indications of use or wear, and they may represent uncorticated debitage flakes, similar to a small flake in ditch / pit P9.

Less regular and with more cortex are debitage flakes contained in ditches D1, D35 and D38. These flakes exhibit broad-squat profiles and more pronounced bulbs of percussions, indicative of hard-hammer or direct percussion. While it is conceivable they represent nodule trimming in the Early Neolithic, they are more typical of the less systematic debitage prod

Appendix N: Clay Tobacco Pipe

Kylie McDermott (AOC Archaeology Group)

Introduction

A total of two stems (4g) were recovered. No bowls or mouthpieces were identified.

Methodology and Discussion

The clay tobacco pipe fragments have been quantified using number of fragments, weight (g), and type (i.e. stem). The pipes have been recorded on an Excel spreadsheet to be included with the site archive.

Two pipe stems were recovered; from context (102) (1 fragment; 2g) and context (814) (1 fragment; 2g). No other clay tobacco pipe fragments were recovered.

Significance and Potential

The clay tobacco pipe assemblage is very small and consists of pipe stems only. Whilst a generic post-medieval date can be attributed to the pipe stems (Higgins 2017) the assemblage offers little further archaeological value. The assemblage is of low significance.

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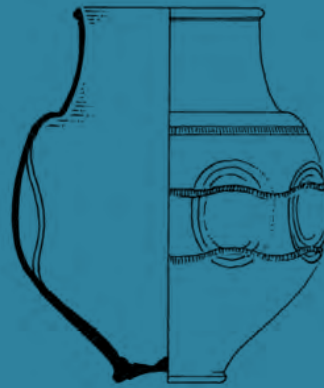
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This monograph details the results of excavations to the west of the Municipal Cemetery, Stratford Road, Sandy, Bedfordshire. The excavations revealed new evidence regarding Roman and Saxon settlement and burial practices in the area between the 1st and 6th centuries AD. Of particular note was the discovery of a town ditch and a later town wall, the presence of which suggests that the Roman settlement that formerly occupied the site was more substantial than previously thought. Within the town wall, evidence of land division and road infrastructure were discovered, as were ovens, kilns and numerous pits spanning the mid-1st to 4th centuries AD. Outside the town wall, a cremation cemetery developed during the earlier part of the Roman period and a possible offering or midden pit was created during the 2nd century AD. Another noteworthy find was the discovery of a Saxon-style sunken featured building (SFB) and an early Saxon inhumation, carbon dated to the 6th century AD, the presence of which raises the possibility of unbroken occupation between the Roman and post-Roman periods in the vicinity of the site.



AOC Archaeology Group, Unit 7, St Margarets Business Centre, Moor Mead Road, Twickenham, TW1 1JS

tel: 020 8843 7380 | fax: 020 8892 0549 | e-mail: london@aocarchaeology.com
www.aocarchaeology.com