Excavations at Wixoe Roman Town (WIX 022)

Kirtling Green to Wixoe Pipeline

Volume 2

Post-Excavation Assessment and Updated Project Design

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Client: Essex and Suffolk Water

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Post-Excavatin Assessment

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Kirtling Green to Wixoe Pipeline

Volume 2

Post-excavation Assessment and Updated Project Design

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Summary

Between the 31st January and the 6th May 2011, OA East conducted an excavation at the site of Wixoe Roman town, Suffolk (TL 7043) on the eastern side of the River Stour in advance of construction of a pipeline. This work follows on a staged programme of evaluations on the site (Krawiec 2009; Baldwin 2009; Krawiec and Mann 2010; Hopla and Krawiec 2010) which indicated a large Roman site survived within Fields 1 and 2. The excavation revealed features dating from the Late Neolithic/Early Bronze Age to the end of the Roman period. The excavation comprised a 10m-wide linear easement that extended for c.185m just within the eastern limits of the former town and a c.20m-wide linear easement extending for c.390m within the north-eastern part.

Ten prehistoric features were found across the excavation areas and these consisted of a Beaker pit, several Late Bronze Age to possibly Middle Iron Age pits and a ditch. These features represent probable sporadic occupation/use in these periods. The excavation revealed no definite Late Iron Age features or artefacts and it is probable that the town was established (at least within this excavated area) in the mid or late 1st century AD and its disuse seems to have been in the very early 5th century. The reasons for its establishment lies in that stratigraphic location of Wixoe being at the junction of a major river, the Stour, and on the route of at least two major Roman Roads, one running from Leicester, through Cambridge to Wixoe and then to Colchester and a second probable road from Great Chesterford to Wixoe and then Long Melford.

Relatively few features or artefacts date to the 1st century suggesting the town took some time to be established. There is substantially more evidence for occupation from the early/mid 2nd with an increase into the 3rd century, with this level of activity being maintained or even expanded near the River Stour into the early 5th but declining in the north-eastern part in the Late Roman period. The excavation results indicate that the town was divided into areas of different use (domestic, industrial, pits etc.) from the Early Roman period and most of these areas continued in-use to the end of the site. The range of features uncovered included three roads (probably the road to Long Melford, one heading towards Icklingham and a minor internal one), parts of two cobbled courtyards, at least seven post hole and/or beam slot domestic buildings (several surviving with good plans), a 4th century town boundary ditch, several industrial ovens and hearths (some with structures around them) with evidence for copper, iron and lead working. Part of a pipeclay figurine of a ram was possibly deliberately placed within one of these former industrial features. There were also two human burials with grave goods in addition to a few animal burials.

The most common feature for all phases were pits and these were concentrated within various parts of the excavation areas. Some of these may have been pits for quarrying, others for storage and a few acting as latrine pits although this activity may have been a secondary usage while the feature was being backfilled. The backfill of some of the pits produced significant quantities of domestic and other refuse with a few displaying evidence of primary deposition. Within a few pits there were probable placed deposits including complete inverted vessels on some of the pits' bases. The excavation has recovered a large quantity of artefacts including over 500kg of pottery and 200kg of animal bone. There have been a number of very interesting individual finds including a dog carved on the end of a bone pin for which no parallel has yet been found.

Wixoe is one of a class of about 150 Roman 'small towns' in lowland Britain and is the first major excavation of one within Suffolk for more than 25 years. The results of the excavation are of at least regional importance and will contribute to a number of the published regional research aims and objectives such as understanding the role towns played as centres of supply and demand and changes in town layouts and housing densities.

1 INTRODUCTION

1.1 Project Background

1.1.1 The archaeological background of the Essex-Suffolk pipeline scheme including the Written Scheme of Investigation (WSI) has been described in volume 1 of this report, which also includes all the archaeological sites within the Suffolk part of the pipeline scheme. This report (vol 2) deals only with the Wixoe Roman town excavation (WIX 022).

1.1.2 The excavation work at WIX 022 is the last in a staged series of archaeological works for this project with the earlier work comprising geophysical survey (Baldwin 2009), fieldwalking (Krawiec 2009), trial trenching (Krawiec and Mann 2010) and palaeoenvironmental assessments (Hopla and Krawiec 2010; Young *et al* 2011).

1.2 Geology and topography

1.2.1 The site is adjacent to the east bank of the River Stour, which forms the county boundary between Suffolk and Essex. The river shares its name with four other English rivers; it is of ancient Celtic origin and probably means 'strong, powerful river'. The underlying geology consists of river terrace gravels and Lowestoft till formation along the valley floor (Area 1) with clay and silts along the higher ground (Areas 1a and 2).

1.3 Archaeological and historical background

Wixoe Roman Town

1.3.1 The excavation lies on the eastern side of the River Stour (Suffolk) although there were parts of the former Wixoe Roman town that lay on the western banks of the river (Essex). The town has been largely archaeologically untouched having been under agricultural usage since being abandoned more than 1500 years ago.

Western bank of the River Stour

1.3.2 There have been small archaeological works in and around the former town along the western bank of the Stour since the 18th century. The first recorded features were noted in antiquarian diggings which were recorded by Walford in 1803 at TL 706 430. This work found an earthwork enclosure at Watsoe Bridge, astride the suspected line of the Colchester to Cambridge Roman Road, which has been interpreted as a possible military Roman 'camp' measuring *c*.450m by *c*.380m. Walford states that its *vallum* was levelled in 1793 (Walford 1803, 70-1; Fox 1923, 178-9; Smith 1987, 167). More recent observations (Essex HER 6958) have failed to identify the date or function of this site.

1.3.3 Two inhumation cemeteries lay respectively *c*.200m and *c*.500m to the south-east of the earthworks (at TL 7098 4266 and 710 427). At the former there were several inhumations with two of the burials being accompanied by urns (Walford 1803, 68-9). Most of the inhumation burials were identified as being Romano-British (VCH Essex 1963, 50-51; Essex HER 6955; 6963-4). At the other site two *tumuli* were found (Walker 1909, 162); these were destroyed before 1903 but may well have been Neolithic (VCH Essex 1963, 50-51). Fox depicted the Roman road from Cambridge as possibly running directly to the west of the River Stour and presumably down to Colchester (Fox 1923, map appendix). It is possible part of Wixoe Roman town also lay along this road.

Eastern bank of the River Stour

1.3.4 There have been a few archaeological discoveries/interventions on the eastern side of the river which have been recorded by the Suffolk HER under a number of different terms *e.g.* a villa/cemetery/*mansio*/road (HER nos MSF6375, 4194, 4195, 6376, 16579, 6373 and 23695).

1.3.5 Surface finds have been reported in this location from at least the beginning of the 19th century (Walford 1803, 71). A Roman inhumation cemetery was discovered in the 19th century by labourers in a gravel pit (VCH 1911, 320). Aggregate extraction and excavations in the early 20th century revealed a large quantity of tile, painted plaster and pottery. Labourers in the 19th and 20th centuries recorded the presence of human remains in a possible cemetery located to the north-east of the pipeline.

1.3.6 Despite these findings the significance of these discoveries was not fully recognised and this can be seen by Fox in the early 20th century who only recorded Wixoe in this eastern side as a findspot (1923, map appendix). The Roman town to the east of the river was only really beginning to be understood from the mid-20th century through, for example, air photographic work (St Joseph 1953). Trackways, and numerous pits were revealed as well as a "villa" building with five or six rooms within what perhaps was a wing of a larger building directly to the south of the excavation in Area 1 (Fig. 2). This building, with flint foundations was partially uncovered in 1950 but most of which had been destroyed by a quarry (St Joseph 1953, 54) with very little record of it, although the presence of tesserae, wall plaster, window glass *etc.* was recorded (WIX 003).

1.3.7 From the 1970s surface finds were being recovered largely by fieldwalking by the Haverhill and District Archaeological Group and through metal-detecting (Plouviez 1995, 79, fig. 7.6; Rodwell 1975, fig. 2; Owles 1977, 77; Suffolk HER WIX 005-9, 011, 013). Most of the finds date to the 1st to 4th centuries AD but includes a few Iron Age and Early Saxon objects.

1.3.8 The main metal detectorist in the area, Mike Cuddeford, has generously supplied five separate lists of coins and/or objects recovered from Wixoe (mostly by himself) but also from other detectorists. The *c*. 4,000 coins and *c*. 250 'small find' objects found by metal detecting (the vast majority of Roman date) have been identified by Mike Cuddeford including full coin descriptions with RIC numbers, weights, sizes *etc.* Several hundred of these have 8 figure TL grid reference numbers. He has briefly given a description of the objects in these lists. A minority of these artefacts have been referred to in publications. In Plouviez's 1995 article, she analysed 414 coins found at Wixoe and produced a histogram (1995, fig.7.5). Plouviez noted that the Wixoe coin profile is heavily biased towards the 3rd and 4th centuries; activity on the site is, however, attested from the 1st century onwards. This is borne out by recent metal-detected finds from the site (Martin *et al* 2002, 212) which included coins of 1st-4th century date. A frog or toad copper alloy artefact found by Mike Cuddeford was reported on in *Britannia* (Drury and Wickenden 1982, 241 and fig. 1, no.3). A gold necklace link and a bronze finger ring as well as a Roman brooch were also reported in the Suffolk County Journal (Martin *et al* 1986, 144-145) whilst three of the Saxon objects from the site, including a girdlehanger, have been drawn (West 1998, fig. 135, 3-5).

1.3.9 These five lists of coins and/or artefacts recorded by Mike Cuddeford comprise:

1) a list of 27 Roman silver 1st and 2nd century AD coins

2) a list of 3,672 coins. These comprise eight Iron Age coins, 3,636 Roman coins, mostly 3rd and 4th century including over 100 dating after 388 AD (Arcadius, Vallentian II and Honorius). There are just 28 medieval and post-medieval coins and jettons in the assemblage.

3) A small finds list of 252 objects. The vast majority are Roman metal objects but includes a few prehistoric flint and metal items with a possible La Tène decorated mount, a handful of possible Saxon objects including a copper alloy bead and more than 20 medieval artefacts. The Roman items comprise a range of objects including nearly 40 brooches including a phallic type, a dozen pins, *c*.20 rings, 10+ mounts (some of possible military origin and a zoomorphic type), many bracelet fragments, tacks, tweezers, nail cleaners, a terret, a few mirror fragments, several seal boxes, a spoon handle, an iron key, many lead weights and pot mends and other objects. A silver stud of possible Roman date with an animal depicted (likely a boar) could not be paralleled in a report when submitted as treasure trove. This stud may be a decorative element of military uniform or regalia; interestingly the boar was a symbol of the XX Legion which controlled this area in the 1st century AD.

4) Five post-medieval and modern coins

5) A summary of finds in the possession of the Stephens family, owners of the land at Wixoe. These were given to them by metal detector users who searched the site in the 1970s and 1980s, and were reportedly found on the site. There are 256 Roman coins recorded of which 10 date before the middle 3rd century. In addition there are 22 small finds including four brooches, a seal box, a ring, a bell, nine lead weights or repair mends and six medieval and post-medieval objects.

1.3.10 Wixoe was recorded as being on two major Roman roads by Margary (1973). Route 24 was the most important of these roads (Via Devana) running from Godmanchester, through Cambridge to Wixoe and then Colchester (Margary 1973, 210-212). Route 34a was a route from Wixoe to Coddenham via Long Melford. The significance of Wixoe was highlighted by Smith in 1987 when he listed Wixoe as one of 148 major roadside settlements in lowland Britain, with Wixoe located on the major road from Leicester (*Ratae*) (Smith 1987, fig. 1).

1.3.11 In 1988 Wixoe was recorded as one of eight small towns in Suffolk with Icklingham, Pakenham, Long Melford, Coddenham, Wenhaston, Hacheston and Felixstowe (Moore with Plouviez and West 1988, 38). All these towns except Wenhaston lay on the known main roads at, or very near, a river crossing. It was argued that as they were no more than 20 miles apart they were presumably market centres (*ibid,* 38; N.B. the publication quotes 10 miles but this is a mistake and should read 20 miles - Plouviez *pers. comm.*).

1.3.12 In the late 1980s a late 1st-early 2nd century cremation burial was found on the edge of an Anglian Water pumping station (Fig. 2) which was constructed in the middle of the former town. The burial contained a large grey ware jar with a samian bowl as a lid, and a small carinated cup (Martin *et al* 1991, 262-263, fig. 45 and Frere 1991, 260).

Essex/Suffolk pipeline scheme

1.3.13 The route of the proposed pipeline was walked by an Entec archaeologist over three days between 26th-28th August 2003 and a further visit took place over 8th-9th November 2005 (Entec 2007, E319). Archaeological monitoring of a trial hole undertaken in Wixoe as part of a geological survey by Entec in November 2004 recorded a grave cut with associated human skull fragments and Romano-British pottery (Caruth 2004a; WIX 017). A geophysical survey was carried out over part of Wixoe Roman town in April 2005 to help ascertain route options for the pipeline (Bunn and Masters 2005). This geophysical report confirmed that there were extensive anomalies within the area of the town. In 2007, Entec produced a desk-top assessment of the proposed pipeline route (Entec 2007). This desk-top concluded that the Wixoe Roman town area was of regional or county importance (*ibid*, E366).

1.3.14 Birmingham Archaeology was then appointed to carry out a staged evaluation of the archaeology along the pipeline and a programme of associated works:

Stage 1: Fieldwalking and palaeoenvironmental investigation

1.3.15 In November 2008 Birmingham Archaeology undertook an archaeological fieldwalking and palaeoenvironmental investigation along the proposed pipeline route (Krawiec 2009). The two fields within the Wixoe Roman town area were walked at 10m intervals covering the full width and length of the pipeline route. Field 1 had a high concentration of flint tools and debitage with 19 worked flints recovered including two scrapers and two awls. A 'large' collection of Roman pottery mostly dating to the 2nd to 4th centuries was recovered from the length of the pipeline in Field 1 (Fig. 1). Roman tile was also recovered from this field indicating the presence of possible buildings. Field 2 contained a continuation of the Roman pottery and tile seen in Field 1. There was a concentration of flint debitage and tools immediately to the north of the southern field boundary, iron nails were also recovered by metal detector. The results led Birmingham to conclude that Field 2 represents a continuation of the site seen in Field 1 (Krawiec 2009; Fig. 2).

1.3.16 The auger survey that took place along the eastern banks of the river Stour indicated relatively low palaeoenvironmental potential of the deposits in this area. However, the area immediately to the north of the pumping station on the western bank at Wixoe was identified as having the potential to preserve significant palaeoenvironmental remains (Fig. 2; Krawiec 2009) .

Stage 2: Geophysical survey

1.3.17 The second stage of the evaluation, a geophysical survey, was undertaken at the same time as the fieldwalking and took place only within Field 1 of the Roman town during November and December 2008 (Baldwin 2009; Figs. 2 and 3). Whilst the gradiometer survey took place across the whole field (7.7ha), the resistance survey comprised 65 grids (20m x 20m) set out over the eastern end of the field (2.5ha). These surveys revealed a complex of regular enclosures straddling a broad avenue. Subsidiary enclosures and tracks were also noted. Evidence of industrial activity was interspersed throughout the site. The location of a substantial stone building with internal divisions was confirmed to the eastern side of the route. Taking into account the results of the field walking survey, it is thought the site might represent a Romano-British 'ladder' settlement.

Stage 3: Trial trench evaluation (not on plan)

1.3.18 A trial trench evaluation by Birmingham Archaeology was carried out between September 2009 and February 2010 (Krawiec and Mann 2010). This evaluation found Roman activity extending from the River Stour to the far north of Field 2. Four trenches were located within Field 1 (Trenches 1- 4) and seven within Field 2 (Trenches 5-11). The geophysical survey (Baldwin 2009) demonstrated the location of possible structures to the north and south of the trenching area with the results being more indistinct within the pipeline easement. The lack of identifiable discrete archaeological features by the geophysical survey may be due to the presence of occupation or ‘dark earth’ layers which overlie most of the archaeology within Trenches 1-3. This layer was not, however, present in Field 2 but there is the suggestion from the findings in Trench 9 that the possible structural remains may in this trench have had complex associated layers. The environmental evidence, although poorly preserved, showed that there was arable farming occurring at this settlement along with the exploitation of woodland resources for fuel. The evaluation stated that the number and range of artefacts recovered from Fields 1 and 2 was comparable to other small towns in the region.

Large quantities of pottery and tile as well as several interesting small finds were recovered, the latter included two bone pins and a broken antler block from a composite fitting.

Stage 4: Further palaeoenvironmental investigation

1.3.19 In March 2010 Birmingham Archaeology undertook further palaeoenvironmental work on the western side of the river (Hopla and Krawiec 2010) The survey recorded a possible palaeochannel as well as floodplain deposits associated with the former course of the Stour just north of the pumping station. The channel had a maximum depth of 3.90m with the main deposit represented by a well humified silt peat. The report stated that the peat deposits within the channel and floodplain were likely to contain microfaunal evidence for environmental change and recommended further analysis of these deposits.

Stage 5: Further geophysical survey

1.3.20 The initial geophysical survey recorded a stone building with several rooms c.50m to the south of the proposed pipeline route. Birmingham Archaeology undertook a further, more detailed, geophysical survey over this structure.

WSI: Preparing for excavation

1.3.21 After the Birmingham Archaeology evaluation stages had been completed, Essex and Suffolk Water appointed URS-Scott Wilson, now URS, to design the archaeological mitigation associated with the construction of a new pipeline scheme. The Written Scheme of Investigation (WSI) for the northern area, which included the site of Wixoe Roman town, was prepared in November 2010 (Finch 2010).

1.3.22 The WSI noted that the excavation was initially to take part in both Fields 1 and 2 across the full width (40m) of the stripped pipeline easement (totalling *c.*11,000 m²) as well as an area for the site compound nearest the road on the western side of excavated strip through Field 1 (Finch 2010, fig. 2). This proposed area was later amended, with the excavation area being reduced within Field 1 to a 10m wide stripped area and an area up to *c.*25m wide in Field 2, with an additional *c.*15m area left unstripped and used to house the soil bund. The result of the reduction in the excavation size was that the Birmingham Archaeology evaluation Trenches 1-3 were to the south of the excavation strip in Field 1. The area of the proposed compound in Field 1 was moved from the area to the south of the excavation area to the north side.

1.3.23 The WSI stipulated that the excavation would "investigate and record Roman occupation features, in the form of a 'dark earth' occupation deposit sealing dense cut features across parts of the site, structural remains, ditches, pits, post-holes and finds identified from geophysical survey, fieldwalking and trail trenching" (Finch 2010). The dark earth deposit was to be hand sampled in 2.50m or 1.00m squares to be agreed on site on the basis of the complexity/extent of such layers with Essex and Suffolk Water's archaeological representative and Suffolk County Council Archaeological Officer.

1.3.24 The sample strategy for excavation was that a minimum of 10% of the fills of substantial linear features (ditches *etc.*) with additional segments (up to a maximum sample of 20%) would be excavated where good quality artefact/ecofact assemblages had been recovered from initial segments, or where insufficient data to address the project objectives had been recovered. All pits were to be half-sectioned. Where good quality artefact/ecofact assemblages had been recovered, or where understanding of the form and function of the pit may be enhanced, additional excavation was to be

agreed in consultation with Essex and Suffolk Water's archaeological representative and the County Archaeological Officer.

Stage 6: Geoarchaeological Investigation on land at Wixoe Pumping Station

1.3.25 Ten boreholes were drilled on the 22nd and 23rd March 2011 adjacent to the Wixoe Pumping Station and the cores of three of these were selected for detailed analysis (Young *et al* 2011). These found that sand, silt and clayey deposits overlay an undulating gravel deposit and these were probably laid down in the late Pleistocene or early Holocene during a period of high-energy deposition. Sealing these layers were richly organic deposits in all three boreholes. Terrestrial seeds from the base of a 2.41m thick peat deposit in borehole 1 were radiocarbon dated to 1170 to 990 cal. yr BP (cal. AD 780 to 960; BETA 301111) whilst seeds from the top of the peat were radiocarbon dated to 790 to 690 cal. yr BP (cal. AD 1160 to 1260; BETA 301110). The analysis of pollen, waterlogged wood, macrofossils and seeds from this organic sequence are indicative of a damp, open and disturbed environment by human activity over this c.400 year period.

1.3.26 The boreholes were located within the middle of the Roman town but no deposits were dated to this period.

1.4 Acknowledgements

1.4.1 The author would like to thank Essex and Suffolk Water for funding the project. Thanks are also extended to URS for commissioning the excavation and especially to Nick Finch who greatly helped with the smooth running of this project. Work was done under the auspices of the main contractor, Farrans, who supplied both the machinery and the welfare facilities and were helpful throughout. James Drummund-Murray managed the project for OA East and Rachel Clarke edited this report.

1.4.2 The WSI was written by Nick Finch and the archaeological works were monitored by Dr Jess Tipper of Suffolk County Council. Mike Cuddeford generously provided details of the coins and objects metal detected with the former town. I am grateful for specialist analysis from Andy Bates, Peter Boardman, Lisa Brown, Nina Crummy, Anthony Dickson, Carole Fletcher, Rachel Fosberry, Chris Howard-Davis, Alice Lyons, Ruth Shaffrey, Dan Stansbie, Zoë Ui Choileáin and Steve Wadeson. The illustrations were drawn by Lucy Offord who also surveyed the excavation area; the overhead photographs was taken by Lindsey Kemp. Steve Critchley kindly metal detected the site. The author directed the excavations with Graeme Clarke, Anthony Haskins and Tom Lyons (supervising) and assisted by Liz Collison, Steve Collison, Nick Cox, Kate Clover, Brenton Culshaw, Michael Green, Kate Hamilton, Yvonne Heath, Vicki Jamieson, Jan Janulewicz, Lindsey Kemp, Pat Moan, David Maron, Dennis Morgan, Steve Morgan, Julian Newman, Nick Taylor, Lianne Waring and Al Zochowski.

2 PROJECT SCOPE

2.1.1 This assessment deals solely with the 2011 excavations at Wixoe Roman Town (WIX 022). Results from the previous stages of works have not been integrated into this PXA. The data recorded in the Birmingham evaluation reports will be integrated into the forthcoming publication report.

3 INTERFACES, COMMUNICATIONS AND PROJECT REVIEW

3.1.1 The evaluation stages were carried out by Birmingham Archaeology and they have lent OA East their archive from these works.

3.1.2 This post-excavation assessment report will be distributed to the client via its consultants (URS) for comment and approval. The document will then be distributed to Suffolk County Council (Dr Jess Tipper).

4 ORIGINAL RESEARCH AIMS AND OBJECTIVES

4.1 Research Aims and Objectives

4.1.1 The WSI recorded the Research Agenda questions for the Romano-British period to include "food: consumption and production, agricultural production, landscapes, and rural settlements" (Finch 2010, section 3.4).

4.1.2 The scope of works for the site (Fields 1 and 2) were listed as "Investigate and record Roman occupational features, in the form of a 'dark earth' occupational deposit sealing dense cut features across parts of the site, structural remains, ditches, pits, post-holes and finds identified from geophysical survey, fieldwalking and trial trenching" (*ibid*, Table 1).

4.1.3 The updated Research aims and objectives are recorded in Section 7 below.

5 SUMMARY OF RESULTS

5.1 Introduction

Methodology

Areas 1 and 1a

5.1.1 A tracked 360° machine under constant archaeological supervision, was used to remove the topsoil and subsoil. A dumper then deposited the soil on the baulks on either side of the excavation area in Area 1. The topsoil was first removed and the exposed subsoil or natural was then scanned with a metal detector. Artefacts recovered from the subsoil were given a number and their locations surveyed in using a Leica GPS. A modern road ran through the excavation area to the Anglian Water pumping station to the north of Area 1 (Fig. 2). The excavation stopped *c.*3m on either side of this road which was left *in situ* as the contractor proposed to drill its pipe under the road and thereby not affecting the archaeological deposits within this part of the site. The excavation to the west of the road was called Area 1 in the excavation whereas to the east this part of the site was called Area 1a.

5.1.2 The subsoil was then removed down to the natural except in three areas of Area 1. Firstly, topsoil was removed from the area of the proposed compound. On the eastern side of this proposed compound, stone footings of a building were exposed. As a consequence, the compound was reduced in size with the topsoil in this eastern area being reinstated.

5.1.3 Secondly, a black soil deposit c.40m long was uncovered within the western half of excavation in Area 1 and this was initially left *in situ*. Thirty-four 2m by 1m test pits were hand excavated through this black earth with each test pit given a unique context number (not on plan). In the western third of this area, the black soil sealed cobbled surfaces, whereas in the extreme eastern area this layer stopped at an oven complex whilst over the remainder this soil deposit sealed features and natural. As a result, where the black earth sealed the cobbles and around the oven complex it was removed by hand, whereas elsewhere a kabota mini excavator was used with an archaeologist supervising the removal of the black earth layer. The cobbled surfaces were cleaned and recorded before being removed by kabota machine. Several intercutting pits, post holes and ditches were revealed under the cobbles, cutting the natural.

5.1.4 Thirdly, near the eastern limits of Area 1, an area of stones was exposed after the removal of topsoil. A soil area of 7m by 6m around these stones was left and not machined to natural as it was thought the stones may have been part of an upstanding structure. Initially a 2m by 1m rectangular test pit grid was laid over this area with a 50% sample proposed to be hand excavated. After hand excavation of a few of these test pits, it was shown this area was not a building complex but comprised intercutting pits within which one large pit had been backfilled with a layer of stones. A representative sample of these pits was then sectioned and hand excavated.

5.1.5 A large number of pits were uncovered within several parts of Area 1. The main hand excavation started within the eastern side of Area 1 and excavation found that pits in this location contained large artefact assemblages within their backfills. Initially, Dr Jess Tipper of Suffolk County Council, stipulated that all these pits should be 100% excavated. It soon became apparent after a dozen had been emptied that this quantity of deposits was not unusual. As a result all the other pits within the excavation were

subject to 50% excavation except a few where there was an important primary assemblage.

Area 2

5.1.6 In Area 2, the topsoil was removed and deposited within the *c.*15m area to the east of the excavation. A *c.*5m area along the most eastern part of the area next to this topsoil bund was initially excavated and recorded. This area was fenced off and then used as a haul road to allow contractor's machinery through the site. The subsoil in Area 2 was removed and deposited within areas of the site where there were no archaeological remains or where a former 19th century railway had destroyed all the earlier archaeology.

5.1.7 During machining a human inhumation was found and was covered with a plastic sheet until the burial licence was obtained. Once this occurred, the burial was excavated.

Environmental sampling

5.1.8 The environmental sampling strategy at WIX 022, followed the WSI recommendations (Finch 2010, sections 6.47-6.51). The English Heritage Regional Advisor for Archaeological Science was notified at the commencement of the project and although did not visit, was verbally consulted. In addition, the OA East Environmental Officer visited the site and advised on sampling policy. All the samples taken were for bulk flotation. No features were waterlogged and so wood was not found except as charred fragments and some of these were recovered within bulk samples (Table 56). Samples of particular importance included a representative quantity of the black earth deposit on the western side of the site (four samples), primary fills of archaeological deposits were targeted, burnt features (hearths/ovens) and burnt deposits as well as other thought of interest including probable cess.

5.1.9 A total of 118 bulk samples were taken from layers and features within the excavation. Most of these samples were of 30L volume but several were less and these mostly came from sampling small features such as post holes or from contents of vessels, samples from within burials etc. The break down of the bulk samples comprised four samples at 2L, three samples at 5L, 17 samples at 10L, nine samples at 20L, 78 samples at 30L, three at 40L and one at 60L with a further three samples of at least 10L in volume.

5.1.10 During flotation of the samples, hammerscale was extracted by running a magnet through the residues and examining the resultant magnetic material under a binocular microscope.

Site records

5.1.11 The evaluation numbers assigned by Birmingham Archaeology to their site records started at 1. As a result, the numbers given out in the excavation were different to avoid any confusion with, for example, context records beginning at number 1000 (Appendix 1, Table 15).

Descriptions of features in the PXA

5.1.12 This report has suggested some possible functions to features on site e.g. water holes, various types of pits, post holes *etc.* At publication stage features will be re-examined in detail and any suggested function will be explained with the evidence weighed for and against. An example of this proposed examination is the evidence for structures on site including buildings. Here, post holes, slots *etc.* will be analysed to see whether there had been post pipes, packing and any other relevant information.

Results (Figs. 4-7, Plates 1-10)

5.1.13 There were 1486 contexts taken for the excavation with 171 currently unphased with the remainder assigned to Phases 1-5 (Table 1). The phasing shows significant occupation only occurred in the Early to Late Roman phases. The relatively large quantity of Middle Roman contexts reflects the expansion of the town in this period, although the quantity of contexts were partly affected by a significant number of deposits within pits belonging to this phase. There were very few post-Roman features/layers present on the site. The limited time period of occupation means there was relatively little contamination of features.

5.1.14 There are four plans produced showing the features recovered by Phase (Figs. 4-7). Figure 4 covers Area 1 only, whilst Fig 5 records features from Area 1a and the southern part of Area 2 and Figs. 6 and 7 has features from the central and northern extents of Area 2.

Phase	**No. of contexts**	**% of contexts**	**Timespan of phase**
Phase 1 (Prehistoric)	26	1.7	Late Neolithic/Early Bronze Age to c.Late Bronze Age up to *c.*Middle Iron Age (*c.*2000 years)
Phase 2 (Early Roman)	230	15.5	Mid 1st to early-middle 2nd century (< 100 years)
Phase 3 (Middle Roman)	687	46.6	Mid 2nd-Late 3rd (>100 years)
Phase 4 (Late Roman)	318	22.8	Late 3rd-Early 5th (>100 years)
Phase 5 (post-Roman	22	1.5	*c.*1500 years
Unphased	171	11.5	
	1486	**100**	

Table 1: WIX 022 contexts by phase

5.2 Phase 1: Prehistoric (Figs. 4 and 6)

Summary

5.2.1 Just ten features (1.7% of the site's contexts) date to the prehistoric phase and these were found across the site, although most were found within Area 2. It is likely that there would have been several/many more prehistoric features but these were destroyed by the later Roman activity across the site. All of the ten prehistoric features recovered were relatively small and shallow and it is therefore not surprising that after nearly 400 years of the site being a Roman town, several/many other such features if present would have been removed. The pottery from these features has only survived as very abraded fragments with the prehistoric pottery weighing on average just 7g (See Section B.6). The majority of the prehistoric pottery was residual, found across the excavation areas in 53 contexts.

5.2.2 These surviving features and the residual pottery date to two main periods, *c.* Late Neolithic/Early Bronze Age and around the Early Iron Age. A few sherds may be Middle or Late Bronze Age, a few sherds are Middle Iron Age in date and there are no definite Late Iron Age sherds. Middle and Late Iron Age pottery is normally more robust than vessels from the earlier prehistoric periods and the lack of Late Iron Age pottery is therefore significant.

Late Neolithic/Early Bronze Age

5.2.3 Evidence of sparse Late Neolithic/Early Bronze Age activity/occupation is represented by a single 'Beaker' pit (**1288**) in the eastern side of Area 1, although fragments of Late Neolithic/Early Bronze Age pottery were found in three different Roman features in Areas 1a and 2. The Beaker pit (**1288**), measured 1.8m long by 1.1m wide and 0.39m deep and it had steep sides and a flat base. It was filled with a mottled red brown and mid brown sandy silt containing a substantial part of a decorated Beaker and some 30 worked flint pieces including a core which may be of Neolithic date. A fragment of a Neolithic coarse ware sherd (possibly a food vessel) was found in Area 1a (Late Roman ditch **1646**). In Area 2, a sherd of a possible undecorated Beaker vessel was found in Early Roman pit **1942**, and two more small sherds were found within a Late Roman cobbled surface (**1740**).

Late Bronze Age to Middle Iron Age

Area 1

5.2.4 Two adjoining pits (**1334** and **1336**) in the eastern side of Area 1 are likely to be Early Iron Age period although the latter pit was not dated. The pits were of a similar size (1.5m and 0.7m in diameter respectively and both were 0.5m deep). They were both backfilled with a single deposit comprising a mid reddish brown silty sand. Two Early Iron Age pottery sherds were found in the former pit as well as 14 worked flint pieces.

5.2.5 A collection of small Late Bronze Age, Early and Middle Iron Age pottery sherds were recovered across Area 1 from 27 Roman pits and layers, mostly only a single or two sherds in each. The large majority of the pottery appears to date to the Early Iron Age and included a West-Harling style sherd from Middle Roman pit **1088**. A few pottery sherds were Middle Iron Age in date, including a burnished sherd from an ovoid jar from Early Roman pit **1265**.

Area 1a

5.2.6 No Early to Middle Iron Age features were found in Area 1a although a single small sherd dating to this period was found in a possible tree bole (**1700**).

Area 2

5.2.7 There were seven features (**2040**, **2093**, **2213**, **2261**, **2356**, **2389** and **2391**) likely to date to the Early to Middle Iron Age (or possibly earlier) within Area 2. Similar to Area 1, there was a small quantity of residual abraded Early Iron Age pottery in Roman features. Only a single sherd dating to the Middle Iron Age and possibly two Late Iron Age or Early Roman wheel thrown sherds in an Early Roman pit (**1649**) were found in this area.

5.2.8 A small round pit **2040**, 0.6m in diameter and 0.34m deep, located in the centre of Area 2, may be Early Iron Age but it was dated by a single very small sherd (1g). No other features dating to this phase were found in this part of the site, although some residual sherds were found 10m to the north in Early Roman pit **1970** and Middle Roman ditch **1974**.

5.2.9 More than 50m further to the north there was a group of four undated pits (**2093**, **2213**, **2389** and **2391**) within a 15m wide area. These four are stratigraphically early, all cut by the Roman road and/or its associated ditches. Two of the pits (**2093** and **2213**) were

very similar oval/sub-rounded shape, 1.4m and 1.5m in length, 1.1m wide and between 0.35m and 0.38m deep. They were backfilled with almost identical deposits, containing burnt clay, significant quantities of burnt flint and a few burnt sandstone pieces (collectively *c.*10% of the deposits) as well as moderate quantities of charcoal flecks. It is possible that they do not date to the Early Iron Age but were earlier in origin but this would only be proved by radio-carbon dating charcoal from the pits. The other two pits were very truncated (**2389** and **2391** (under Phase 2 ditch)) were more than 0.7m and 1.25m long and more than 0.2 and 0.22m deep but were backfilled with sterile deposits.

5.2.10 About 30m to the north of these four pits were two adjacent features, pit **2356** and ditch **2261**. Ditch **2261** was 3.2m long, up to 0.48m wide and up to 0.08 deep. The ditch had a slight curvilinear shape and it is possible that this was the remains of a ring gully. It was filled with a mid brown clay silt with frequent pebbles (c.20% of the deposit) and ten sherds (27g) of pottery probably Early Iron Age in date, and one worked flint piece. Pit **2356** lay 5m to the west of the ditch, it was 1.1m in diameter and 0.36m deep, with steep sides and a flattish base. Within its three backfill deposits there were 25 small pottery sherds (53g) dating to the Early Iron Age and six worked flint pieces.

5.3 Phase 2: Early Roman (Mid 1st to Early/Mid 2nd century) (Figs. 4-7)

Summary

5.3.1 The Early Roman phase accounts for 230 of the site's 1486 contexts (15.5%), with just over half of these from Area 2. There is little or no pottery definitely dating to the mid 1st century AD and this would tie in with the settlement being a post-Boudiccan foundation. It is likely that the majority of features therefore date from the late 1st to the early to mid 2nd century. The phase lasted significantly less than 100 years - far shorter time-scale than Phases 3 and 4. The relatively short time span for this phase partly explains why there are less Early Roman contexts compared with the Middle and Late Roman periods.

5.3.2 The Early Roman features were concentrated in one part of the site in Area 1. In contrast to the western and eastern parts of Area 1 where there were just two features in each, the central part of Area 1 was quite 'busy' with 32 features being recorded. In this part of the site there seems to be two sub-phases of use, but for this PXA the phase has not been sub-divided. This central area consisted of features associated with pitting or industrial activity. The vast majority of the features produced relatively small artefact assemblages but there were two significant exceptions to this with two pits (**1265** and **1414**), *c.*10m apart, being backfilled with primary assemblages dating to the end of the phase (early-mid 2nd century). In Areas 1a and 2 there were, for the main, a few features spread over a large area. These features consisted of several ditches, some possibly boundary or enclosure related, others for drainage along roadsides, as well as pits and a cobbled surface. In the central part of Area 2 there was a concentration of domestic buildings and other features along a north to south road. It is presently uncertain where the road leads, although, interestingly it is aligned towards the small town of Icklingham, *c.*30km to the north.

Area 1 (Fig. 4)

Western part

5.3.3 There were just two Phase 2 features on the western side of Area 1, nearest the River Stour. An isolated dog burial **1397** (sk. 1566), was the most westerly feature and it is

likely the dog was buried well away from settlement with the next nearest feature being a pit (**1429**) *c*.20m further to the east. Pit **1429** was 1.1m in diameter and 0.2m deep was backfilled with three deposits which only contained 34g of pottery. Small quantities of slag (0.53kg), a possible lead off-cut (SF 2150) and two good environmental samples were also recovered (samples 1066 and 1067).

Central part (quarrying and industrial area?)

5.3.4 Thirty-two features comprising two probable ditches, parts of at least two different post hole structures, including possible industrial features and pits were located within the central part of Area 1. The post hole structures are unlikely to be domestic as the results of the geophysical survey (Figs 2 and 3) shows that this part of the site was within a large area of pits with no associated road being recorded (the nearest being an internal town road more than 20m to the north).

*Ditches (**1575** and **1611**)*

5.3.5 Two possible shallow ditches (**1575** and **1611**) were the most westerly of the central area of features and these were both only partly within the excavation area so their function is uncertain. They were 0.8m and 0.45m wide and 0.15m and 0.27m deep respectively. The ditches were backfilled with few artefacts (0.13kg and 0.02kg of pottery) although the former also contained a probable 1st century coin (SF 1444).

*?Rectangular post hole structure **1616**, **1635**, **2135**, **2138** and **2140***

5.3.6 Directly to the east of **1575** and **1611** were at least five post holes which formed a possible structure of uncertain function, *c*.10m by *c*.5m size. The post holes measured up to 0.99m in diameter and 0.40m deep. Stratigraphically the structure is 'early' and its disuse was dated to the early or mid 2nd century by pottery sherds in the backfill of the post holes. There was a small slag piece in one of the post holes (**2138**).

*?Pits **1619**, **1940**, **1942**, **2103**, **2107**, **2109**, **2111**, **2129**, **2184** and **2186**; ditch **1623***

5.3.7 There were up to 10 pits and ditch **1623** in the same location as the structure. Three of these pits (**2107**, **2109** and **2184**), were between 0.7m to 1m in diameter and may in fact be large post holes associated with the above structure. Four of the pits were between 2.05m and 2.58m in diameter (**2103**, **2111**, **2186** and **1942**) but despite their size most of the pits were mostly fairly shallow with just two over 0.42m deep (**2111** at 0.54m and **1942** at 0.8m). The function of the shallower pits is therefore uncertain whereas the larger ones may have been for quarrying. None of the pits were artefact rich in their backfill deposits - collectively 4.1kg of Early Roman pottery, with pit **2111** having the most (0.83kg). There was also a copper alloy pin (SF 1813) from pit **1942**. Ephemeral ditch **1623** was just 0.6m wide and 0.14m deep and contained 0.16kg of Early Roman pottery.

*Hearth(s)/oven(s) and ?post hole structure(s) **1264**, **1372**, **1374** and **1378***

5.3.8 In a *c*.5m area to the east of the above pit group there was a possible industrial structure consisting of up to two hearth(s)/oven(s) and two or more possible post holes. Hearth/oven **1264** was 0.64m in diameter and 0.15m deep and contained a medium reddish orange sandy clay burnt deposit. The possible post holes (**1372** and **1374**) and hearth (**1378**) were between 0.4m and 0.55m in diameter and 0.1m and 0.17m deep. All three features were filled with a dark grey black sandy silt and this contained 0.78kg of Early Roman pottery; a hobnail was also found in **1378**. The function of the structure is uncertain, partly because there was no slag, the hammerscale from all four features was minimal apart from one moderate sample from hearth **1264**; the environmental samples were also uninformative.

*A group of four quarry pits (**1381**, **1391, 1414** and **1265**)*

5.3.9 On the eastern side of the central area there was a group of three possible quarry pits (**1381**, **1391** and **1414**; Table 2) within a 5m area, with a further quarry pit (**1265**) located 10m to the east of these. All four pits were of a medium to large size. The former two pits were severely truncated by later Phase 3 pits which at least partly explains the relative lack of artefacts recovered from them. All four pits were backfilled with either one or two deposits only. The most significant was pit **1414** which produced an important primary assemblage of material including several near complete pottery vessels (Table 2; Plate 2). Although the date of this pit can be relatively closely dated to the early to mid 2nd century, at publication stage the pottery assemblage merits further work and analysis of the samian should hopefully narrow this date down further. There was interestingly very little bone from this pit although several other artefacts types were found in moderate to large quantities (Table 2). Pit **1265** was possibly contemporary with pit **1414** and, on the whole, produced a similarly significant but smaller artefact collection, although in contrast to **1414** there was also a large animal bone assemblage.

Cut	No. of fills	Size (Length/width/ depth)	Location/ type	Assemblage	Date
1381	1	0.96m deep	Eastern group of three ?quarry pits	4.4kg of pottery (including a few Middle Roman intrusive sherds?- presumably from pit 1369 which cut it; possible quern (SF 1550); good animal bone assemblage	M-LC1
1391	1	1.12x0.7x0.51	Eastern group of ? quarry three pits	0.03kg pottery; copper alloy pin (SF 2007); bone pin	?
1414	2	2.3 diameter; 0.84m deep	Eastern group of three of 3 ?quarry pits	Massive primary pottery assemblage (39.4kg); 4.4kg of slag; several nails; 3 fe keys; fe spatulate tool; fe looped pin; 2 glass fragments; 4.3kg CBM (several heavily burnt); 56g fired clay (2 burnt); little animal bone	E-MC2
1265	1	1.82m long, 1.6m wide and 0.84m deep	Quarry pit?	Significant pottery assemblage (10.2kg); 9 nails including from use in structural timbers (SF 1412); 4 other fe objects; 2 pieces of CBM (0.41kg); significant animal bone assemblage	E-MC2

*Table 2: Phase 2 group of possible quarry pits (**1381**, **1391**, **1414** and **1265**)*

*Post hole alignment **1307**, **1309** and **1311**; Pits **1195** and **1232***

5.3.10 Directly to the east of pit **1265** was a line of three post holes (**1307**, **1309** and **1311**) which extended in the excavation area for nearly 5m. They were aligned roughly east to west up to the site's northern baulk. All three post holes were relatively similar; they were between 0.46m and 0.7m in diameter and 0.2m and 0.34m deep and backfilled with a single fairly sterile deposit. Early Roman pottery from these deposits collectively weighed just 0.19kg. To the south-east of the post hole alignment there were two adjacent fairly sterile shallow pits (**1195** and **1232**) which were truncated by Phase 3 pit **1197**.

Eastern part of Area 1

5.3.11 Just two Phase 2 features (pit **1051** and ditch **1076**/**8**) were within the eastern part of Area 1. Pit **1051** was round, just 0.6m in diameter and 0.4m deep and was dated by

two scrappy tiny Early Roman sherds (0.01kg). Ditch **1076**/**8** was at the far eastern part of the site and was aligned north-to-south terminating near the northern baulk. It was between 0.5m and 0.8m wide and between 0.13m and 0.27m deep and filled with a fairly sterile deposit containing just 0.02kg of Early Roman pottery.

Areas 1a and 2 (Figs. 5-7)

*Ditches **1628**, **1655/1651**, pit or ditch **1631** and pit **1649***

5.3.12 In Area 1a, two features comprising ditch **1628** and possible pit or ditch **1631** have been assigned an Early Roman date. Ditch **1628** was aligned north-east to south-west and probably continued into Area 2 (ditch **1655**/**1651**). To the south-west of Area 1a it may have been located by the geophysical survey and seems to have been cut by the villa-like building near to the River Stour (Fig. 2; Baldwin 2009). If this is correct, the ditch can be traced for nearly 300m and may have therefore been a boundary, possibly representing the eastern extent of the town as the geophysical survey suggests there were only a few features to the east of it and these may date to a later period (*e.g.* the 4th century town boundary ditch). The ditch was between 1m and 1.54m wide and 0.44m to 0.55m deep before it narrowed and then terminated near the site's north-eastern baulk. In its backfill there was 1.01kg of pottery dating from the late 1st to early/mid 2nd century as well as a possible stone rubber. Undated pit or ditch **1631** was directly to the north-west of ditch **1628** in Area 1a and shallow pit (**1649**) was found directly to the south of ditch **1651** in Area 2. Pit **1649** measured 2.3m by 1.15m and 0.41m deep and had 0.6kg of late 1st to early-mid 2nd century pottery in its backfill.

*Possible curvilinear ditch and recuts **1714**, **1687/1771/1774***

5.3.13 A probable single large curvilinear ditch **1714** and recut **1687**/**1771**/**1774** were found in two separate locations over a *c*.45m area on either side of the former Victorian railway embankment. This railway cut all features and nothing of note including artefacts of any date were recorded within this area of the site. The Roman curvilinear ditch was of a similar size in both locations and it may have been the south-eastern drainage ditch at the junction of two roads (a minor internal road in the town and the larger road running towards Long Melford (Fig. 2). The ditch and recut was up to 2.23m wide and 0.62m deep, from which collectively 1.06kg of Early Roman was recovered as well as a possible lead off-cut from **1714**.

*Scatter of pits and post holes (**1746**, **1757**, **1768**, **1770**, **1113**, **1115**, **1730** and **1999**) and ditch **1750/1761***

5.3.14 Directly to the north of the curvilinear ditch was a scatter of eight pits/post holes and a possible ditch over a *c*.50m area. Two shallow possible pits (**1746** and **1757**) were located within the route of the possible Long Melford road but these may be just incidental scoops in the ground. There may have been field systems to the north of this road as a fragment of a shallow ditch **1750**/**1761** was cut by Middle Roman field enclosures running on the same north-to-south alignment. Most of the former enclosure ditches may therefore not have survived later recutting. Within the postulated field enclosures there was only a scatter of four shallow small pits or post holes (**1768**, **1770**, **1730** and **1999**) and two slightly larger pits (**1113** and **1115**). These features collectively had 0.66kg of Early Roman pottery in their backfills although within pit **1113** there was also a copper alloy pin (SF 1210), in pit **1115** there was an plain iron chain link whilst a small enamelled stud or a nail head (SF 1436) was recovered from post hole **1999** .

*Cobbled surface **2005** and possible related structure (post holes **1996**, **2027**, **2029** and **2041**)*

5.3.15 To the north of the possible enclosures and against the western edge of the excavation area, there was a cobbled surface measuring 5m by 1.5m. It mainly comprised flint nodules with some rounded chalk pieces. Within the layer 0.28kg of early to mid 2nd century pottery and a copper alloy pin (SF 1637) was recovered. It is uncertain whether this was a road or yard surface; the road heading towards Icklingham was located less than 10m to the west and it is possible this cobbled surface led off from this road and up to a spread of eight or nine post holes found within the excavation area. Four of the post holes (**1996**, **2027**, **2029** and **2041**) contained Early Roman pottery and these may have been part of a structure.

*Possible quarry pit **1970***

5.3.16 A large quarry pit (**1970**) lay 5m to the north of the cobbled surface and possible structure. It was oval in shape, 6.03m in length, 0.62m deep and contained 0.69kg of pottery, dating up to the mid 2nd century, as well as an iron blade (SF 1826).

*Eastern ditch of road heading towards Icklingham and up to two structures fronting onto it (Building 1 and pit/or post hole **1188**)*

5.3.17 The eastern ditch of the road heading towards Icklingham was sampled six times; it was up to 2m wide and 0.56m deep and contained small quantities of pottery (0.55kg).

5.3.18 Perpendicular to the road was a long-lived domestic building (Building 1; Plate 1). Later rebuilding has meant the earliest phase of the building is not clear but the surviving post holes suggest it may have been a rectangular building measuring c.7m by 6m in plan. Twelve post holes and two floor layers have been dated to Phase 2 (pits **1810**, **1816**, **1838**, **1850**, **1855**, **1860**, **1865**, **1872**, **1876, 2289, 2340** and **2437** and floor layers 2342 and 2343). The post holes were up to 0.91m in diameter and 0.27m deep. Only two of the post holes had dating evidence with small quantities of Early Roman pottery in both. The earliest floor surface (2343), extended for more than 5.5m in length and was more than 3.2m wide, comprising a mid orangey brown sandy clay. It was overlaid by floor layer 2342 which was a slightly orangey grey-brown slightly silty clay more than 4.3m long by more than 3.2m wide and 0.08m thick; this was respected by post hole **2437**. Hearth **2336** may equate with floor 2343 and hearth **2415** with floor 2342 but both, presently, have been assigned a Phase 3 date (see below).

5.3.19 Pit or post hole **1188** was located *c*.50m to the north of Building 1. It is possible that it was the remains of another domestic post hole structure which was later rebuilt in Phase 3 by a slot constructed building (Building 4). Within the post hole there was a possible fragment from a bucket escutcheon.

*Features on the western side of road heading towards Icklingham (Building 2, pit **2195**, post hole **2299**, possible ring gully **2240**, pits **2406**, **2262**, **2451** and **2455** and ditch **2448/2467**)*

5.3.20 The Phase 2 features in this location may have had two sub-phases (Figs. 6 and 7). Perhaps in the earliest sub-phase was a possible ring gully **2240**, which was only partly revealed within the excavation area. Its curvilinear ditch was 10m to the west of the road and was therefore not directly related to it. It was possibly the pre-cursor to the Middle Roman Building 5 directly to the north-east of it. The ring gully was 0.35m wide and 0.22m deep and contained pottery (0.22kg) dating from the mid/late 1st century to the early/mid 2nd century.

5.3.21 Presumably fronting onto the road's western side was a group of post holes (mostly undated including a line of three aligned east to west (**2192**, **2194** and **2219**), which almost certainly denote the remains of a building. The other buildings fronting on to this

road were multi-period structures and therefore, it is uncertain to which phase the unphased post holes related to. There were two post holes (**2170** and **2275**) containing Early Roman pottery and it is therefore likely that Building 2 began in this period although its dimensions are uncertain as the structure presumably continued to the west of the excavation area beyond the site's baulk).

5.3.22 Directly to the north of Building 2 was pit **2195**, 1.65m in diameter and 0.58m deep which contained 0.18kg of Early Roman pottery. A further post hole (**2299**) lay to the north and may have been part of another structure. Four pits (**2406**, **2262**, **2451** and **2455**), lay in a 20m area to the north of possible ring gully **2240**. They measured between 1m and 2.4m in length and 0.26m and 0.74m deep with three of them producing small quantities of Early Roman pottery; pit **2406** was undated but was stratigraphically early. An east-to-west ditch **2448**/**2467** lay directly to the north of of the pits and stopped before the presumed location of the former western roadside ditch, possibly leaving a small entranceway between the two (Fig. 7). It is uncertain whether the ditch was a boundary as no Phase 2 features were found to the north of it. The ditch was 1.4m wide and 0.61m deep on its western side, narrowing to 0.7m wide and 0.12m deep in the centre of the excavation area. Moderate quantities of pottery (0.68kg) dating up to the mid 2nd century were recovered from the ditch.

5.4 Phase 3: Middle Roman (Mid 2nd to Late 3rd centuries)

Summary

5.4.1 There was a clear upsurge in activity in the Middle Roman period (mid 2nd to late 3rd century) with 687 contexts assigned. There was continuity between Phase 2 and Phase 3 with no major alteration of the town's layout within the excavation areas. The location of pitting/industrial use, the enclosure and roadside areas largely continued. There seems to have been more buildings established in Area 2 suggesting a possible increase in population although these structures were at the same "basic" level as Phase 2 with none roofed with ceramic tiles. The large increase in the number of CBM fragments recovered in this phase does suggest some of the town buildings outside the excavation area were becoming more sophisticated. The quantity of pits excavated greatly increased in this phase and they were mostly larger in size, perhaps suggesting many had been dug for quarrying for construction materials. Some of the pits were intercutting or found in groups suggesting they may have been dug sequentially. There was, on the whole, a large increase in the quantity of domestic and other products backfilled into these pits. It is likely that there were a few "placed" deposits occurring as seen by some complete vessels being placed inverted at the base of some of the pits.

Area 1 (Fig. 4)

*Western area features (pits **1551/1585**, **1556** and **1445** and ditch **1427/1454**)*

5.4.2 The extreme western side of Area 1 contained only five Phase 3 features (**1551**/**1585**, **1556, 1445** and **1483**). Undated pit **1585** was cut by **1551**, and this latter pit was more than 2.6m in length, 1.6m wide and 0.72m deep. Pit **1551** contained a moderate pottery assemblage (2.13kg) dating to the early to mid 3rd century as well as a 3rd or 4th century coin (SF 1018) and 17 CBM fragments (5.21kg). Undated pit **1556** was 1.52m in diameter and 0.42m deep whilst pit **1445** was 1.6m in diameter and 0.54m deep. The latter contained a moderate assemblage of pottery (1.68kg) dating from the mid 2nd century to 3rd century as well as six CBM fragments (2.04kg). Ditch

1427/**1454** was aligned north-west to south-east. It was just 0.4m wide and between 0.05m and 0.15m deep; it cut Phase 2 pit **1429** and was cut by Phase 4 pits. The only dating evidence for the ditch was a coin (AD 268-270; SF 1030) and therefore dates to the end of this phase.

*Quarry group **1562**, **1564** and **1604***

5.4.3 A group of three large intercutting possible quarry pits (**1562**, **1564** and **1604**) lay partly within the excavation area (Table 3). All were slightly irregular in shape, had steep, sometimes stepped, irregular sides with slightly concave bases (**1562** and **1564**), although **1604** was not bottomed. The pits were backfilled with similar deposits at roughly the same time (late 2nd century). All three pits produced moderate or large, diverse and overall significant assemblages which merit further work.

Cut	No. of fills	Size (Length/width/depth)	Assemblage	Date
1562	4	2.75m x 2.7m x 1.02m	Pottery (2.2kg);cu-alloy hair pin (SF 1648); 0.12kg slag; fe blade; 1 CBM fragment (0.04kg); two good environmental samples (1072 and 1080).	M/LC2
1564	7	1.36m x1.24m x 1.12m	Pottery (13.03kg); 4 cu-alloy objects (brooch pin; hair pin;spoon probes (SF 1650) and vessel fragments (SFs 1651 and 2151); fe lift key; 2 fe blades; 0.22kg slag; glass vessel (SF 1666); 23 CBM fragments (3.83kg); 21 fired clay fragments; 2 opus signinum fragments (0.41kg)	LC2
1604	4	3.32m x 2.4m+ x 1.1m+	Pottery (8.32kg); 15 CBM fragments (2.46kg); 4 fired clay fragments (0.09kg)	LC2-E/MC3

*Table 3: Quarry pits **1562**, **1564** and **1604***

*Pits **1576/1578***

5.4.4 Directly to the south of the three quarry pits (***1562**, **1564** and **1604***) there were two shallow and fairly sterile intercutting pits (**1576**/**1578**), 0.14 and 0.15m deep.

*Ditch **1580**, boundary ditch **1573/1602** and related fence line **1589**, **1592**, **1607**, **1981**, **1983**, **2031**, **2033**, **2035**, **2037**, **2231***

5.4.5 To the east of pits **1576**/**1578**, there was a north-east to south-west ditch (**1580**). The ditch was 0.8m wide and 0.2m deep and contained 0.1kg of pottery dating to the early to mid 3rd century in addition to a glass fragment from a window. Directly the east of ditch **1580** was a ditch **1573**/**1602** and related fence line (**1589**, **1592**, **1607**, **1981**, **1983**, **2031**, **2033**, **2035**, **2037**, **2231**). Ditch **1580** may have formed a routeway with ditch **1573**/**1602** (Fig. 4). They were both roughly parallel, aligned north-east to south-west between *c*.3m and 4m apart. The former was fragmentary terminating in the excavation area, but ditch **1573**/**1602** can probably be traced in the geophysical survey for more than 100m (Fig. 2) forming a slightly meandering boundary. Significantly, this ditch may have demarcated the extent of the industrial and pitting area as there seems to be few pits beyond this boundary to the north-west of it. Running parallel to this boundary ditch and adjacent to the south-east of it, was a linear line of nine or ten post-holes which represent a long fence line. It is possible that either the ditch and fence line were contemporary or that one pre-dated the other. The ditch was not substantial at 0.84m wide and between 0.18-0.21m deep. In contrast the post holes, regularly spaced apart, were often substantial with most of the former fence posts being 0.4m or deeper

(up to 0.93m) below the excavated ground level. There were very few artefacts from either the ditch or from the post holes although an illegible *as* came from ditch **1573** (SF 1445). The date for either the ditch or fence line cannot, at this stage, be narrowed down to suggest a sequence of construction.

*Quarry and other pits **1345**, **1353**,**1355**, **1921**, **2105**, **2113**, **2122** and **2131***

5.4.6 To the south of the boundary ditch and fence line were eight pits (**1345**, **1353**, **1355**, **1921**, **2105**, **2113**, **2122** and **2131**) covering a *c*.10m area. Three of the pits were a similar size at between 2.27m and 3.3m in diameter and 1.04m to 1.23m deep (**1345**, **1921** and **2122**; Table 4) and it is likely these were originally dug as quarry pits. They had steep/near vertical sides and flatish bases. After disuse, these three pits were backfilled, on the whole, with a moderate quantity of artefacts but significantly less than the three quarry pits to the west (**1562**, **1564** and **1604**), and may have been slightly later in date (all 3rd century?). They may have been used as latrines during backfilling as they (especially **1345**) had distinctive green deposits. A late 3rd century coin from pit **2122** suggests this pit may have backfilled at the end of this phase.

Cut	No. of fills	Size (Length/width/depth)	Assemblage	Date
1345	10	2.27m x 1.95m+ x 1.23m	Pottery (2.38kg); Coin AD 92-4 (SF 1862); coin 77-78 (SF 1863); Fe spatulate object; 14 CBM fragments (3.23kg); 14+ fired clay fragments (0.16kg)	MC3-LC3
1921	4	2.8m x 2.3m x 1.04m	Pottery (2.56kg); 21 CBM fragments (4.43kg)	?C3
2122	7	3.3m x 2.4m x 1.22m	Pottery (5.05kg); Coin SF 1441 (AD 270-90); slag (0.17kg); bone pin; 13 CBM fragments (1kg)	LC2-C3

Table 4: *Quarry pits **1345**, **1921** and **2122***

5.4.7 The two intercutting pits (**1353** and **1355**) were only partly exposed the excavation area and their full extent is unknown. They both seem to be less wide than the quarry pits at just over a metre in diameter but both were vertically edged and 1m and 1.06m deep respectively. They were backfilled with only one and two deposits and contained far fewer artefacts with only 1.46kg and 1.07kg of pottery respectively, the latter dating to the mid/late 2nd to mid 3rd centuries. Pit **1353** also contained 12 CBM fragments (4.04kg). Pits **2105**, **2113** and **2131** were between 1m and 2.4m in diameter but were only 0.32m and 0.72m deep. Pit **2105** was undated whilst the other two contained only 0.14 and 0.12kg of Middle Roman pottery with few other artefacts, although **2131** also had a glass fragment (SF 1702). There were three stake holes (**2116**, **2118** and **2120**) within pit **2113**, spread roughly equal distance apart near the edge of the base of the pit. The stake holes were of a similar size *c*.016m² in diameter and 0.22m deep.

*Kiln/oven **1633** within a probable sub-rectangular structure*

5.4.8 Within a few metres of the pit group there was a raised kiln/oven **1633** cut into layer 1560 that had possibly been within a structure (Plate 7). It is likely that layer 1560 was laid down first to raise the hearth/oven above the ground level. This layer was *c*.6m by *c*.3m and 0.25m thick and comprised a dark blackish brown sandy silt with frequent unsorted angular and sub-angular flint nodules of varying size from small to large. This layer contained 1.01kg of Early Roman pottery and a probable quern fragment reused as a hone and a cut stone (SFs 2187 and 1676).

5.4.9 Kiln/oven **1633**'s superstructure has not survived but the base of a main chamber, the firing area/pit and flue was found (Plate 7). It was aligned north-west to south-east with the flue lying on the north-eastern side of the chamber. The flue was 1.5m long and *c*.0.2m wide and consisted of a yellowish brown clay, burnt red near the stoking area. The fire pit measured *c*.0.5m in area. The main chamber comprised a sub-circular clay 'bowl', *c*.0.60m in diameter and up to 0.24m deep, and was lined with a mid yellowish brown clay. This chamber survived slightly below the flue. The south-eastern corner of the wall foundations of a sub-rectangular structure may have survived and would have surrounded the kiln/oven. The foundations, *c*.0.5m wide, are very similar to layer 1560 and so their identification is uncertain.

5.4.10 To the north of kiln/oven **1633** were two shallow pits **1621** and **1637** which respectively contained 1.71kg of mid 2nd to early 3rd century and 0.39kg of mid 2nd century pottery.

*Area of pitting (**1367**, **1290**, **1273**, **1369**, **1327**, **1271** and **1325**)*

5.4.11 Just to the east of kiln/oven **1633** were six probable large or very large quarry pits (**1367**, **1290**, **1273**, **1369**, **1327**, **1271**) and a single small pit (**1325**; Table 5). At least half of the pits date to the 2nd half of the 2nd century with only one (**1327**) being definitely 3rd century. There were two areas of intercutting (pits **1367** and **1290**) and (pits **1271**, **1369** and **1327**). The former quarry pits were backfilled with large quantities of artefacts and ecofacts (**1271** especially). Some of the assemblages within the pits were very similar *e.g.* slag was recovered from all of them whilst there were virtually no fired clay fragments in any of the pits. A secondary use for the pits was that some may have been used as latrines during backfilling as several green deposits were recorded. A sample from one of these cess deposits in pit **1290** (sample 1058) found some charred cereal seeds and charcoal but no evidence for it being used as a toilet but this is not surprising as this part of the site is well drained.

Cut	No. of fills	Size (Length/width/depth)	Assemblage	Date
1367	4	2.26m x 2.08m x 1.1m	Pottery (3.49kg); slag (0.02kg); significant animal bone assemblage	?LC2
1290	8	4.8m x 2.44m x 1.26m	Pottery (7.18kg); coin M/LC3 (SF 1440)?intrusive); slag (1.8kg); part of a shale bangle; six glass fragments from cup or beaker (SF 1470); another glass fragment of a vessel (SF 1506); 35 CBM fragments (5.4kg); bone pin	M/LC2
1273	3	2.28m x 1.82m x 1.26m	Pottery (5.35kg); fe hinge; slag (3.5kg); 9 CBM fragments (1.03kg)	MC2
1369	4	3.1m x 2.96m x 1.41m	Pottery (5.74kg); fe latch lifter and an fe blade; slag (4.57kg);glass fragment (SF 1579); 6 CBM fragments (1.32kg)	M/LC2
1327	6	3.24m x 2.8m+ x 1.6m	Pottery (6.08kg); Fe joiner's dog; slag (2.16kg); glass fragment (SF 1530); 2 CBM fragments (0.89kg); 7 fired clay fragments (0.09kg); bone pin (SF 1532)	C3
1271	4	2.8m² x 1.24m	Pottery (23.67kg); hair pin (SF 1482); slag (1.29kg); glass body fragment (SF 1484); glass bead (SF 2192); 30 CBM fragments (4.94kg); 7+ fired clay fragments (0.08kg); 3 opus *signinum* fragments (0.1kg); significant animal bone assemblage	?LC2
1325	1	1.09m x 0.84m x 0.46m	Pottery (0.57kg); slag (0.4kg)	C2

*Table 5: Pits **1367**, **1290**, **1273**, **1369**, **1327**, **1271** and **1325***

*Sparse area of pitting (**1234**, **1284**, **1101**, **1197**, **1261** and **1130**)*

5.4.12 To the east of the pits was a *c*.25m wide area where there were just six pits (**1234**, **1284**, **1101**, **1197**, **1261** and **1130**; Table 6). Three of the pits were large (**1101**, **1197** and **1130**; Plate 4) and these may have been quarry pits. All three produced moderate to large artefact and ecofact assemblages whereas only one of the shallow pits (**1234**) produced a good artefact assemblage. The large quarry pits were backfilled with up to nine deposits and several were probably used as latrines during this process. There seems to have been a time differentiation in some of the pits - with **1234**, **1284**, **1261** and possibly **1130** dating to the later half of the 2nd century whereas adjacent pits **1101** and **1197** may have been dug in the 1st half of the 3rd century.

Cut	No. of fills	Size (Length/width/depth)	Assemblage	Date
1234	1	2.9m² x 0.3m	Pottery (10.25kg); cu hair pin; 1 fired clay fragment (0.01kg); good bone assemblage	M/LC2
1284	2	0.9m² x 0.81m	Pottery (0.18kg); fe lift key; slag (1.24kg)	C2
1101	9	1.8m x - x 1.2m	Pottery (8.47kg); cu hair pin; slag (0.44kg); 8 CBM fragments (0.79kg); 1 fired clay fragment (0.1kg); bone pin; significant animal bone assemblage; good environmental assemblage (sample 1019)	E/MC3
1197	7	3.62m x 3m x 1m	Pottery (9.38kg); slag (0.3kg); 1 window glass fragment (SF 1379); 5 CBM fragments (1.08kg)	?E/MC3
1261	1	1.1m x 1m x 0.34m	Pottery (0.23kg)	M/LC2
1130	7	1.8m x 1.4m x 1.65m	Pottery (3.01kg); 2 cu sheets ?buckle plate (SF 1504); fe cylinder or collar; slag (1.14kg); probable quern fragment (SF 2188); 29 CBM fragments (2.64kg); 2 fired clay fragments (0.03kg); good environmental assemblages (samples 1051 and 1052)	LC2+

*Table 6: Pits **1234**, **1284**, **1101**, **1197**, **1261** and **1130***

*Pits **1070**, **1088**, **1090**, **1135**, **1251**, **1238**, **1266**, **1299**, **1329**, **1214/1221**, **1216**, **1302** and **1320***

5.4.13 Thirteen intercutting pits (**1070**, **1088**, **1090**, **1135**, **1251**, **1238**, **1266**, **1299**, **1329**, **1214/1221**, **1216**, **1302** and **1320**) were found in one area measuring *c*.9m by 8m. They are mostly likely to date to the 2nd half of the 2nd century (Table 7). A few, especially the larger pits were probably dug for quarrying. Only three of the pits (**1088**, **1214** and **1216**) produced moderate or large artefact and ecofact assemblages.

Cut	No. of fills	Size (Length/width/depth	Assemblage	Date
1070	3	1.5m x 1.3m x 0.68m	Pottery (1.79kg); cu spoon (SF 1197); fe ring; slag (0.18kg); 1 CBM fragment (0.12kg); 1 fired clay frament (0.01kg)	MC2
1088	8	2.42m x 2.2m x 0.88m	Pottery (6.14kg); 1st cent AD brooch, cu-alloy bangle; fe needle; a fe 'L' shaped tool; a double-spiked loop; slag	M/LC2

			(2.26kg); 5 CBM fragments (0.16kg); 18 fired clay fragments (1.31kg)	
1090	1	0.92m² x 0.3m	Pottery (0.18kg); slag (0.07kg); 1 CBM fragment (0.03kg)	-
1135	3	1.02m x 0.66m+ 0.32m	Pottery (0.02kg); slag (0.01kg)	MC2+
1251	2	0.56m²+ x 0.54m+	Pottery (0.17kg); slag (0.03kg)	-
1238	8	1.92m x 1m+ x 0.92m	Pottery (2.89kg); cu pin (SF 1564); slag (1.65kg); 3 CBM fragments (0.55kg); 5 fired clay fragments (0.1kg)	C3
1266	1	0.88m² x 0.41	Pottery (0.13kg); slag (0.21kg); 1 CBM fragment (0.16kg)	MC2+
1299	3	- x - x 0.78m	?2nd century coin (SF 1299)	-
1329	2	2m² x 0.82	Pottery (2.13kg); slag (1.75kg); 2xFe rings; 4 CBM fragments (0.22kg); 5 fired clay fragments (0.54kg)	E/MC3
1214/ 1221	7	3.4m x - x 1.2m	Pottery (15.15kg); cu ear scoop (SF 1387); fe punch; fe looped pin; slag (3.05kg); 3 x glass fragments (SFs 1388, 1392 and 1409); possible quern and polished stone (SFs 2190 and 1410); 16 CBM fragments (2.78kg); 6 fired clay fragments (0.3kg); bone pin; significant animal bone assemblage	LC2-C3
1216	4	2m x 2m x 0.95m	Pottery (8.32kg) a few intrusive in top fill 1225; slag (0.75kg); 1 glass bottle (SF 1421); 19 CBM fragments (2.72kg); 7 fired clay fragments (1.05kg); significant animal bone assemblage	LC2+
1302	1	1.1m x - x 0.4m		
1320	6	-m x 1.95m x 1.42m	Pottery (0.64kg); slag (0.04kg); fe wall hook; bone pin	LC2-C3

*Table 7: Pit group **1070**, **1088**, **1090**, **1135**, **1251**, **1238**, **1266**, **1299**, **1329**, **1214/1221**, **1216**, **1302** and **1320***

*Eight sub-rounded pits in eastern area (**1055**, **1094**, **1059**, **1245**, **1045**, **1047** and **1081**), pit **1219**, sub-square pit **1049** and ditch **1040***

5.4.14 A group of eight probable quarry pits were spaced across the eastern part of Area 1 (**1055**, **1094**, **1059**, **1245**, **1045**, **1047** and **1081**; Table 8). All of these pits were 100% excavated except **1059** which was only partly exposed within the excavation area (Plate 6). These sub-rounded pits were at the eastern boundary of the pitting area (Fig. 2). To the east there was a sub-square pit (**1039**) and ditch **1040**. Given the peripheral location of the sub-rounded pits, it is perhaps not surprising that the quantity of artefacts recovered from them was only moderate (the exception being **1055** which had a reasonable finds assemblage, whilst remains of a goat were also found in **1045**). The relative lack of artefacts (compared with most pits to the west) may imply that domestic occupation was further away and the town's inhabitants did not wish to transport their rubbish too far. There was certainly no evidence for any manuring/stockpiling of manure.

Cut	No. of fills	Size (Length/width/depth)	Assemblage	Date
1055	4	2.5m x 2.26m x 1.18m	Pottery (9.13kg); cu-alloy ring (SF 1178); cu-alloy brooch pin; slag (1.49kg); 8 CBM fragments (0.56kg); bone needle (SF 1303) bone pin stained green (SF 1177); significant bone assemblage	LC2-EC3
1094	3	1.25m x 1.1m x 0.98m	Pottery (0.84kg); slag (0.13kg); 3 CBM fragments	M/LC2

			(0.43kg)	
1059	2	2.75m² x 0.85m	Pottery (0.9kg); slag (0.07kg); glass bottle or jug fragment (SF 1554); 2 CBM fragments (0.22kg); 3 fired clay fragments (0.02kg); bone needle (SF 1212)	LC2-C3
1245	3	2.4m x 0.85m x 0.95m	Pottery (4.52kg); possible stone rubber; 6 CBM fragments (0.41kg)	LC2-C3
1045	3	1.2m x 0.86m x 0.98m	Pottery (2.13kg); slag (0.01kg); glass bottle fragment (SF 1156); 2 CBM fragments (0.2kg); 3 fired clay fragments (0.01kg); near complete skeleton of a goat	?M/LC3
1047	1	2.34m x 1.98m x 0.78m	Pottery (1.59kg); slag (0.05kg); 3 CBM fragments (0.15kg)	M/LC2
1081	2	2.34m x 1.82m x 1.28m	Pottery (4.29kg) including a large grey ware vessel inverted in base of pit (Plate 6); fe ferrule object; glass bottle fragment (SF 1218); 7 CBM fragments (0.78kg)	M/LC2
1049	2	2m x 1.4m x 0.72	Pottery (3.33kg) could be Phase 2?; cu buckle plate (SF 1179);slag (0.81kg); good environmental sample (sample 1007)	?MC2

*Table 8: Pits **1055**, **1094**, **1059**, **1245**, **1045**, **1047** and **1081***

5.4.15 Pits **1049** and **1039** were to the east of the above pit group and were of a different character. The former was small and shallow at 0.82m diameter and 0.18m deep, while the latter had a different shape being sub-square (2.23m by 2m) and just 0.2m deep with a flat base. Pit **1039** was relatively sterile with just 0.36kg of pottery dating up to the mid 2nd to 3rd centuries being present although there were three large CBM fragments (3.41kg). Ditch **1040** started adjacent to pit **1039** and may have respected it. The ditch was aligned east-to-west, and ran only for 5.8m before terminating. It was 0.8m wide and 0.3m deep; 0.88kg of mid 2nd to 3rd century pottery was found in its backfills.

Area 2 (Figs. 5-7)

*Ditch (**1653/1666**) and area of intercutting pits and a metalworking furnace **1667***

5.4.16 In the extreme southern part of Area 2 there was a single ditch (**1653**) and recut (**1666**) just to the north of which was a large area (*c*.20m by more than 10m) of intercutting pits (Fig. 5). The two ditches ran north-east to south-west, and were up to 1.95m wide and 0.5m deep. In their backfills there was just 0.82kg of pottery dating up to the mid/late 2nd to mid 3rd centuries.

5.4.17 The area of pitting (not individually represented on Fig. 5) was mostly sampled by a large excavation 'slot' measuring *c*.8m². This work characterised the area, revealing the 19 intercutting pits (**1778**, **1780**, **1783**, **1785**, **1788**, **1790**, **1792**, **1922**, **1924**, **1931**, **1963**, **2149**, **2151**, **2153**, **2155**, **2157**, **2159**, **2161** and **2163**). A further two Phase 3 pits (**1712** and **1739**) were also excavated separately on the north-eastern side of the pit area. The main group of 19 pits were relatively uniform and were presumably for extracting the natural clay subsoil. The sub-rounded and oval pits varied from 1.04m to 3m in length/diameter and they were between 0.16m and 0.72m deep. They had been backfilled with fairly sterile material with all pits containing only one or two deposits. Only five of the pits had dating evidence with collectively 2.34kg of pottery being recovered providing a date of up to the mid/late 2nd to 3rd century. There were only a few other artefacts with just four CBM fragments from all pits, a copper-alloy pin and a bone gaming counter came from pit **2153** (SFs 1482 and 1717) and probable quern

fragments from pit **2151** (SF 1701). A worn coin from pit **1790** was dated as 1st to early 2nd century (SF 1119). and an illegible *as* (SF 1298), came from **1712**.

5.4.18 A dark brown layer (1670) sealed the pits and this was at least 0.16m thick. It contained a large quantity of artefacts including more than 10kg of pottery which were mostly Early Roman in date. A possible lead off-cut (SF 1698) may be linked to a metal working furnace (**1667**) cutting this layer. It is probable that this soil was brought in to level up the former quarry area.

5.4.19 Cutting layer 1670 was a possible furnace **1667**. The furnace is likely to date to the 3rd century or even in to the Late Roman period (Phase 4). It was sub-rectangular in plan, 1.38m long, 0.63m wide and 0.53m deep with steep sides. It had an initial shallow break of slope (0.1m) then dropped vertically to a slightly bowl shaped base. Within the furnace there was 0.81kg of vitrified clay (furnace lining) with ferrous and lead slag (and possibly copper as well) with the majority of the vitrified material found in the basal fill (1669). This suggests that although the furnace was broken up, the remnants remained in original feature. The upper fill (1668) was very dark grey with burnt red mottling, with frequent charcoal and burnt clay fragments were found in the fill. A total of 0.35kg of mixed iron and lead slag were recovered from the furnace. Three crucibles were also recovered (SFs 2070, 2010 and 2011). Molten lead was attached internally in SF 2010 and copper concretions in SF 2011 whilst moderate to large quantities of hammerscale was found in the bulk soil environmental samples 1075 and 1076; Table 21). In addition there were 2.38kg of pottery, some possibly dating to the 3rd century but none seemingly 'late', two iron blades, a possible quern (SF 2186) and 17 fired clay fragments (0.14kg). An environmental sample (1076; see Table 56) also produced interesting results and more work is selected on this sample (Table 55).

*Southern roadside ditch/enclosure (**1680/1695**) and internal pits (**1688**, **1692** and **1710**)*

5.4.20 A ditch (***1680/1695***) was identified at the junction/along two Roman roads (probably to Long Melford and a small internal road), which acted both as a roadside and an enclosure ditch (Figs. 2 and 5). It was between 0.82m to 0.91m wide and 0.29m to 0.36m deep. Three pits (***1688***, ***1692*** *and* ***1710***) lay within the enclosure, with **1688** and **1692** being of moderate size (1.46m and 2.2m in diameter and 0.72m and 0.8m deep respectively) and pit **1692** being shallow. The three pits had small to moderate-sized pottery assemblages within their backfills (0.13kg to 1.57kg) and these dated up to the mid/late 2nd century.

*Pits **1732**, **1701** and **1706***

5.4.21 A single pit (**1732**) lay to the east of the internal road and contained a small to moderate collection (0.83kg) of late 2nd century pottery and a blue/green vessel glass fragment (SF 1739; see Wadeson section B.5). There were also two possible pits seemingly located within the area of the Long Melford road (**1701** and **1706**). The latter can perhaps be explained away as it was a very shallow scoop (0.15m deep) and may therefore not have been dug as a pit. The former at 1.54m in diameter and 0.52m deep was far more substantial and contained 0.57kg of pottery dating to the 2nd to 3rd centuries. The reason for its location within the presumed road corridor is uncertain.

Enclosures and pits to the north of the Long Melford Road

5.4.22 There were parts of possibly four enclosures within the 60m area to the north of the Long Melford road. Seven pits (**1904**, **1899**, **1933**, **1966**, **2025**, **1964** and **1180**) were also identified within this area, with the latter two pits cutting two different enclosure ditches. This suggests some or even all the enclosures date to the early part of this

phase. The pottery from the enclosure ditches all dates to before the 3rd century and it is possible the enclosures went out of use in *c*. the late 2nd century. It is probable the enclosures were for arable farming as the ditches were relatively shallow and there were no watering holes within the excavation area. It is possible that the enclosures were linked to settlement plots, with the houses outside the excavation area presumably next to a road(s).

5.4.23 The southern three enclosures were formed by four related ditches. The most southerly ditch (**1756**/**1752**/**1754**) was aligned east-to-west and was also probably the northern ditch of the Long Melford road. The ditch was between 0.6m to 1.41m wide and 0.29m to 0.43m deep and was backfilled with sterile deposits, which produced only 0.01kg of pottery. There was a *c*.3m entranceway between ditch (**1756**/**1752**/**1754**) and ditch **1748**/**1726**/**1728**/**1968**/**1957**/**1946**/**1994**), which was aligned north-to-south for 40m before running north-westwards into the site's baulk. The southern 20m of the ditch was up to 0.87m wide and 0.26m deep but then widened to 1.86m and deepened up to 0.58m. In all excavated sections through the ditch there were few artefacts, the exception being **1994**, which produced 1.68kg of the 2.56kg of pottery recovered. A copper alloy hairpin was also found in ditch section **1946** (SF 1840).

5.4.24 This enclosure was internally divided by ditch **1954**/**2007** which adjoined up to it on its western side and was linked to eastern enclosures by ditch **1958**/**1980**/**1182** which respected it on its eastern side. Ditch **1954**/**2007** was 1.5m wide and between 0.4m and 0.57m deep and collectively contained 1.32kg of pottery dating up to the mid 2nd century as well as an iron double-spiked loop. Ditch **1958**/**1980**/**1182** was between 0.75m and 1.15m wide and 0.3m and 0.46m deep. There was 11.69kg of pottery within this ditch, dating mostly to the mid 2nd century but there was also a later flanged dish which may be intrusive. The majority of this deposit was found within one of the excavated slots (**1980**) where there was 10.69kg of pottery including substantial parts of a few vessels including an amphora. A copper alloy nail cleaner (SF 2094) and an iron looped object were also found in the ditch.

5.4.25 A roughly linear group of six pits were located within a *c*.20m area (**1904**, **1899**, **1933**, **1950**, **1966** and **1964**), two of which cut the enclosure ditches. Stratigraphic relationship and artefacts (no Late Roman examples within the pits) imply that they should date from the late 2nd to mid 3rd century period and it is likely that most, if not all, post-date the enclosures. The pits were of similar diameter (1.1m to 1.94m) although their depths varied from 0.43m (**1904**) to 0.46m (**1950** and **1966**) and 1.6m (**1933**). These pits were possibly dug for storing food during winter. They were of different character than the suggested quarry pits in the southern part of Area 2 and substantially smaller in diameter than the large quarry pits in Area 1. They were steep or vertically-sided, cut through stiff clay natural and the water table was not encountered even in the deepest pits. The quantity of artefacts in their backfills varied from minimal amounts in pit **1904** (0.09kg of pottery and a glass fragment (SF 1807)) whilst pits **1899**, **1933**, **1950** and **1964** had small to moderate quantities of pottery (0.97kg, 1.6kg, 0.46kg and 2.04kg of pottery respectively); pits **1933** and **1950** also had glass fragments (SFs 1838 and 1806). Pit **1966** in contrast had a significant primary deposit dating from the early to mid 3rd century. It was possible that pit **1966** contained a "placed" deposit as there were at least five complete/near complete vessels including an amphora found “packed” in the relatively shallow 0.46m deep pit. In addition to this pottery there was also a worn sestertius coin (SF 1867).

5.4.26 Twenty to 30m to the north-east and north of this pit group were two isolated pits (**1180** and **2025**). The former was 2.15m in diameter, 0.22m deep and contained 1.38kg of

pottery whilst the latter was sub-rectangular, 1.4m long by 0.36m wide and 0.2m deep. Within its backfill was 0.38kg of mid 2nd century pottery and an iron ox-goad fragment.

5.4.27 Ditch **1930**/**1974** lay directly to the north of pit **2025**, and was aligned east-to-west. It is possible that it was an enclosure ditch or a plot boundary running from the road heading towards Icklingham. Two further plot boundaries can be seen to the north (**1803** and **1078**) and all three ditches were roughly equi distance (Figs. 5 and 6). Ditch **1930**/**1974** was between 1.74m and 2m wide and 0.56m and 0.71m deep. A small to moderate quantity of pottery was recovered (2.48kg) dating to the late 2nd century as well as pair of tweezers (SF 1828) and an illegible *as* coin (SF 1300).

*Pit **1890**, Building 1 and plot boundary ditch **1803**/**2474***

5.4.28 Located between ditch **1930**/**1974** and plot boundary ditch **1803**/**2474**, a distance of just over 25m, was Building 1 and a single pit (**1890**). Pit **1890**, which cut the Phase 2 roadside ditch, measured 2.68m in length and was 1.1m deep and contained 0.38kg of pottery as well as an iron hinge fragment.

5.4.29 Building 1 lay adjacent, *c.*3m and perpendicular, to the east of the roadside ditch, and parallel to and just over 2m to the south of ditch **1803**/**2474** (Plate 1; Fig. 6). Building 1 was sub-rectangular in plan, *c.*8.2 long and *c.*6.6m wide with an additional 'porch' on its eastern side. The external layout of the structure comprised fifteen post holes along the southern, eastern, northern and western sides (**1844**, **1846**, **1853**, **1862**, **1868**, **1874**, **1817**, **1887**/**2441**, **1894, 1814, 1826, 1828, 1835, 1833** and **1824**). There was probably an entranceway into Building 1 from the roadway on the north-western side between post holes **1828** and **1835**. The eastern 'porch' comprised post holes **1812** and **1870**. The main Phase 3 post holes had stone packing and several had evidence for post pipes. There was one exterior post hole (**2444**), which may have been placed to strengthen the external eastern wall, several interior post holes (**2334**, **2419** and **2439**), five internal floor surfaces (1808,1819/2413/2416, 2344, 2345 and 2346) and two hearths (**2336** and **2415**) that also possibly date to this phase. Bulk samples (1088 and 1115) from floor 1819 and hearth **2415** produced good environmental results (see Appendix C.3).

5.4.30 Plot boundary ditch **1803**/**2474** survived to between 0.38m to 1.4m wide and between 0.12m to 0.42m deep. It contained a moderate pottery assemblage of 0.48kg, datable to the late 2nd century.

Eastern ditch of road heading towards Icklingham

5.4.31 The Phase 3 eastern roadside ditch was recut to the west of the earlier Phase 2 ditch. Five slots were excavated through the ditch which was found to be between 0.7m to 1.1m wide and 0.26m to 0.43m deep. A total of 0.3kg of pottery was recovered from the ditch which dates to the late 2nd to mid 3rd centuries.

*Building 3, pit **2048** and plot boundary ditch **1178***

5.4.32 Pit **2048** was located 2m to the south of Building 3 and was 1.15m long and 0.28m deep. Just 0.09kg of pottery was recovered from its backfill. Plot boundary ditch **1178**, which was largely removed by Phase 4 pit **2292**, was 1.35m wide and 0.58m deep. A reasonable quantity of pottery (1.98kg), was recovered from two of its three backfill deposits dating from the mid 2nd to mid 3rd centuries.

5.4.33 Building 3 was built over the backfill of the Phase 2 roadside ditch and was located less than 1m to the east of the Phase 3 roadside ditch (Plate 3). It was built lengthways, parallel to the road. The building was c.7m long and 6m wide and had been constructed with at least 11 post holes (**2051**/**2053**, **2056**, **2059**, **2061**, **2064**, **2067**, **2070**, **2078**,

2083, **2086** and **2098**). Post pipes were seen in many of the post holes. Several of the post holes had deposits which were burnt with small quantities of burnt clay especially flecks as well as charcoal. It is therefore possible that the building had burnt down. Very few artefacts were found within the post holes but these included small quantities of pottery, none seemingly late in date (possibly up to the end of the 3rd century) suggesting that the building did not continue into the Late Roman phase.

Building 4

5.4.34 Building 4 was positioned directly to the east of the roadside ditch and was aligned end on to the road. The building, which continued beyond the edge of excavation, was more than 4.4m long and *c.*5m wide. The building was presumably of beamslot construction with a bedding trench up to 0.72m wide and between 0.1m and 0.4m deep (**1174**, **1189** and **1191**). A moderate quantity of pottery was recovered from its backfill (2.47kg) which dates to the end of the 2nd century.

*Western roadside ditch; pits **2090** and **2101***

5.4.35 The western roadside ditch was sectioned in five locations (**2168**, **2222**, **2351**, **2395** and **1210**) and was up to 1.46m wide and 0.64m deep. The backfill was mostly sterile from which extremely small quantities of pottery were recovered (0.04kg) as well as an illegible coin (SF 1283). There was a possible recut to this ditch (**2353** and **2399**). Pit **2090** was seemingly the only 'Roman' feature within the centre area of the road aligned towards Icklingham and may therefore post date the Roman period. It was 0.78m in diameter and 0.41m deep and contained small quantities of Roman pottery (0.06kg) dating from the mid 2nd and possibly into the 3rd century AD. Pit **2101** was located to the west of the roadside ditch; it was 1.32m long, 0.92m wide and 0.33m deep and contained 0.36kg of pottery dating to the mid 2nd century as well as a glass fragment from a beaker (SF 1874).

Three plot boundary/enclosure ditches and building 5

5.4.36 Three plot boundary/enclosure ditches were identified to the west of the road, within which Building 5 was located. The southernmost plot boundary **2317**/**2327** was aligned east-to-west, stopping adjacent to the western roadside ditch. It was between 0.5m and 0.61m wide and 0.11m and 0.18m deep. The ditch was fairly shallow and produced a moderate quantity of pottery from its backfills (0.74kg), which dates to the late 2nd to 3rd centuries. Directly to the north of **2317**/**2327** was ditch **2324**/**2303**/**2401**/**2347** which was aligned east-to-west and turned to the north recutting the Phase 3 roadside ditch on its western side; presumably enclosing Building 5. The ditch was between 1.05m and 1.64m wide and 0.37m to 0.64m deep and contained 1.73kg of pottery dating to at least the late 2nd century as well as an iron blade. In addition, there was also an enigmatic object comprising four oval pellets of poorly-fused blue frit which may be associated with the production of blue frit melon beads. The northern plot boundary (**2403**/**2379** and **2409**) was aligned east-to-west and terminated at the western roadside ditch. The boundary ditch was up to 0.98m wide and between 0.21m and 0.38m deep. A moderate to large collection of pottery (4.11kg) was recovered from the ditch, which dates up to the early/mid 3rd century, as well as part of a probable penannular brooch (SF 1945) and a fragment of window glass (SF 1955).

Building 5

5.4.37 Directly to the west of the roadside ditch was a rectangular building fronting onto it width-ways. It measured *c.*10m in length by *c.*6.6m wide and comprised two east-to-west rows of five post holes (**2256**, **2254**, **2252**, **2246**, **2244**, **2365**, **2371**, **2323**, **2321** and **2319**). In their backfills there were a few very small largely undiagnostic pottery

sherds but including some early Romanised proto grey wares (collectively 0.09kg) and a hobnail from **2365**. It is unlikely the building was built before the end of the 1st century and it probably dates from the early or mid 2nd century.

*Plot boundary ditch **2506** and pit **2453***

5.4.38 A further plot boundary (**2506**), was located *c*.17m to the north of ditch **2403**/**2379**, although any former building within the plot has not survived. East to west ditch **2506**, was 0.8m wide and 0.45m deep although it narrowed and then terminated 10m to the east of the site baulk. Within the ditch there was a moderate quantity of pottery (0.55kg) dating to the mid 2nd century. Pit **2453**, located near to the road, was large and may have been a former storage pit. It was 2.93m by 2.75m and 1.1m deep with near vertical sides and contained 0.21kg of pottery dating to the mid 2nd to 3rd century in its backfills.

*Pit **2268**, well **2308** and pit **2248***

5.4.39 There were just three Phase 3 features to the north of plot boundary ditch **2506**. Pit **2268** was 5m to the north and measured 2.2m by 1.6m and was 0.52m deep. It contained 0.26kg of pottery dating to at least the mid 2nd century. Well **2308** was located 15m to the north of pit **2268**, it was sightly oval in shape, measuring 4.6m by 3.92m and was 3.75m deep. The well was quadranted with two opposing quarters excavated to a depth of 1.3m and then hand augered to ascertain its depth. The well was vertically sided and the present water table was found at *c*.1.2m below excavated site level. A moderate quantity of pottery (1.33kg) was recovered, which dates to at least the mid 2nd century.

5.4.40 Pit **2248** was the most northerly feature dating to this phase. The pit was circular, 2.7m in diameter and 1.24m deep (Plate 5) with near vertical sides and a slightly concave base. The lowest four deposits (2446, 2271, 2447 and 2270) were deposited into the pit from the north and they collectively accounted for half the pit's backfill. These layers were largely sterile with just 0.08kg of pottery being recovered in addition to a CBM fragment (0.31kg). The burial of a female aged 30-35 (skeleton 2258; Plate 5) was then laid in the pit in a supine position (north-west to south-east), though on a slight slope with her left side lower than her right, with her arms over her chest. The skull was placed next to her right leg along with a small grey ware beaker (SF 1954), which had soot still attached; the latter dates to the mid 1st to 2nd century. She also had a copper alloy ring on a finger of her left hand (SF 1286), and an iron pointed ferrule object presumably intended to sheath the end of a pole. Three soil layers (2249, 2250 and 2257) were then backfilled over her with the top deposit (2249) containing a moderate quantity of pottery (0.73kg), dating to the mid to late 2nd century, and two CBM fragments (0.2kg).

5.5 Phase 4: Late Roman (Late 3rd to Early 5th centuries)

Summary

5.5.1 Within the Late Roman Phase were a number of features where there were stratigraphic relationships and this phase has therefore been sub-divided into sub-phase 1 (all features) and sub-phase 2 (two layers in Area 1). In reality it is likely that some of the features date to the later sub-phase but this will be further investigated at analysis and publication stage. A total of 318 contexts have been assigned to this Late Roman phase (22.8% of the total from site) of which 214 were from Area 1. This

number is slightly inflated by multiple numbers (56) assigned to the two sub-phase 2 layers in Area 1. If the multiple numbering is taken out of the equation, over 60% of the contexts (160) were assigned to Area 1.

5.5.2 In Phase 4 there is some continuity of use from the previous phase (Middle Roman; Phase 3), although in parts of the excavation area there were changes of use. These changes include the western parts of Area 1 where, for the first time, domestic buildings and a large cobbled area were located near the river. A large defensive ditch was also constructed around the town. The areas of continuity included the central and eastern part of Area 1 which was still used as an area of pitting and industrial activity probably into the 5th century. The three roads within Area 2 were maintained, albeit that there were no enclosures next to two of them and some of the houses along the third road heading towards Icklingham seem to have gone out of use. Instead, several large watering holes were dug in this area. The two sub-phase 2 layers (*i.e.* middens) are indicative of a change in the way rubbish was disposed of (instead of in pits) but these layers were limited to only two specific parts in Area 1.

Area 1 (Sub-Phase 1) (Fig. 4)

*Pits in the western part (**1438**, **1523** and **1554**)*

5.5.3 Three pits were located at the extreme western side of the site, of which two (**1438** and **1523**) were relatively shallow at 0.15m and 0.28m deep respectively. These pits both produced very small pottery assemblages (0.03kg and 0.05kg) which was not closely dated but each contained a late 4th century coin dating to AD 364-75 (SFs 1016 and 1019). The third pit (**1554**) was larger at 3.2m by 1.65m and 0.72m deep. Stratigraphically it cut two Phase 3 pits but it is possible it also dates to the Middle Roman phase (Phase 3). The moderate assemblage of artefacts recovered included 3.02kg of pottery but no Late Roman sherds were present; 16 CBM fragments (4.92kg) were also found.

*Building 6 and ditch **1423***

5.5.4 Building 6 consisted of a group of eight post holes (**1444**, **1506**, **1512**, **1518**, **1520**, **1525**, **1527** and **1529**) in a *c.*10m by 6m area which did not form a coherent pattern but is very likely to be part of a building. The phasing of this building is also tenuous as only two post holes (**1444** and **1518**) had any dating evidence with the former producing pottery which could not be closely dated whilst the latter contained a sherd of a probable Oxford red ware dish (4th century). In the middle of the postulated building were two probable hearths/ovens (**1532** and **1535**) which are likely to belong to this building. Hearth/oven **1532** was 0.75m in diameter and 0.1m deep with gentle sides and a flat base. The basal deposit (1531) was unburnt yellow brown silty clay with chalk lumps and was presumably the original lower lining while the upper layer comprised clay with chalk pieces burnt to a bright orange red colour. Hearth/oven **1535** was sub-rectangular 0.85m by 0.35m and 0.07m deep with moderate sides and a flatish base. The lower layer was the original lining; a burnt orange to red clay. The upper deposit was an unburnt yellow/brown clay which may have been part of the collapsed former superstructure. Two unphased ovens/hearths (**1536** and **1538**) lay 5m to the south of Building 6 and may have been part of another building.

5.5.5 Ditch **1423** lay directly to the east of Building 6, and was aligned on a slihtly different north-west to south-east orientation. It was 2.3m wide and 0.6m deep and produced very small quantities of pottery that is not closely datable as well as a late 3rd century and a mid 4th century coin (SFs 1026 and 1025).

*Pits **1416**, **1418**, **1456**, **1493** and **1497** and Building 7*

5.5.6 A group of five pits (**1416**, **1418**, **1456**, **1493** and **1497**) lay directly to the east of ditch **1423** within a *c*.6m wide area. The pits were between 0.62m and 1.5m in diameter and 0.1m and 0.65m deep and contained very small quantities of pottery including a Latest Roman sherd within **1416**. Four of the pits also collectively contained 12 CBM fragments (4.79kg).

5.5.7 The plan of Building 7 was mostly revealed within the excavation area; it was at least 14m long and 5m wide and was aligned north-east to south-west (Plate 8). There seems to have been two phases to its construction with the north-eastern end consisting of a shallow slot and post hole construction. This north-eastern end was *c*.7.4m long and comprised a number of post holes and slots (**1403**, **1410**, **1412**, **1407**, **1490**, **1474**, **1472** and **1470**). The beamslots were between 0.28m and 0.47m wide and 0.08m and 0.21m deep and the post holes between 0.47m and 0.53m in diameter and 0.21m to 0.29m deep. Very few artefacts were found in their backfills but these included a 4th century coin from slot **1403** (SF 2027, AD 335-345). The probable extension (**1476**, **1478**, **1480**, **1483**, **1485**, **1487** and **1546**) comprised bedding trenches/beamslots between 0.45 and 0.55m wide and 0.37m and 0.48m deep. The post holes varied from 0.15m to 0.65m in diameter and 0.06m to 0.15m deep. Fourth century pottery sherds were recovered from the backfill of beamslots **1483** and **1485**.

Cobbled surfaces (1035/1515 and 1516/1587)

5.5.8 Directly to the north-east of Building 7 was a cobbled surface which extended over an area measuring *c*.15m by 7m, and it overlaid several features including a Phase 3 group of large pits (**1562**, **1564** and **1604**). The cobbled surface (Plate 9) did not continue as far as the southern baulk (not on plan) but extended beyond the excavation area running into the north baulk. It was probably a courtyard for a nearby stone building to the north. The original surface (1035/1515) largely comprised small sub-rounded cobbles up to 0.1m in length. There was a moderate quantity of pottery from 1035 (2.91kg) dating into the 4th century, in addition there was also a copper alloy hairpin.

5.5.9 A second cobbled area (1516 and 1587) measuring 4m by 3m, covered the earlier surface in the middle part of the former courtyard (Plate 9). This later surface had larger cobbles than 1035 and included a substantial quantity of flat CBM tiles and a saddle quern (SF1640). These larger cobbles may have been repairs/patching to the long-lived surface. From this relatively small area a total of 3.7kg of pottery dating into the 4th century was recovered. The CBM comprised 428 fragments (92.23kg), largely originating from 1516. Surface 1516 also produced an iron hook while a possible copper alloy hairpin (SF 1663) and a needle (SF 1659) was recovered from 1587.

*Ditch **1617/1625** and pit **2142***

5.5.10 Ditch **1617**/**1625** lay some 10m to the east of the cobbled surface and was aligned north-west to south-east. The ditch was only 0.5m wide and 0.14m deep but was finds-rich with a large variety of artefacts being recovered. These included 7.78kg of pottery dating up to the mid 4th century, three coins (one of Claudius II; SF 1614, AD 268-70) a 4th century example (SF 1616, AD 330-7) but also a possible intrusive coin of William IV (SF 1615). This artefact, if this identification is correct, is the only obviously intrusive artefact within this large assemblage, and found its way into the ditch by uncertain means. Other artefacts recovered comprise a copper alloy bangle, a hob nail, an iron blade, three fragments from glass vessels (SFs 1608, 1609 and 1610), a bone hairpin and 0.35kg of slag. Rectangular pit **2142** was located directly the the east of ditch

1617/**1625**. It measured 1.76m by 0.68m and was 0.29m deep and contained 0.18kg of pottery dating into the Late Roman period.

*Pit group **1269**, **1313** and **1275***

5.5.11 Twenty metres to the east of ditch **1617**/**1625** was a group of three pits (**1269**, **1313** and **1275**). Two of the pits (**1269** and **1313**) were between 1.58m and 1.2m in diameter and 0.33m to 1.22m deep respectively. There were small artefact assemblages from both with just 0.09kg of pottery from pit **1269** and 0.13kg from **1313.** The latter pit also had some 20 CBM fragments (1.25kg), an opus signinum cement fragment (0.02kg) and 0.08kg of slag. Pit **1275** was larger in diameter than these two pits, it measured 2.15m in diameter and was 0.9m deep. It had three backfill deposits which had a moderate to large collection of artefacts. This comprised a group of five late 3rd century coins (SF 1109a-e), which had probably originated in a bag. There was also 5.1kg of pottery including sherds dated as latest Roman, 25 CBM fragments (4.28kg), 2 fired clay fragments (0.21kg), 6 fragments of wall plaster (0.05kg), a bone hairpin and 0.07kg of slag.

*Industrial features (**1337/1099**, **1108** and **1213**)*

5.5.12 Twenty metres to the east of pit group **1269**, **1313** and **1275**, there were three industrial features within a 10m area (feature **1337** and probable related flue **1099**, **1108** and **1213**). Feature **1337** cut into former Phase 3 pit **1130** and re-used it for industrial reasons, presumably a kiln (Plate 4). It was 1.8m by 1.4m and 0.7m deep with near vertical sides. A lining was inserted into the former pit comprising a layer of large sub-rounded cobbles up to 0.2m in length. It has been suggested that this lining was placed to support a superstructure for metalworking (see Appendix B.4). Associated with this feature was a possible flue **1099**, directly to the north which was 1.2m long and 0.7m wide and had moderate to steep sides and 0.25m deep; it turned towards the south to feature **1337**. The kiln and flue were probably dismantled as no superstructure was found. The flue's backfill (1098) had been burnt mid to dark brownish red. Very few hammerscale fragments were recovered from the flue which may suggest it was not a metalworking feature. Former kiln **1337** had a basal fill of dark greyish brown sandy silt (1129), this was overlain by a mid brownish yellow silty sand with frequent unsorted large angular and sub-angular flint cobbles (1128) and the upper fill of dark greyish brown sandy silt (1103). The latter deposit was 0.5m deep, it was finds rich and dated to the last decade of the 4th century or more likely the early 5th century. Within the backfill of **1337** there was a significant quantity of pottery (4.18kg) including 4th century types, part of a pipeclay figurine of a ram, two coins (one dated AD 388-402 (SF 1227), the other late 3rd to 4th (SF 1051)), a possible quern stone (SF 1452), a whetstone (SF1452), 0.07kg of slag, 46 CBM fragments (4.83kg), eight fired clay fragments (0.13kg) and six opus signinum cement fragments (0.22kg).

5.5.13 Features **1108** and **1213** were located adjacent to the west of flue **1099** and may also have been the remains of furnaces for metalworking (see Appendix B.4). They were undated but contained very similar burnt material to that found in flue **1099** and were also a similar shape to metalworking kiln **1667**. Probable kiln **1108** was oval in shape running east-to-west and was 1.35m long, 0.48m wide and 0.28m deep with shallow sides (*c.*30°) with an undulating base. Its backfill was a medium red-brown sandy clay with burnt areas. Large flint nodules were seen in the eastern part of the probable kiln. Probable kiln **1213** was also oval in shape, 2.9m long, 0.9m wide and 0.34m deep with an uneven base. There was no sign of *in situ* burning but it was backfilled with a dark brown/black clayey sand with some burnt clay flecks. The upper deposit was a dark reddish brown sandy clay with frequent burnt material.

Pits in the eastern part of Area 1

5.5.14 To the east of the industrial features there were seven pits over a c.20m area (**1064, 1071**, **1079**, **1083**, **1106**, **1125** and **1226**; Table 9). Six are almost certainly quarry pits with the seventh, pit **1226**, noticeably smaller and not part of the main group (Table 9). Two of the pits (**1071** and **1125**) were extremely large features and the other four just large. All the six pits were over 1m deep, they had slightly undercutting, vertical or near vertical sides and were flat bottomed. The water table was encountered near to the base of the deepest pits and its presence suggests these were not for storage. Two of the pits (**1064** and **1106**) were intercutting whereas the others were next to each other with the exception being **1071**, located 10m to the west. Three of the pits were totally excavated (**1064**, **1079** and **1106**) while the remainder were half-sectioned.

5.5.15 Most of the pits were backfilled with several deposits with the largest two (**1071** and **1125**) containing nine and 15 deposits respectively. Some of these layers were tipped into the former pits suggesting they had probably been rapidly infilled from several sources. Most of the pits were backfilled with large or extremely large domestic assemblages, presumably from middens as the artefacts were mixed. It is likely that some of the pits were backfilled in the very late 4th or even early 5th centuries.

Cut of pits	No. of fills	Size (length/ width/depth)	Assemblage
1064	Four	2.8m x 2.7m x 1.54m	Significant pottery collection dating to C3-C4 (10.51kg); 4th century coin (SF 1104) and a very worn coin which may be post-med and so intrusive (SF 1186); fe stylus, fe blade; whetstone (SF 2189); 33 CBM fragments (3.48kg);bone pin; significant quantities of animal bone
1071	Nine	5.4m x 3.2m x 1.02m	Significant pottery assemblage MC3-C4 (6.95kg); 2 coins including one AD 350-60; 34 CBM fragments (2.71kg);16 fired clay fragments (716g); 3 glass vessel fragments (SFs 1236; 1380 +1390);significant animal bone; environmental sample good (1040)
1079	Five	2.4m x 1.9m x 1.22m	Moderate pottery collection into C4 (3.72kg); fe ring; 27 CBM fragments (4.7kg); good environment sample (1011)
1083	Three	2.53m x 2.26m x 1.6m	Significant pottery assemblage including C4 (8.56kg); ?worked stone (SF 1181)
1106	One	2.3m x 1.4+m x 1.56m	Moderate pottery collection dating to C3-C4 (3.9kg); 7 CBM fragments (0.62kg); animal bone included significant parts of 2 piglets
1125	Fifteen	3.7m x 1.95m+ x 1.3m	Significant pottery assemblage included latest Roman (11.77kg); fe ring;117 CBM fragments (11.28kg); 42 fired clay fragments (1.13kg); window glass fragment (SF 127); glass bead (SF 2193); 2 bone pins including terrier dog; significant animal bone assemblage; good environmental sample (1028)
1226	One	0.75m x 0.6m x 0.33m	coin AD 364-78 (SF 1447)

*Table 9: pits **1064, 1071**, **1079**, **1083**, **1106**, **1125** and **1226***

Area 1 (Sub-phase 2)(not on plan)

Black earth layer

5.5.16 The black earth layer was only present in the eastern part of the site, it lay directly to the east of Building 7, possibly implying that this structure was still in use. It covered an area of *c*.40m sealing both the 4th century cobbled layers 1035/1515 and 1516/1587 and features to the east of it up to and possibly just sealing Phase 4 ditch **1617**/**1625**. This ditch was very late and may suggest this black earth layer was placed/confined up to this area of the site only. The area to the east of ditch **1617**/**1625** did not have this

layer - indeed several of the pits and industrial features here (*e.g.* **1275**, **1337**, **1071** and **1125**) were probably contemporary with this layer.

5.5.17 The layer was sampled by 34 test pits, each measuring 2m by 1m in size, spread across the layer ensuring a representative sample (not on plan). This layer was between 0.05m (over some of the cobbled area) to a maximum of 0.28m thick with an average depth of *c*.0.15m. It comprised a dark brown to black sandy silt and contained a large quantity of various types of artefacts with a likely date of this material being at least the last decade of the 4th century but probably into the early 5th century. There was a significant quantity of CBM (relatively small pieces), some wall plaster, opus signinum fragments and other artefacts which suggest that this layer included demolition remains of former building(s) which had been abandoned. In addition there were large quantities of domestic remains including oyster shell suggesting that occupational material was also been disposed of in this layer implying other parts of the site may still have been in use.

5.5.18 The artefacts and ecofacts comprised a large pottery assemblage (31.53kg) including Latest Roman sherds, and ten coins all dating from the mid 3rd centuries. The latter consists of six mid to late 3rd century coins (SF'S 1522, 1572, 1587, 1592, 1596, 1602), a coin dated late 3rd to 4th (SF 1045) but also some 4th century examples SFs 1056, 1070, 1521 (AD 346-50, AD 330-5 and AD 364-75). There were also at least nine copper alloy objects comprising three possible hairpins (SFs 1130, 1598 and 1599), tweezers (SF 1088), a bangle, a probable part of a brooch and three cut sheets (SFs 2180, 2182 and 1493) which were probably off-cuts from metal-working. Iron objects include a joiner's dog, a double-spiked loop with a ring, a blade, three wall hooks, hob nails and a stylus. Sherds from six glass vessels (SFs 1073, 1076, 1077, 1095, 1097 and 2076) were recovered as well as several bone objects consisting of two bone hairpins that had been resharpened (SFs 1064 and 1065), seven other bone hairpins, a bone needle (SF 1066). Stone objects comprised a whetstone (SF 1086) and a possible weight. A substantial quantity of CBM was also recovered (1419 fragments weighing 118.31kg at an average size of 83.4g per fragment). The small size of these (below the site's average fragment weight) may be due to the more controlled excavation in the test pits including contexts sieved. In contrast there were relatively few fired clay fragments with only 31 fragments (0.79kg) being recovered, but there were also 66 lumps of opus signinum (2.1kg), four pieces of wall plaster (0.02kg) and a major assemblage (27.17kg) of oyster shell.

Eastern "layer"

5.5.19 A possible layer or Late Roman ground surface or even a remnant of subsoil was sampled over an area 7m by 6m on the eastern part of the site. This deposit was at the interface between subsoil and an area of Phase 3 quarry pits and was left *in situ* when the site was initially machined as the top of some cobbles were exposed in this area suggesting these stones may have been part of a structure. In reality the cobbles were found to be a deposit of stones within one of the large 3rd century quarry pits. Initially the 7m by 6m area was hand excavated by 2m by 1m test pits, although this stopped once it was proved the cobbles were not structural and the soil just sealed Phase 3 pits. The layer comprised a dark greyish brown sandy silt up to 0.2m thick. Within this layer there were some very late 4th/early 5th century artefacts. There was a large pottery assemblage (12.1kg) including 4th century types, three 4th century coins (SFs 1058 (AD 330-5), 1107 (AD 330-41) and 1055 (AD 388-402)), two possible copper alloy hairpins (SFs 1242 and 1005), tweezers (SF 1315), a cast handle (SF 1002), a copper alloy stud or nail (SF 1346), an iron blade, a window glass fragment (SF 1888) and a

probable double ended bone pin-beater (SF 2183). A significant quantity of CBM material (100 fragments weighing 11.9kg) were also recovered in addition to 23 fired clay fragments (0.44kg). This layer unlike the black earth, had no opus signinum or wall plaster fragments and only a moderate quantity of oyster shells (1.88kg).

Area 1a (Fig. 5)

5.5.20 In Area 1a, the town ditch was uncovered aligned on a north-east to south-west orientation (Figs. 2 and 5). The suggested location of the ditch on the eastern and north-eastern areas of the town have been plotted in Fig. 2. This ditch was sampled in two sections (**1698** and **1645**), *c.*20m apart, in Area 1a. The two sections were roughly the same size (3.9m and 3.76m wide respectively and 1.55m and 1.46m deep). The ditches had a steep "V" shape profile with a slightly concave base. They were backfilled with a similar number of deposits (eight and six) with the deposits being tipped into the ditches suggesting both had been filled in quickly. The artefacts within the two ditch sections were both different suggesting that they were backfilled from different sources. The artefacts from **1645** were noticeably later in date and included coins that were found by metal detector around the excavated slot. Five coins were recovered (SFs 1289, 1290, 1295, 1296 and 1297) with one from the 2nd century, three from the mid/late 3rd century and one dated AD 364-78. From the hand excavated slot there was also 1.98kg of pottery with several sherds dating into the Late Roman period. A glass fragment (SF 1913), 20 CBM fragments (1.96kg) and nine fired clay fragments (0.13kg) were also present. In contrast ditch **1698** contained 1.51kg of pottery but no definite Late Roman sherds, part of a probable copper alloy pin (SF 1703), 23 CBM fragments (0.83kg) and a single fired clay fragment (0.02kg). There were also adult human remains from two fills within the ditch (1721 and 1721) comprising two skull fragments and a metatarsal respectively. In addition, a further skull fragment, from an adult, came from an adjacent ?feature/tree bole (**1700**) as well as part of a skull of a person aged 8-12 (context 1547) which is very likely to have come from the top of the ditch.

5.5.21 Just beyond the northern side of ditch **1698** was an intercutting possible pit (**1699**) and a possible tree bole (**1700**; not on plan). These shallow features (0.3m deep) were slightly irregular and recorded in an area of 1.5m². They may have been cut by the town ditch or be the result of disturbance caused when creating its internal bank. Tree bole **1700** had small quantities of pottery (0.04kg) and the human skull fragment whereas pit **1699** was undated. On the southern side of ditch **1645** was a possible ditch (**1646**), 2.28m wide and 0.44m deep. It may be an earlier boundary or similar feature although the pottery (0.03kg) probably dates to the Late Roman period (3rd to 4th centuries) suggesting it could have been disturbance caused by construction or even backfilling of the town ditch.

Area 2 (Figs. 5-7)

*Burial **1393***

5.5.22 Burial **1393** comprised a shallow grave aligned north-west to south-east to the south of the former railway embankment (Fig. 5). The grave measured 2.18m by 0.7m and 0.15m deep and contained a male aged 30-35 in an extended position. A minim radiate coin was placed in the mouth, dating to sometime between AD 270-90 (SF 1539) whilst a few residual Early Roman sherds (0.14kg) were within the backfill soil of the burial, presumably from the Phase 2 ditch it cut.

*Road surfaces **1704** and **1741**(?Long Melford road and an internal road)*

5.5.23 Parts of two roads (**1704** and **1741**) met in Area 2 (Figs. 2 and 5). The main road (**1704**) ran east-to-west towards Long Melford. There were seemingly no road side ditches in the Late Roman period, although metalling was recorded on the western side. The road metalling survived in an area 4.5m wide and 0.1m thick and this comprised a dark grey clay with numerous cobbles and flints. From this fill there was a Hod Hill brooch fragment (SF 1450), a copper alloy strap slider probably from a horse harness (SF 1122) and very small quantities of pottery that is not closely dated (0.04kg). An internal town road (**1741**) met the 'main' road at a "T" junction. This internal road was sampled just to the south of the former Victorian railway line with its metalling surface being 4.4m wide and 0.1m deep. The metalling (1715) comprised compacted sub-angular stones (20%), sub-rounded stones (70%) and gravel (10%). There were few finds from the surface comprising just 0.07kg of undiagnostic pottery. Sealing the metalling was a greyish brown clay sand with some pebbles and charcoal (1740) which was possibly the remains of a disturbed stone surface from the former road. Some artefacts were found in this layer comprising 0.59kg of pottery and a copper hairpin (SF 1754).

*Water hole **1121** and pits **1117** and **1908***

5.5.24 In the long *c*.80m area north of the probable road to Long Melford there were just three features, a water hole (**1121**) and two pits (**1117** and **1908**). Water hole **1121** was directly to the north of the road and measured 3.6m in diameter and was 0.9m deep. There was a small to moderate quantity of pottery in its backfills dating to the late 2nd to 3rd centuries, as well as an iron blade. This feature could date to the Middle Roman period but its proximity to the road and the fact there were two similar Late Roman water holes (**1801** and **2292**) to the north makes it more likely that it was excavated in Phase 4 when this part of the town was declining and seems to have been associated, at least in part, with pastoral farming. The two pits were different, with pit **1117** being shallow (0.16m deep) and containing just 0.16kg of Late Roman pottery whereas pit **1908** was 1.7m in diameter, 0.86m deep and produced 2.1kg of pottery including some sherds dating to the 4th century.

Building 1

5.5.25 It is possible that Building 1 continued partly into Phase 4. The Phase 3 building was internally altered with post holes **1795**, **1799**/**2432**, **2422**, **2425** and **2430** being inserted and new floors 1807, 2337 and 2338 laid. It is possible that these changes occurred late in Phase 3 as the only artefacts from these features were 0.01kg of pottery which were not closely datable and a lead cast plug (SF 1118). A good environmental sample (1086) was recovered from post hole **1795** (see Appendix C.3).

*Watering holes/wells **1801** and **1254**/**2292***

5.5.26 Two similar watering holes/wells (**1801** and **1254**/**2292**) were both dug within 2m of the northern side of Buildings 1 and 3 respectively and both were directly to the east of the road heading towards Icklingham. They were excavated into former plot boundary ditches of the buildings but it is not definite that Buildings 1 and 3 had gone out of use. Part of the uncertainty lies in the fact that there were two watering holes located 20m apart and why so close to the buildings? Perhaps the domestic buildings were re-used as agricultural ones (barns or stables). It is therefore not certain whether the features were wells for domestic use or watering holes presumably for pastoral farming. It is possibly more likely the latter as there was a noticeable lack of 4th century pottery and other late artefacts in this part of the site compared with Area 1 but it may be that refuse was disposed of differently. Overall the two wells/watering holes were of far

cruder construction than the Phase 3 well (**2308**) located *c*.100m to the north which seems to have gone out of use in the 3rd century. These wells/watering holes were between 5m and 7m in diameter with **1801** being 1m deep on relatively lower lying ground whilst the depth of (**1254**/**2292**) was greater at 1.85m, being on slightly higher ground. The sides of both features were steep but there was no evidence of any former lining. Ground water was encountered in the former at *c*.0.4m below the ground level. The two features were partly hand excavated but due to the high water levels, their bases were hand augered. There was 0.46kg of pottery dating to the 3rd century from **1801** and 2.03kg from **1254**/**2292** dating to the latest Roman phase. A fragment of window glass (SF 1798) came from **1801** but it is not certain if this had originated from Building 1 directly to the south of it. Twenty-five CBM tile fragments including tegula (1.71kg) were also recovered from **2292**.

*Western and eastern roadside ditches and road surface (**1883**, 1907 and **1912**)*

5.5.27 The western roadside ditch (**2167**/**2224**/**2349**/**2397**) was between 0.69m and 0.8m wide and 0.25m and 0.47m deep. This ditch cut the Phase 3 roadside ditch but there were very few artefacts in its backfill, with just 0.05kg of pottery with is not closely datable. There was also a late 3rd century coin (AD 270-90; SF 1755) from ditch **2224** and a mid 2nd century coin from **2167** (AD 138-61, SF 1433). The eastern ditch (**2282**/**2285**/**2381**), unlike the western side, was possibly not continuous (there may have been a gap/entranceway on its southern side). It was between 0.7m and 1.26m wide and 0.2m and 0.24m deep. There was just 0.04kg of pottery from the ditch which dates to at least the Middle Roman period.

5.5.28 Parts of the road metalling were seen in patches (**1883**, 1907 and **1912**). The best survival was 1907 in the western baulk where the road was seen over a *c*.4.8m length and survived up to 0.2m thick. The surface comprised small flint pieces, mostly sub-rounded 0.03m in diameter but a few larger sub-annular flints up to 0.12m long were also present. The flint comprised only *c*.40% of the total make-up of the layer and it is likely this surface had been disturbed by later activity such as ploughing. There was just 0.12kg of pottery recovered from the metalling, which dates up to at least the Middle Roman period.

Building 5

5.5.29 The middle of the southern side of Building 5 was supported internally by three post holes (**2368**, **2375** and **2361**) and it is likely these represent rebuilding/additional support for this structure. The only finds comprise a single scrap of pottery weighing 3g from post hole **2375** and a part of a Puddingstone rotary quern from **2368** (SF 1947). Two post holes (**2242** and **2392**), presumably part of a fence line, led from the northern corner of the building to the road. The latter post hole cut the former Phase 3 roadside ditch suggesting the building continued into this Late Roman period.

*Pits **1206** and **2267***

5.5.30 Two pits (**1206** and **2267**) were located to the north of Building 5 (Fig. 7). The pits were very different with the former being circular in plan and measuring 2.21m in diameter, 1.25m deep with vertical sides. It cut the Phase 3 roadside ditch and was filled with a moderate quantity of pottery (2.65kg) dating to at least the Middle Roman period. In contrast pit **2267** was sub-square, 2.75m by 2.4m and 0.3m deep but was also filled with a moderate quantity of pottery (2.24kg) dating after the mid 3rd century. Other artefacts comprise a copper alloy needle (SF 1964) of a late type (3rd to 4th century), a plain iron ring and a iron blade, a glass fragment (SF 1971) and a single CBM fragment (0.01kg).

*Northern town ditch **2460/2473***

5.5.31 At the northern end of the site the presumed town ditch was sampled in two locations (**2460** and **2473**). The sections were 4.5m and 3.9m wide with the latter being 2.25m deep (Plate 10). This section was hand excavated to 1.4m and then widened by machine for health and safety reasons with the base then being hand excavated. There were relatively few artefacts within the ditches with collectively 0.3kg of pottery being recovered, none of which is Late Roman in date.

5.6 Phase 5 (post-Roman)

5.6.1 There were very few features which were post-Roman in date and all of these were located in Area 2. The former 20m wide, railway area, was not sampled and was used as storage area for the subsoil (Fig. 5). To the north of this a narrow ditch (**1697**) seemed to cut the Phase 4 road surface (**1704**). In the middle of Area 2 there were three ditches (**1762**/**1843**, **2087**/**2383**/**2200** and **2314**/**2312**) aligned north-east to south-west, *c.*20m apart and these cut through the Roman road running towards Icklingham. Artefacts from all three ditches comprise only residual Roman finds and therefore the date of ditches is uncertain but they are likely to be post-medieval. The ditches runs roughly parallel to the trackway more than 100m to the north-west (Fig. 2). A series of ephemeral ditches directly to the north of the town ditch, currently unphased, are likely to be recent in date as they are mostly aligned parallel and near to a modern trackway, and no definite Roman features were seen to the north of the Roman town ditch.

6 FACTUAL DATA AND ASSESSMENT OF ARCHAEOLOGICAL POTENTIAL

6.1 Stratigraphic and Structural Data

The Excavation Record

6.1.1 All hand written records have been collated and checked for internal consistency, and the site records have been transcribed onto an MS Access Database. A preliminary matrix of the site has been compiled in the program S*tratify*.

Type	Quantity
Context registers	38
Context numbers	1486
Plan registers	6
Section registers	9
Sample registers	24
Object Registers	26
Plans	206
Sections	354
Black and white films	19
Colour slide films	20
Digital photographs	1854

Table 10: *Quantification of excavation records*

Finds and Environmental Quantification

6.1.2 All finds have been washed, quantified, and bagged or boxed. Total quantities of the finds and ecofact categories are listed in Table 11. Environmental bulk samples were collected from a representative cross section of feature types, dates and locations.

Artefacts	Number and/or weight
Lithics	555
Coins	113
Copper alloy objects	118 fragments (c.95 objects)
Iron objects	1193 (including *c.*930 nails)
Lead objects	15
Metalworking residues	62.19kg
Glass	52 vessel fragments, 6 window fragments and 3 beads
Prehistoric pottery	171 sherds (1.15kg) - includes two possible Saxon sherds
Roman pottery	544.55kg
CBM	3031 fragments (373.15kg)
Fired Clay	540 fragments (10.21kg)
Opus Signinum	90 'lumps' (2.93kg)
Wall plaster	10 fragments (0.07kg). Paint survives on several.

Miscellaneous small finds	3
Stone objects	c. 500 pieces (including c. 477 very small lava fragments)
Worked bone	36 fragments (33 objects)
Human remains	2 burials and parts of at least two others
Animal remains	67% of the animal bone was assessed and this produced 9411 animal bone and teeth fragments weighing 146kg
Environmental samples	120 bulk samples taken
Shells (marine)	87.4kg

Table 11: *Quantification of artefacts and ecofacts*

Range and Variety

6.1.3 Features and layers on the site included ditches, pits, watering holes and wells, kilns, hearths/ovens, cobbled surfaces (roads and courtyards), post holes, beamslots, floor layers, stake holes and animal and human inhumations. The most common features were pits of varying sizes with various functions including for quarrying and use as storage pits. Some had secondary uses including rubbish disposal and/or as latrines. There were several ditches with some being for boundaries and enclosures, as well as a large defensive ditch. At least seven probably domestic buildings, either of post hole and/or beam slots construction, were identified in addition to other structures, most probably relating to industrial uses.

Condition

6.1.4 Preservation of features was average to good across the excavation area. In one building floor levels survived and there were some cobbled surfaces uncovered, at least in small areas. There is no evidence for medieval ridge and furrow on site and and even modern ploughing has not been particularly deep (topsoil *c.*0.25m deep). Ploughing however has caused some truncation to features and in some parts of the site where relatively shallow features such as post holes will not have survived - this has affected the ability to have complete building and structural plans for some parts of the site. Well over 95% of features were Roman in date and the lack of many prehistoric and post-Roman remains has meant that there is far less residuality and intrusion than in many other open area excavations. There was only one significant area of modern destruction and this was due to a Victorian railway line, *c.*20m wide, running through the site.

6.2 Artefact Summaries

Lithics (Appendix B.1)

Summary

6.2.1 Five hundred and fifty-five lithics were found in 152 individual contexts. The majority of the flint dated to the Mesolithic through to the Late Neolithic/Early Bronze Age. Only one context with 30 flint pieces may be contemporary with the remainder, the vast majority being residual. This assemblage will be recorded within the WIX 021 assemblage.

Statement of Potential

6.2.2 The relatively sparse quantity of mostly residual lithics from the site has contributed to the decision to have no prehistoric research objectives in this report.

Coins (Appendix B.2)

Summary

6.2.3 A total of 113 coins was found including a small hoard of five late 3rd century *antoniniani*. At least 109 date to the Roman period, 72 of which can be identified to a reign without conservation. Three or four coins may be post-Roman in date. The earliest Roman coin is probably a Nero example and the latest comprised three dating to AD 388-402. There is low coin loss from the mid 1st to mid 3rd century after which there is a general increase.

Statement of Potential

6.2.4 There are enough coins recovered to merit detailed analysis. A comparison with the *c*. 4000 coins found during metal-detecting of Wixoe over the last 30+ years would be useful (see recommendations on B.2.17 and B.2.18). The assemblages will help elucidate the town's date of origin, its length of occupation, its pattern of coin supply and loss, and how that might have been affected by historical events. The wider economic and geographical associations of the coins can be suggested partly by comparison with nearby coin assemblages.

Metalwork (Appendix B.3)

Summary

6.2.5 A large collection of copper alloy objects (118 fragments), iron (1193 fragments (including 930 nails) and lead (15) was found with the large majority trcovered from features. The vast majority are Roman in date although few could be dated with precision. These artefacts largely survive in good condition.

Statement of Potential

6.2.6 Many of the copper alloy finds have the potential to inform the dating and interpretation of this site. A lot of the artefacts are personal items from clothing or adornment and therefore help with interpretation of activity on the site, trade networks including regional/national/international contracts. Most of the ironwork is related to the timber element of buildings on the site and can contribute to understanding of the appearance and style of them. Some of the ironwork is related to craft and other activity and the assemblage has the potential to understanding activity within and near to the excavation area. The large quantity of metal artefacts recovered and their good survival, will mean that the assemblages can usefully be compared with other settlements in the area.

Metalworking debris (Appendix B.4)

Summary

6.2.7 A large assemblage of industrial residues, totalling 62.19kg, was recovered, including ferrous and lead based slags, copper residues (55.01kg) and vitrified clay (7.95kg). Significant remains of copper, iron and lead were found in kiln **1667** in Area 2. There may have been other metalworking buildings and hearths/kilns in Area 1 but this is not

yet proven. Features **1108**, **1130**, **1213** in a c.5m² area were probably remains of metalworking kilns Most of the remains were found as secondary deposition in pits and other features and layers.

Statement of Potential

6.2.8 The metalworking debris will inform on the type of industries occurring within Wixoe Roman town. Site-scale distribution analysis will be attempted, as well as correlation with magnetometer results and industrial layouts of cognate small towns and other settlements in the region.

Glass (Appendix B.5)

Summary

6.2.9 A moderate assemblage of small glass fragments was recovered comprising 52 parts of vessels, six windows fragments and three beads. In addition there is some secondary evidence of possible production of melon beads at Wixoe. The glass remains were found in features and layers across the site with no obvious concentrations.

Statement of Potential

6.2.10 The assemblage has potential to inform on details of glass manufacture, use, trade and exchange within Wixoe and beyond.

Prehistoric and ?Saxon Pottery (Appendix B.6)

Summary

6.2.11 A very small abraded collection of largely residual prehistoric and possibly two Saxon sherds were recovered. There were just 171 sherds, weighing 1.15kg with the earliest dating from the Late Neolithic/Early Bronze Age. The majority are Early Iron Age in date with only a few sherds dating to the Late Bronze Age and Middle Iron Age. There are no definite Late Iron Age sherds. There were a few vessels which were found in contemporary features with the most significant being a large part of a Beaker vessel from a pit. The limited evidence for prehistoric activity does suggest sporadic minor occupation at various periods.

Statement of Potential

6.2.12 This assemblage is useful in showing how minimal the prehistoric occupation was, and significantly, that there was no Late Iron Age precursor to the Roman town in this location. Parallels with other small towns apparently started from scratch in the region will be made.

Romano-British Pottery (Appendix B.7)

Summary

6.2.13 A large collection of Roman pottery (weighing 544.55kg) was recovered from features (primarily pits) dating from the mid to late 1st century AD to probably the early 5th century. Early Roman pottery is scarce as the majority of the assemblage belongs to the Middle Roman period, but continues (on a lesser scale) into latest Roman times. There were several primary assemblages with significant pottery deposits recovered principally from pits (in all three main phases). The pottery assemblage consists mostly of utilitarian coarse wares (from several local and regional sources) although a significant amount of imported and traded specialist wares are also present including

952 samian sherds. For the most part Wixoe appears to have a Cambridgeshire/Essex ceramic supply base.

Statement of Potential

6.2.14 This is a large, well-recorded, group of Romano-British pottery. The assemblage has the potential to increase our understanding of how pottery was traded, used and deposited within Wixoe and thereby helping to see how the town, its culture and economy developed. This good stratified assemblage may help address research aims such as understanding how the BB2 industry developed. The Wixoe assemblages has several very interesting and rare components including some Latest Roman pottery.

Ceramic Building Material (CBM)(Appendix B.8)

Summary

6.2.15 A large assemblage of CBM was recovered (3031 fragments weighing 373.15kg). The CBM (box flue, imbrex, tegula, brick and flat) was almost entirely found as secondary deposits with the exception being a Phase 4 cobbled surface where it had been used to repair a probable courtyard. It is very likely that none of the buildings or structures within the excavation area had been roofed in tile. The CBM probably derived either from a stone building to the north of the excavation area and/or a possible bath or administrative building to the south. There are minimal quantities of CBM in Phase 2 contexts (under 4% of the total) and these derived from early to mid 2nd century contexts, although by the Mid 3rd century CBM was more common. By the vast majority derived from Late Roman contexts in Area 1, including in the latest Roman sub-phase 2 period, suggesting perhaps that one or both of these stone buildings had been demolished.

Statement of Potential

6.2.16 The assemblage provide some general information on when buildings near to the excavation were using CBM and about waste disposal in the town.

Fired Clay (Appendix B.9)

Summary

6.2.17 A moderate collection of 540 fragments of fired clay (weighing 10.21kg) were recovered from secondary deposits. None of the material derived from structures surviving within the site. Most of the fired clay probably came from domestic or industrial ovens as a significant quantity had smoothed surfaces but only a few had wattle or wood impressions.

Statement of Potential

6.2.18 The assemblage is of little significance as it is very fragmentary and entirely derived from secondary deposits.

Opus Signinum (Appendix B.10)

Summary

6.2.19 A very small collection of 90 opus signinum 'lumps' weighing 2.93kg were recovered from Area 1 only. These were found in just four Middle Roman features and the remainder in Late Roman contexts, notably the Latest Roman sub-phase 2 deposits.

Statement of Potential

6.2.20 The assemblage can tell provide some general information on when building(s) near to the excavation were using opus signinum.

Wall Plaster (Appendix B.11)

Summary

6.2.21 A very small collection of 10 pieces of wall plaster (0.07kg) was found in one Late Roman pit and the Late Roman sub-phase 2 dark earth layer in Area 1. Several of these fragments had paint surviving (red or yellow/brown). These fragments presumably derived from the demolition of the stone building known to exist to the north of the excavation area and/or the possible bath or administrative building to the south.

Statement of Potential

6.2.22 The assemblage has little potential to inform the projects research objectives as it is very small and derived from secondary deposits.

Miscellaneous Small Finds Objects (Appendix B.12)

Summary

6.2.23 Three 'small find' objects were reported separately as miscellaneous items. They consist of part of a pipeclay figurine of a ?ram found in the backfill of a Late Roman kiln that may have religious significance. Part of a shale bangle from a Middle Roman pit and possible objects associated with the production of blue frit melon beads were also found.

Statement of Potential

6.2.24 These three objects will contribute to understanding the nature of activity on the site during the Roman period.

Stone Objects (Appendix B.13)

Summary

6.2.25 Around 500 stone pieces were found of which *c.*477 were lava fragments/crumbs. The other pieces included other quern stones, whetstone, rubbers, a hone and a piece of inlay or wall veneer.

Statement of Potential

6.2.26 Stone tools such as the querns, rubbers and whetstones can inform about the nature of activity on site and potentially add to our understanding of different activities across the site. They can also add to a broader understanding of quern use across the local area, region and imports.

Worked Bone (Appendix B.14)

Summary

6.2.27 Thirty-six fragments of worked bone, representing probably 33 objects were recovered, and comprise bone pins, needles and a gaming counter. One very unusual pin had a small dog carved on its end. There is no evidence for bone working at the site although, as 67% of the animal bone has been assessed, it is possible that this may change when the other 33% has been analysed (see Section C. 2).

Statement of Potential

6.2.28 The worked bone finds have some potential to contribute to the interpretation of activity, and possibly social zoning, within the Roman town. The bone will also be identified by the animal bone specialist.

6.3 Environmental Summaries

Human Remains (Appendix C.1)

Summary

6.3.1 Two burials and parts of two other remains were found in the excavations. The two burials are of interest, one had a coin within its mouth and the other was decapitated and had grave goods including a finger ring, a pottery vessel and an iron object. The two or more disarticulated elements were presumably disturbed burials backfilled into the 4th century defensive ditch.

Statement of Potential

6.3.2 The human remains help in the understanding of the way people were buried within small towns. Other burials have been found in Wixoe during the 18th to 20th centuries and can be compared including their distribution, with the remains found in the excavation.

Faunal Remains (Appendix C.2)

Summary

6.3.3 A total of 9411 bones (weighing 146kg) was recorded in the 67% sample analysed from the site (33% of the assemblage has yet to be recorded). The bone was largely well preserved with the bones being robust in nature. This has allowed 37% to be identified to species level or low order group. Cattle and sheep were found in roughly equal numbers and pig in significantly lower numbers. As there was marginal pre or post-Roman activity it is likely that residuality will only be a minor problem. The sample has shown that 14% of the bone has signs of being butchered, 5% burnt and 4% canine gnawed. Significant assemblages were recovered from 12 pits and the black earth deposit. In addition there were at least four animal burials including partial skeletons. Small quantities of wild animals including deer were found, as well as a few 'exotic' species such as bird bones. Smaller bones including frogs were recovered from the bulk samples but no fish (see Table 52). Snails etc. from the environmental samples can be seen in Table 56.

Statement of Potential

6.3.4 The assemblage is significant and there is very good potential to understand consumption and production within the town. There is a relative lack of Roman/non-Roman contamination and residuality and so this is a good Roman period group of bone. Whether there is low residuality or intrusion within the different Roman phases is less clear at present, but after full analysis of the pottery this will hopefully be answered. Analysis of where the toads/frogs etc. were found within the features, for example whether they were found at the base, may give additional environmental/seasonal indicators.

Environmental Remains (Appendix C.3)

Summary

6.3.5 One hundred and twenty bulk samples were taken from a variety of features dating to the different phases. Eleven samples have yet to be assessed. Many of the features contained some plant remains preserved by carbonisation. The results have shown 15 samples produced good environmental remains which require further work including three samples from Building 1, one from a kiln and the rest from pits.

Statement of Potential

6.3.6 The importance of the remains is enhanced by the fact that few of the other excavated small towns in the region have been environmentally sampled (*e.g.* Great Chesterford or Hacheston). The three good samples from Building 1 are of particular use as they will potentially help in the understanding of what activities were occurring there. Some of the samples will be able to inform us about matters such as whether brewing was occurring in specific parts of the excavation area.

Shells (Appendix C.4)

Summary

6.3.7 A total of 87.4kg of shells was recovered from the site but it should be noted only a small percentage of shell from Middle Roman pit **1564** was kept. The vast majority (99.9%) of these shells were oysters with only a few mussels (found in three contexts): a single whelk was also found. Relatively few shells (2.3%) by weight were found in Early Roman contexts whereas frequent shell was found in roughly equal numbers (ignoring the largely discarded assemblage after recording from **1564** with permission of the County Archaeological Officer) from the Middle Roman and Late Roman periods.

Statement of Potential

6.3.8 The importance of the remains is enhanced by the fact that virtually no shell was retained from most other excavated small towns (*e.g.* no reports on shell from either Great Chesterford or Hacheston) with the shell from the former not kept or recorded (Maria Medlycott, *pers. comm.*). The role of shellfish in the diet needs to be re-evaluated and compared with the relatively few excavated settlements where shell has been analysed (*e.g.* Elms Farm, Essex (Winder forthcoming)). It is likely the shell was brought up the River Stour from beds on the Essex coast and their remains highlights the importance of the trade/communications of this route.

7 UPDATED RESEARCH AIMS AND OBJECTIVES

7.1 Introduction

7.1.1 The excavations original research aims and objectives recorded in the WSI have been listed in Section 4.1 (above). The answers to these aims have been included within the regional research frameworks objectives (Section 7.2 of this report). This section refers to the regional frameworks for the Roman period (Going 1997; Going and Plouviez 2000 and Medlycott 2011b). The former two are the older research frameworks which have been included and referred to as Medlycott notes that many of the Roman research topics identified in the previous research work still remain valid (2011b, 47). In addition, new site-specific objectives have been included (Section 7.3).

7.1.2 This is the first major excavation at a small Roman town within Suffolk in more than 25 years. Small towns are also not numerous with Wixoe being one of only eight known within the county (Plouviez 1995). There were no large Roman towns in the county and this site can therefore be viewed as the top site in terms of size hierarchy for the area. Wixoe is a relatively rare example nationally and this can be seen by Smith's statistics (1987) when he listed Wixoe as one of 148 major roadside settlements in lowland Britain. Wixoe's importance and size however should not be overstated - none of the eight postulated Suffolk small towns were part of the fifty-four 'small towns' cited in Burnham and Wacher's study (1990), which were those places at the upper end of the small-town scale.

7.1.3 Wixoe is described as a small town in this report for several reasons. The settlement is much larger than rural sites, it had seemingly a range of economic industries such as lead making and glass making, facilitating a presumed market located on trade routes - on two sides of an important river and was at the junction of two major Roman roads. Within Wixoe itself there were probable town like functions such as a possible administrative building/bathhouse to the south of the excavation area and the town was view important enough for a 4th century defensive ditch to be constructed around the town. The large quantity of artefacts recovered (such as 4,000 coins) far outweigh what would be recovered from a rural settlement. Overall, it is important not to be tied up in this argument over what constitutes a small town as Burnham and Wacher have themselves recognised, "small towns have been a source of considerable argument amongst scholars, much of it directed at a fruitless semantic debate over what constitutes a 'town' and which sites can legitimately be included" (Burnham and Wacher 1990, 1). Plouviez was herself uncertain whether the eight should be described as small towns but on balance she used this term as these eight were unlike other settlements in the county and qualified, their inclusion "on the basis of size, location and multiple functions" (Plouviez 1995, 69). Later, this ambivalence re-asserted itself in the title of the 2004 publication on excavations at Hacheston, one of the eight suggested small towns in Suffolk, which was called, "Excavations at a large Romano-British settlement at Hacheston, Suffolk" (Blagg *et al* 2004). These authors (including Plouviez herself) therefore made a decision not to call it in the title a "small Roman town" although somewhat confusingly Hacheston was described many times in the text as a small town.

7.1.4 It is in the last 30 or so years that a significant number of artefacts including coins have been recovered from Wixoe. In Plouviez's 1995 article only 414 coins were recored as coming from Wixoe, with 5,522 originating from all the eight small towns (including

Wixoe) out of 10,325 for the whole county. The largest non-urban site collection recorded was 333 coins, and only twelve other sites have produced more than 100 coins (Plouviez 1995, 74). The artefact and coin loss from Wixoe and the other postulated small towns is one of several areas which mark these sites as very different than rural settlements including villas. By the time of the Hacheston publication in 2004, the number of coins recovered from Wixoe had risen to 2814, with six of the eight small towns producing 9450 coins (Blagg *et al* 2004, fig. 60). There are now over 4, 000 coins recorded from Wixoe and this must denote that the settlement was of significance. Wixoe has several factors which suggest that it would qualify as either a middle or upper order settlement as defined in Burnham 1995, 10. It almost certainly had an internal street network, defences, distinctive zones of use, had possible distinctive official buildings and was therfore seemingly above Burnham's lower order settlements.

7.1.5 In writing this section there has been some initial attempt to understand how Wixoe compared with surrounding town sites (the other seven small towns in Suffolk), Scole in Norfolk as well as other larger nearby towns such as Cambridge and Great Chesterford. Several of these towns have had excavations with a few being published (Bagg *et al* 2004, Medlycott 2011a and Evans and Harkel 2010). In addition, an overview of the Suffolk small towns has been published as an article in a book (Plouviez 1995). Table 12 derives from this article and presents an overview of various aspects of these Suffolk small towns. A large caveat in using Table 12 is the relatively small quantity of archaeological work done on the Suffolk small towns. Of the eight there have been large scale excavations at four (Coddenham, Hacheston (work took place over 1973-4) and at Pakenham in 1985 and now Wixoe) although only the Hacheston site has been published (Blagg *et al* 2004). Unfortunately little information is available from Coddenham (Plouviez 1995, 69) and whilst there is an archive report for the Pakenham excavation (Plouviez n.d.), the publication report is still a long way off (Jude Plouviez *pers. comm.*). A medium-sized excavation at Icklingham has been published (West with Plouviez 1976) as have small scale investigations at Long Melford (Smedley 1961; Avent and Howlett 1980). Felixstowe has had some chance discoveries in the 19th and early 20th century but at Wenhaston there has only been minimal archaeological work comprising mostly the recovery of surface artefacts (Plouviez 1995, 69). The latter situation was also true of Wixoe until this present excavation.

Name	Size (ha.)	Road plan	Buildings Wood	Buildings Flint	Industry	Religion	Cemetery	Military	Iron Age	Saxon
Coddenham	40	Complex	?	?	P	Y	?	Ist C	Y	C
Felixstowe	18?	Linear?	-	-	-	Y	?	4th C	-	?
Hacheston	30	Complex?	10	-	Bo, P, I, B,?L	Y	Y	-	Y	P
Icklingham	17	Complex	1+	3	P	Y	Y	-	-	P
Long Melford	24	Linear?	-	1	-	-	?	-	Y	-
Pakenham	19	Complex	8+	1	P, I, B	Y	?	1st C	-	P
Wenhaston	15	?	-	-	-	?	-	-	-	C?
Wixoe	**24+**	**Complex**	**9+**	**2**	**I, B, L,?G**	**Y**	**Y**	**?**	**-**	**-**

Table 12 *Small towns of Suffolk after Plouviez 1995, table 7.1 with updates using results from Blagg et al 2004, present excavation and other sources*

Key. Industries: P =pottery, I = Iron working, B = Bronze working, L = Lead working, G=Glass working, Bo=Bone working. Religion: based on artefact evidence only except at Icklingham. Early Saxon: C= from central part of site, P = peripheral

7.1.6 Within a useful area to be decided, relevant small towns outside Suffolk (probably North Essex and South Cambridgeshire) will be added to Table 12.

7.2 Regional Research Objectives

7.2.1 Wixoe town's origins

The updated research framework has identified the need to understand the origins of towns (Medlycott 2011b, 48).

The evidence from work within the Wixoe to the east of the River Stour suggests it was a 'planned' Roman town dating from the mid to late 1st century AD. The present excavations have found very few prehistoric features and these date from the Late Neolithic/Early Bronze Age and possibly Late Bronze Age to Mid Iron Age. There were no Late Iron Age features or definite artefacts with all the pottery, coins and metal work being post-Conquest. The earliest Roman pottery appears to be Romanised proto grey wares but these were in limited numbers. There were also relatively few Early Roman 1st century coins and little early metalwork comprising just four or five brooches.

It is possible that if there was an Iron Age precursor to Wixoe it was located to the north-west of the site, next to the ford across the River Stour, or possibly along the western bank of the River Stour where presumably the road to Colchester/Cambridge was located (and where the burial grounds and possible fort were found in the 18th/19th centuries). There is a significant possibility that the town stood on both banks of the river. This is true of some Roman towns including Towcester (Northants) which was positioned on either side of the Silverstone Brook.

The present excavation took place at the furthest extent away from the suggested location of the ford across the River Stour, at the eastern and north-eastern periphery of the Roman town. No intrusive archaeological work has occurred close to the crossing point although the extremely large quantity of metal detected artefacts uncovered over more than 30 years across Wixoe (on the eastern side of the river), on the whole, supports a post-Conquest date for the town on this side of the river. There have been, for example, only eight Iron Age coins recovered from Wixoe as of the summer of 2011 compared with over 4,000 post-Conquest Roman issues (source: Cuddeford lists (unpublished)). The lack of Iron Age metal work suggests that there is at the very most, not an extensive presence on this side of the river.

Wixoe is not referenced in the Antonine Itinary. Jones and Mattingly suggest that there is Leicester to Colchester road which runs north of Great Chesterford, seemingly past Wixoe (1990, maps 4.24 and 4.27). Jones and Mattingly record this road being of Early Roman origin although only the northern segment (Gartree Road) was then recorded as a definite route . This is a possible modified version of Margary's route 24 (Via Devana) running from Godmanchester, through Cambridge to Wixoe and then to Colchester (Margary 1973, 210-212). The route has been located at Cambridge in a recent excavation and was seen to have been established in the mid/third quarter of the the 1st century AD (Evans and Harkel 2010, 35 and 54-56). Evans and Harkel found that unlike Akeman Street, which had a Late Iron Age origin, Via Devana was secondary and and was on a different alignment, implying an Early Roman date.

Smith (1987, fig. 1) has Wixoe connected with this road leading from Leicester although he does not have Via Devana continuing from Wixoe to Colchester and he has only one

road leading out of Wixoe and this ran to Baylham House (*i.e.* Margary's route 34a). Margary has this route running to Coddenham via Long Melford (and this routeway may have been one of the roads found in the excavation area). It is possible that this road also continued westwards for at least *c.*20km to the town of Great Chesterford. Excavations at Great Chesterford recorded a significant road running eastwards from the town for at least 8km towards Bartlow Hills and it is probable this road continued to Wixoe - certainly the road alignment is roughly correct (Medlycott 2011a, figs. 7.1 and 7.3).

It is therefore likely that Wixoe was developed due to being at a strategic location (at a major river crossing of the important River Stour, and roughly equidistant from the other adjacent towns, some of which had earlier Iron Age settlements). These towns were Cambridge (25km to the north-west), Great Chesterford (20km to the west), Long Melford (15km to the east), Great Dunmow (22km to the south-west) and Braintree (20km to the south). The two main ones, Roman Cambridge (*Duroliponte*) was built on an extensive high status Iron Age settlement (Alexander and Pullinger 1999, 17; Evans and Harkel 2010, 35) and Great Chesterford had its origins in a Late Iron Age settlement on two sides of the river represented by ditches, a possible round house and some pits as well as a Late Iron Age cemetery which probably included some local elite (Medlycott 2011a, 10-14 and 125). Great Dunmow was also built on an Iron Age predecessor (Wickenden 1988; Medlycott 1988).

Elsewhere, other nearby towns such as Scole (Norfolk) may also be entirely of Roman origin with a suggested date of established in the AD 60s (Blagg *et al* 2004, 197). For the other Suffolk small towns, Coddenham, Hacheson and Long Melford all have Iron Age occupation (Table 12; Plouviez 1995, table 7.1). Despite moderate to large archaeological investigations at Icklingham and Pakenham, however there is as yet no known Iron Age occupation at these sites, where occupation appears to be post-Conquest (1st century AD).

7.2.2 The role of towns as defensive centres

The 2011 updated regional research agendas indicated that there was a need to study towns for their role as defences centres (Medlycott 2011b, 48).

Wixoe may have had a fort to the west of the River at TL 706 430 - it comprised an earthwork enclosure at Watsoe Bridge, astride the presumed line of the Colchester to Cambridge Road. Antiquarians record it as a fort (Walford 1803, 70-1) but more recent observations (Essex HER 6958) have failed to identify date or function of this site. At least two of the other small towns in Suffolk (Pakenham and Coddenham) seem to have had a fort with Pakenham's being very short-lived and of 1st century AD post-Boudiccan date (Plouviez 1995, 71). In contrast there was seemingly no military presence at Hacheson (Blagg *et al* 2004, 197). Great Chesterford's vexillation fort may been built pre-or post-Boudiccan but it certainly was backfilled after the revolt in AD 60-61 - it measured approximately 485m x 272m (Medlycott 2011a, 14-18). Other forts in East Anglia in this period included Cambridge although evidence here is far from conclusive (Taylor 1999, 77), and Chelmsford - and these forts were presumably built to tighten the military grip over the rebellious tribes.

The reasons why there may have been a fort (pre and/or post-Boudicca) at Wixoe probably stem from it being at a major river crossing and on the road network. Wixoe was also on the border between the Catevellauni and the Trinovantian tribes (Jones

and Mattingley 1990, map 4.24) with the Catevellauni tribe having been aggressively anti-Roman at the Conquest (in comparison to the Trinovantian tribe). The location of Wixoe as a tribal hotspot area is likely given that the area around, from Great Chesterford to Colchester, was former Trinovantian lands that were subjugated by the Catevellauni tribe under Cunobelin by *c*.AD 10 (Medlycott 2011a, 10). The impression gained from Iron Age coin evidence is that Great Chesterford was more heavily influenced by the Catuvellauni than by the Trinovantes (Medlycott 2011a, 10). Wixoe, 20km to the east, was in an area right in the middle of the two tribes in the mid 1st century AD as it is suggested that Long Melford 15km to the east was a Trinovantian centre (Plouviez 1995).

In the Late Roman period there was a Saxon shore fort built adjacent to the Suffolk small town of Felixstowe. This town was the only Suffolk small town with such direct military link in the 4th century (Table 12). There was no evidence that Wixoe was similarly involved especially as Great Chesterford, only 20km to the west, probably had a significant role as an inland component of the Saxon Shore defences in the 4th century (Medlycott 2011a, xiv). Great Chesterford was ideal for this use as it also probably played a significant role as a centre for local administration throughout the Roman period (Medlycott 2011a).

7.2.3 *Small towns need to be examined with their hinterland*

"There was agreement, too, among the responding bodies to the regional framework discussions that small towns need to examined, not as isolated entities but in relation to their hinterlands" (Going 1997, 37).

"there has been little attempt to look at inter-relationships between the urban and rural landscapes" (Going and Plouviez 2000, 19).

How large was Wixoe's economic pull *i.e.* its hinterland? A reasonable estimate would place a *c*.8-10km radius around Wixoe to define the main area of its influence and within this area it is likely that farmsteads/villas would have utilised Wixoe as a primary centre.

This distance is calculated using various sources. Wixoe would have been affected by the larger towns of Cambridge 25km to the north-west and Great Chesterford is 20km to the west and was of roughly equal size to the small towns of Long Melford, which was 15km to the east, Great Dunmow and Braintree, 22km to the south-west and 20km to the south respectively. The *c*.8-10km hinterland radius suggested for Wixoe is realistic as in comparison, Medlycott (2011a, 105), has estimated the economic focus around Great Chesterford was between 10km and 15km.

The distance suggested for Wixoe was well within a day's journey, including economic transactions. Burnham and Wacher (1990, 44) have examined modes of transport and distance travelled in order to allow possible areas of economic influence to be estimated. This is based on the assumption that travellers would wish to go to town, transact their business and get home in a day. They have suggested a radius of about 10-12km for foot transport, 20-24km for pack animals and carts and up to 30km for riding horses. The River Stour would have been navigable and the economic importance along this route can be seen by the supply of certain commodities such as oyster shells from the Essex coast.

It would be interesting to locate all the known Roman settlements including villas within 10km of Wixoe to see where they were placed and compare this with neighbouring Great Chesterford. Here, Medlycott records the Roman roads, settlements, burials and findspots in the surrounding area and includes the geological contexts such as higher ground and rivers (*ibid*, fig. 7.3). Medlycott found that there were a number of location preferences with 63% of sites located within 500m of a river and 87% within a kilometre of a river whilst in contrast only 27% of sites were on land above 75m (*ibid*, 111-112). Great Chesterford had six Roman roads running from the town allowing easy access to its market place, which was located in the centre and flanked by substantial masonry buildings possibly including a *mansio* or a *macellum* (*ibid*, 125).

The current pipeline project partly examined two Roman enclosure sites within 10km of Wixoe town, one *c*.2km to the north (WIX 021) and another *c*.5km to the north at Great Wratting (WLT 010). Plouviez (1995, fig. 7.1) locates three villas and six other settlements within 10km of Wixoe on the Suffolk side . One of the villas was at Kedington (TL 7047), *c*.3km to the north, but on the Essex side of the river other settlements including a villa are known along the course of the *Via Devana* south-east at Ridgewell in Essex (TL 7340).

7.2.4 *Towns as centres of supply and demand*

"Settlements at community centres require very much more work before even their morphology, let alone their history can be elucidated with any confidence" (Going 1997, 37).

There is a need to understand the role towns played as centres of supply and demand (Medlycott 2011b, 48)

In the previous objective (7.2.3), the main area of Wixoe's economic pull (*c*.8-10km) was discussed. Central to the Wixoe economy, and therefore the main reason for its existence, was its good transport system for the movement of people and goods. It should be noted that within Wixoe town itself there would have been some small scale farming. This can possibly be seen in enclosures within Area 2 in particular and several watering holes (especially in the Late Roman period). The findings at Wixoe are typical of other Roman towns, although it is often difficult to identify farms inside these settlements especially as excavation areas are mostly small, or as in Wixoe's case, a long linear narrow strip through the town. Elsewhere, within many towns there are ranges of buildings, which often occupy enclosed strips suggesting some people were raising their own produce or keeping their pigs and fowl (Burnhan and Wacher 1990, 44-45). At Great Dunmow, Essex, such strips were up to 100m deep (Drury 1976, 124).

Imports to Wixoe

The inhabitants of Wixoe would have been importing significant produce and goods not only from the farms and villas around but also further afield, both to consume/use within the town and to sell on for farms/villas outside. One of the imports found in huge quantities at Wixoe were oyster shells. These oysters were almost certainly farmed on the Essex coast and came to Wixoe via the River Stour. The Essex coast has been suggested as a major producer of oysters for export to the continent (Jones and Mattingly 1990, map 6.17). The major extent of the industry can be seen in that it is listed as one of less than 20 areas where goods/products were produced in Britain and exported in the early Roman period (*ibid*). Oysters were clearly eaten in large quantities

at Wixoe. Unfortunately no other excavation reports around Wixoe including Hacheston and Great Chesterford record oysters so it is uncertain whether the quantities found at Wixoe were unusual. At Great Chesterford the oyster shell was not kept and there are no mention of oysters in the report on the large Roman settlement at Harlow (Maria Medlycott, *pers. comm.*), although quantities found at Elms Farm, nr. Heybridge (Essex) with 6637 oysters are similar to Wixoe (Winder forthcoming). Winder has made a comparison with other sites in her report which has a bearing on the Wixoe assemblage, " quantities of oyster shells recovered from thirteen other Roman sites, numbers vary from 10,810 valves at the Greyhound Yard Roman town site in Dorset, to just 383 valves from the Roman road at Tort Hill in Cambridgeshire; so the Elms Farm shells represent a not inconsiderable amount of oysters."

There were significant numbers of amphora sherds at Wixoe and these would have been supplying wine, olive oil *etc.* Samian pottery was relatively common with 952 sherds (12.12kg) being recovered. Other pottery imports included regional wares which seem to have largely originated from Cambridgeshire and Essex. Other commodities imported to Wixoe included some of the metal objects.

Internal production for consumption and exports

The results of the present excavations at Wixoe have greatly added to the number of industries known to be occurring within the town (Table 12). There is evidence for iron, copper alloy, lead and possibly glass production found on the site. Wixoe therefore seems to conform to elsewhere as, "Within the larger 'small towns' as well as in rural areas extractive and production industries undoubtedly operated on a substantial scale" (Going 1997, 40).

The industrial features were located mainly within the central part of Area 1. This area was both used as an industrial area and an area of pitting from the Early Roman period until the end of the town, probably in the early 5th century. A Middle Roman or possibly Late Roman furnace (**1667**) was found in Area 2 with evidence that it was used for copper alloy, iron and lead working (attached to furnace lining and within three crucibles recovered from the furnace). Remains of three probable Late Roman metalworking kilns were found in a 5m² area in Area 1 (**1108**, **1213** and **1337**). The use of the several other ovens/hearths/kilns from Area 1, some within former structures (including (**1633**) which was set up above ground (Plate 7)), is presently uncertain and parallels will be looked for at publication stage.

Iron and copper alloy production have been found at both Hacheston and Pakenham (Table 12). At Hacheston there was seemingly only smithing and no smelting. A sunken keyhole hearth was found in conjunction with a rake-out pit which contained hearth debris. Other hearths in north-east away from centre of the site probably iron working..."huge number if iron objects, most of which are likely to have been made locally" (2004, 200) supply needs of settlement and hinterland. Overall the quantity of slag would indicate itinerant metalworking was taking place at a modest scale (Blagg *et al* 2004, 200). At Hacheston there was some evidence for small scale working of non ferrous metals with a pattern for making moulds (*ibid*, 200-201). Presumably these were copper-alloy casting of a range of objects. The possible lead working evidence at Wixoe is more unusual with only Hacheston having similar workings. Here a tin-lead alloy sprue which may indicate the casting of pewter, possibly for objects such as spoons (*ibid*, 201).

There is no evidence of pottery kilns at Wixoe although the assemblage included a few seconds. If this is an indicator of pottery production, this would not be unusual as presently four of the other Suffolk small towns have evidence for pottery production (Coddenham, Hacheston, Icklingham and Pakenham). Hacheston had pottery kilns in several areas of the small town (eight possible kilns recorded) dating from the 1st century AD to the 3rd centuries (*ibid*, 200) Pakenham had 3rd century pottery kilns (Plouviez 1995, 72) and pottery kilns fairly close to the centres of both Coddenham and Icklingham (*ibid*, 72; Plouviez 1976).

The possible glass working evidence at Wixoe with evidence of possible melon bead production is unusual as evidence for production of glass has been found rarely - certainly there is no evidence for this industry in the other Suffolk small towns (Table 12). It is uncertain if this Wixoe evidence represents only possible bead manufacturing and not full 'glass production' which implies vessel blowing *etc.* The nearest known full glass production centre is Colchester.

There was a relatively large quantity of worked bone found at Wixoe with around 33 worked bone objects found. It is possible they were imported from other towns such as Great Chesterford where one of the buildings on the East Gate Site was used as a bone-workshop, with numerous bits of split cattle long bones being recovered, and the bone apparently having been used for the making of bone hairpins (Medlycott 2011a, 108). At Hacheston the only direct evidence for bone working was a piece of worked antler (Blagg *et al* 2004, 201).

7.2.5 *Changes in towns internal layouts and housing densities* (Medlycott 2011b, 48)

The knowledge of the Wixoe Roman town's extent and layout on the eastern side of the River Stour has been greatly enhanced by the present development. As a direct result there has been a geophysical survey taken in the town to the east of the river with a magnetometer survey on this southern half (Fig. 2). This work has complemented and increasing on the information from air photographs. The data from trial trench evaluation and present excavation has further added to the understanding of the layout. This excavation was also useful as it could compare the results with the geophysical survey and its summary interpretation (Figs. 2 and 3). There is a good correlation between most of the pits and ditches found in the excavation and the geophysics data although most/all of the "industrial" features postulated (due to enhanced magnetometer responses within the excavation area) proved to be merely pits. In contrast none of the ovens/industrial features found within Area 1 were recorded as industrial anomalies (Fig. 3). It is possible that geological or other reasons have affected the magnetometer responses but it does mean that other "industrial" responses across the whole geophysical area needs to be interpreted with caution. Also, on the negative side to understanding the town's layout, there have been two large areas of modern destruction within the former town comprising 19th century quarrying over an area more than 100m² to the north of Area 1 and a former 19th century railway line can be seen cutting through the town including across the excavation in Area 2 (Fig. 2).

The results of the recent work at Wixoe means that it can be compared to other nearby small towns and questions such as whether it was a "planned" settlement can be addressed. At Hacheston the layout of the trackway with its ditches and the metalling of the roads suggests a degree of organised planning (Blagg *et al* 2004, 198). This may

also be true at Scole and Pakenham which had regular division of property including rectangular enclosures (Ashwin and Tester in press; Plouviez 1995).

At Wixoe the possible road to Long Melford is clearly visible on the geophysical survey (Figs. 2 and 3). There appear to be large structures on either side of this road *c*.200m to the west of the excavation area. These anomalies are roughly within the centre of the settlement on this eastern side of the river and interpretation of their function will be carried out at publication stage. In the excavation area itself there were no roads within Area 1 although three were found in Area 2 including the road to Long Melford and another heading in the direction of the small town of Icklingham. The Long Melford Road has been postulated both by Margary (see above) and Plouviez (1995, fig 7.1). The road heading towards Icklingham needs to be assessed and this can be done when the town's hinterland is studied at publication stage (Section 7.2.3) although it is interesting to note, using Plouviez's map of known road systems, that this postulated road would complement this network.

A zone of pits and industrial features seems to have been laid out in an area covering *c*.100m by 70m in Area 1. Northern and western limits of this area seemed to have been demarcated by a boundary ditch and fence line in Area 1, with the eastern extent near the end of Area 1. The southern limit is more uncertain although it was clearly within the area defined by an Early Roman boundary ditch and the 4th century town ditch. This area was continuously used for pitting/industrial use from the Early Roman (Phase 2) up to the end of occupation in the end of the 4th/early 5th centuries (Phase 4).

Early Roman

In the Early Roman phase there are relatively few features recorded across the excavation areas. In Area 2, a curvilinear ditch or ring gully (**2240**), partly within the excavation area may represent part of a round house/structure. This suggests that the earliest buildings in the north-eastern periphery of the town were still constructed in the old Iron Age tradition. It was located *c*.10m to the west of the road towards Icklingham and was probably abandoned by the early/middle 2nd century. At Pakenham, the sequence was fort/circular structure/rectangular buildings in rapid succession, probably all well within the 'Early' phase at Wixoe (Jude Plouviez, *pers. comm.*). This short lived Early Roman 1st century circular structure had an 8m diameter diameter (Plouviez 1995, 71) and at Hacheston there were two circular buildings in Area 1 (Blagg et al 2004, 196).

The five buildings (Buildings 1-5) fronting the road heading towards Icklingham were all seemingly rectangular in shape, and two or possibly up to three, may date from the Early Roman period. It is therefore likely that they were at least partly contemporary with the postulated ring gully even if the ring gully was constructed first. These rectangular buildings were reasonably regularly spaced apart and this suggests some planning (it is noticeable that by the Middle Roman phase they were within plot boundaries).

In Phase 2 there were other post holes, pits and ditches found in the other parts of Areas 1a and 2 but these sparse features were too few to produce an intelligible plan of occupation and use.

Middle Roman

In the Middle Roman phase, there was a clear expansion of features within Areas 1 and 2. In Area 2, at least four of the five buildings fronting the road towards Icklingham were being used in this period and given the large number of features and objects in this phase, it is extremely likely the fifth (Building 2) was also occupied. Wixoe seems typical of other Roman small towns in that the town expanded in this period with houses fronting the main roads. This can be seen clearly along the road running towards Icklingham where there were the remains of at least five buildings located within property division boundaries (four post-built and one an earth-fast post setting). The date of the Wixoe expansion is similar to Hacheston and Pakenham. In the former: "from the 2nd and 3rd centuries there was a range of relatively small buildings developing alongside the roads. The new structures are rectangular in plan and built using sil beams" (Blagg *et al* 2004, 197-8). Most of the Hacheston buildings did not involve earth-fast post settings whilst in contrast Pakenham in the north-west of the county had various rectangular post-built structures in the central part of the site (*ibid*, 198). In Pakenham, along the back roads of the town, the few excavated buildings date from the mid 2nd century and were all timber, mostly post built with clay floors.

At Wixoe, at the extreme northern end of the site there was a well, presumably for these houses, and a couple of pits, one inkfilled with a human burial (see Section 7.2.7 below). In contrast within the southern part of Area 2, there were seemingly rectangular enclosures abutting the road to Long Melford and a third internal road. Only a small part of both roads were within the excavation area so it is uncertain whether these enclosures were entirely agricultural related or there were structures fronting the road within the enclosures outside the excavation area. Within Areas 1 and 1a, there were different activities uncovered. Area 1 may have been divided up into three or four areas with linear ditches delineating boundaries. Within these areas there were groups of intercutting pits and possibly two areas of industrial activities (ovens *etc.*).

Late Roman period

In the Late Roman period there was a diminishing of domestic use within Area 2, although at least two of the buildings (Buildings 1 and 5) and possibly also Building 3 fronting the road aligned towards Icklingham, may have continued at least partly into the Late Roman period, although others seem to have gone out of use. At some time in the Late Roman period there were possibly three large wells or watering holes dug in Area 2 indicating that pastoral farming was possibly occurring here. At the same time only sparse pits were uncovered in the southern parts of Area 2. In the 4th century a large defensive ditch (in Areas 1a and 2) was constructed (see Section 7.2.6 below) and at least one burial dates to this phase (Section 7.2.7). Within Area 1 there were parts of two or three buildings (Buildings 6 and 7) nearest the river. One was an earth-fast post setting domestic structure, and the other one/two were post-built with internal hearths surviving. Adjacent to the north was a cobbled yard surface, probably relating to stone buildings to the north and south. In the central and northern parts of Area 1, the pitting and industrial activity seen in the Middle Roman period continued. The black earth deposit found in part of Area 1 seems to have been a late way of disposal of rubbish (*i.e.* a midden) in this area only, although a layer within a limited area on the eastern side of Area 1 may have a similar purpose.

7.2.6 *Town defences*

Few East Anglian 'small towns' appear to have been equipped with defences in the later Roman period, in contrast to the towns of the Fens *e.g.* Godmanchester *etc.* (Going 1997, 41)

Going and Plouviez (2000, 19) called this "a marked absence of late defences around the small urban communication centres east of the Wash" and this was regarded as a gap in knowledge: "During the later 2nd century earthworks were erected round even quite small towns in Roman Essex, the lack of 3rd-4th century AD defences at some of the more important centres in the East Anglian road network certainly merits more concerted study" (Going 1997, 41).

The current excavation has uncovered evidence in two locations for a substantial ditch up to 4.5m wide and 2.25m deep that was dug directly to the eastern and northern sides of the town. In addition, the extent of the ditch can be traced, along part of the eastern side in the geophysical survey where it shows this ditch heading towards the River Stour, and was also traced on google earth.

This geophysical plot and the excavated stripped ground to the north of the excavation area both show that no major Roman features lay beyond the ditch. Its construction would have been time consuming but would not have caused any buildings *etc.* to be displaced. This is in contrast to other towns such as Great Chesterford whose defences were built through former buildings (Medlycott 2011a). Cambridge, Colchester and Great Chesterford were the only three major settlements in a 40km radius of Wixoe, all with stone defences. The Colchester defences were probably built in the 3rd century and maintained through the 4th whilst Great Chesterford defences were established probably in the mid to late 4th century (Medlycott 2011a, 115); those at Cambridge date to the 4th century (Evans and Harkel 2010, 57). The 4th century was a period of widespread instability and unrest, for instance Barbarian raids reached as far as London in the 'Barbarian Conspiracy' of AD 367-9. Medlycott argues that these stone defences enabled Great Chesterford to be used as a military base and as a place supplies could be safely stored (2011a, 115-116). The date of the construction of the Wixoe ditch could have been 3rd or 4th century although its disuse can be easily dated as it was backfilled with Late Roman coins and Latest Roman pottery. There was no evidence for an internal bank surviving but considering the size of the ditch, it would have been significant.

The Wixoe ditch is important as it demonstrates that the settlement was significant enough to be defended, albeit not in stone. This is in contrast with the other Suffolk small towns where "so far there is no trace of defences" (Plouviez 1995, 69). The reasons why Wixoe may have been defended and the others not may lie in where it is situated - it is the most westerly of these Suffolk towns along a major and important road (Via Devana) with the adjacent towns on this road to the north (Cambridge) and South (Colchester) and south being defended. The significant town directly to the west of Wixoe was also defended (Great Chesterford). The other Suffolk small towns were in contrast all located on relatively minor roads and the towns themselves were not extensive.

7.2.7 *Burials*

Going identified that Philpott's 1991 survey of Roman burials in England showed that, "both qualitatively and quantitatively East Anglia makes a generally meagre showing where burials are concerned" (Going 1997, 40). Going also commented that the identification of urban burials and cemeteries was of some importance (*ibid*, 40).

"Roman burials are remarkably uncommon in the eastern region...there is growing evidence for very different practices around urban areas and in the countryside" (Going and Plouviez 2000, 19).

Burials have been uncovered in and around Wixoe small town over the last few hundred years on both the western and eastern sides of the River Stour and in several different locations. The present excavations found remains of *c*.four or five complete or parts/fragments of skeletons within two parts of the excavation (Areas 1a and 2) and these date to the Middle and Late Roman periods. If these findings are added to the previous records of human remains it indicates that human remains were found in several areas over all the Roman periods with different burial rites signifying a long-term diverse burial policy within the town.

It is possible there were a dispersed burial ground within the centre of the excavation area as parts of at least three people were found in a 50m+ area as well as at least one burial discovered prior to the excavation. These possible burial grounds were located around Area 1a and just to the north of it into Area 2, on both the eastern and western side of a minor internal road. Directly to the east of the internal road a complete adult male burial was buried with a late 3rd century coin in his mouth. In addition fragmentary pieces of at least two people found nearby, *c*.50m to the south, within the backfill of the town's defensive ditch - presumably these had been the remains of disturbed burials. The author is presently uncertain of the exact location of two previous discoveries of human remains. A small trial hole excavated by SCAAS in 2004 revealed a grave cut with associated human skull fragments and Romano-British pottery (Caruth 2004a) and labourers in the 19th and 20th centuries recorded the presence of human remains in a possible cemetery located to the north-east of the pipeline route. Directly to the west of the internal road a late 1st or early 2nd century cremation burial with grave goods was found in the late 1980s during construction of an Anglian Water Pumping station (Martin *et al* 1991, 262-263).

The present excavation also found a single Middle Roman decapitated burial within the backfill of a large pit in the extreme northern part of Area 2. This burial was just inside the 4th century defensive ditch and was presumably sealed by its former bank. No contemporary Middle Roman features were identified to the north of this pit and this burial may have been viewed as "beyond the town" when placed in the pit. This burial was laid out with respect with a copper alloy ring on one finger; a vessel and an iron object had been deposited as grave goods and the head placed by its right leg.

There are other burials recorded in the town to the east of the Stour, *c*.100m to the north of Area 1 (TL 7429). Here a Roman inhumation cemetery was discovered in the 19th century by labourers in a gravel pit (Fig. 2).

To the west of the river there were possibly formal burial areas with two inhumation cemeteries situated at TL 7098 4266 (Walford 1803, 68-9) and TL 710 427 (Walker 1909, 162) and it is possible that these burial grounds respected the main road to Cambridge/Colchester. Most of the former inhumation burials were identified as

Romano-British (VCH Essex 1963, 50-51; Essex HER 6955; 6963-4) but the latter may well have been Neolithic (VCH Essex 1963, 50-51).

There is very little known of burial practices in the other seven Suffolk Roman towns. At Hacheston a small cremation cemetery found at Gallows Hill outside the main settlement area comprised a group of around a dozen individuals and a further isolated cremation 20m to the north-west of them (Plouviez 2004a, 203). In other small or larger towns in Britain there were different burial practices *e.g.* even in Cambridge burials have been located within the town including a neonate and a Late Roman inhumation at Castle Street (Evans and Harkel 2010, 36-8). At Shepton Mallet, Somerset there were two small dispersed inhumation cemeteries fronting onto either side of a road within ditched enclosures in the centre of the town (Leach with Evans 2001).

7.2.8 Was there decay within Late Roman small towns?

The former regional research framework thought that further examination was needed to decide whether there was decay and dereliction post-mid 3rd century AD in smaller towns (Going and Plouviez 2000, 19).

In the Late Roman period there was, on the whole, less activity on site compared to the Middle Roman period, but the evidence is that this decline was not universal across the site and there was not a catastrophic abandoning of any area. It is also probably true that all parts of the site had as much or even more activity in the Late Roman period as the Early Roman period and so the decline needs to be clarified by area and by period. It should also be noted the Late Roman defensive ditch encompassed all the area of the Middle Roman town - therefore even though there was a relative decline in Area 2, the former outer boundaries of the Middle Roman settlement seem to have been maintained. It is also worth stipulating that the peripheral location of the excavation within the town (at the far eastern and north-eastern parts of the town) means that if any decline is apparent it is more likely to be seen in these areas. This peripheral nature can be seen in the Early Roman period when the whole excavation area had relatively little evidence of use before the early to middle 2nd century, even near to the river.

The Late Roman period saw differential occupation of Wixoe within the excavation area in this period. There was comparative decay within Areas 1a and 2 (compared with the Middle Roman period; see Section 7.2.6 above) but in contrast there was probable expansion in Area 1 especially near to the River Stour. This may suggest that the river played an increasing importance in this phase (compared to the Middle Roman) and therefore it can be argued that the Late Roman phase may have seen an expansion along the River Stour and population may have congregated along it. In the 4th century there was seemingly, for the first time, occupation within this part of the site with parts of three 4th century timber buildings being recorded in this area (there seems to have been none in the Early and Middle Roman phases). These buildings were not high status but it is important to note that there were also two major buildings along the river frontage, one *c*. 100m to the south and the other just to the north of the excavation area. It is uncertain what the functions of these buildings were, they were far more substantial than the buildings found in the excavation area perhaps suggesting that they could possibly be the town's bath house and/or administrative building (Fig. 2). The southern building was obviously of high status - indeed for many decades it was recorded as a "villa". It had many rooms, with tesselated pavements, wall plaster and

hypocaust systems. The northern building was possibly of similar status with stone walls and possible a hypocaust system but little more was deduced as the area was quickly backfilled when the tops of the walls were exposed. Both the structures were almost certainly in use in this Late Roman period, and, rather than decline this overt wealth/expansion is noticeable in this area. These two buildings may not have continued into the early 5th century - within the sub-phase 2 black earth layer and several pits, there were artefacts such as wall plaster fragments, which were presumably demolition material from high status building(s).

At Hacheston there was a seemingly north-eastern shift in focus of the settlement in the Late Roman period with a contraction in Area I but given the quantity of coins and pottery artefacts recovered in features from Area II, it seems that a comparatively high density of occupation occurred here during the late 3rd and 4th centuries (Blagg *et al* 2004, 199).

7.2.9 *What later industries are evident in the towns?* Research topic (Going and Plouviez 2000, 21).

The Wixoe excavations found evidence of several Late Roman industrial features within Area 1 (see Section 7.2.4). It is therefore likely this research topic will be answered - at least in part.

7.2.10 *"Can the distribution patterns of later Roman pottery, even mapped at a gross level, indicate shifting patterns of active settlement inside towns?" (Going and Plouviez 2000, 21)*

The evidence seems to suggest that there may have been some association between the Late Roman pottery found and nearby occupation. In the analysis and publication stage it will be possible to map the distribution of the late pottery (including Latest Roman sherds).

Pottery from the Late Roman period features (Phase 4) comprised a large assemblage by weight (128.55kg) although some of these sherds were residual. The vast majority of this pottery from Phase 4 features (105.3kg) was recovered from Area 1 and these sherds were mostly from layers and pits. This pottery is very likely to be related to buildings fronting near to the river both within and outside the excavation area and these buildings seem to have lasted well into the 4th century with a least one probably continuing into the early 5th in the excavation area. In contrast, Area 2 produced relatively small quantities of pottery in Phase 4 features (11.6kg) despite possibly up to three buildings continuing into this Late Roman phase. In Area 2, the vast majority of pottery was found in Middle Roman features which therefore either implies that the buildings went out of use early in the 4th century here or changed use from domestic to agricultural and/or there was a different disposal of waste in this period here.

7.2.11 *What is happening in the Latest Roman period?*

"What is happening in the latest stratigraphic levels which are regarded Roman? Is the pottery in these levels 'collected' material, and therefore likely to post-date the collapse of the major ceramic industries" (Going and Plouviez 2000, 21)

The latest "Roman" period at Wixoe has been given a Phase 4, sub-phase 2 date and is likely to date to the late 4th into the early 5th century. At present this sub-phase 2 has just been assigned to two layers including a black earth layer within Area 1. A few pits (*e.g.* **1275**, **1337**, **1071** and **1125**) and Building 7 may also be contemporary. Sub-phase 2 has tentatively been given a "Roman" phase despite the fact that it seemingly includes Latest Roman pottery, some destruction debris presumably from the nearby major structures (wall plaster, opus signinum and a lot of small pieces of CBM *etc.*). These layers have not been called Saxon or post-Roman as there was a complete lack of Early Saxon settlement features within the excavation area, such as Sunken Featured Building (SFBs), or Saxon material culture such hand made pottery. In 30+ years of metal detected there have also been only a few Saxon objects found compared with a massive quantity of Roman artefacts.

The main black earth deposit in Area 1 sealed a 4th century cobbled surface possibly relating to the Roman stone building to the north of the site. On balance, it is therefore likely that occupation at Wixoe continued within the site after the main stone Roman buildings along the river had been destroyed and/or looted. It is uncertain if the wooden slot and post hole building (Building 7), just to the west of the black earth, was still in use in this latest phase - the fact that this former building was not sealed by dark earth material may suggest it was. Further evidence such as small pieces of box flue tile and pottery sherds and a coin of the late 4th century in its backfill does suggest its disuse was very late. At least three of the pits within Area 1 were backfilled with pottery which included Latest Roman sherds, and one of these pits had a wall plaster piece identical to plaster in the black earth and may thus be contemporary with the two layers assigned this sub-phase 2 date.

The dating of the Wixoe black earth can be compared with other nearby small towns. There were three nearby small towns where there seems to have been an accumulation of black earth - Hacheston, Pakenham and Scole (Blagg *et al* 2004, 198; Plouviez 1995, 73). The start of the black earth in these towns seem to start before the end of the Roman period (Blagg *et al* 2004, 199). There is possibly a difference between these towns and Wixoe and this can be seen at Hacheston where, "a change that does occur in the later Roman period is the disposal of rubbish on the surface instead of in pits" (*ibid*, 198). At Hacheston this black earth is suggested to have derived in part from the dumping of manure heaps on the then ground surface and then the upper layers were ploughed (*ibid*, 199). It was suggested that the use of settlement changed to partly agriculture although with some structures possibly continuing amid the mire as the number of small finds from these layers indicates that there was continued activity elsewhere on the site to generate them. Unlike Wixoe, pits virtually disappear sometime in the 3rd century, at much the same time as other changes in organisation at both Pakenham and Hacheston with only one and two pits respectively dug at Hacheston and Pakenham in the late 3rd and 4th centuries (Plouviez 1995, 73). The end of the Hacheston occupation was seemingly in the late 4th century.

Hacheston, unlike Wixoe, a Sunken Featured Building was found in Area II, in the location of the dark earth soils, and this building contained a high percentage of Late Roman pottery and Early Saxon hand made sherds (Blagg *et al* 2004, 1999). An interesting comment is that at West Stow, the Roman pottery recovered from the SFBs was the result of surface foraging by post-Roman settlers over the abandoned adjacent small Roman town of Icklingham (Plouviez in West 1985, 82-85 and 167). This robbing must have occurred at Icklingham in the 5th century or later as the former small town

continued till the end of the 4th century (whereas Hacheston may have been abandoned at least 30 years earlier- although "the presence of some sub-Romans at Hacheston can not be entirely discounted" (Blagg *et al* 2004, 199).

The end of Roman Hacheston is slightly uncertain whereas at Wixoe the presence of coins dating to the very end of the 4th century including a clipped example and Latest Roman pottery suggests an early 5th century date. If, as seems likely, several of the pits and other features in the area (over a c.200m length) date to this period then this suggests that there was a reasonable level of occupation in this latest phase. The extent of the latest Roman Wixoe evidence to a certain extent questions the formerly held view that, "there is no hint that any of the (Suffolk) town sites retain any urban significance into the 5th century or beyond" (Plouviez 1995, 78). Wixoe may be more similar to Great Chesterford where the fate of the town was not clear as "an extensive Anglo-Saxon cemetery (AD 450-600) has been excavated immediately to the north of the town, and there is some evidence for individuals using Romano-British burial practices being included within that cemetery (Medlycott 2011a, xiv).

7.3 Site Specific Research Objectives

7.3.1 Building layouts

The building density and comparisons have been made in the more general regional research framework objectives (Section 7.2.5 above). This does not deal specifically with building layouts. One of the impressive aspects of the excavation was the level of survival of some buildings, several within their plot boundaries. Three of the Wixoe buildings had complete 'ground plans' surviving (the best comprised a building with associated floor layers and hearths). A comparison of house sizes and building techniques can be made with similar buildings found in other towns including Pakenham (Plouviez 1995, fig. 7.2) and in (to a certain extent) Hacheston. At the latter site there were only partial plans even for the more complete structures (Buildings III and XI) with measurements of the former, for instance, recorded as being about 8m or 9m long and between 5m and 7m wide although part of its chalk and clay floor and hearth survived (Blagg *et al* 2004, 198). Comparisons with buildings within other towns in the area will be carried out at publication stage.

At Wixoe the structures are mostly post-built. At Pakenham all the buildings were timber, mostly post-built with clay floors (Plouviez 1995, 71), whilst at Scole a variety of types of structure were found including both post-built and sill beam examples. The relatively small quantities of brick and tile at Wixoe and also Hacheston, suggests that all the excavated buildings in the present and 1973-4 excavations respectively had thatched or wooden shingle rather than tiled roofs (Blagg *et al* 2004, 198). Excavations elsewhere at Hacheston (*e.g.* in 1966) indicate that there were structures with walls of brick or flint, and at least in part tiled roofs (Blagg *et al* 2004, 198).

A few of the Wixoe buildings were partly rebuilt/repaired or expanded including a probable porch on one. This latter feature can be compared with an example from Hacheston. The change in plans of the buildings over the Roman period may be significant with the first rectangular buildings at Pakenham located in the central cross-roads area, being about 5.5m by 11.5m with large clay hearths. These were replaced during the first half of the 2nd century by a larger, semi-aisled building which was 19m

long and about 8m wide. At Hacheston, Buildings VI and VII had irregular post-holes to the side and these may have extended both buildings (*ibid*, 198).

In addition to the buildings found at the excavation at Wixoe, geophysical work by Birmingham Archaeology on the 'villa' like building to the south of the excavation produced a clear layout with the stone walls shown. This building may be compared with an example at Pakenham where there was a least one late building with flint wall foundations, perhaps a bath-house with hypocaust (Plouviez 1995, 73).

7.3.2 Religion

It is possible that some of the Wixoe artefacts have a religious significance. The pipeclay figurine of a ram was recovered in the backfill of an industrial pit and this deposition may be linked to the god Mercury (Nina Crummy *pers. comm.*). The terrier dog carved on the end of a bone pin may also have a religious link. A metal detected artefact of a frog/toad found in the 1980s at Wixoe also emphasises this religious link. "Representations of frogs occur sporadically in Roman art, for example, on some bronze votive hands associated with the Anatolian mystery god Sabazius" (Drury and Wickenden 1982, 241). Some see frogs in a religious light such as Toynbee who suggests that the frog was used "as a charm to ward of evil" (Toynbee 1973, 216-217).

A further comparator for these Wixoe artefacts is Hacheston. Here there is scant evidence for religion with three small finds - a figurine head, a votive axe, and a pipeclay statuette of Apollo which had been imported from Gaul (Blagg *et al* 2004, 201).

8 METHODS STATEMENTS FOR ANALYSIS

8.1 Stratigraphic Analysis

8.1.1 The programme 'Stratify' has been used to check the stratigraphic relationships between contexts in the excavation area. The site has also been preliminarily phased using this and the spot dating from artefacts especially pottery. The preliminary phasing has been deliberately broad for this assessment and it is likely that once detailed analysis of the artefacts, especially pottery is complete (including the samian), the site will include sub-phasing.

8.1.2 It should be noted that the results of the Birmingham evaluation have not been included or integrated. At publication stage the information from the Birmingham evaluation reports will be included.

8.2 Illustration

8.2.1 Plans of the site including the burials have been digitised. At publication stage, areas of the site including houses will be given more detail. Sections have not yet been digitised but it is proposed that those that merit it will be included in the publication. Several of the specialists have already recommended artefacts for illustration whilst some of the others suggest recommendations for illustration for the full report stage. The main items needing illustrating will be the Roman pottery and the small finds. There will be a figure containing Roman sites and topography within a 10km radius of Wixoe.

8.2.2 Some of the artefacts will be photographed rather than drawn (glass and stone especially). There will be photographs of features, overhead shots and general views used in the publication report as appropriate.

8.3 Documentary Research

8.3.1 In order to understand the town and its hinterland there will be a comprehensive search in the HER for sites within a 10km radius of Wixoe (See Section 7.2.3 above). Building on the research already done for this report, other research is needed on other towns in the region including Scole (Norfolk), the archive report on Pakenham (Suffolk), reports on Icklingham and Long Melford (Suffolk) and Elms Farm (Essex).

8.4 Artefactual Analysis

8.4.1 All the artefacts have been assessed (Appendices B1-B14). A significant number of these artefact categories require more analysis for publication (coins, metal objects (copper, iron and lead), prehistoric pottery, Roman pottery including Samian, worked stone and worked bone). The recommendations for these artefacts have been laid out in Table 14 below. The catalogue and reports on the remaining artefact types (lithics, metalworking, glass, CBM, fired clay, wall plaster and opus signinum) have been completed or largely finished but will need to be synthesised for publication.

8.5 Ecofactual Analysis

8.5.1 All ecofactural remains have been assessed (Appendices C1-C4). The reports on the animal bone, environmental samples and shells recommend further analysis (Table 14) whilst the human bone report will be synthesised for publication.

9 REPORT WRITING, ARCHIVING AND PUBLICATION

9.1 Report Writing

Tasks associated with report writing are identified in Table 14.

9.2 Storage and Curation

9.2.1 Excavated material and records will be deposited with, and curated by, Suffolk County Council in appropriate county stores under the Site Code WIX 022. A digital archive will be deposited with OA Library/ADS. Suffolk County Council requires transfer of ownership prior to deposition (see Section 11). During analysis and report preparation, OA East will hold all material and reserves the right to send material for specialist analysis.

9.2.2 The archive will be prepared in accordance with current OA East guidelines, which are based on current national guidelines and for Suffolk, the County Council Archaeological Service, have recorded their requirements in their 2008 document (SCCAS 2008).

9.3 Publication

9.3.1 It is proposed that the results of the project should be published as an East Anglian Archaeology (EAA) monograph, under the title "Excavations at Wixoe Roman small town" by Rob Atkins.

9.3.2 The monograph will set the results from each period of activity within town. The results of other Roman settlements uncovered in the pipeline route within the hinterland of Wixoe (WLT 010 and WIX 021) will be cross-referenced with the Wixoe town excavation.

9.3.3 Report Structure:

Front matter (listings, acknowledgements, list of contributors *etc.)*
(*c.* 10 pages)

Chapter 1 Introduction
(*c. 5* text pages, *c.* 4 figures, *c. 2* plates)

I. Introduction
II. Geology and Topography
III. Archaeological and Historical Background
IV. Methodologies
V. Research Aims
VI. Phasing
VII. Storage and Curation

Chapter 2 The Archaeological Sequence
(*c.* 20 text pages, *c.*10 figures, *c*. 15 plates, c. 4 tables)

I. Prehistoric Activity
II. Roman Town

Chapter 3 The Finds
(*c.* 35 text pages, *c. 2*5 tables, *c.*20 figures, *c*. 5 plates)

I. Lithics
II. Coins
III. Metalwork
IV. Metalworking
V. Glass
VI. Prehistoric Pottery
VII. Romano-British Pottery
VIII. CBM
IX. Fired Clay
X. Opus Signinum
XI. Wall Plaster
XII. Miscellaneous Small Finds
XIII. Stone Objects
XIV. Worked Bone

Chapter 4 The Zooarchaeological and Botanical Evidence
(*c*. 15 text pages, *c*. 10 tables, *c*.10 figures, *c*. 3 plates)

`

I. Human Remains
II. Animal Bone
III. Charred Plant Macrofossils and Other Remains
IV. Shells

Chapter 5 Discussion and Conclusions
(*c*. 10 text pages, *c*. 3 figures)

Back Matter (bibliography, index, *etc*.)
(*c*. 12 pages)

9.3.4 Volume Summary

Sub-total	**No. pages**
Total front matter	10
Total text pages	85
Total figures	20
Total plates	8
Total tables	20
Back material	12
Volume Total	**155**

10 RESOURCES AND PROGRAMMING

10.1 Project Team Structure

Name	**Initials**	**Project Role**	**Establishment**
James Drummond Murray	JDM	Project Manager	OA East
Rob Atkins	RA	Author	OA East
Elizabeth Popescu	EP	Editor	OA East
Andy Bates	AB	Faunal Remains	OA North
Peter Boardman	PB	Metalworking	OA East
Lisa Brown	LB	Prehistoric Pottery	OA South
Nina Crummy	NC	Coins	Freelance
Anthony Dickson	AD	Lithics	OA North
Rachel Fosberry	RF	Seeds and shells	OA East

		(TBC)	
Chris Howard-Davis	CHD	Small Finds	OA North
Alice Lyons	AL	Roman Pottery	OA East
Ruth Shaffrey	RS	Worked Stone	OA South
Zoë Ui Choileáin	ZUC	Human Remains	OA East
Steve Wadeson	SW	Glass and Samain	OA East
TBC	ILL	Illustrator	OA East and South
TBC	Cons	Conservator	?Colchester and TBC
TBC	Thin	Thin Section Analysis	TBC
Carole Fletcher	CF	Archiving	OA East

Table 13: *Project Team*

10.2 Stages, Products and Tasks

Task No.	Task	Product No.*	Staff
Project Management			
1	Project management	1	JDM+ EP
2	Liaison with relevant staff and specialists, distribution of relevant information and materials	1	RA
Stage 1: Stratigraphic analysis			
3	Integrate ceramic/artefact dating with site matrix	1	RA
4	Update database and digital plans/sections to reflect any changes	1	RA + ILL
5	Finalise site phasing	1	RA
6	Add final phasing to database	1	RA
7	Compile group and phase text	1	RA
8	Compile overall stratigraphic text and site narrative to form the basis of the full/archive report	1	RA
9	Review, collate and standardise results of all final specialist reports and integrate with stratigraphic text and project results	1	RA
Illustration			
10	Digitise selected sections	1	ILL
11	Prepare draft phase plans, sections and other report figures	1	RA
12	Select photographs for inclusion in the report	1	RA
Documentary research			
13	Research 10km area around Wixoe at HER and obtain local and regional comparisons	1	RA
Artefact studies			
14	Lithics: Reduce text for publication	1	AD
15	Coins: * Liaise with conservator (43 coins to be conserved and cleaned) * A publication catalogue and report * Selected metal-detected coin data supplied by Mike Cuddeford to be analysed	1	NC Cons
16	Copper metal work: * Conserving/cleaning 10 items * Complete archive catalogue * Research local and regional comparisons * Select items for illustrations	1	CHD Cons

Task No.	Task	Product No.*	Staff
	* Publication report		
17	Iron : * Conserving/cleaning 20 items * Complete archive catalogue * Research local and regional comparisons * Select items for illustrations * Publication report	1	CHD Cons
18	Lead: * Complete archive catalogue * Research local and regional comparisons * Select items for illustrations * Publication report	1	CHD
19	Metalworking: * Reduce text for publication	1	PB
20	Glass: * Update catalogue * Prepare report for publication	1	SW
21	Prehistoric pottery: * Prepare report for publication * Liaise with illustrator (OA south)	1	LB
22	Roman pottery (not Samian): * Complete detailed catalogue * Select sections for thin sectioning * Select pottery for illustrations * Report on thin sections * Analyse the pottery by fabric and form * Analyse the pottery by phase * Analyse pottery by group * Analyse local, regional and national significance * Write archive report that is suitable for publication * Thin sections 5 slides x 5 fabrics	1	AL Thin
23	Samian pottery: * Complete detailed catalogue * Analyse 37 stamps * Analyse local, regional and national significance * Write archive report that is suitable for publication	1	SW
24	CBM, fired clay, wall plaster and opus signinum: * Reduce texts for publication	1	RA
25	Misc. : * Complete archive catalogue * Research local and regional comparisons * Select items for illustrations * Publication report	1	CHD
26	Worked Stone: * Catalogue stone * Research local and regional comparisons plus research on marble inlay etc. * Report writing * Illustration briefs and editing	1	RS
27	Worked bone: * Complete archive catalogue * Research local and regional comparisons * Select items for illustrations * Publication report	1	CHD
28	C14 2 Prehistoric pits	1	C14

Task No.	Task	Product No.*	Staff
29	Illustration of artefacts: * 7 Prehistoric sherds (OA south) * Worked stone (OA south) * Illustrate selected artefacts	1	ILL
Environmental Remains			
30	Human Remains: * Reduce text for publication	1	ZUC
31	Animal Bone: * Analysis of remaining 33% of assemblage * Research local, regional and national comparisons * Produce publication report	1	AB
33	Environmental Samples: * 15 samples merit further work * Produce publication report	1	RF
34	Shells: *Further analysis of contexts containing more than 1kg of shell * Produce publication report	1	?RF (TBC)
Stage 2: Report Writing			
35	Integrate documentary research	1	RA
36	Write historical and archaeological background text	1	RA
37	Edit phase and group text	1	RA
38	Compile list of illustrations/liaise with illustrators	1	RA +ILL
39	Write discussion and conclusions	1	RA
40	Prepare report figures	1	ILL
41	Collate/edit captions, bibliography, appendices etc	1	RA
42	Produce draft report	1	RA
43	Internal edit	1	EP
44	Incorporate internal edits	1	RA
45	Final edit	1	EP
46	Send to publisher for refereeing	1	EP
47	Post-refereeing revisions including illustrations/plates	1	EP/RA
48	Copy edit queries	1	EP
49	Proof-reading	1	EP/RA
Stage 3: Archiving			
50	Compile paper archive	1	RA
51	Archive/delete digital photographs	1	CF
52	Compile/check material archive and transfer of archive (paper and finds to stores)	1	CF

Table 14: *Task list*

* See Appendix D for product details and Appendix E for the project risk log.

10.3 Project Timetable

10.3.1 It is anticipated that once this PXA has been approved, work on the publication will start immediately. It is anticipated that the report will be sent to EAA for publication by the end of 2014.

11 OWNERSHIP

11.1.1 The ownership of the archive (paper and artefacts) will pass to Suffolk County Council after the project has been published.

APPENDIX A. CONTEXT INVENTORY

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1000		0	1	layer	Topsoil				0.25	5	0	0	0	0	0	0	0	0
1001		0	1	layer	Subsoil				0.4	5	0	0	0	0	0	0	0	0
1002		0	1	fill	pit		0			4	0	0	0	0	1359	0	0	0
1003		0	1	fill	pit		0			4	0	0	0	0	1359	0	0	0
1004		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1005		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1006		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1007		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1008		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1009		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1010		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1011		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1012		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1013		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1014		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1015		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1016		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1017		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1018		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1019		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1020		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1021		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1022		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1023		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1024		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1025		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1026		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1027		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1028		0	1	layer	black		0			4	0	0	0	0	0	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
					earth													
1029		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1030		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1031		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1032		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1033		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1034		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
1035	1515	0	1	layer	cobbled surface	courtyard	0			4	1516	0	0	0	0	0	0	0
1036		0	1	layer	black earth		0			4	0	0	0	0	1516	0	0	0
1037		1083	1	fill	pit	quarry	0			4	1168	0	0	0	1083	0	0	0
1038		1039	1	fill	pit		0			3	0	0	0	0	1039	0	0	0
1039		1039	1	cut	pit		2.23	2	0.2	3	1038	0	0	0	0	0	0	0
1040		1040	1	cut	ditch		5.8	0.8	0.3	3	1041	1043	0	0	0	0	0	0
1041		1040	1	fill	ditch		0			3	0	0	0	0	1040	0	0	0
1042		1040	1	fill	ditch		0			3	0	0	0	0	1043	0	0	0
1043		1040	1	fill	ditch		0			3	1042	0	0	0	1040	0	0	0
1044		1045	1	fill	pit	quarry	0			3	0	0	0	0	1054	0	0	0
1045		1045	1	cut	pit	quarry	1.24	0.86	0.98	3	1053	0	0	0	0	0	0	0
1046		1047	1	fill	pit	quarry	0			3	1081	0	0	0	1047	0	0	0
1047		1047	1	cut	pit	quarry	2.34	1.98	0.78	3	1046	0	0	0	0	0	0	0
1048		1049	1	fill	pit	quarry	0			3	0	0	0	0	1074	0	0	0
1049		1049	1	cut	pit	quarry	2	1.4	0.72	3	1074	0	0	0	0	0	0	0
1050		1125	1	fill	pit	quarry	0			4	0	0	0	0	1085	0	0	0
1051		1051	1	cut	pit or ph		0.6	0.6	0.4	2	1052	0	0	0	0	0	0	0
1052		1051	1	fill	pit or ph		0			2	0	0	0	0	1051	0	0	0
1053		1045	1	fill	pit	quarry	0			3	1054	0	0	0	0	0	0	0
1054		1045	1	fill	pit	quarry	0			3	1044	0	0	0	1053	0	0	0
1055		1055	1	cut	pit	quarry	2.5	2.26	1.18	3	1097	0	0	0	1100	0	0	0
1056		1055	1	fill	pit	quarry	0			3	0	0	0	0	1057	0	0	0
1057		1055	1	fill	pit	quarry	0			3	1056	0	0	0	1058	0	0	0
1058		1055	1	fill	pit	quarry	0			3	1057	0	0	0	1097	0	0	0
1059		1059	1	cut	pit	quarry	2.75		0.85	3	1120	0	0	0	0	0	0	0
1060		1059	1	fill	pit	quarry	0			3	0	0	0	0	1120	0	0	0
1061		1079	1	fill	pit	quarry	0			4	1093	0	0	0	1104	0	0	0
1062		1064	1	fill	pit	quarry	0			4	0	0	0	0	1063	0	0	0
1063		1064	1	fill	pit	quarry	0			4	1062	0	0	0	1242	0	0	0
1064		1064	1	cut	pit	quarry	0			4	1243	0	0	0	1105	0	0	0
1065		1065	1	cut	pit		0.5	0.5	0.35	0	1067	0	0	0	0	0	0	0
1066		1065	1	fill	pit		0			0	0	0	0	0	1067	0	0	0
1067		1065	1	fill	pit		0			0	1066	0	0	0	1065	0	0	0
1068		1070	1	fill	pit	quarry	0			3	1088	0	0	0	1069	0	0	0
1069		1070	1	fill	pit	quarry	0			3	1068	0	0	0	1184	0	0	0
1070		1070	1	cut	pit	quarry	1.5	1.3	0.68	3	1184	0	0	0	0	0	0	0
1071		1071	1	cut	pit	quarry	5.4	3.2	1.02	4	1222	1296	0	0	0	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1072		1071	1	fill	pit	quarry	0			4	1237	0	0	0	1297	1296	0	0
1073		1071	1	fill	pit	quarry	0			4	0	0	0	0	1131	0	0	0
1074		1049	1	fill	pit	quarry	0			3	1048	0	0	0	1049	0	0	0
1075		1076	1	fill	ditch		0			2	1049	0	0	0	1076	0	0	0
1076	1078	1076	1	cut	ditch		0	0.5	0.13	2	1075	0	0	0	0	0	0	0
1077		1078	1	fill	ditch		0			2	1049	0	0	0	1078	0	0	0
1078		1078	1	cut	ditch		0	0.8	0.27	2	1077	0	0	0	0	0	0	0
1079		1079	1	cut	pit	quarry	2.4	1.9	1.22	4	1104	0	0	0	0	0	0	0
1080		1081	1	fill	pit	quarry	0			3	0	0	0	0	1084	0	0	0
1081		1081	1	cut	pit	quarry	2.34	1.82	1.28	3	1084	0	0	0	1046	0	0	0
1082		1088	1	fill	pit	quarry	0			3	0	0	0	0	1086	0	0	0
1083		1083	1	cut	pit	quarry	2.53	2.26	1.36	4	1037	0	0	0	0	0	0	0
1084		1081	1	fill	pit	quarry	0			3	1080	0	0	0	1081	0	0	0
1085		1125	1	fill	pit	quarry	0			4	1050	0	0	0	1159	1386	0	0
1086		1088	1	fill	pit	quarry	0			3	1082	1266	0	0	1267	1183	1087	0
1087		1088	1	fill	pit	quarry	0			3	1086	0	0	0	1223	0	0	0
1088		1088	1	cut	pit	quarry	2.42	2.2	0.88	3	1267	1223	0	0	1068	1089	1352	0
1089		1090	1	fill	pit		0			3	1088	0	0	0	1090	0	0	0
1090		1090	1	cut	pit		0.92	0.92	0.3	3	1089	0	0	0	0	0	0	0
1091		1079	1	fill	pit	quarry	0			4	0	0	0	0	1092	0	0	0
1092		1079	1	fill	pit	quarry	0			4	1091	0	0	0	1093	0	0	0
1093		1079	1	fill	pit	quarry	0			4	1092	0	0	0	1061	0	0	0
1094		1094	1	cut	pit	quarry	1.25	1.1	0.98	3	1096	0	0	0	0	0	0	0
1095		1094	1	fill	pit	quarry	0			3	1100	0	0	0	1096	0	0	0
1096		1094	1	fill	pit	quarry	0			3	1095	0	0	0	1094	0	0	0
1097		1055	1	fill	pit	quarry	0			3	1058	0	0	0	1055	0	0	0
1098		1099	1	fill	?oven		0			4	0	0	0	0	1099	0	0	0
1099		1099	1	cut	?oven	flu?	0			4	1098	0	0	0	1341	0	0	0
1100		1094	1	fill	pit	quarry	0			3	1055	0	0	0	1095	0	0	0
1101		1101	1	cut	pit	quarry	1.8	1.8	1.2	3	1170	0	0	0	0	0	0	0
1102		1101	1	fill	pit	quarry	0			3	0	0	0	0	1109	0	0	0
1103		1337	1	fill	pit		0			4	0	0	0	0	1128	0	0	0
1104		1079	1	fill	pit	quarry	0			4	1061	0	0	0	1079	0	0	0
1105		1106	1	fill	pit		0			4	1064	0	0	0	1106	0	0	0
1106		1106	1	cut	pit		0			4	1105	0	0	0	0	0	0	0
1107		1108	1	fill	pit		0			4	0	0	0	0	1108	0	0	0
1108		1108	1	cut	pit		1.35	0.48	0.28	4	1107	0	0	0	0	0	0	0
1109		1101	1	fill	pit	quarry	0			3	1102	0	0	0	0	0	0	0
1110		1101	1	fill	pit	quarry	0			3	1109	0	0	0	1126	0	0	0
1111		1101	1	fill	pit	quarry	0			3	1110	0	0	0	0	0	0	0
1112		1113	2	fill	pit		0			2	0	0	0	0	1113	0	0	0
1113		1113	2	cut	pit		2.8	0.9	0.2	2	1112	0	0	0	0	0	0	0
1114		1115	2	fill	pit		0			2	0	0	0	0	1115	0	0	0
1115		1115	2	cut	pit		1.45		0.4	2	1114	0	0	0	0	0	0	0
1116		1117	2	fill	pit		0			4	0	0	0	0	1117	0	0	0
1117		1117	2	cut	pit		1.66		0.16	4	1116	0	0	0	0	0	0	0
1118		1119	2	fill	post hole		0			0	0	0	0	0	1119	0	0	0
1119		1119	2	cut	post hole		0.32		0.14	0	1118	0	0	0	0	0	0	0
1120		1059	1	fill	pit	quarry	0			3	1060	0	0	0	1059	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1121		1121	2	cut	pit	quarry	3.66		0.9	4	1171	0	0	0	0	0	0	0
1122		1121	2	fill	pit	quarry	0			4	0	0	0	0	1123	0	0	0
1123		1121	2	fill	pit	quarry	0			4	1122	0	0	0	1171	0	0	0
1124		1101	1	fill	pit	quarry	0			3	1102	0	0	0	1110	0	0	0
1125		1125	1	cut	pit	quarry	3.7	3.7	1.3	4	1390	1166	0	0	0	0	0	0
1126		1101	1	fill	pit	quarry	0			3	1110	0	0	0	1169	0	0	0
1127		1101	1	fill	pit	quarry	0			3	1110	0	0	0	1169	0	0	0
1128		1337	1	fill	pit		0			4	1103	0	0	0	1129	0	0	0
1129		1337	1	fill	pit		0			4	1128	0	0	0	1337	0	0	0
1130		1130	1	cut	pit	quarry	1.8	1.4	1.65	3	1340	0	0	0	0	0	0	0
1131		1071	1	fill	pit	quarry	0			4	1073	0	0	0	1294	1295	0	0
1132		1135	1	fill	pit		0			3	1139	1140	0	0	1133	0	0	0
1133		1135	1	fill	pit		0			3	1132	0	0	0	1134	0	0	0
1134		1135	1	fill	pit		0			3	1133	0	0	0	1135	0	0	0
1135		1135	1	cut	pit		1.32		0.32	3	1134	0	0	0	1136	0	0	0
1136		1266	1	fill	pit		0			3	1135	0	0	0	1266	0	0	0
1137		0	2	layer	topsoil		0			5	0	0	0	0	0	0	0	0
1138		0	2	layer	subsoil		0			5	0	0	0	0	0	0	0	0
1139		0	1	layer			0			4	0	0	0	0	0	0	0	0
1140		0	1	layer	?pit		0			4	0	0	0	0	0	0	0	0
1141		0	1	layer	?pit		0			4	0	0	0	0	0	0	0	0
1142		0	1	layer	?pit		0			4	0	0	0	0	0	0	0	0
1143		0	1	layer	?pit		0			4	0	0	0	0	0	0	0	0
1144		0	1	layer		quarry	0			4	0	0	0	0	0	0	0	0
1145		0	1	layer		quarry	0			4	0	0	0	0	0	0	0	0
1146		0	1	layer		quarry	0			4	0	0	0	0	0	0	0	0
1147		0	1	layer			0			4	0	0	0	0	0	0	0	0
1148		0	1	layer		quarry	0			4	0	0	0	0	0	0	0	0
1149		0	1	layer			0			4	0	0	0	0	0	0	0	0
1150		0	1	layer			0			4	0	0	0	0	0	0	0	0
1151		1299	1	layer			0			3	0	0	0	0	0	0	0	0
1152		0	1	layer			0			4	0	0	0	0	0	0	0	0
1153		0	1	layer			0			4	0	0	0	0	0	0	0	0
1154		0	1	layer			0			4	0	0	0	0	0	0	0	0
1155		0	1	layer			0			4	0	0	0	0	0	0	0	0
1156		0	1	layer			0			4	0	0	0	0	0	0	0	0
1157		0	1	layer			0			4	0	0	0	0	0	0	0	0
1158		0	1	layer			0			4	0	0	0	0	0	0	0	0
1159		1125	1	fill	pit	quarry	0			4	1085	0	0	0	1160	0	0	0
1160		1125	1	fill	pit	quarry	0			4	1159	0	0	0	1162	0	0	0
1161		1125	1	fill	pit	quarry	0			4	1162	0	0	0	1163	0	0	0
1162		1125	1	fill	pit	quarry	0			4	1160	0	0	0	1161	0	0	0
1163		1125	1	fill	pit	quarry	0			4	1161	0	0	0	1164	0	0	0
1164		1125	1	fill	pit	quarry	0			4	1163	0	0	0	1165	0	0	0
1165		1125	1	fill	pit	quarry	0			4	1164	0	0	0	1166	0	0	0
1166		1125	1	fill	pit	quarry	0			4	1165	0	0	0	1125	0	0	0
1167		1083	1	fill	pit	quarry	0			4	0	0	0	0	1168	0	0	0
1168		1083	1	fill	pit	quarry	0			4	1167	0	0	0	1037	0	0	0
1169		1101	1	fill	pit	quarry	0			3	1126	0	0	0	1170	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1170		1101	1	fill	pit	quarry	0			3	1169	0	0	0	1101	0	0	0
1171		1121	2	fill	pit	quarry	0			3	1123	0	0	0	1121	0	0	0
1172		1174	2	fill	beamslot	structure	0			3	0	0	0	0	1173	0	0	0
1173		1174	2	fill	beamslot	structure	0			3	1172	0	0	0	1174	0	0	0
1174	1189 1191	1174	2	cut	beamslot	structure	0	0.72	0.35	3	1173	0	0	0	0	0	0	0
1175		1178	2	fill	ditch		0			3	1254	0	0	0	1176	0	0	0
1176		1178	2	fill	ditch		0			3	1175	0	0	0	1177	0	0	0
1177		1178	2	fill	ditch		0			3	1176	0	0	0	1194	0	0	0
1178		1178	2	cut	ditch		0	1.35	0.58	3	1194	0	0	0	0	0	0	0
1179		1180	2	fill	pit		0			3	0	0	0	0	1180	0	0	0
1180		1180	2	cut	pit		2.15	1.64	0.22	3	1179	0	0	0	1181	0	0	0
1181		1182	2	fill	ditch		0			3	1180	0	0	0	1182	0	0	0
1182	1958 1980	1182	2	cut	ditch		0	0.75	0.46	3	1181	0	0	0	0	0	0	0
1183		1088	1	fill	pit	quarry	0			3	1086	0	0	0	1185	0	0	0
1184		1070	1	fill	pit	quarry	0			3	1069	0	0	0	1070	0	0	0
1185		1088	1	fill	pit	quarry	0			3	1183	0	0	0	1200	0	0	0
1186		1251	1	fill	pit		0			3	1224	0	0	0	1251	0	0	0
1187		1187	2	cut	pit		0	0.7	0.25	2	1188	0	0	0	0	0	0	0
1188		1187	2	fill	pit		0			2	1191	0	0	0	1187	0	0	0
1189	1174 1191	1189	2	cut	beamslot	structure	0		0.4	3	1190	0	0	0	0	0	0	0
1190		1189	2	fill	beamslot	structure	0			3	1191	0	0	0	1189	0	0	0
1191	1174 1189	1191	2	cut	beamslot	structure	0	0.4	0.1	3	1192	0	0	0	1188	0	0	0
1192		1191	2	fill	beamslot	structure	0			3	0	0	0	0	1191	0	0	0
1193		0	2	group number		structure	0			0	0	0	0	0	0	0	0	0
1194		1178	2	fill	ditch		0			3	1177	0	0	0	1178	0	0	0
1195		1195	1	cut	pit		2.48	0.7	0.3	2	1196	0	0	0	0	0	0	0
1196		1195	1	fill	pit		0			2	0	0	0	0	1195	0	0	0
1197		1197	1	cut	pit	quarry	3.62	3	1	3	1250	0	0	0	1233	0	0	0
1198		1197	1	fill	pit	quarry	0			3	0	0	0	0	1199	0	0	0
1199		1197	1	fill	pit	quarry	0			3	1198	0	0	0	1228	0	0	0
1200		1088	1	fill	pit	quarry	0			3	1185	0	0	0	1223	0	0	0
1201		1206	2	fill	pit		0			4	0	0	0	0	1202	0	0	0
1202		1206	2	fill	pit		0			4	1201	0	0	0	1203	0	0	0
1203		1206	2	fill	pit		0			4	1202	0	0	0	1204	0	0	0
1204		1206	2	fill	pit		0			4	1203	0	0	0	1205	0	0	0
1205		1206	2	fill	pit		0			4	1204	0	0	0	1206	0	0	0
1206		1206	2	cut	pit		2.21	2.15	1.25	4	1205	0	0	0	1209	0	0	0
1207		1208	2	fill	ditch		0			0	0	0	0	0	1208	0	0	0
1208		1208	2	cut	ditch		0			0	1207	0	0	0	0	0	0	0
1209		1210	2	fill	ditch		0			3	1206	0	0	0	1210	0	0	0
1210		1210	2	cut	ditch		0			3	1209	0	0	0	0	0	0	0
1211		1213	1	fill	pit		0			4	0	0	0	0	1212	0	0	0
1212		1213	1	fill	pit		0			4	1211	0	0	0	1213	0	0	0
1213		1213	1	cut	pit	furnace?	2.9	0.9	0.34	4	1212	0	0	0	0	0	0	0
1214		1214	1	cut	pit		3.4		1.2	3	1215	0	0	0	1364	1321	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1215		1214	1	fill	pit		0			3	1363	0	0	0	1214	0	0	0
1216		1216	1	cut	pit		2	2	0.95	3	1225	0	0	0	0	0	0	0
1217	1317	1216	1	fill	pit		0			3	0	0	0	0	0	0	0	0
1218		1219	1	fill	pit		0			3	1156	0	0	0	1219	0	0	0
1219		1219	1	cut	pit		0.82		0.18	3	1218	0	0	0	1220	0	0	0
1220		1221	1	fill	pit		0			3	1219	0	0	0	1221	0	0	0
1221	1214	1221	1	cut	pit		0			3	1220	0	0	0	0	0	0	0
1222		1071	1	fill	pit	quarry	0			4	1297	0	0	0	1071	0	0	0
1223		1088	1	fill	pit	quarry	0			3	1200	1087	0	0	1088	0	0	0
1224		1251	1	fill	pit		0			3	1238	0	0	0	1186	0	0	0
1225		1216	1	fill	pit		0			3	1317	0	0	0	1216	0	0	0
1226		1226	1	cut	pit		0.75	0.6	0.33	4	1227	0	0	0	0	0	0	0
1227		1226	1	fill	pit		0			4	0	0	0	0	1226	0	0	0
1228		1197	1	fill	pit	quarry	0			3	1199	0	0	0	1236	0	0	0
1229		1329	1	fill	pit		0			3	1331	0	0	0	1329	0	0	0
1230	1317	1216	1	fill	pit		0			3	0	0	0	0	0	0	0	0
1232		1232	1	cut	pit		1.1	0.76	0.16	2	1233	0	0	0	0	0	0	0
1233		1232	1	fill	pit		0			2	1197	0	0	0	1232	0	0	0
1234		1234	1	cut	pit		2.9		0.3	3	1235	0	0	0	1259	0	0	0
1235		1234	1	fill	pit		0			3	0	0	0	0	1234	0	0	0
1236		1197	1	fill	pit	quarry	0			3	1228	0	0	0	1258	0	0	0
1237		1071	1	fill	pit	quarry	0			4	1294	1295	0	0	1072	0	0	0
1238		1238	1	cut	pit		1.92		0.92	3	1351	0	0	0	1224	1330	0	0
1239		1238	1	fill	pit		0			3	1352	0	0	0	1351	0	0	0
1240		1214	1	fill	pit		0			3	1360	0	0	0	1362	0	0	0
1241		1238	1	fill	pit		0			3	1349	0	0	0	1348	0	0	0
1242		1064	1	fill	pit	quarry	0			4	1063	0	0	0	1243	0	0	0
1243		1064	1	fill	pit	quarry	0			4	1242	0	0	0	1064	0	0	0
1244		1245	1	fill	pit		0			3	0	0	0	0	1255	0	0	0
1245		1245	1	cut	pit		2.4	0.85	0.95	3	1256	0	0	0	0	0	0	0
1250		1197	1	fill	pit	quarry	0			3	1257	0	0	0	1197	0	0	0
1251		1251	1	cut	pit	?quarry	0			3	1186	0	0	0	0	0	0	0
1253		1254	2	fill	well		0			4	0	0	0	0	1254	0	0	0
1254	2292	1254	2	cut	well		3		0.46	4	1253	0	0	0	1175	0	0	0
1255		1245	1	fill	pit		0			3	1244	0	0	0	1256	0	0	0
1256		1245	1	fill	pit		0			3	1255	0	0	0	1245	0	0	0
1257		1197	1	fill	pit	quarry	0			3	1258	0	0	0	1250	0	0	0
1258		1197	1	fill	pit	quarry	0			3	1236	0	0	0	1257	0	0	0
1259		1265	1	fill	pit	?quarry	0			2	1234	0	0	0	1265	0	0	0
1260		1275	1	fill	pit		0			4	0	0	0	0	1276	0	0	0
1261		1261	1	cut	pit		1.1	1	0.34	3	1262	0	0	0	0	0	0	0
1262		1261	1	fill	pit		0			3	0	0	0	0	1261	0	0	0
1263		1264	1	fill	hearth	structure	0			2	1376	0	0	0	1278	0	0	0
1264		1264	1	cut	hearth	structure	0.64	0.6	0.15	2	1278	0	0	0	0	0	0	0
1265		1265	1	cut	pit	?quarry	1.82	1.6	0.84	2	1259	0	0	0	0	0	0	0
1266		1266	1	cut	pit		0.88		0.41	3	1136	0	0	0	1086	0	0	0
1267		1088	1	fill	pit	quarry	0			3	1086	0	0	0	1088	0	0	0
1268		1269	1	fill	pit		0			4	0	0	0	0	1269	0	0	0
1269		1269	1	cut	pit		1.58	1.17	0.33	4	1268	0	0	0	0	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1270		1271	1	fill	pit		0			3	1593	0	0	0	1272	0	0	0
1271		1271	1	cut	pit	quarry	2.8		1.24	3	1304	0	0	0	1326	0	0	0
1272		1271	1	fill	pit	quarry	0			3	1270	0	0	0	1303	0	0	0
1273		1273	1	cut	pit	quarry	2.28	1.82	1.26	3	1396	0	0	0	1392	0	0	0
1274		1273	1	fill	pit	quarry	0			3	0	0	0	0	1286	0	0	0
1275		1275	1	cut	pit		2.15		0.9	4	1276	0	0	0	0	0	0	0
1276		1275	1	fill	pit		0			4	1260	0	0	0	1275	0	0	0
1277		0	1	layer			0			3	0	0	0	0	1376	1279	0	0
1278		1264	1	fill	hearth		0			2	1263	0	0	0	1264	0	0	0
1279		1374	1	fill	?hearth		0			2	1279	0	0	0	1373	0	0	0
1280		1281	1	fill	?pit		0			0	0	0	0	0	1281	0	0	0
1281		1281	1	cut	?pit		0.4	0.4	0.15	0	1280	0	0	0	0	0	0	0
1282		1130	1	fill	pit	quarry	0			3	1283	0	0	0	1338	0	0	0
1283		1130	1	fill	pit	quarry	0			3	1337	0	0	0	0	1282	0	0
1284		1284	1	cut	pit		0	0.9	0.81	3	1289	0	0	0	0	0	0	0
1285		1284	1	fill	pit		0			3	0	0	0	0	1284	0	0	0
1286		1273	1	fill	pit	quarry	0			3	1274	0	0	0	1396	0	0	0
1287		1288	1	fill	pit		0			1	1071	0	0	0	1288	0	0	0
1288		1288	1	cut	pit		1.8	1.1	0.39	1	1287	0	0	0	0	0	0	0
1289		1284	1	fill	pit		0			3	1285	0	0	0	1284	0	0	0
1290		1290	1	cut	pit	quarry	4.8	2.44	1.26	3	1400	0	0	0	0	0	0	0
1291		1290	1	fill	pit	quarry	0			3	1367	0	0	0	1292	0	0	0
1292		1290	1	fill	pit	quarry	0			3	1291	0	0	0	1293	0	0	0
1293		1290	1	fill	pit	quarry	0			3	1346	0	0	0	1347	0	0	0
1294		1071	1	fill	pit	quarry	0			4	1131	0	0	0	1237	0	0	0
1295		1071	1	fill	pit	quarry	0			4	1131	0	0	0	1237	0	0	0
1296		1071	1	fill	pit	quarry	0			4	1072	0	0	0	1071	0	0	0
1297		1071	1	fill	pit	quarry	0			4	1072	0	0	0	1222	0	0	0
1298		1372	1	fill	pit		0			2	0	0	0	0	1371	0	0	0
1299		1299	1	cut	pit		0		0.78	3	1301	0	0	0	1317	0	0	0
1300		1299	1	fill	pit		0			3	1316	0	0	0	1301	0	0	0
1301		1299	1	fill	pit		0			3	1300	0	0	0	1299	0	0	0
1302		1302	1	cut	pit		1.1		0.4	3	1302	0	0	0	1330	1224	0	0
1303		1271	1	fill	pit	quarry	0			3	1272	0	0	0	1304	0	0	0
1304		1271	1	fill	pit	quarry	0			3	1303	0	0	0	1271	0	0	0
1305		1305	1	cut	pit		1.1	0.7	0.2	0	1306	0	0	0	0	0	0	0
1306		1305	1	fill	pit		0			0	0	0	0	0	1305	0	0	0
1307		1307	1	cut	post hole		0.7	0.6	0.3	2	1308	0	0	0	0	0	0	0
1308		1307	1	fill	post hole		0			2	0	0	0	0	1307	0	0	0
1309		1309	1	cut	post hole		0.5	0.48	0.34	2	1310	0	0	0	0	0	0	0
1310		1309	1	fill	post hole		0			2	0	0	0	0	1309	0	0	0
1311		1311	1	cut	post hole		0.46	0.38	0.2	2	1312	0	0	0	0	0	0	0
1312		1311	1	fill	post hole		0			2	0	0	0	0	1311	0	0	0
1313		1313	1	cut	pit		1.2	0.68	0.22	4	1314	0	0	0	0	0	0	0
1314		1313	1	fill	pit		0			4	0	0	0	0	1313	0	0	0
1315		1238	1	fill	pit		0			3	1348	0	0	0	1350	0	0	0
1316		1299	1	fill	pit		0			3	1329	0	0	0	1300	0	0	0
1317		1216	1	fill	pit		0			3	1299	0	0	0	1225	0	0	0
1318		1302	1	fill	pit		0			3	1320	0	0	0	1302	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1320		1320	1	cut	pit	quarry	0			3	1366	1323	0	0	1318	0	0	0
1321		1320	1	fill	pit	quarry	0			3	1214	0	0	0	1322	0	0	0
1322		1320	1	fill	pit	quarry	0			3	1321	0	0	0	1323	0	0	0
1323		1320	1	fill	pit	quarry	0			3	1322	0	0	0	1320	0	0	0
1324		0		master no.			0			0	0	0	0	0	0	0	0	0
1325		1325	1	cut	pit		0			3	1332	0	0	0	0	0	0	0
1326		1327	1	fill	pit	quarry	0			3	1271	1369	0	0	1328	0	0	0
1327		1327	1	cut	pit	quarry	0			3	1596	0	0	0	0	0	0	0
1328		1327	1	fill	pit	quarry	0			3	1326	0	0	0	1594	0	0	0
1329		1329	1	cut	pit		2	2	0.82	3	1229	0	0	0	1316	0	0	0
1330		1329	1	fill	pit		0			3	1332	1238	0	0	1331	0	0	0
1331		1329	1	fill	pit		0			3	1330	0	0	0	1229	0	0	0
1332		1325	1	fill	pit		0			3	0	0	0	0	1325	0	0	0
1333		1334	1	fill	pit		0			1	1130	0	0	0	1334	0	0	0
1334		1334	1	cut	pit		1.5	1.2	0.5	1	1333	0	0	0	1335	0	0	0
1335		1336	1	fill	pit		0			1	1334	0	0	0	1336	0	0	0
1336		1336	1	cut	pit		0.9	0.7	0.5	1	1335	0	0	0	0	0	0	0
1337		1337	1	cut	pit		1.8	1.4	0.7	4	1129	0	0	0	1283	0	0	0
1338		1130	1	fill	pit	quarry	0			3	1282	0	0	0	1342	0	0	0
1339		1130	1	fill	pit	quarry	0			3	1341	0	0	0	1338	0	0	0
1340		1130	1	fill	pit	quarry	0			3	1339	0	0	0	1130	0	0	0
1341		1130	1	fill	pit	quarry	0			3	1342	0	0	0	1339	0	0	0
1342		1130	1	fill	pit	quarry	0			3	1338	0	0	0	1341	0	0	0
1343		0	1	layer	?dark earth		0			4	0	0	0	0	1559	0	0	0
1344		1345	1	fill	pit	?quarry or cess	0			3	0	0	0	0	2233	0	0	0
1345		1345	1	cut	pit	?quarry or cess	2.27	1.95	1.23	3	2237	2238	0	0	2182	0	0	0
1346		1290	1	fill	pit	quarry	0			3	1292	0	0	0	1293	0	0	0
1347		1290	1	fill	pit	quarry	0			3	1293	0	0	0	1398	0	0	0
1348		1238	1	fill	pit		0			3	1241	0	0	0	1315	0	0	0
1349		1238	1	fill	pit		0			3	1140	0	0	0	1241	0	0	0
1350		1238	1	fill	pit		0			3	1315	0	0	0	1352	0	0	0
1351		1238	1	fill	pit		0			3	1239	0	0	0	1238	0	0	0
1352		1238	1	fill	pit		0			3	1350	0	0	0	1239	0	0	0
1353		1353	1	cut	pit		0	1.02	1	3	1361	0	0	0	1354	0	0	0
1354		1353	1	fill	pit		0			3	1353	0	0	0	1355	0	0	0
1355		1355	1	cut	pit		0			3	1561	0	0	0	0	0	0	0
1356		1355	1	fill	pit		2		1.06	3	0	0	0	0	1561	0	0	0
1357		1357	1	cut	?post hole		0.5	0.5	0.27	0	1358	0	0	0	0	0	0	0
1358		1357	1	fill	?post hole		0			0	0	0	0	0	1357	0	0	0
1359	1379	0	1	layer	black earth		0			4	0	0	0	0	1516	0	0	0
1360		1214	1	fill	pit		0			3	1521	0	0	0	1361	1240	0	0
1361		1214	1	fill	pit		0			3	1360	0	0	0	0	0	0	0
1362		1214	1	fill	pit		0			3	1240	0	0	0	1363	0	0	0
1363		1214	1	fill	pit		0			3	1362	0	0	0	1215	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1364		1320	1	fill	pit	quarry	0			3	1214	0	0	0	1365	0	0	0
1365		1320	1	fill	pit	quarry	0			3	1364	0	0	0	1366	0	0	0
1366		1320	1	fill	pit	quarry	0			3	1365	0	0	0	1320	0	0	0
1367		1367	1	cut	pit	quarry	2.26	2.08	1.1	3	1402	0	0	0	1291	0	0	0
1368		1367	1	fill	pit	quarry	0			3	0	0	0	0	1375	0	0	0
1369		1369	1	cut	pit	quarry	3.1	2.96	1.41	3	1599	0	0	0	1326	1380	1415	0
1370		1369	1	fill	pit	quarry	0			3	1593	0	0	0	1597	0	0	0
1371		1372	1	fill	?post hole	structure	0			2	1298	0	0	0	1372	0	0	0
1372		1372	1	cut	?post hole	structure	0.4	0.37	0.12	2	1371	0	0	0	0	0	0	0
1373		1374	1	fill	?post hole	structure	0			2	1279	0	0	0	1374	0	0	0
1374		1374	1	cut	?post hole	structure	0.35	0.2	0.17	2	1373	0	0	0	0	0	0	0
1375		1367	1	fill	pit	quarry	0			3	1368	0	0	0	1401	0	0	0
1376		1264	1	fill	hearth	structure	0			2	1277	0	0	0	1263	0	0	0
1377		1378	1	fill	?hearth	structure	0			2	0	0	0	0	1378	0	0	0
1378		1378	1	cut	?hearth	structure	0.55	0.22	0.1	2	1377	0	0	0	0	0	0	0
1379	1359	0	1	layer			0			4	0	0	0	0	0	0	0	0
1380		1381	1	fill	pit	quarry	0			2	1369	0	0	0	1381	0	0	0
1381		1381	1	cut	pit	quarry	0		0.96	2	1380	0	0	0	0	0	0	0
1382		1383	1	fill	post hole	structure	0			0	0	0	0	0	1383	0	0	0
1383		1383	1	cut	post hole	structure	0.45	0.24	0.34	0	1382	0	0	0	0	0	0	0
1384		1385	1	fill	grave	human burial	0	0	0	0	0	0	0	0	1435	0	0	0
1385		1385	1	cut	grave	human burial	0.64	0.4	0.12	0	1435	0	0	0	0	0	0	0
1386		1125	1	fill	pit	quarry	0			4	1085	0	0	0	1387	0	0	0
1387		1125	1	fill	pit	quarry	0			4	1386	0	0	0	1388	0	0	0
1388		1125	1	fill	pit	quarry	0			4	1387	0	0	0	1389	0	0	0
1389		1125	1	fill	pit	quarry	0			4	1388	0	0	0	1390	0	0	0
1390		1125	1	fill	pit	quarry	0			4	1389	0	0	0	1125	0	0	0
1391		1391	1	cut	pit	?quarry	1.12	0.7	0.51	2	1392	0	0	0	0	0	0	0
1392		1391	1	fill	pit	?quarry	0			2	1273	0	0	0	1391	0	0	0
1393		1393	2	cut	grave	human burial	2.18	0.7	0.15	4	1394	0	0	0	0	0	0	0
1394		1393	2	skeleton	grave	human burial	0			4	1395	0	0	0	1393	0	0	0
1395		1393	2	fill	grave	human burial	0			4	0	0	0	0	1394	0	0	0
1396		1273	1	fill	pit	quarry	0			3	1286	0	0	0	1273	0	0	0
1397		1397	1	cut	pit	animal grave	0			2	0	0	0	0	1567	0	0	0
1398		1290	1	fill	pit	quarry	0			3	1397	0	0	0	1399	0	0	0
1399		1290	1	fill	pit	quarry	0			3	1398	0	0	0	1400	0	0	0
1400		1290	1	fill	pit	quarry	0			3	1399	0	0	0	1290	0	0	0
1401		1367	1	fill	pit	quarry	0			3	1375	0	0	0	1402	0	0	0
1402		1367	1	fill	pit	quarry	0			3	1401	0	0	0	1367	0	0	0
1403		1403	1	cut	beam slot	building	0	0.3	0.1	4	1404	0	0	0	0	0	0	0
1404		1403	1	fill	beam slot	building	0			4	0	0	0	0	1403	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1405		1405	1	cut	post hole	structure	0.6	0.55	0.32	0	1406	0	0	0	0	0	0	0
1406		1405	1	fill	post hole	structure	0			0	0	0	0	0	1405	0	0	0
1407		1407	1	cut	beam slot	building	0	0.51	0.29	4	1408	0	0	0	0	0	0	0
1408		1407	1	fill	beam slot	building	0			4	0	0	0	0	1407	0	0	0
1409		1410	1	fill	beam slot	building	0			4	0	0	0	0	1410	0	0	0
1410	1412	1410	1	cut	beam slot	building	0	0.28	0.09	4	1409	0	0	0	0	0	0	0
1411		1412	1	fill	beam slot	building	0			4	0	0	0	0	1412	0	0	0
1412		1412	1	cut	beam slot	building	0	0.28	0.08	4	1411	0	0	0	0	0	0	0
1413		1617	1	fill	ditch		0			4	0	0	0	0	1617	0	0	0
1414		1414	1	cut	pit		2.3		0.84	2	1600	0	0	0	0	0	0	0
1415		1414	1	fill	pit		0			2	1369	0	0	0	1600	0	0	0
1416		1416	1	cut	pit or post hole		0.8	0.5	0.22	4	1417	0	0	0	1455	0	0	0
1417		1416	1	fill	pit or post hole		0			4	1418	0	0	0	1416	0	0	0
1418		1418	1	cut	pit		1.5	0.8	0.5	4	1420	0	0	0	1417	1457	0	0
1419		1418	1	fill	pit		0			4	0	0	0	0	1420	0	0	0
1420		1418	1	fill	pit		0			4	1419	0	0	0	1418	0	0	0
1421		1421	1	cut	post hole		0.53	0.53	0.36	0	1422	0	0	0	0	0	0	0
1422		1421	1	fill	post hole		0			0	0	0	0	0	1421	0	0	0
1423		1423	1	cut	ditch		0	2.3	0.6	4	1424	0	0	0	0	0	0	0
1424		1423	1	fill	ditch		0			4	1425	0	0	0	1423	0	0	0
1425		1423	1	fill	ditch		0			4	1426	0	0	0	1424	0	0	0
1426		1423	1	fill	ditch		0			4	1436	0	0	0	1425	0	0	0
1427	1454	1427	1	cut	ditch		0	0.52	0.15	3	1428	0	0	0	1430	0	0	0
1428		1427	1	fill	ditch		0			3	0	0	0	0	1427	0	0	0
1429		1429	1	cut	pit		0	1.1	0.2	2	1432	0	0	0	0	0	0	0
1430		1429	1	fill	pit		0			2	1427	0	0	0	1431	0	0	0
1431		1429	1	fill	pit		0			2	1430	0	0	0	1432	0	0	0
1432		1429	1	fill	pit		0			2	1431	0	0	0	1429	0	0	0
1433		1434	1	fill	ditch		0			0	0	0	0	0	1434	0	0	0
1434		1434	1	cut	ditch		0	0.8	0.1	0	1433	0	0	0	0	0	0	0
1435		1385	1	skeleton	grave	human burial	0			0	1384	0	0	0	1385	0	0	0
1436		1423	1	fill	ditch		0			4	0	0	0	0	1426	0	0	0
1437		1438	1	fill	pit		0			0	0	0	0	0	1438	0	0	0
1438		1438	1	cut	pit		2	1.4	0.15	0	1437	0	0	0	0	0	0	0
1439		1440	1	fill	pit		0			0	0	0	0	0	1440	0	0	0
1440		1440	1	cut	pit		1.1	1	0.3	0	1439	0	0	0	0	0	0	0
1441		1442	1	fill	pit		0			0	0	0	0	0	1442	0	0	0
1442		1442	1	cut	pit		1	0.6	0.25	0	1441	0	0	0	0	0	0	0
1443		1444	1	fill	post hole	structure	0			4	0	0	0	0	1444	0	0	0
1444		1444	1	cut	post hole	structure	0.6	0.3	0.1	4	1443	0	0	0	0	0	0	0
1445		1445	1	cut	pit		1.6		0.54	3	1447	0	0	0	0	0	0	0
1446		1445	1	fill	pit		0			3	0	0	0	0	1447	0	0	0
1447		1445	1	fill	pit		0			3	1446	0	0	0	1445	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1448		1448	1	cut	post hole	structure	0.36	0.34	0.22	0	1449	0	0	0	0	0	0	0
1449		1448	1	fill	post hole	structure	0			0	0	0	0	0	1448	0	0	0
1450		1450	1	cut	pit		0.72	0.64	0.18	0	1451	0	0	0	0	0	0	0
1451		1450	1	fill	pit		0			0	0	0	0	0	1450	0	0	0
1452		1452	1	cut	pit		1.3	0.64	0.25	0	1453	0	0	0	0	0	0	0
1453		1452	1	fill	pit		0			0	0	0	0	0	1452	0	0	0
1454		1454	1	cut	ditch		0	0.4	0.05	3	1455	0	0	0	0	0	0	0
1455		1454	1	fill	ditch		0			3	1456	1416	0	0	1454	0	0	0
1456		1456	1	cut	pit		1	1	0.65	4	1541	0	0	0	1455	0	0	0
1457		1456	1	fill	pit	building	0			4	1418	0	0	0	1541	0	0	0
1458		1458	1	cut	post hole	building	0.3	0.3	0.1	4	1459	0	0	0	0	0	0	0
1459		1458	1	fill	post hole	building	0			4	0	0	0	0	1458	0	0	0
1460		0		master no		building	0			0	0	0	0	0	0	0	0	0
1461		1461	1	cut	post hole		0.3	0.3	0.08	0	1462	0	0	0	0	0	0	0
1462		1461	1	fill	post hole		0			0	0	0	0	0	1461	0	0	0
1463		1463	1	cut	post hole		0.3	0.28	0.12	0	1464	0	0	0	0	0	0	0
1464		1463	1	fill	post hole		0			0	0	0	0	0	1463	0	0	0
1465		1466	1	fill	pit		0			0	0	0	0	0	1466	0	0	0
1466		1466	1	cut	pit		1.2	1	0.4	0	1465	0	0	0	1507	1509	0	0
1467		1467	1	cut	pit		1.2	1.2	0.13	0	1468	0	0	0	0	0	0	0
1468		1467	1	fill	pit		0			0	0	0	0	0	1467	0	0	0
1469		1470	1	fill	beam slot	building	0			4	0	0	0	0	1470	0	0	0
1470		1470	1	cut	beam slot	building	0	0.47	0.13	4	1469	0	0	0	0	0	0	0
1471		1472	1	fill	beam slot	building	0			4	0	0	0	0	1472	0	0	0
1472		1472	1	cut	beam slot	building	0	0.35	0.25	4	1471	0	0	0	0	0	0	0
1473		1474	1	fill	beam slot	building	0			4	0	0	0	0	1474	0	0	0
1474		1474	1	cut	beam slot	building	0	0.47	0.21	4	1473	0	0	0	0	0	0	0
1475		1476	1	fill	beam slot	building	0			4	0	0	0	0	1476	0	0	0
1476		1476	1	cut	beam slot	building	0	0.45	0.48	4	1475	0	0	0	1477	1479	0	0
1477		1478	1	fill	post hole	building	0			4	1476	0	0	0	1478	0	0	0
1478		1478	1	cut	post hole	building	0.3	0.3	0.12	4	1477	0	0	0	0	0	0	0
1479		1480	1	fill	post hole	building	0			4	1476	0	0	0	1480	0	0	0
1480		1480	1	cut	post hole	building	0.65	0.65	0.15	4	1479	0	0	0	0	0	0	0
1481		1546	1	fill	post pad	building	0			4	0	0	0	0	1546	0	0	0
1482		1483	1	fill	beam slot	building	0			4	1546	0	0	0	1483	0	0	0
1483		1483	1	cut	beam slot	building	0	0.55	0.37	4	1482	0	0	0	0	0	0	0
1484		1485	1	fill	post hole	building	0			4	0	0	0	0	1485	0	0	0
1485		1485	1	cut	post hole	building	0.15	0.15	0.06	4	1484	0	0	0	0	0	0	0
1486		1487	1	fill	post hole	building	0			4	0	0	0	0	1487	0	0	0
1487		1487	1	cut	post hole	building	0.15	0.15	0.1	4	1486	0	0	0	0	0	0	0
1488		1490	1	fill	post hole	building	0			4	0	0	0	0	1489	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1489		1490	1	fill	post hole	building	0			4	1488	0	0	0	1490	0	0	0
1490		1490	1	cut	post hole	building	0.53		0.21	4	1489	0	0	0	0	0	0	0
1491		1491	1	cut	post hole	building	0.4	0.4	0.1	0	1492	0	0	0	0	0	0	0
1492		1491	1	fill	post hole	building	0			0	0	0	0	0	1491	0	0	0
1493		1493	1	cut	pit		0.87	0.87	0.44	4	1496	0	0	0	0	0	0	0
1494		1493	1	fill	pit		0			4	0	0	0	0	1495	0	0	0
1495		1493	1	fill	pit		0			4	1494	0	0	0	1496	0	0	0
1496		1493	1	fill	pit		0			4	1495	0	0	0	1493	0	0	0
1497		1497	1	cut	pit		0.62	0.46	0.1	4	1498	0	0	0	0	0	0	0
1498		1497	1	fill	pit		0			4	0	0	0	0	1497	0	0	0
1499		1502	1	fill	pit		0			0	0	0	0	0	1500	0	0	0
1500		1502	1	fill	pit		0			0	1499	0	0	0	1501	0	0	0
1501		1502	1	fill	pit		0			0	1500	0	0	0	1502	0	0	0
1502		1502	1	cut	pit		1.4	1.3	0.55	0	1501	0	0	0	1503	0	0	0
1503		1504	1	fill	pit		0			0	1502	0	0	0	1504	0	0	0
1504		1504	1	cut	pit		1.2	1.2	0.3	0	1503	0	0	0	0	0	0	0
1505		1506	1	fill	post hole		0			4	0	0	0	0	1506	0	0	0
1506		1506	1	cut	post hole		0.5	0.5	0.2	4	1505	0	0	0	0	0	0	0
1507		1508	1	fill	post hole		0			0	1466	0	0	0	1508	0	0	0
1508		1508	1	cut	post hole		0.8	0.6	0.15	0	1507	0	0	0	0	0	0	0
1509		1510	1	fill	post hole		0			0	1466	0	0	0	1510	0	0	0
1510		1510	1	cut	post hole		0.7	0.6	0.1	0	1509	0	0	0	0	0	0	0
1511		1512	1	fill	post hole		0			4	0	0	0	0	1512	0	0	0
1512		1512	1	cut	post hole		0.2	0.2	0.1	4	1511	0	0	0	0	0	0	0
1513		1514	1	fill	post hole		0			0	0	0	0	0	1514	0	0	0
1514		1514	1	cut	post hole		0.4	0.4	0.1	0	1513	0	0	0	0	0	0	0
1515		0		layer	cobbled surface	courtyard	0			4	1516	0	0	0	0	0	0	0
1516		0		layer	cobbled surface	courtyard	0			4	1359	0	0	0	1515	0	0	0
1517		1518	1	fill	post hole	building	0			4	0	0	0	0	1518	0	0	0
1518		1518	1	cut	post hole	building	0.6	0.5	0.2	4	1517	0	0	0	0	0	0	0
1519		1520	1	fill	post hole	building	0			4	0	0	0	0	1520	0	0	0
1520		1520	1	cut	post hole	building	0.6	0.6	0.05	4	1519	0	0	0	0	0	0	0
1521		1214	1	fill	pit		0			3	1147	0	0	0	1360	0	0	0
1522		1523	1	fill	pit		0			4	0	0	0	0	1523	0	0	0
1523		1523	1	cut	pit		1.7	1.5	0.28	4	1522	0	0	0	0	0	0	0
1524		1525	1	fill	?post hole		0			4	0	0	0	0	1525	0	0	0
1525		1525	1	cut	?post hole		0.45	0.45	0.15	4	1524	0	0	0	0	0	0	0
1526		1527	1	fill	post hole		0			4	0	0	0	0	1527	0	0	0
1527		1527	1	cut	post hole		0.35	0.3	0.24	4	1526	0	0	0	0	0	0	0
1528		1529	1	fill	post hole		0			4	0	0	0	0	1529	0	0	0
1529		1529	1	cut	post hole		0.8	0.74	0.25	4	1528	0	0	0	0	0	0	0
1530		1532	1	fill	hearth	building	0			4	0	0	0	0	1531	0	0	0
1531		1532	1	fill	hearth	building	0			4	1530	0	0	0	1532	0	0	0
1532		1532	1	cut	hearth	building	0.75	0.75	0.1	4	1531	0	0	0	0	0	0	0
1533		1535	1	fill	hearth	building	0			4	0	0	0	0	1534	0	0	0
1534		1535	1	fill	hearth	building	0			4	1533	0	0	0	1535	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1535		1535	1	cut	hearth	building	0.85	0.35	0.07	4	1534	0	0	0	0	0	0	0
1536		1536	1	cut	?hearth		1.07	0.84	0.19	0	1537	0	0	0	0	0	0	0
1537		1536	1	fill	?hearth		0			0	0	0	0	0	1536	0	0	0
1538		1538	1	cut	?hearth		1.66	1.52	0.3	0	1539	0	0	0	0	0	0	0
1539		1538	1	fill	?hearth		0			0	1540	0	0	0	1538	0	0	0
1540		1538	1	fill	?hearth		0			0	0	0	0	0	1539	0	0	0
1541		1456	1	fill	pit		0			4	1457	0	0	0	1456	0	0	0
1542		1542	1	cut	pit		0.9	0.7	0.26	0	1543	0	0	0	0	0	0	0
1543		1542	1	fill	pit		0			0	0	0	0	0	1542	0	0	0
1544		1544	1	cut	pit		0.8	0.8	0.28	0	1545	0	0	0	0	0	0	0
1545		1544	1	fill	pit		0			0	0	0	0	0	1544	0	0	0
1546		1546	1	fill	post pad	building	0			4	1481	0	0	0	1482	0	0	0
1547		0		skeleton	human		0			4	0	0	0	0	0	0	0	0
1548		1327	1	fill	pit	quarry	0			3	0	0	0	0	0	0	0	0
1549		1551	1	fill	pit	quarry	0			3	1554	0	0	0	1550	0	0	0
1550		1551	1	fill	pit	quarry	0			3	1549	0	0	0	1571	0	0	0
1551		1551	1	cut	pit	quarry	2.6	1.6	0.72	3	1571	0	0	0	1584	0	0	0
1552		1554	1	fill	pit	quarry	0			4	1556	0	0	0	1553	0	0	0
1553		1554	1	fill	pit	quarry	0			4	1552	0	0	0	1570	0	0	0
1554		1554	1	cut	pit	quarry	3.2	1.65	0.7	4	1570	0	0	0	1549	0	0	0
1555		1556	1	fill	pit		0			3	0	0	0	0	1556	0	0	0
1556		1556	1	cut	pit		1.52	1.4	0.42	3	1555	0	0	0	0	0	0	0
1557		0		layer	black earth		0			4	0	0	0	0	0	0	0	0
1558		0		layer	black earth		0			4	0	0	0	0	0	0	0	0
1559		1633	1	fill	kiln	structure	0			3	1343	0	0	0	1633	0	0	0
1560		0	1	layer			0			3	1633	0	0	0	1618	1620	1622	0
1561		1355	1	fill	pit		0			3	1356	0	0	0	0	0	0	0
1562		1562	1	cut	pit	quarry	2.75	2.7	1.02	3	1677	0	0	0	0	0	0	0
1563		1562	1	fill	pit	quarry	0			3	1603	0	0	0	1675	0	0	0
1564		1564	1	cut	pit	quarry	1.36	1.24	1.12	3	1673	0	0	0	0	0	0	0
1565		1564	1	fill	pit	quarry	0			3	1035	0	0	0	1612	1613	0	0
1566		1397	1	fill	pit	animal grave	0			2	0	0	0	0	1567	0	0	0
1567		1397	1	skeleton	dog burial	animal grave	0			2	1566	0	0	0	1397	0	0	0
1570		1554	1	fill	pit	quarry	0			4	1553	0	0	0	1554	0	0	0
1571		1551	1	fill	pit	quarry	0			3	1550	0	0	0	1551	0	0	0
1572		1573	1	fill	ditch		0			3	0	0	0	0	1573	0	0	0
1573	1602	1573	1	cut	ditch		0	0.84	0.18	3	1572	0	0	0	0	0	0	0
1574		1575	1	fill	ditch		0			2	0	0	0	0	1575	0	0	0
1575		1575	1	cut	ditch		0	0.8	0.15	2	1574	0	0	0	0	0	0	0
1576		1576	1	cut	pit		0.95		0.14	3	1577	0	0	0	0	0	0	0
1577		1576	1	fill	pit		0			3	1578	0	0	0	1576	0	0	0
1578		1578	1	cut	pit		1.04		0.15	3	1579	0	0	0	1577	0	0	0
1579		1578	1	fill	pit		0			3	0	0	0	0	1578	0	0	0
1580		1580	1	cut	ditch		0	0.8	0.2	3	1581	0	0	0	0	0	0	0
1581		1580	1	fill	ditch		0			3	0	0	0	0	1580	0	0	0
1582		1582	1	cut	post hole		0.51	0.4	0.32	0	1583	0	0	0	0	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1583		1582	1	fill	post hole		0			0	0	0	0	0	1582	0	0	0
1584		1585	1	fill	pit	quarry	0			3	1551	0	0	0	1585	0	0	0
1585		1585	1	cut	pit	quarry	2.55		0.72	3	1584	0	0	0	0	0	0	0
1586		1564	1	fill	pit	quarry	0			3	1612	0	0	0	1632	0	0	0
1587		0		layer			0			4	1035	0	0	0	0	0	0	0
1588		1589	1	fill	post hole	fence line	0			3	0	0	0	0	1589	0	0	0
1589		1589	1	cut	post hole	fence line	0.7	0.5	0.12	3	1588	0	0	0	0	0	0	0
1590		1592	1	fill	post hole	fence line	0			3	0	0	0	0	1591	0	0	0
1591		1592	1	fill	post hole	fence line	0			3	1590	0	0	0	1592	0	0	0
1592		1592	1	cut	post hole	fence line	0.85	0.7	0.65	3	1591	0	0	0	0	0	0	0
1593		0		layer			0			0	0	0	0	0	1270	1370	0	0
1594		1327	1	fill	pit	quarry	0			3	1328	0	0	0	1595	0	0	0
1595		1327	1	fill	pit	quarry	0			3	1594	0	0	0	1596	0	0	0
1596		1327	1	fill	pit	quarry	0			3	1595	0	0	0	1327	0	0	0
1597		1369	1	fill	pit	quarry	0			3	1370	0	0	0	1598	0	0	0
1598		1369	1	fill	pit	quarry	0			3	1597	0	0	0	1599	0	0	0
1599		1369	1	fill	pit	quarry	0			3	1598	0	0	0	1369	0	0	0
1600		1414	1	fill	pit		0			2	1415	0	0	0	1414	0	0	0
1601		1602	1	fill	ditch		0			3	1587	0	0	0	1602	0	0	0
1602		1602	1	cut	ditch		0	0.84	0.21	3	1601	0	0	0	0	0	0	0
1603		1564	1	fill	pit	quarry	0			3	1035	0	0	0	1563	1613	0	0
1604		1604	1	cut	pit	quarry	3.32	2.4	1.1	3	1644	0	0	0	0	0	0	0
1605		1607	1	fill	post hole	fence line	0			3	0	0	0	0	1606	0	0	0
1606		1607	1	fill	post hole	fence line	0			3	1605	0	0	0	0	0	0	0
1607		1607	1	cut	post hole	fence line	0.9	0.52	0.93	3	1606	0	0	0	0	0	0	0
1608		1611	1	fill	ditch		0			2	1587	0	0	0	1609	0	0	0
1609		1611	1	fill	ditch		0			2	1608	0	0	0	1610	0	0	0
1610		1611	1	fill	ditch		0			2	1609	0	0	0	1611	0	0	0
1611		1611	1	cut	ditch		0		0.27	2	1610	0	0	0	0	0	0	0
1612		1564	1	fill	pit	quarry	0			3	1565	0	0	0	1586	0	0	0
1613		1604	1	fill	pit	quarry	0			3	1565	0	0	0	1614	0	0	0
1614		1604	1	fill	pit		0			3	1613	0	0	0	1643	0	0	0
1615		1616	1	fill	post hole		0			2	1587	0	0	0	1616	0	0	0
1616		1616	1	cut	post hole		0.7		0.17	2	1615	0	0	0	0	0	0	0
1617	1625	1617	1	cut	ditch		0	0.5	0.14	4	1413	0	0	0	1343	0	0	0
1618		1619	1	fill	pit		0			2	1560	0	0	0	1619	0	0	0
1619		1619	1	cut	pit		1.3	0.7	0.32	2	1618	0	0	0	0	0	0	0
1620		1621	1	fill	pit		0			3	1560	0	0	0	1621	0	0	0
1621		1621	1	cut	pit		1.1	1.1	0.18	3	1620	0	0	0	0	0	0	0
1622		1623	1	fill	ditch		0			2	1560	0	0	0	1623	0	0	0
1623		1623	1	cut	ditch		0	0.6	0.14	2	1622	0	0	0	0	0	0	0
1624		1625	1	fill	ditch		0			4	0	0	0	0	1617	0	0	0
1625	1617	1625	1	cut	ditch		0			4	1413	0	0	0	1343	0	0	0
1626		1626	1	cut	ditch		0	0.79	0.15	0	1627	0	0	0	0	0	0	0
1627		1626	1	fill	ditch		0			0	0	0	0	0	1626	0	0	0
1628		1628	1a	cut	ditch		0	1	0.55	2	1629	0	0	0	0	0	0	0
1629		1628	1a	fill	ditch		0			2	1630	0	0	0	1628	0	0	0
1630		1628	1a	fill	ditch		0			2	0	0	0	0	1629	0	0	0
1631		1631	1a	cut	ditch or pit		0	0.76	0.38	2	1640	0	0	0	0	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1632		1564	1	fill	pit	quarry	0			3	1586	0	0	0	1674	0	0	0
1633		1633	1	cut	kiln		5.54	0.8	0.2	3	1559	0	0	0	1560	0	0	0
1634		1635	1	fill	post hole		0			2	1560	0	0	0	1635	0	0	0
1635		1635	1	cut	post hole		0.64	0.64	0.32	2	1634	0	0	0	0	0	0	0
1636		1637	1	fill	pit		0			3	1343	0	0	0	1637	0	0	0
1637		1637	1	cut	pit		1	0.6	0.12	3	1636	0	0	0	1560	0	0	0
1638		1631	1a	fill	ditch or pit		0			2	1639	0	0	0	1640	0	0	0
1639		1631	1a	fill	ditch or pit		0			2	0	0	0	0	1638	0	0	0
1640		1631	1a	fill	ditch or pit		0			2	1638	0	0	0	1631	0	0	0
1641		1642	1	fill	?post hole		0			0	0	0	0	0	1642	0	0	0
1642		1642	1	cut	?post hole		0.55	0.55	0.12	0	1641	0	0	0	0	0	0	0
1643		1604	1	fill	pit	quarry	0			3	1614	0	0	0	1644	0	0	0
1644		1604	1	fill	pit	quarry	0			3	1643	0	0	0	1604	0	0	0
1645	1698	1645	1a	cut	ditch	town boundary	0	3.76	1.46	4	1662	0	0	0	1656	0	0	0
1646		1646	1a	cut	?ditch		0	2.28	0.44	4	1656	0	0	0	0	0	0	0
1647		1649	2	fill	pit		0			2	0	0	0	0	1648	0	0	0
1648		1649	2	fill	pit		0			2	1647	0	0	0	1649	0	0	0
1649		1649	2	cut	pit		2.3	1.15	0.41	2	1648	0	0	0	0	0	0	0
1650		1651	2	fill	ditch		0			2	0	0	0	0	1651	0	0	0
1651		1651	2	cut	ditch		0	1.14	0.17	2	1650	0	0	0	0	0	0	0
1652		1653	2	fill	ditch		0			3	1663	0	0	0	1653	0	0	0
1653		1653	2	cut	ditch		0	1.94	0.5	3	1652	0	0	0	1664	0	0	0
1654		1655	2	fill	ditch		0			2	1664	0	0	0	1655	0	0	0
1655		1655	2	cut	ditch		0	1.54	0.44	2	1654	0	0	0	0	0	0	0
1656		1646	1a	fill	?ditch		0			4	1645	0	0	0	1646	0	0	0
1657		1645	1a	fill	ditch	town boundary	0			4	0	0	0	0	1658	0	0	0
1658		1645	1a	fill	ditch	town boundary	0			4	1657	0	0	0	1659	0	0	0
1659		1645	1a	fill	ditch	town bowndary	0			4	1658	0	0	0	1660	0	0	0
1660		1645	1a	fill	ditch	town boundary	0			4	1659	0	0	0	1661	0	0	0
1661		1645	1a	fill	ditch	town boundary	0			4	1660	0	0	0	1662	0	0	0
1662		1645	1a	fill	ditch	town boundary	0			4	1661	0	0	0	1645	0	0	0
1663		1653	2	fill	ditch		0			3	1666	0	0	0	1652	0	0	0
1664		1655	2	fill	ditch		0			2	1653	0	0	0	1654	0	0	0
1665		1666	2	fill	ditch		0			3	0	0	0	0	1666	0	0	0
1666		1666	2	cut	ditch		0	0.45	0.34	3	1665	0	0	0	1663	0	0	0
1667		1667	2	cut	pit	furnace?	1.38	0.63	0.53	3	1669	0	0	0	0	0	0	0
1668		1667	2	fill	pit		0			3	0	0	0	0	1669	0	0	0
1669		1667	2	fill	pit		0			3	1668	0	0	0	1667	0	0	0
1670		0		layer			0			3	0	0	0	0	1779	1932	1786	2150
1671		2151	2	fill	pit	quarry	0			3	2150	0	0	0	2149	0	0	0
1672	1843	2151	2	fill	pit	quarry	0			3	2153	0	0	0	2152	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1673		1564	1	fill	pit	quarry	0			3	1644	0	0	0	1564	0	0	0
1674		1564	1	fill	pit	quarry	0			3	1632	0	0	0	1644	0	0	0
1675		1562	1	fill	pit	quarry	0			3	1563	0	0	0	1676	0	0	0
1676		1562	1	fill	pit	quarry	0			3	1675	0	0	0	1677	0	0	0
1677		1562	1	fill	pit	quarry	0			3	1676	0	0	0	1562	0	0	0
1678		1633	1	fill	kiln	structure	0			3	0	0	0	0	1559	0	0	0
1679		1680	2	fill	ditch	enclosure	0			3	1683	0	0	0	1680	0	0	0
1680		1680	2	cut	ditch	enclosure	0	0.91	0.36	3	1679	0	0	0	0	0	0	0
1681		1739	2	fill	pit		0			3	1738	0	0	0	1739	0	0	0
1682		2153	2	fill	pit	quarry	0			3	1670	0	0	0	2153	0	0	0
1683		1680	2	fill	ditch		0			3	0	0	0	0	1679	0	0	0
1684		0	2	layer			0			0	0	0	0	0	0	0	0	0
1685		0	1	master number	quarry	pits	0			0	0	0	0	0	0	0	0	0
1686		1687	2	fill	ditch		0			2	0	0	0	0	1687	0	0	0
1687	1771	1687	2	cut	ditch		0	1.68	0.32	2	1686	0	0	0	0	0	0	0
1688		1688	2	cut	pit		1.46	0.8	0.72	3	1689	0	0	0	1693	0	0	0
1689		1688	2	fill	pit		0			3	1690	0	0	0	1688	0	0	0
1690		1690	2	cut	pit		0.85	0.8	0.36	3	1691	0	0	0	1689	0	0	0
1691		1690	2	fill	pit		0			3	0	0	0	0	1690	0	0	0
1692		1692	2	cut	pit or post hole		0.67	0.5	0.14	3	1693	0	0	0	0	0	0	0
1693		1692	2	fill	pit or post hole		0			3	1688	0	0	0	1692	0	0	0
1694		1695	2	fill	ditch	enclosure	0			3	0	0	0	0	1695	0	0	0
1695	1680	1695	2	cut	ditch	enclosure	0	0.82	0.29	3	1694	0	0	0	0	0	0	0
1696		1697	2	fill	ditch		0			5	0	0	0	0	1697	0	0	0
1697		1697	2	cut	ditch		0	0.36	0.06	5	1696	0	0	0	1705	0	0	0
1698		1698	1a	cut	ditch	town boundary	0	3.9	1.55	4	1718	0	0	0	1716	0	0	0
1699		1699	1a	cut	?pit		0.4	0.2	0.31	4	1717	0	0	0	1716	0	0	0
1700		1700	1a	cut	tree bole		1.35	1	0.3	4	1716	0	0	0	0	0	0	0
1701		1701	2	cut	pit		1.54	1.3	0.52	3	1703	0	0	0	0	0	0	0
1702		1701	2	fill	pit		0			3	0	0	0	0	1703	0	0	0
1703		1701	2	fill	pit		0			3	1702	0	0	0	1701	0	0	0
1704		1704	2	cut	cobbled surface	road	0	4.5	0.1	4	1705	0	0	0	0	0	0	0
1705		1705	2	fill	cobbled surface	road	0			4	0	0	0	0	1704	0	0	0
1706		1706	2	cut	post hole	structure	0.86	0.47	0.15	3	1707	0	0	0	0	0	0	0
1707		1706	2	fill	post hole	structure	0			3	0	0	0	0	1706	0	0	0
1708		1710	2	fill	pit		0			3	0	0	0	0	1709	0	0	0
1709		1710	2	fill	pit		0			3	1708	0	0	0	1710	0	0	0
1710		1710	2	cut	pit		2.2	2	0.8	3	1709	0	0	0	0	0	0	0
1711		1712	2	fill	pit		0			3	1737	0	0	0	1712	0	0	0
1712		1712	2	cut	pit		1.12	1.12	0.42	3	1711	0	0	0	1738	0	0	0
1713		1714	2	fill	ditch		0			2	1736	0	0	0	1714	0	0	0
1714		1714	2	cut	ditch		0	2.23	0.62	2	1713	0	0	0	0	0	0	0
1715		0		layer	cobbled surface	road	0		0.1	4	1740	0	0	0	1738	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1716		1700	1a	fill	tree bole		0			4	1699	1698	0	0	1700	0	0	0
1717		1699	1a	fill	?pit		0			4	0	0	0	0	1699	0	0	0
1718		1698	1a	fill	ditch	town boundary	0			4	1719	0	0	0	1698	0	0	0
1719		1698	1a	fill	ditch	town boundary	0			4	1720	0	0	0	1718	0	0	0
1720		1698	1a	fill	ditch	town boundary	0			4	1724	0	0	0	1719	0	0	0
1721		1698	1a	fill	ditch	town boundary	0			4	1722	0	0	0	1723	0	0	0
1722		1698	1a	fill	ditch	town boundary	0			4	1725	0	0	0	1721	0	0	0
1723		1698	1a	fill	ditch	town boundary	0			4	1721	0	0	0	1724	0	0	0
1724		1698	1a	fill	ditch	town boundary	0			4	1723	0	0	0	1720	0	0	0
1725		1698	1a	fill	ditch	town boundary	0			4	0	0	0	0	1722	0	0	0
1726	1728 1748	1726	2	cut	ditch		0	0.7	0.2	3	1727	0	0	0	0	0	0	0
1727		1726	2	fill	ditch		0			3	0	0	0	0	1726	0	0	0
1728	1726 1748	1728	2	cut	ditch		0	0.85	0.22	3	1729	0	0	0	1731	0	0	0
1729		1728	2	fill	ditch		0			3	0	0	0	0	1728	0	0	0
1730		1730	2	cut	pit		0.74	0.55	0.14	2	1731	0	0	0	0	0	0	0
1731		1730	2	fill	pit		0			2	1728	0	0	0	1730	0	0	0
1732		1732	2	cut	pit		1.55	1	0.47	3	1734	0	0	0	1775	0	0	0
1733		1732	2	fill	pit		0			3	0	0	0	0	1734	0	0	0
1734		1732	2	fill	pit		0			3	1733	0	0	0	1732	0	0	0
1735		1714	2	fill	ditch		0			2	1739	0	0	0	1736	0	0	0
1736		1714	2	fill	ditch		0			2	1735	0	0	0	1713	0	0	0
1737		1712	2	fill	pit		0			3	0	0	0	0	1711	0	0	0
1738		1739	2	fill	pit		0			3	1741	1712	0	0	1681	0	0	0
1739		1739	2	cut	pit		0.92	0.92	0.52	3	1681	0	0	0	1735	0	0	0
1740		1741	2	fill	cobbled surface	road	0			4	0	0	0	0	1715	0	0	0
1741		1741	2	cut	cobbled surface	road	0	4.4	0.24	4	1715	0	0	0	1738	0	0	0
1742		1743	2	fill	post hole		0			0	0	0	0	0	1742	0	0	0
1743		1743	2	cut	post hole		0.62	0.48	0.12	0	1742	0	0	0	0	0	0	0
1744		1746	2	fill	pit		0			2	0	0	0	0	1745	0	0	0
1745		1746	2	fill	pit		0			2	1744	0	0	0	1746	0	0	0
1746		1746	2	cut	pit		1.35	0.68	0.28	2	1745	0	0	0	0	0	0	0
1747		1748	2	fill	ditch		0			3	0	0	0	0	1748	0	0	0
1748	1726 1728	1748	2	cut	ditch		0	0.87	0.26	3	1747	0	0	0	1760	0	0	0
1749		1750	2	fill	ditch		0			2	1752	0	0	0	1750	0	0	0
1750	1761	1750	2	cut	ditch		0	0.76	0.06	2	1749	0	0	0	0	0	0	0
1751		1752	2	fill	ditch		0			3	0	0	0	0	1752	0	0	0
1752	1754 1756	1752	2	cut	ditch		0	1.41	0.43	3	1751	0	0	0	1749	0	0	0
1753		1754	2	fill	ditch		0			3	0	0	0	0	1754	0	0	0
1754	1752 1756	1754	2	cut	ditch		0	1.05	0.37	3	1753	0	0	0	0	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1755		1756	2	fill	ditch		0			3	0	0	0	0	1756	0	0	0
1756	1752 1754	1756	2	cut	ditch		0	0.6	0.29	3	1755	0	0	0	0	0	0	0
1757		1757	2	cut	pit		1.16	1.02	0.18	2	1758	0	0	0	0	0	0	0
1758		1757	2	fill	pit		0			2	1759	0	0	0	1757	0	0	0
1759		1757	2	fill	pit		0			2	0	0	0	0	1758	0	0	0
1760		1761	2	fill	ditch		0			2	1748	0	0	0	1761	0	0	0
1761		1761	2	cut	ditch		0	0.68	0.15	2	1760	0	0	0	0	0	0	0
1762	1843	1762	2	cut	ditch		0	2.1	1	5	1764	0	0	0	1766	0	0	0
1763		1762	2	fill	ditch		0			5	0	0	0	0	1764	0	0	0
1764		1762	2	fill	ditch		0			5	1763	0	0	0	1762	0	0	0
1765	1822 2202 2274 2385	1765	2	cut	ditch		0	0.38	0.42	3	1766	0	0	0	0	0	0	0
1766		1765	2	fill	ditch		0			3	1762	0	0	0	1765	0	0	0
1767		1768	2	fill	post hole		0			2	0	0	0	0	1768	0	0	0
1768		1768	2	cut	post hole		0.65	0.53	0.2	2	1767	0	0	0	0	0	0	0
1769		1770	2	fill	post hole		0			2	0	0	0	0	1770	0	0	0
1770		1770	2	cut	post hole		0.44	0.42	0.14	2	1769	0	0	0	0	0	0	0
1771		1771	2	cut	ditch		0	1.8	0.56	2	1773	0	0	0	1775	0	0	0
1772		1771	2	fill	ditch		0			2	0	0	0	0	1773	0	0	0
1773		1771	2	fill	ditch		0			2	1772	0	0	0	1771	0	0	0
1774		1774	2	cut	ditch		0	1.65	0.55	2	1777	0	0	0	0	0	0	0
1775		1774	2	fill	ditch		0			2	1771	1732	0	0	1776	0	0	0
1776		1774	2	fill	ditch		0			2	1775	0	0	0	1777	0	0	0
1777		1774	2	fill	ditch		0			2	1776	0	0	0	1774	0	0	0
1778		1778	2	cut	pit	quarry	0			3	1779	0	0	0	1787	0	0	0
1779		1778	2	fill	pit	quarry	0			3	1670	0	0	0	1778	0	0	0
1780		1780	2	cut	pit	quarry	0	1.04	0.64	3	1781	0	0	0	1784	0	0	0
1781		1780	2	fill	pit	quarry	0			3	1782	0	0	0	1780	0	0	0
1782		1780	2	fill	pit	quarry	0			3	1787	0	0	0	1781	0	0	0
1783		1783	2	cut	pit	quarry	0		0.58	3	1780	0	0	0	0	0	0	0
1784		1783	2	fill	pit	quarry	0			3	1780	1785	1922	0	1783	0	0	0
1785		1785	2	cut	pit	quarry	0	1.86	0.48	3	1786	0	0	0	1784	0	0	0
1786		1785	2	fill	pit	quarry	0			3	1670	0	0	0	1785	0	0	0
1787		1780	2	fill	pit	quarry	0			3	1778	0	0	0	1782	0	0	0
1788		1788	2	cut	pit	quarry	1	1	0.19	3	1789	0	0	0	0	0	0	0
1789		1788	2	fill	pit	quarry	0			3	1931	0	0	0	1788	0	0	0
1790		1790	2	cut	pit	quarry	1.18		0.38	3	1791	0	0	0	0	0	0	0
1791		1790	2	fill	pit	quarry	0			3	1792	0	0	0	1790	0	0	0
1792		1792	2	cut	pit	quarry	2.8		0.52	3	1793	0	0	0	1791	0	0	0
1793		1792	2	fill	pit	quarry	0			3	1922	0	0	0	1792	0	0	0
1794		1795	2	fill	pit		0			4	0	0	0	0	1795	0	0	0
1795		1795	2	cut	pit		0	0.56	0.15	4	1794	0	0	0	1807	0	0	0
1796		1799	2	fill	post hole		0			4	0	0	0	0	1797	0	0	0
1797		1799	2	fill	post hole		0			4	1796	0	0	0	1798	0	0	0
1798		1799	2	fill	post hole		0			4	1797	0	0	0	1799	0	0	0
1799		1799	2	cut	post hole		0.62		0.35	4	1798	0	0	0	1807	0	0	0
1800	2335	0	2	fill	hearth	building	0.63		0.1	3	0	0	0	0	0	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1801		1801	2	cut	well		7		1	4	1837	0	0	0	0	0	0	0
1802		1801	2	fill	well		0			4	1803	0	0	0	1837	0	0	0
1803	2474	1803	2	cut	ditch		0	1.4	0.42	3	1804	0	0	0	1802	0	0	0
1804		1803	2	fill	ditch		0			3	1805	0	0	0	1803	0	0	0
1805		1803	2	fill	ditch		0			3	1806	0	0	0	1804	0	0	0
1806		1803	2	fill	ditch		0			3	0	0	0	0	1805	0	0	0
1807		0	2	layer	floor	building	0			4	0	0	0	0	1819	0	0	0
1808		0	2	layer	floor	building	0			3	1819	0	0	0	0	0	0	0
1809		1810	2	fill	post hole	building	0			2	0	0	0	0	1810	0	0	0
1810		1810	2	cut	post hole	building	0.34	0.34	0.25	2	1809	0	0	0	0	0	0	0
1811		1812	2	fill	post hole	building	0			3	0	0	0	0	1812	0	0	0
1812		1812	2	cut	post hole	building	0.81		0.33	3	1811	0	0	0	0	0	0	0
1813		1814	2	fill	post hole	building	0			3	0	0	0	0	1814	0	0	0
1814		1814	2	cut	post hole	building	0.58		0.24	3	1813	0	0	0	0	0	0	0
1815		1816	2	fill	post hole	building	0			2	0	0	0	0	1816	0	0	0
1816		1816	2	cut	post hole	building	0.29	0.29	0.22	2	1815	0	0	0	0	0	0	0
1817		1817	2	cut	post hole	building	0.65	0.65	0.34	3	1132	1818	0	0	1819	0	0	0
1818		1817	2	fill	post hole	building	0			3	0	0	0	0	1817	0	0	0
1819		0	2	layer		building	1.05	0.43	0.18	3	1817	1807	0	0	1808	0	0	0
1820	1879 2076 2204 2273 2387	1820	2	cut	ditch	road	0	0.85	0.25	2	1821	0	0	0	0	0	0	0
1821		1820	2	fill	ditch	road	0			2	0	0	0	0	1820	0	0	0
1822		1822	2	cut	ditch	road	0	0.7	0.26	3	1823	0	0	0	0	0	0	0
1823		1822	2	fill	ditch	road	0			3	0	0	0	0	1822	0	0	0
1824		1824	2	cut	post hole	building	0.64	0.64	0.16	3	1825	0	0	0	0	0	0	0
1825		1824	2	fill	post hole	building	0			3	0	0	0	0	1824	0	0	0
1826		1826	2	cut	post hole	building	0.52		0.28	3	1827	0	0	0	0	0	0	0
1827		1826	2	fill	post hole	building	0			3	0	0	0	0	1826	0	0	0
1828		1828	2	cut	post hole	building	0.49		0.24	3	1829	0	0	0	0	0	0	0
1829		1828	2	fill	post hole	building	0			3	0	0	0	0	1828	0	0	0
1830		1830	2	cut	beam slot	building	0	0.39	0.1	0	1831	0	0	0	0	0	0	0
1831		1830	2	fill	beam slot	building	0			0	0	0	0	0	1830	0	0	0
1832		1817	2	fill	post hole	building	0			3	0	0	0	0	1817	0	0	0
1833		1833	2	cut	post hole	building	0.6	0.37	0.13	3	1834	0	0	0	0	0	0	0
1834		1833	2	fill	post hole	building	0			3	0	0	0	0	1833	0	0	0
1835		1835	2	cut	post hole	building	0.54	0.32	0.12	3	1836	0	0	0	0	0	0	0
1836		1835	2	fill	post hole	building	0			3	0	0	0	0	1835	0	0	0
1837		1801	2	fill	well		0			4	1802	0	0	0	1801	0	0	0
1838		1838	2	cut	post hole	building	0.5		0.3	2	1839	0	0	0	0	0	0	0
1839		1838	2	fill	post hole	building	0			2	0	0	0	0	1838	0	0	0
1840		1840	2	cut	post hole	building	0.7		0.31	0	1841	0	0	0	0	0	0	0
1841		1840	2	fill	post hole	building	0			0	0	0	0	0	1840	0	0	0
1842		1843	2	fill	ditch		0			5	0	0	0	0	1885	0	0	0
1843	1672	1843	2	cut	ditch		0	2.83	0.79	5	1885	0	0	0	0	0	0	0
1844		1844	2	cut	post hole	building	1.1	0.68	0.07	3	1845	0	0	0	0	0	0	0
1845		1844	2	fill	post hole	building	0			3	0	0	0	0	1844	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1846		1846	2	cut	post hole	building	0.71		0.17	3	1847	0	0	0	0	0	0	0
1847		1846	2	fill	post hole	building	0			3	0	0	0	0	1846	0	0	0
1848		1848	2	cut	post hole	building	0.7	0.64	0.08	0	1849	0	0	0	0	0	0	0
1849		1848	2	fill	post hole	building	0			0	0	0	0	0	1848	0	0	0
1850		1850	2	cut	post hole	building	0.58	0.4	0.14	2	1852	0	0	0	0	0	0	0
1851		1850	2	fill	post hole	building	0			2	0	0	0	0	1852	0	0	0
1852		1850	2	fill	post hole	building	0			2	1851	0	0	0	1850	0	0	0
1853		1853	2	cut	post hole	building	0.6	0.57	0.18	3	1854	0	0	0	0	0	0	0
1854		1853	2	fill	post hole	building	0			3	0	0	0	0	1853	0	0	0
1855		1855	2	cut	post hole	building	0.6	0.56	0.19	2	1857	0	0	0	0	0	0	0
1856		1855	2	fill	post hole	building	0			2	0	0	0	0	1857	0	0	0
1857		1855	2	fill	post hole	building	0			2	1856	0	0	0	1855	0	0	0
1858		1858	2	cut	post hole	building	0		0.19	0	1859	0	0	0	0	0	0	0
1859		1858	2	fill	post hole	building	0			0	0	0	0	0	1858	0	0	0
1860		1860	2	cut	post hole	building	0.22	0.22	0.09	2	1861	0	0	0	0	0	0	0
1861		1860	2	fill	post hole	building	0			2	0	0	0	0	1860	0	0	0
1862		1862	2	cut	post hole	building	0.59		0.21	3	1863	0	0	0	0	0	0	0
1863		1862	2	fill	post hole	building	0			3	1864	0	0	0	1862	0	0	0
1864		1862	2	fill	post hole	building	0			3	0	0	0	0	1863	0	0	0
1865		1865	2	cut	post hole	building	0.61		0.17	2	1866	0	0	0	0	0	0	0
1866		1865	2	fill	post hole	building	0			2	1867	0	0	0	1865	0	0	0
1867		1865	2	fill	post hole	building	0			2	0	0	0	0	1866	0	0	0
1868		1868	2	cut	post hole	building	1.06		0.41	3	1869	0	0	0	0	0	0	0
1869		1868	2	fill	post hole	building	0			3	0	0	0	0	1868	0	0	0
1870		1870	2	cut	post hole	building	0.68	0.68	0.26	3	1871	0	0	0	0	0	0	0
1871		1870	2	fill	post hole	building	0			3	0	0	0	0	1870	0	0	0
1872		1872	2	cut	post hole	building	0.54		0.2	2	1873	0	0	0	0	0	0	0
1873		1872	2	fill	post hole	building	0			2	0	0	0	0	1872	0	0	0
1874		1874	2	cut	post hole	building	0.84		0.21	3	1875	0	0	0	0	0	0	0
1875		1874	2	fill	post hole	building	0			3	0	0	0	0	1874	0	0	0
1876		1876	2	cut	post hole	building	0.91		0.27	2	1877	0	0	0	0	0	0	0
1877		1876	2	fill	post hole	building	0			2	0	0	0	0	1876	0	0	0
1878		1879	2	fill	ditch	road	0			2	1884	0	0	0	1879	0	0	0
1879		1879	2	cut	ditch	road	0	1.23	0.14	2	1878	0	0	0	0	0	0	0
1880		1881	2	fill	ditch	road	0			4	0	0	0	0	1881	0	0	0
1881	2282 2285 2381	1881	2	cut	ditch	road	0	0.57	0.13	4	1880	0	0	0	1882	0	0	0
1882		1883	2	fill	cobbled surface	road	0			4	1881	0	0	0	1883	0	0	0
1883	1907 1912	1883	2	cut	cobbled surface	road	0		0.08	4	1882	0	0	0	0	0	0	0
1884		1879	2	fill	ditch	road	0			2	0	0	0	0	1878	0	0	0
1885		1843	2	fill	ditch		0			5	1842	0	0	0	1843	0	0	0
1886		1887	2	fill	post hole	structure	0			3	1795	0	0	0	1887	0	0	0
1887		1887	2	cut	post hole	structure	0.61	0.61	0.39	3	1886	0	0	0	0	0	0	0
1888		1888	2	cut	ditch		0	1.2	0.21	2	1889	0	0	0	0	0	0	0
1889		1888	2	fill	ditch		0			2	1890	0	0	0	1888	0	0	0
1890		1890	2	cut	pit		2.68		1.1	3	1915	1916	0	0	1889	0	0	0
1891		1890	2	fill	pit		0			3	1914	0	0	0	1915	1916	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1892		1890	2	fill	pit		0			3	1917	0	0	0	1914	0	0	0
1893		1894	2	fill	post hole	building	0			3	0	0	0	0	1894	0	0	0
1894		1894	2	cut	post hole	building	0.59		0.31	3	1893	0	0	0	0	0	0	0
1895		1895	2	cut	pit		0.72	0.64	0.46	0	1896	0	0	0	1898	0	0	0
1896		1895	2	fill	pit		0			0	0	0	0	0	1895	0	0	0
1897		1897	2	cut	pit		0.7	0.59	0.43	0	1898	0	0	0	0	0	0	0
1898		1897	2	fill	pit		0			0	1895	0	0	0	1897	0	0	0
1899		1899	2	cut	pit		1.1	1.1	0.96	3	2011	0	0	0	0	0	0	0
1900		1899	2	fill	pit		0			3	1966	0	0	0	2010	0	0	0
1901		1903	2	fill	pit		0			0	0	0	0	0	1902	0	0	0
1902		1903	2	fill	pit		0			0	1901	0	0	0	1903	0	0	0
1903		1903	2	cut	pit		0.9		0.16	0	1902	0	0	0	0	0	0	0
1904		1904	2	cut	pit		1.31	1.01	0.46	3	1906	0	0	0	0	0	0	0
1905		1904	2	fill	pit		0			3	0	0	0	0	1906	0	0	0
1906		1904	2	fill	pit		0			3	1905	0	0	0	1904	0	0	0
1907		0	2	layer	cobbled surface	road	0		0.2	4	0	0	0	0	0	0	0	0
1908		1908	2	cut	pit		1.7	1.7	0.86	4	1909	0	0	0	0	0	0	0
1909		1908	2	fill	pit		0			4	1910	0	0	0	1908	0	0	0
1910		1908	2	fill	pit		0			4	1911	0	0	0	1909	0	0	0
1911		1908	2	fill	pit		0			4	0	0	0	0	1910	0	0	0
1912		1912	2	cut	cobbled surface	road	0			4	1913	0	0	0	0	0	0	0
1913		1913	2	fill	cobbled surface	road	0			4	0	0	0	0	1912	0	0	0
1914		1890	2	fill	pit		0			3	1892	0	0	0	1891	0	0	0
1915		1890	2	fill	pit		0			3	1891	0	0	0	1890	0	0	0
1916		1890	2	fill	pit		0			3	1891	0	0	0	1890	0	0	0
1917		1890	2	fill	pit		0			3	0	0	0	0	1892	0	0	0
1918		1921	1	fill	pit		0			3	0	0	0	0	1919	0	0	0
1919		1921	1	fill	pit		0			3	1918	0	0	0	1920	0	0	0
1920		1921	1	fill	pit		0			3	1919	0	0	0	1948	0	0	0
1921		1921	1	cut	pit		2.8	2.3	1.04	3	1948	0	0	0	0	0	0	0
1922		1922	2	cut	pit	quarry	1.22	1.22	0.6	3	1923	0	0	0	1784	0	0	0
1923		1922	2	fill	pit	quarry	0			3	1924	0	0	0	1922	0	0	0
1924		1924	2	cut	pit	quarry	1.04		0.32	3	1925	0	0	0	1923	0	0	0
1925		1924	2	fill	pit	quarry	0			3	0	0	0	0	1924	0	0	0
1926		1930	2	fill	ditch		0			3	0	0	0	0	1927	0	0	0
1927		1930	2	fill	ditch		0			3	1926	0	0	0	1928	0	0	0
1928		1930	2	fill	ditch		0			3	1927	0	0	0	1929	0	0	0
1929		1930	2	fill	ditch		0			3	1928	0	0	0	1930	0	0	0
1930	1974	1930	2	cut	ditch		0	2	0.71	3	1929	0	0	0	0	0	0	0
1931		1931	2	cut	pit		0.31	0.31	0.2	3	1932	0	0	0	1789	0	0	0
1932		1931	2	fill	pit		0			3	0	0	0	0	1931	0	0	0
1933		1933	2	cut	pit		1.82	1.82	1.6	3	1934	0	0	0	0	0	0	0
1934		1933	2	fill	pit		0			3	1935	0	0	0	1933	0	0	0
1935		1933	2	fill	pit		0			3	1936	0	0	0	1934	0	0	0
1936		1933	2	fill	pit		0			3	1937	0	0	0	1935	0	0	0
1937		1933	2	fill	pit		0			3	1938	0	0	0	1936	0	0	0
1938		1933	2	fill	pit		0			3	1939	0	0	0	1937	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1939		1933	2	fill	pit		0			3	0	0	0	0	1938	0	0	0
1940		1940	1	cut	pit		1.2		0.26	2	1941	0	0	0	0	0	0	0
1941		1940	1	fill	pit		0			2	2129	0	0	0	1940	0	0	0
1942		1942	1	cut	pit	quarry	2.58	1.45	0.8	2	2024	0	0	0	2104	0	0	0
1943		1942	1	fill	pit	quarry	0			2	2129	0	0	0	2179	0	0	0
1944		1945	2	fill	ditch		0			0	0	0	0	0	1945	0	0	0
1945	2003	1945	2	cut	ditch		0	0.47	0.03	0	1944	0	0	0	0	0	0	0
1946	1994 1952	1946	2	cut	ditch	enclosure	0	1.33	0.5	3	1987	0	0	0	0	0	0	0
1947		1980	2	fill	ditch		0			3	0	0	0	0	1978	0	0	0
1948		1921	1	fill	pit		0			3	1920	0	0	0	1921	0	0	0
1949		1950	2	fill	pit		0			3	0	0	0	0	1950	0	0	0
1950		1950	2	cut	pit		1.94		0.46	3	1949	0	0	0	1956	1953	0	0
1951		1952	2	fill	ditch	enclosure	0			3	1957	0	0	0	1952	0	0	0
1952		1952	2	cut	ditch	enclosure	0		0.56	3	1951	0	0	0	1997	0	0	0
1953		1954	2	fill	ditch		0			3	1950	0	0	0	1955	0	0	0
1954	2007	1954	2	cut	ditch		0	1.49	0.57	3	1953	0	0	0	0	0	0	0
1955		1954	2	fill	ditch		0			3	1953	0	0	0	1954	0	0	0
1956		1957	2	fill	ditch		0			3	1950	0	0	0	1957	0	0	0
1957		1957	2	cut	ditch		0	0.49	0.18	3	1956	0	0	0	1951	0	0	0
1958		1958	2	cut	ditch		0		0.3	3	1988	0	0	0	1985	0	0	0
1959		1960	2	fill	pit		0			0	0	0	0	0	1960	0	0	0
1960		1960	2	cut	pit		0.9	0.8	0.22	0	1959	0	0	0	0	0	0	0
1961		1962	2	fill	pit		0			0	0	0	0	0	1962	0	0	0
1962		1962	2	cut	pit		1.1	0.8	0.27	0	1961	0	0	0	0	0	0	0
1963		1963	2	cut	pit	quarry	0			0	0	0	0	0	0	0	0	0
1964		1964	2	cut	pit		1.9	1.4	0.9	3	2012	0	0	0	1969	0	0	0
1965		1964	2	fill	pit		0			3	1966	0	0	0	2012	0	0	0
1966		1966	2	cut	pit		1.15	1	0.43	3	1967	0	0	0	1900	1965	0	0
1967		1966	2	fill	pit		0			3	0	0	0	0	1966	0	0	0
1968		1968	2	cut	ditch		0	1.1	0.58	3	2014	0	0	0	0	0	0	0
1969		1968	2	fill	ditch		0			3	1964	0	0	0	2013	0	0	0
1970		1970	2	cut	pit	quarry	6.03		0.62	2	1971	0	0	0	0	0	0	0
1971		1970	2	fill	pit	quarry	0			2	1972	0	0	0	1970	0	0	0
1972		1970	2	fill	pit	quarry	0			2	1973	0	0	0	1971	0	0	0
1973		1970	2	fill	pit	quarry	0			2	1974	0	0	0	1972	0	0	0
1974		1974	2	cut	ditch		0	1.74	0.56	3	1975	0	0	0	1973	0	0	0
1975		1974	2	fill	ditch		0			3	1976	0	0	0	1974	0	0	0
1976		1974	2	fill	ditch		0			3	1977	0	0	0	1975	0	0	0
1977		1974	2	fill	ditch		0			3	0	0	0	0	1976	0	0	0
1978		1980	2	fill	ditch		0			3	1947	0	0	0	1979	0	0	0
1979		1980	2	fill	ditch		0			3	1978	0	0	0	1980	0	0	0
1980		1980	2	cut	ditch		0	1.15	0.42	3	1979	0	0	0	0	0	0	0
1981		1981	1	cut	post hole	fence line	0.67	0.57	0.3	3	1982	0	0	0	0	0	0	0
1982		1981	1	fill	post hole	fence line	0			3	0	0	0	0	1981	0	0	0
1983		1983	1	cut	post hole	fence line	0.36		0.67	3	1984	0	0	0	0	0	0	0
1984		1983	1	fill	post hole	fence line	0			3	0	0	0	0	1983	0	0	0
1985		1946	2	fill	ditch	enclosure	0			3	1958	0	0	0	1989	0	0	0
1986		1946	2	fill	ditch	enclosure	0			3	1990	0	0	0	1987	0	0	0
1987		1946	2	fill	ditch	enclosure	0			3	1986	0	0	0	1946	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
1988		1958	2	fill	ditch		0			3	0	0	0	0	1958	0	0	0
1989		1990	2	fill	stake hole		0			0	1985	0	0	0	1990	0	0	0
1990		1990	2	cut	stake hole		0	0.16	0.2	0	1989	0	0	0	1986	0	0	0
1991		1994	2	fill	ditch	enclosure	0			3	0	0	0	0	1992	0	0	0
1992		1994	2	fill	ditch	enclosure	0			3	1991	0	0	0	1993	0	0	0
1993		1994	2	fill	ditch	enclosure	0			3	1992	0	0	0	1994	0	0	0
1994		1994	2	cut	ditch	enclosure	0	1.86	0.54	3	1993	0	0	0	0	0	0	0
1995		1996	2	fill	pit		0			2	0	0	0	0	1996	0	0	0
1996		1996	2	cut	pit		0.95	0.85	0.21	2	1995	0	0	0	0	0	0	0
1997		1998	2	fill	pit		0			3	1952	0	0	0	1998	0	0	0
1998		1998	2	cut	pit		2.08		0.12	3	1997	0	0	0	0	0	0	0
1999		1999	2	cut	post hole		0.34	0.34	0.35	2	2000	0	0	0	0	0	0	0
2000		1999	2	fill	post hole		0			2	2001	0	0	0	1999	0	0	0
2001		1999	2	fill	post hole		0			2	0	0	0	0	2000	0	0	0
2002		0	2	layer	hearth		0			0	1670	0	0	0	0	0	0	0
2003		2003	2	cut	ditch		0	0.55	0.04	0	2004	0	0	0	0	0	0	0
2004		2003	2	fill	ditch		0			0	0	0	0	0	2003	0	0	0
2005		2005	2	cut	cobbled surface		5	1.5	0.2	2	2006	0	0	0	0	0	0	0
2006		2005	2	fill	cobbled surface		0			2	0	0	0	0	2005	0	0	0
2007		2007	2	cut	ditch		0	1.5	0.4	3	2009	0	0	0	0	0	0	0
2008		2007	2	fill	ditch		0			3	0	0	0	0	2009	0	0	0
2009		2007	2	fill	ditch		0			3	2008	0	0	0	2007	0	0	0
2010		1899	2	fill	pit		0			3	1900	0	0	0	2046	0	0	0
2011		1899	2	fill	pit		0			3	2046	0	0	0	1899	0	0	0
2012		1964	2	fill	pit		0			3	1965	0	0	0	1964	0	0	0
2013		1968	2	fill	ditch		0			3	1969	0	0	0	2014	0	0	0
2014		1968	2	fill	ditch		0			3	2013	0	0	0	1968	0	0	0
2015		2016	2	fill	post hole	? structure	0			0	0	0	0	0	2016	0	0	0
2016		2016	2	cut	post hole	? structure	0.85	0.83	0.38	0	2015	0	0	0	0	0	0	0
2017		2018	2	fill	post hole	? structure	0			0	0	0	0	0	2018	0	0	0
2018		2018	2	cut	post hole	? structure	0.68	0.58	0.39	0	2017	0	0	0	0	0	0	0
2019		2020	2	fill	post hole	? structure	0			0	0	0	0	0	2020	0	0	0
2020		2020	2	cut	post hole	? structure	0.35	0.32	0.43	0	2019	0	0	0	0	0	0	0
2021		2022	2	fill	post hole		0			0	0	0	0	0	2022	0	0	0
2022		2022	2	cut	post hole		0			0	2021	0	0	0	0	0	0	0
2023		1942	1	fill	pit	quarry	0			2	2179	0	0	0	2024	0	0	0
2024		1942	1	fill	pit	quarry	0			2	2023	0	0	0	1942	0	0	0
2025		2025	2	cut	?pit		1.4	0.36	0.2	3	2026	0	0	0	0	0	0	0
2026		2025	2	fill	?pit		0			3	0	0	0	0	2025	0	0	0
2027		2027	2	cut	post hole	? structure	0.47	0.47	0.29	0	2028	0	0	0	0	0	0	0
2028		2027	2	fill	post hole	? structure	0			0	0	0	0	0	2027	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
2029		2029	2	cut	post hole		0			2	2030	0	0	0	0	0	0	0
2030		2029	2	fill	post hole		0			2	0	0	0	0	2029	0	0	0
2031		2031	1	cut	post hole	fence line	0.73		0.4	3	2032	0	0	0	0	0	0	0
2032		2031	1	fill	post hole	fence line	0			3	0	0	0	0	2031	0	0	0
2033		2033	1	cut	post hole	fence line	0.47		0.41	3	2034	0	0	0	0	0	0	0
2034		2033	1	fill	post hole	fence line	0			3	0	0	0	0	2033	0	0	0
2035		2035	1	cut	post hole	fence line	0.31		0.13	3	2036	0	0	0	0	0	0	0
2036		2035	1	fill	post hole	fence line	0			3	0	0	0	0	2036	0	0	0
2037		2037	1	cut	post hole	fence line	0.71		0.25	3	2038	0	0	0	0	0	0	0
2038		2037	1	fill	post hole	fence line	0			3	0	0	0	0	2037	0	0	0
2039		2040	2	fill	post hole		0			1	0	0	0	0	2040	0	0	0
2040		2040	2	cut	post hole		0.6	0.6	0.34	1	2039	0	0	0	0	0	0	0
2041		2041	2	cut	post hole		0.64	0.64	0.41	2	2042	0	0	0	0	0	0	0
2042		2041	2	fill	post hole		0			2	2043	0	0	0	2041	0	0	0
2043		2041	2	fill	post hole		0			2	0	0	0	0	2042	0	0	0
2044		2045	2	fill	pit		0			0	0	0	0	0	2045	0	0	0
2045		2045	2	cut	pit		2.94	1.32	0.44	0	2044	0	0	0	0	0	0	0
2046		1899	2	fill	pit		0			3	2010	0	0	0	2011	0	0	0
2047		2048	2	fill	pit		0			3	0	0	0	0	2048	0	0	0
2048		2048	2	cut	pit		1.15	0.83	0.28	3	2047	0	0	0	0	0	0	0
2050		2051	2	fill	post hole	building	0			3	2053	0	0	0	2051	0	0	0
2051		2051	2	cut	post hole	building	1	0.92	0.56	3	2050	0	0	0	0	0	0	0
2052		2053	2	fill	post hole	building	0			3	0	0	0	0	2053	0	0	0
2053		2053	2	cut	post hole	building	0.86	0.86	0.33	3	2052	0	0	0	2050	0	0	0
2054		2056	2	fill	post hole	building	0			3	0	0	0	0	2055	0	0	0
2055		2056	2	fill	post hole	building	0			3	2054	0	0	0	2056	0	0	0
2056		2056	2	cut	post hole	building	0.72	0.66	0.5	3	2055	0	0	0	0	0	0	0
2057		2059	2	fill	post hole	building	0			3	0	0	0	0	2058	0	0	0
2058		2059	2	fill	post hole	building	0			3	2057	0	0	0	2059	0	0	0
2059		2059	2	cut	post hole	building	0.88	0.66	0.36	3	2058	0	0	0	0	0	0	0
2060		2061	2	fill	post hole	building	0			3	0	0	0	0	2061	0	0	0
2061		2061	2	cut	post hole	building	0.6	0.5	0.24	3	2060	0	0	0	0	0	0	0
2062		2064	2	fill	post hole	building	0			3	0	0	0	0	2063	0	0	0
2063		2064	2	fill	post hole	building	0			3	2062	0	0	0	2102	0	0	0
2064		2064	2	cut	post hole	building	0.64	0.47	0.47	3	2102	0	0	0	0	0	0	0
2065		2067	2	fill	post hole	building	0			3	0	0	0	0	2066	0	0	0
2066		2067	2	fill	post hole	building	0			3	2065	0	0	0	2067	0	0	0
2067		2067	2	cut	post hole	building	0.95	0.68	0.48	3	2066	0	0	0	0	0	0	0
2068		2070	2	fill	post hole	building	0			3	0	0	0	0	2069	0	0	0
2069		2070	2	fill	post hole	building	0			3	2068	0	0	0	2070	0	0	0
2070		2070	2	cut	post hole	building	0.62	0.4	0.3	3	2069	0	0	0	0	0	0	0
2071		2072	2	fill	post hole		0			0	0	0	0	0	2072	0	0	0
2072		2072	2	cut	post hole		0.54	0.49	0.18	0	2071	0	0	0	0	0	0	0
2073		2074	2	fill	post hole	? structure	0			3	0	0	0	0	2074	0	0	0
2074		2074	2	cut	post hole	? structure	0.44	0.35	0.19	3	2073	0	0	0	2075	0	0	0
2075		2076	2	fill	ditch	road	0			2	2074	0	0	0	2076	0	0	0
2076		2076	2	cut	ditch	road	0		0.17	2	2075	0	0	0	0	0	0	0
2077		2078	2	fill	post hole	building	0			3	0	0	0	0	2078	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
2078		2078	2	cut	post hole	building	0.5	0.47	0.22	3	2077	0	0	0	0	0	0	0
2079		2080	2	fill	post hole	structure	0			3	0	0	0	0	2080	0	0	0
2080		2080	2	cut	post hole	structure	0.6	0.56	0.27	3	2079	0	0	0	0	0	0	0
2081		2083	2	fill	post hole	building	0			3	0	0	0	0	2082	0	0	0
2082		2083	2	cut	post hole	building	0			3	2081	0	0	0	2083	0	0	0
2083		2083	2	cut	post hole	building	0.8	0.72	0.4	3	2082	0	0	0	0	0	0	0
2084		2086	2	fill	post hole	building	0			3	0	0	0	0	2085	0	0	0
2085		2086	2	fill	post hole	building	0			3	2084	0	0	0	2086	0	0	0
2086		2086	2	cut	post hole	building	0.88	0.72	0.5	3	2085	0	0	0	0	0	0	0
2087	2200 2383	2087	2	cut	ditch		0	0.8	0.24	5	2088	0	0	0	0	0	0	0
2088		2087	2	fill	ditch		0			5	2089	0	0	0	2087	0	0	0
2089		2087	2	fill	ditch		0			5	1907	0	0	0	2088	0	0	0
2090		2090	2	cut	pit		0.78		0.41	3	2091	0	0	0	2090	0	0	0
2091		2090	2	fill	pit		0			3	0	0	0	0	2090	0	0	0
2093		2093	2	cut	pit		1.5	1.1	0.35	1	2146	0	0	0	0	0	0	0
2094		2094	2	cut	ditch		0	1.26	0.4	0	2096	0	0	0	0	0	0	0
2095		2094	2	fill	ditch		0			0	0	0	0	0	2096	0	0	0
2096		2094	2	fill	ditch		0			0	2095	0	0	0	2094	0	0	0
2097		2098	2	fill	post hole	building	0			3	0	0	0	0	2098	0	0	0
2098		2098	2	cut	post hole	building	1.16	0.78	0.51	3	2097	0	0	0	0	0	0	0
2099		2101	2	fill	pit		0			3	0	0	0	0	2100	0	0	0
2100		2101	2	fill	pit		0			3	2099	0	0	0	2101	0	0	0
2101		2101	2	cut	pit		1.32	0.92	0.33	3	2100	0	0	0	0	0	0	0
2102		2064	2	fill	post hole	building	0			3	2063	0	0	0	2064	0	0	0
2103		2103	1	cut	pit	?quarry	2.4		0.4	2	2104	0	0	0	0	0	0	0
2104		2103	1	fill	pit	?quarry	0			2	2105	1942	0	0	2103	0	0	0
2105		2105	1	cut	pit		1		0.32	3	2106	0	0	0	2104	0	0	0
2106		2105	1	fill	pit		0			3	2107	0	0	0	2105	0	0	0
2107		2107	1	cut	pit		1	0.7	0.42	2	2108	0	0	0	2106	0	0	0
2108		2107	1	fill	pit		0			2	0	0	0	0	2107	0	0	0
2109		2109	1	cut	pit		1		0.32	2	2110	0	0	0	2106	0	0	0
2110		2109	1	fill	pit		0			2	0	0	0	0	2109	0	0	0
2111		2111	1	cut	pit		2.05	1.5	0.54	2	2112	0	0	0	0	0	0	0
2112		2111	1	fill	pit		0			2	0	0	0	0	2111	0	0	0
2113		2113	1	cut	pit		1.5	1.42	0.33	3	2116	2118	2120	0	2113	0	0	0
2114		2113	1	fill	pit		0			3	0	0	0	0	2113	0	0	0
2115		2113	1	fill	pit		0			3	2114	0	0	0	2121	0	0	0
2116		2116	1	cut	stake hole		0.16	0.16	0.22	3	2117	0	0	0	2113	0	0	0
2117		2116	1	fill	stake hole		0			3	2114	0	0	0	2116	0	0	0
2118		2118	1	cut	stake hole		0.16	0.16	0.22	3	2119	0	0	0	2113	0	0	0
2119		2118	1	fill	stake hole		0			3	2114	0	0	0	2118	0	0	0
2120		2120	1	cut	stake hole		0			3	2121	0	0	0	2113	0	0	0
2121		2120	1	fill	stake hole		0			3	2115	0	0	0	2120	0	0	0
2122		2122	1	cut	pit	quarry	3.3	2.4	1.22	3	2128	2239	0	0	1943	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
2123		2122	1	fill	pit	quarry	0			3	2111	0	0	0	2124	2126	0	0
2124		2122	1	fill	pit	quarry	0			3	2123	0	0	0	2125	0	0	0
2125		2122	1	fill	pit	quarry	0			3	2124	0	0	0	2126	0	0	0
2126		2122	1	fill	pit	quarry	0			3	2125	2123	0	0	2127	2239	0	0
2127		2122	1	fill	pit	quarry	0			3	2126	0	0	0	2128	0	0	0
2128		2122	1	fill	pit	quarry	0			3	2127	0	0	0	2122	0	0	0
2129		2129	1	cut	pit		1.75	1.46	0.26	2	2130	0	0	0	1941	0	0	0
2130		2129	1	fill	pit		0			2	0	0	0	0	2129	0	0	0
2131		2131	1	cut	pit		0	0.42	0.72	3	2133	0	0	0	0	0	0	0
2132		2131	1	fill	pit		0			3	2105	0	0	0	2133	0	0	0
2133		2131	1	fill	pit		0			3	2132	0	0	0	2131	0	0	0
2134		0	1	master number	pits		0			0	0	0	0	0	0	0	0	0
2135		2135	1	cut	post hole		0.99	0.81	0.21	2	2136	0	0	0	0	0	0	0
2136		2135	1	fill	post hole		0			2	2137	0	0	0	2135	0	0	0
2137		2135	1	fill	post hole		0			2	0	0	0	0	2136	0	0	0
2138		2138	1	cut	post hole		0.64	0.64	0.24	2	2139	0	0	0	0	0	0	0
2139		2138	1	fill	post hole		0			2	0	0	0	0	2138	0	0	0
2140		2140	1	cut	post hole		0.49	0.45	0.16	2	2141	0	0	0	0	0	0	0
2141		2140	1	fill	post hole		0			2	0	0	0	0	2140	0	0	0
2142		2142	1	cut	pit		1.76	0.68	0.29	4	2190	0	0	0	0	0	0	0
2143		2142	1	fill	pit		0			4	0	0	0	0	2190	0	0	0
2144		2144	2	cut	post hole	building	0.54	0.36	0.25	0	2145	0	0	0	0	0	0	0
2145		2144	2	fill	post hole	building	0			0	0	0	0	0	2144	0	0	0
2146		2093	2	fill	pit		0			1	2147	0	0	0	2093	0	0	0
2147		2093	2	fill	pit		0			1	2148	0	0	0	2146	0	0	0
2148		2093	2	fill	pit		0			1	0	0	0	0	2147	0	0	0
2149		2149	2	cut	pit	quarry	1.6		0.16	3	1671	0	0	0	0	0	0	0
2150		2149	2	fill	pit	quarry	0			3	1670	0	0	0	1671	0	0	0
2151		2151	2	cut	pit	quarry	0		0.44	3	2152	0	0	0	0	0	0	0
2152		2151	2	fill	pit	quarry	0			3	1672	0	0	0	2151	0	0	0
2153		2153	2	cut	pit	quarry	1.4		0.24	3	2154	0	0	0	1672	0	2156	0
2154	1682	2153	2	fill	pit	quarry	0			3	1670	0	0	0	2153	0	0	0
2155		2155	2	cut	pit	quarry	0		0.54	3	2156	0	0	0	0	0	0	0
2156		2155	2	fill	pit	quarry	0			3	2153	0	0	0	2155	0	0	0
2157		2157	2	cut	pit	quarry	1.3		0.72	3	2158	0	0	0	0	0	0	0
2158		2157	2	fill	pit	quarry	0			3	1670	0	0	0	2157	0	0	0
2159		2159	2	cut	pit	quarry	3		0.54	3	2160	0	0	0	2152	0	0	0
2160		2159	2	fill	pit	quarry	0			3	0	0	0	0	2159	0	0	0
2161		2161	2	cut	pit	quarry	0.9	0.9	0.26	3	2162	0	0	0	0	0	0	0
2162		2161	2	fill	pit	quarry	0			3	0	0	0	0	2161	0	0	0
2163		2163	2	cut	pit	quarry	1.7	1.7	0.24	3	2164	0	0	0	0	0	0	0
2164		2163	2	fill	pit	quarry	0			3	2159	2157	0	0	2163	0	0	0
2165		2165	2	cut	ditch		0	0.4	0.12	0	2166	0	0	0	0	0	0	0
2166		2165	2	fill	ditch		0			0	0	0	0	0	2165	0	0	0
2167	2224 2349 2397	2167	2	cut	ditch	road	0	0.78	0.28	4	2205	0	0	0	0	0	0	0
2168	2222	2168	2	cut	ditch	road	0			3	2210	2206	0	0	2212	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
	2351 2395																	
2169		2170	2	fill	post hole		0			2	0	0	0	0	2170	0	0	0
2170		2170	2	cut	post hole		0.64		0.22	2	2169	0	0	0	0	0	0	0
2177		2177	2	cut	post hole	building	0.68		0.18	0	2178	0	0	0	0	0	0	0
2178		2177	2	fill	post hole	building	0			0	0	0	0	0	2177	0	0	0
2179		1942	1	fill	pit	quarry	0			2	1943	0	0	0	2023	0	0	0
2180		1345	1	fill	pit	?quarry	0			3	2183	0	0	0	2235	0	0	0
2181		1345	1	fill	pit	?quarry	0			3	2235	0	0	0	2236	0	0	0
2182		0	1	layer			0			0	1345	0	0	0	2185	2189	0	0
2183		1345	1	fill	pit	?quarry	0			3	2234	0	0	0	2180	0	0	0
2184		2184	1	cut	pit		0.7		0.2	2	2185	0	0	0	0	0	0	0
2185		2184	1	fill	pit		0			2	2182	0	0	0	2184	0	0	0
2186		2186	1	cut	pit		0		0.45	2	2187	0	0	0	0	0	0	0
2187		2186	1	fill	pit		0			2	2188	0	0	0	2186	0	0	0
2188		2186	1	fill	pit		0			2	2189	0	0	0	2187	0	0	0
2189		2186	1	fill	pit		0			2	2182	0	0	0	2188	0	0	0
2190		2142	1	fill	pit		0			4	2143	0	0	0	2142	0	0	0
2191		2192	2	fill	post hole	building	0			0	0	0	0	0	2192	0	0	0
2192		2192	2	cut	post hole	building	0.54		0.15	0	2191	0	0	0	0	0	0	0
2193		2194	2	fill	post hole	building	0			0	0	0	0	0	2194	0	0	0
2194		2194	2	cut	post hole	building	0.58		0.19	0	2193	0	0	0	0	0	0	0
2195		2195	2	cut	pit		1.64		0.58	2	2198	0	0	0	0	0	0	0
2196		2195	2	fill	pit		0			2	0	0	0	0	2197	0	0	0
2197		2195	2	fill	pit		0			2	2196	0	0	0	2198	0	0	0
2198		2195	2	fill	pit		0			2	2197	0	0	0	2195	0	0	0
2199		2200	2	fill	ditch		0			5	0	0	0	0	2200	0	0	0
2200		2200	2	cut	ditch		0	0.85	0.25	5	2199	0	0	0	2203	0	0	0
2201		2202	2	fill	ditch	road	0			3	0	0	0	0	2216	0	0	0
2202		2202	2	cut	ditch	road	0	1.1	0.43	3	2216	0	0	0	2203	0	0	0
2203		2204	2	fill	ditch	road	0			2	2200	2202	0	0	2204	0	0	0
2204		2204	2	cut	ditch	road	0	1.55	0.32	2	2203	0	0	0	2217	0	0	0
2205		2167	2	fill	ditch	road	0			4	0	0	0	0	2167	0	0	0
2206		2168	2	fill	ditch	road	0			3	2207	0	0	0	2168	0	0	0
2207		2168	2	fill	ditch	road	0			3	2167	0	0	0	2206	2208	0	0
2208		2168	2	fill	ditch	road	0			3	2207	0	0	0	2209	0	0	0
2209		2168	2	fill	ditch	road	0			3	2208	0	0	0	2210	0	0	0
2210		2168	2	fill	ditch	road	0			3	2209	0	0	0	2168	0	0	0
2211		0	2	layer	natural		0			0	0	0	0	0	0	0	0	0
2212		0	2	layer	natural		0			0	0	0	0	0	0	0	0	0
2213		2213	2	cut	pit		1.4		0.38	1	2272	0	0	0	0	0	0	0
2214		2213	2	fill	pit		0			1	1907	0	0	0	2215	0	0	0
2215		2213	2	fill	pit		0			1	2214	0	0	0	2272	0	0	0
2216		2202	2	fill	ditch	road	0			3	2201	0	0	0	2202	0	0	0
2217		2218	2	fill	ditch		0			2	2204	0	0	0	2218	0	0	0
2218		2218	2	cut	ditch		0	1.55	0.24	2	2217	0	0	0	0	0	0	0
2219		2219	2	cut	post hole		0.48		0.3	0	2220	0	0	0	0	0	0	0
2220		2219	2	fill	post hole		0			0	0	0	0	0	2219	0	0	0
2221		0	2	layer			0			0	0	0	0	0	2223	0	0	0
2222		2222	2	cut	ditch	road	0	1.2	0.5	3	2223	0	0	0	0	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
2223		2222	2	fill	ditch	road	0			3	2221	0	0	0	2222	0	0	0
2224		2224	2	cut	ditch	road	0	0.8	0.45	4	2225	0	0	0	0	0	0	0
2225		2224	2	fill	ditch	road	0			4	2221	0	0	0	2224	0	0	0
2226		2227	2	fill	post hole	fenceline	0			0	0	0	0	0	2227	0	0	0
2227		2227	2	cut	post hole	fenceline	0.56	0.45	0.14	0	2226	0	0	0	0	0	0	0
2228	2326	2324	2	fill	ditch		0			3	0	0	0	0	0	0	0	0
2229	2324	2229	2	cut	ditch		0			3	0	0	0	0	0	0	0	0
2230	2329	2327	2	fill	ditch		0			3	0	0	0	0	0	0	0	0
2231		2231	1	cut	post hole	fence line	0.72	0.65	0.4	3	2232	0	0	0	0	0	0	0
2232		2231	1	fill	post hole	fence line	0			3	0	0	0	0	2231	0	0	0
2233		1345	1	fill	pit	?quarry	0			3	1344	0	0	0	2234	0	0	0
2234		1345	1	fill	pit	?quarry	0			3	2233	0	0	0	2183	0	0	0
2235		1345	1	fill	pit	?quarry	0			3	2180	0	0	0	2181	0	0	0
2236		1345	1	fill	pit	?quarry	0			3	2181	0	0	0	2237	2238	0	0
2237		1345	1	fill	pit	?quarry	0			3	2236	0	0	0	1345	0	0	0
2238		1345	1	fill	pit	?quarry	0			3	2236	0	0	0	1345	0	0	0
2239		2122	1	fill	pit	quarry	0			3	2126	0	0	0	2122	0	0	0
2240		2240	2	cut	ditch		0	0.35	0.22	2	2241	0	0	0	0	0	0	0
2241		2240	2	fill	ditch		0			2	0	0	0	0	2240	0	0	0
2242		2242	2	cut	post hole	building	0.7		0.29	4	2243	0	0	0	0	0	0	0
2243		2242	2	fill	post hole	building	0			4	0	0	0	0	2242	0	0	0
2244		2244	2	cut	post hole	building	0.59		0.25	3	2245	0	0	0	0	0	0	0
2245		2244	2	fill	post hole	building	0			3	0	0	0	0	2244	0	0	0
2246		2246	2	cut	post hole	building	0.76		0.17	3	2247	0	0	0	0	0	0	0
2247		2246	2	fill	post hole	building	0			3	0	0	0	0	2246	0	0	0
2248		2248	2	cut	pit	?storage	2.7	2.68	1.24	3	2446	0	0	0	0	0	0	0
2249		2248	2	fill	pit	?storage	0			3	2257	2250	0	0	2270	0	0	0
2250		2248	2	fill	pit	?storage	0			3	0	0	0	0	2270	0	0	0
2251		2252	2	fill	post hole	building	0			3	0	0	0	0	2252	0	0	0
2252		2252	2	cut	post hole	building	0.61	0.52	0.26	3	2251	0	0	0	0	0	0	0
2253		2254	2	fill	post hole	building	0			3	0	0	0	0	2254	0	0	0
2254		2254	2	cut	post hole	building	0.76	0.5	0.24	3	2253	0	0	0	0	0	0	0
2255		2256	2	fill	post hole	building	0			3	0	0	0	0	2256	0	0	0
2256		2256	2	cut	post hole	building	0.6	0.54	0.18	3	2255	0	0	0	0	0	0	0
2257		2248	2	fill	pit	?storage	0			3	0	0	0	0	2249	2258	2259	0
2258		2248	2	skeleton	human burial	reused as grave	0			3	2257	2250	0	0	2270	0	0	0
2259		2248	2	pottery vessel	human burial	reused as grave	0			3	2250	2257	0	0	2270	0	0	0
2260		2261	2	fill	?ditch		0			1	0	0	0	0	2261	0	0	0
2261		2261	2	cut	?ditch		0	0.48	0.08	1	2260	0	0	0	0	0	0	0
2262		2262	2	cut	pit		1		0.74	2	2263	0	0	0	0	0	0	0
2263		2262	2	fill	pit		0			2	2264	0	0	0	2262	0	0	0
2264		2262	2	fill	pit		0			2	0	0	0	0	2263	0	0	0
2265		2267	2	fill	pit		0			4	0	0	0	0	2266	0	0	0
2266		2267	2	fill	pit		0			4	2265	0	0	0	2267	0	0	0
2267		2267	2	cut	pit		2.75	2.4	0.3	4	2266	0	0	0	0	0	0	0
2268		2268	2	cut	pit		2.2	1.6	0.52	3	2445	0	0	0	0	0	0	0
2269		2268	2	fill	pit		0			3	2445	0	0	0	2268	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
2270		2248	2	fill	pit	?storage	0			3	2249	2258	2259	0	2447	0	0	0
2271		2248	2	fill	pit	?storage	0			3	2447	0	0	0	2446	0	0	0
2272		2213	2	fill	pit		0			1	2215	0	0	0	2213	0	0	0
2273		2273	2	cut	ditch	road	0	1.32	0.5	2	2278	0	0	0	0	0	0	0
2274		2274	2	cut	ditch	road	0	0.44	0.58	3	2279	0	0	0	2277	0	0	0
2275		2275	2	cut	post hole	building	0.79		0.3	2	2276	0	0	0	0	0	0	0
2276		2275	2	fill	post hole	building	0			2	0	0	0	0	2275	0	0	0
2277		2273	2	fill	ditch	road	0			2	2274	0	0	0	2278	0	0	0
2278		2273	2	fill	ditch	road	0			2	2277	0	0	0	2273	0	0	0
2279		2274	2	fill	ditch	road	0			3	2282	0	0	0	2274	0	0	0
2280		2282	2	fill	ditch		0			4	0	0	0	0	2281	0	0	0
2281		2282	2	fill	ditch		0			4	2280	0	0	0	2282	0	0	0
2282		2282	2	cut	ditch		0	1.26	0.24	4	2281	0	0	0	2279	0	0	0
2283		2283	2	cut	post hole	building	0.46	0.46	0.07	0	2284	0	0	0	0	0	0	0
2284		2283	2	fill	post hole	building	0			0	0	0	0	0	2283	0	0	0
2285		2285	2	cut	ditch		0	1.2	0.3	4	2286	0	0	0	0	0	0	0
2286		2285	2	fill	ditch		0			4	0	0	0	0	2285	0	0	0
2287		2287	2	cut	post hole	building	0.29	0.29	0.14	0	2288	0	0	0	0	0	0	0
2288		2287	2	fill	post hole	building	0			0	0	0	0	0	2287	0	0	0
2289		2289	2	cut	post hole	building	0.39	0.39	0.24	2	2290	0	0	0	0	0	0	0
2290		2289	2	fill	post hole	building	0			2	2291	0	0	0	2289	0	0	0
2291		2289	2	fill	post hole	building	0			2	0	0	0	0	2290	0	0	0
2292		2292	2	cut	pit	waterhole	3.1	3.1	1.85	4	2293	0	0	0	2386	0	0	0
2293		2292	2	fill	pit	waterhole	0			4	2294	0	0	0	2292	0	0	0
2294		2292	2	fill	pit	waterhole	0			4	2295	0	0	0	2293	0	0	0
2295		2292	2	fill	pit	waterhole	0			4	0	0	0	0	2294	0	0	0
2296		2296	2	cut	post hole	building	0.92		0.29	0	2297	0	0	0	0	0	0	0
2297		2296	2	fill	post hole	building	0			0	2298	0	0	0	2296	0	0	0
2298		2296	2	fill	post hole	building	0			0	0	0	0	0	2297	0	0	0
2299		2299	2	cut	post hole	building	0.7	0.7	0.18	2	2300	0	0	0	0	0	0	0
2300		2299	2	fill	post hole	building	0			2	0	0	0	0	2299	0	0	0
2301	2317 2327	2301	2	cut	ditch		0			3	0	0	0	0	0	0	0	0
2302		2303	2	fill	ditch		0			3	0	0	0	0	2304	0	0	0
2303	2324 2401	2303	2	cut	ditch		0	1.64	0.38	3	2305	0	0	0	0	0	0	0
2304		2303	2	fill	ditch		0			3	2302	0	0	0	2305	0	0	0
2305		2303	2	fill	ditch		0			3	2304	0	0	0	2303	0	0	0
2306		2306	2	cut	post hole	building	0.61	0.61	0.25	0	2307	0	0	0	0	0	0	0
2307		2306	2	fill	post hole	building	0			0	2310	0	0	0	2306	0	0	0
2308		2308	2	cut	well		4.6	3.92	3.75	3	2311	0	0	0	0	0	0	0
2309		2308	2	fill	well		0			3	0	0	0	0	2330	0	0	0
2310		2306	2	fill	post hole	building	0			0	0	0	0	0	2307	0	0	0
2311		2308	2	fill	well		0			3	2309	0	0	0	2330	0	0	0
2312	2314	2312	2	cut	ditch		0	0.84	0.41	5	2313	0	0	0	0	0	0	0
2313		2312	2	fill	ditch		0			5	0	0	0	0	2312	0	0	0
2314		2314	2	cut	ditch		0	1.2	0.36	5	2315	0	0	0	0	0	0	0
2315		2314	2	fill	ditch		0			5	0	0	0	0	2314	0	0	0
2316		2317	2	fill	ditch		0			3	0	0	0	0	2317	0	0	0
2317		2317	2	cut	ditch		0	0.61	0.11	3	2316	0	0	0	0	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
2318		2319	2	fill	post hole	building	0			3	0	0	0	0	2319	0	0	0
2319		2319	2	cut	post hole	building	0.52		0.15	3	2318	0	0	0	0	0	0	0
2320		2321	2	fill	post hole	building	0			3	0	0	0	0	2321	0	0	0
2321		2321	2	cut	post hole	building	0.38		0.15	3	2320	0	0	0	0	0	0	0
2322		2323	2	fill	post hole	building	0			3	0	0	0	0	2323	0	0	0
2323		2323	2	cut	post hole	building	0.54		0.15	3	2322	0	0	0	0	0	0	0
2324	2229	2324	2	cut	ditch		0	1.05	0.37	3	2325	0	0	0	0	0	0	0
2325		2324	2	fill	ditch		0			3	2326	0	0	0	2324	0	0	0
2326	2228	2324	2	fill	ditch		0			3	0	0	0	0	2325	0	0	0
2327	2301	2327	2	cut	ditch		0	0.5	0.18	3	2328	0	0	0	0	0	0	0
2328		2327	2	fill	ditch		0			3	2329	0	0	0	2327	0	0	0
2329		2327	2	fill	ditch		0			3	0	0	0	0	2328	0	0	0
2330		2308	2	fill	well		0			3	2311	0	0	0	2355	0	0	0
2331		2308	2	fill	well		0			3	2355	0	0	0	2308	0	0	0
2333		2334	2	fill	post hole	building	0			3	0	0	0	0	2334	0	0	0
2334		2334	2	cut	post hole	building	0.37	0.37	0.14	3	2333	0	0	0	2342	0	0	0
2335		2336	2	fill	hearth	building	0			3	2338	0	0	0	2336	0	0	0
2336		2336	2	cut	hearth	building	0.68	0.46	0.1	3	2335	0	0	0	2343	0	0	0
2337		2338	2	fill	floor	building	0			4	2422	2428	1795	0	2338	0	0	0
2338		2338	2	cut	floor	building	2.1	1.7	0.1	4	2337	0	0	0	2438	2417	2335	2344
2339		2340	2	fill	post hole	building	0			2	0	0	0	0	0	0	0	2340
2340		2340	2	cut	post hole	building	0.38		0.17	2	2339	0	0	0	1877	0	0	0
2341		0		master	number	building	0			0	0	0	0	0	0	0	0	0
2342		0	2	layer	floor	building	0			2	2439	2415	2419	2334	2435	0	0	0
2343		0	2	layer	floor	building	0			2	2336	2437	1876	0	0	0	0	0
2344		0	2	layer	floor	building	0			3	2338	2425	2432	0	2440	2345	0	0
2345		2346	2	fill	floor	building	0			3	2344	2434	0	0	2340	0	0	0
2346		2346	2	cut	floor	building	2.2	1.4	0.05	3	2345	0	0	0	2413	0	0	0
2347		2347	2	cut	ditch		0	1.05	0.39	3	2348	0	0	0	0	0	0	0
2348		2347	2	fill	ditch		0			3	2351	0	0	0	2347	0	0	0
2349		2349	2	cut	ditch	road	0	0.73	0.25	4	2350	0	0	0	2352	0	0	0
2350		2349	2	fill	ditch	road	0			4	0	0	0	0	2349	0	0	0
2351		2351	2	cut	ditch	road	0	0.81	0.29	3	2352	0	0	0	2348	0	0	0
2352		2351	2	fill	ditch	road	0			3	2349	0	0	0	2351	0	0	0
2353	2399	2353	2	cut	ditch		0	0.46	0.27	3	2354	0	0	0	0	0	0	0
2354		2353	2	fill	ditch		0			3	0	0	0	0	2353	0	0	0
2355		2308	2	fill	well		0			3	2330	0	0	0	2331	0	0	0
2356		2356	2	cut	pit		1.1	1.1	0.36	1	2359	0	0	0	0	0	0	0
2357		2356	2	fill	pit		0			1	0	0	0	0	2358	0	0	0
2358		2356	2	fill	pit		0			1	2357	0	0	0	2359	0	0	0
2359		2356	2	fill	pit		0			1	2358	0	0	0	2356	0	0	0
2360		2361	2	fill	post hole	building	0			4	0	0	0	0	2361	0	0	0
2361		2361	2	cut	post hole	building	0.7	0.62	0.17	4	2360	0	0	0	0	0	0	0
2362		2362	2	cut	post hole	building	0			0	2363	0	0	0	0	0	0	0
2363		2362	2	fill	post hole	building	0			0	2364	0	0	0	2362	0	0	0
2364		2362	2	fill	post hole	building	0			0	0	0	0	0	2363	0	0	0
2365		2365	2	cut	post hole	building	0			3	2367	0	0	0	0	0	0	0
2366		2365	2	fill	post hole	building	0			3	0	0	0	0	2367	0	0	0
2367		2365	2	fill	post hole	building	0			3	2366	0	0	0	2365	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
2368		2368	2	cut	post hole	building	0			4	2370	0	0	0	2372	0	0	0
2369		2368	2	fill	post hole	building	0			4	0	0	0	0	2370	0	0	0
2370		2368	2	fill	post hole	building	0			4	2369	0	0	0	2368	0	0	0
2371		2371	2	cut	post hole	building	0			3	2373	0	0	0	0	0	0	0
2372		2371	2	fill	post hole	building	0			3	2368	0	0	0	2373	0	0	0
2373		2371	2	fill	post hole	building	0			3	2372	0	0	0	2371	0	0	0
2375		2375	2	cut	post hole	building	0			4	2376	0	0	0	0	0	0	0
2376		2375	2	fill	post hole	building	0			4	0	0	0	0	2375	0	0	0
2377		2379	2	fill	ditch	boundary	0			3	0	0	0	0	2378	0	0	0
2378		2379	2	fill	ditch	boundary	0			3	2377	0	0	0	2379	0	0	0
2379	2403 2409	2379	2	cut	ditch	boundary	0	0.9	0.28	3	2378	0	0	0	0	0	0	0
2380		2381	2	fill	ditch	road	0			4	2383	0	0	0	2381	0	0	0
2381		2381	2	cut	ditch	road	0	0.7		4	2380	0	0	0	0	0	0	0
2382		2383	2	fill	ditch		0			5	0	0	0	0	2383	0	0	0
2383		2383	2	cut	ditch		0	0.7	0.24	5	2382	0	0	0	2380	2384	0	0
2384		2385	2	fill	ditch	road	0			3	2383	0	0	0	2385	0	0	0
2385		2385	2	cut	ditch	road	0	0.8	0.26	3	2384	0	0	0	2386	0	0	0
2386		2387	2	fill	ditch	road	0			2	2385	2292	0	0	2387	0	0	0
2387		2387	2	cut	ditch	road	0	2	0.56	2	2386	0	0	0	2388	2390	0	0
2388		2389	2	fill	pit		0			1	2387	0	0	0	2389	0	0	0
2389		2389	2	cut	pit		0	1.25	0.22	1	2388	0	0	0	0	0	0	0
2390		2391	2	fill	pit		0			1	2387	0	0	0	2391	0	0	0
2391		2391	2	cut	pit		0.7	0.5	0.2	1	2390	0	0	0	0	0	0	0
2392		2392	2	cut	post hole	building	0.7		0.18	4	2393	0	0	0	2350	0	0	0
2393		2392	2	fill	post hole	building	0			4	0	0	0	0	2392	0	0	0
2394		2395	2	fill	ditch	road	0			3	2397	0	0	0	2395	0	0	0
2395		2395	2	cut	ditch	road	0	1.46	0.64	3	2394	0	0	0	0	0	0	0
2396		2397	2	fill	ditch	road	0			4	0	0	0	0	2397	0	0	0
2397		2397	2	cut	ditch	road	0	0.69	0.47	4	2396	0	0	0	2394	0	0	0
2398		2399	2	fill	ditch		0			3	2401	0	0	0	2399	0	0	0
2399		2399	2	cut	ditch		0		0.44	3	2398	0	0	0	0	0	0	0
2400		2401	2	fill	ditch		0			3	0	0	0	0	2402	0	0	0
2401		2401	2	cut	ditch		0	1.46	0.64	3	2402	0	0	0	2398	0	0	0
2402		2401	2	fill	ditch		0			3	2400	0	0	0	2401	0	0	0
2403		2403	2	cut	ditch	boundary	0	2.3	0.38	3	2405	0	0	0	2406	0	0	0
2404		2403	2	fill	ditch	boundary	0			3	0	0	0	0	2405	0	0	0
2405		2403	2	fill	ditch	boundary	0			3	2404	0	0	0	2403	0	0	0
2406		2406	2	cut	pit		2.4	1.2	0.28	2	2408	0	0	0	0	0	0	0
2407		2406	2	fill	pit		0			2	2403	0	0	0	2408	0	0	0
2408		2406	2	fill	pit		0			2	2407	0	0	0	2406	0	0	0
2409		2409	2	cut	ditch	boundary	0	0.98	0.21	3	2412	0	0	0	0	0	0	0
2410		2409	2	fill	ditch	boundary	0			3	0	0	0	0	2411	0	0	0
2411		2409	2	fill	ditch	boundary	0			3	2410	0	0	0	2412	0	0	0
2412		2409	2	fill	ditch	boundary	0			3	2411	0	0	0	2409	0	0	0
2413	2416 1819	0	2	layer		building	0			3	2346	0	0	0	2414	0	0	0
2414		2415	2	fill	hearth	building	0			3	2413	0	0	0	2415	0	0	0
2415		2415	2	cut	hearth	building	0.54		0.06	3	2414	0	0	0	2342	0	0	0
2416		0	2	layer		building	0			3	2346	0	0	0	2414	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
2417		2419	2	fill	post hole	building	0			3	2338	0	0	0	2418	0	0	0
2418		2419	2	fill	post hole	building	0			3	2417	0	0	0	2419	0	0	0
2419		2419	2	cut	post hole	building	0.38		0.34	3	2418	0	0	0	2342	0	0	0
2420		2422	2	fill	post hole	building	0			4	0	0	0	0	2421	0	0	0
2421		2422	2	fill	post hole	building	0			4	2420	0	0	0	2422	0	0	0
2422		2422	2	cut	post hole	building	0.36	0.26	0.32	4	2421	0	0	0	2337	0	0	0
2423		2425	2	fill	post hole	building	0			4	0	0	0	0	2424	0	0	0
2424		2425	2	fill	post hole	building	0			4	2423	0	0	0	2425	0	0	0
2425		2425	2	cut	post hole	building	0.5		0.36	4	2424	0	0	0	2344	0	0	0
2426		2428	2	fill	post hole	building	0			4	0	0	0	0	2427	0	0	0
2427		2428	2	fill	post hole	building	0			4	2426	0	0	0	2428	0	0	0
2428		2428	2	cut	post hole	building	0.38	0.32	0.22	4	2427	0	0	0	2337	0	0	0
2429		2430	2	fill	post hole	building	0			4	0	0	0	0	2430	0	0	0
2430		2430	2	cut	post hole	building	0	0.3	0.08	4	2429	0	0	0	2431	0	0	0
2431		2432	2	fill	post hole	building	0			4	2430	0	0	0	2432	0	0	0
2432		2432	2	cut	post hole	building	0.62		0.18	4	2431	0	0	0	2344	0	0	0
2433		2434	2	fill	post hole	building	0			3	0	0	0	0	2433	0	0	0
2434		2434	2	cut	post hole	building	0.46	0.34	0.29	3	2433	0	0	0	2345	0	0	0
2435		2437	2	fill	post hole	building	0			2	2342	0	0	0	2436	0	0	0
2436		2437	2	fill	post hole	building	0			2	2435	0	0	0	2437	0	0	0
2437		2437	2	cut	post hole	building	0.35		0.21	2	2436	0	0	0	2343	0	0	0
2438		2439	2	fill	post hole	building	0			3	2338	0	0	0	2439	0	0	0
2439		2439	2	cut	post hole	building	0.33		0.12	3	2438	0	0	0	2342	0	0	0
2440		2441	2	fill	post hole	building	0			3	2344	0	0	0	2441	0	0	0
2441		2441	2	cut	post hole	building	0.63		0.31	3	2440	0	0	0	2342	0	0	0
2442		2444	2	fill	post hole	building	0			3	0	0	0	0	2443	0	0	0
2443		2444	2	fill	post hole	building	0			3	2442	0	0	0	2444	0	0	0
2444		2444	2	cut	post hole	building	0.23		0.2	3	2443	0	0	0	2342	0	0	0
2445		2268	2	fill	pit		0			3	2269	0	0	0	2268	0	0	0
2446		2248	2	fill	pit	?storage	0			3	2271	0	0	0	2248	0	0	0
2447		2248	2	fill	pit	?storage	0			3	2270	0	0	0	2271	0	0	0
2448	2467	2448	2	cut	ditch		0	0.7	0.12	2	2449	0	0	0	0	0	0	0
2449		2448	2	fill	ditch		0			2	0	0	0	0	2448	0	0	0
2450		2451	2	fill	pit		0			2	2453	0	0	0	2451	0	0	0
2451		2451	2	cut	pit		2.28	0.84	0.36	2	2450	0	0	0	0	0	0	0
2452		2453	2	fill	pit		0			3	0	0	0	0	2486	0	0	0
2453		2453	2	cut	pit		2.93	2.75	1.11	3	2483	0	0	0	2454	2450	0	0
2454		2455	2	fill	pit		0			2	2453	0	0	0	2482	0	0	0
2455		2455	2	cut	pit		1.83	0.88	0.67	2	2482	0	0	0	0	0	0	0
2456		2457	2	fill	pit		0			0	0	0	0	0	2457	0	0	0
2457		2457	2	cut	pit		0.55	0.55	0.16	0	2456	0	0	0	0	0	0	0
2458		2460	2	fill	ditch	town boundary	0			4	0	0	0	0	2459	0	0	0
2459		2460	2	fill	ditch	town boundary	0			4	2458	0	0	0	2489	0	0	0
2460	2473	2460	2	cut	ditch	town boundary	0	4.5		4	2491	0	0	0	0	0	0	0
2461	2463	2461	2	cut	ditch		0	1.2	0.27	0	2487	0	0	0	0	0	0	0
2462		2462	2	cut	ditch		0	0.4	0.15	0	2502	0	0	0	2487	0	0	0
2463	2461	2463	2	cut	ditch		0	0.7	0.13	0	2464	0	0	0	0	0	0	0

Context	Same as	Cut	Area	Category	Feature Type	Function	Length	width	Depth	Phase	CA1	CA2	CA3	CA4	CB1	CB2	CB3	CB4
2464		2463	2	fill	ditch		0			0	2462	0	0	0	2463	0	0	0
2465		2465	2	cut	ditch		0	0.55	0.09	0	2501	0	0	0	0	0	0	0
2466	2498	2466	2	cut	ditch		0	0.37	0.19	0	2493	0	0	0	0	0	0	0
2467		2467	2	cut	ditch		0	1.4	0.61	2	2471	0	0	0	0	0	0	0
2468		2506	2	fill	ditch		0			3	0	0	0	0	2469	0	0	0
2469		2506	2	fill	ditch		0			3	2468	0	0	0	2506	0	0	0
2470		2467	2	fill	ditch		0			2	2506	0	0	0	2471	0	0	0
2471		2467	2	fill	ditch		0			2	2470	0	0	0	0	0	0	0
2472		2472	2	cut	ditch		0	0.8	0.16	0	2504	0	0	0	0	0	0	0
2473		2473	2	cut	ditch	town boundary	0	3.9	2.25	4	2481	0	0	0	0	0	0	0
2474		2474	2	cut	ditch		0	0.38	0.12	3	2492	0	0	0	0	0	0	0
2475		2473	2	fill	ditch	town boundary	0			4	0	0	0	0	2476	0	0	0
2476		2473	2	fill	ditch	town boundary	0			4	2475	0	0	0	2477	0	0	0
2477		2473	2	fill	ditch	town boundary	0			4	2476	0	0	0	2478	0	0	0
2478		2473	2	fill	ditch	town boundary	0			4	2477	0	0	0	2479	0	0	0
2479		2473	2	fill	ditch	town boundary	0			4	2478	0	0	0	2480	0	0	0
2480		2473	2	fill	ditch	town boundary	0			4	2479	0	0	0	2481	0	0	0
2481		2473	2	fill	ditch	town boundary	0			4	2480	0	0	0	2473	0	0	0
2482		2455	2	fill	pit		0			2	2454	0	0	0	2455	0	0	0
2483		2453	2	fill	pit		0			3	2484	0	0	0	2453	0	0	0
2484		2453	2	fill	pit		0			3	2485	0	0	0	2483	0	0	0
2485		2453	2	fill	pit		0			3	2486	0	0	0	2484	0	0	0
2486		2453	2	fill	pit		0			3	2452	0	0	0	2485	0	0	0
2487		2461	2	fill	ditch		0			0	2462	0	0	0	2461	0	0	0
2489		2460	2	fill	ditch		0			4	2459	0	0	0	2490	0	0	0
2490		2460	2	fill	ditch		0			4	2489	0	0	0	2491	0	0	0
2491		2460	2	fill	ditch		0			4	2490	0	0	0	2460	0	0	0
2492		2474	2	fill	ditch		0			3	0	0	0	0	2474	0	0	0
2493		2466	2	fill	ditch		0			0	0	0	0	0	2466	0	0	0
2494		2495	2	fill	?ditch		0			0	0	0	0	0	2495	0	0	0
2495	2496	2495	2	cut	?ditch		0	0.86	0.1	0	2494	0	0	0	0	0	0	0
2496		2496	2	cut	?ditch		0	0.56	0.06	0	2497	0	0	0	0	0	0	0
2497		2496	2	fill	?ditch		0			0	0	0	0	0	2496	0	0	0
2498	2466	2498	2	cut	ditch		0	0.4	0.15	0	2500	0	0	0	0	0	0	0
2500		2498	2	fill	ditch		0			0	0	0	0	0	2498	0	0	0
2501		2465	2	fill	ditch		0			0	0	0	0	0	2465	0	0	0
2502		2462	2	fill	ditch		0			0	0	0	0	0	2462	0	0	0
2503		2472	2	fill	ditch		0			0	0	0	0	0	2504	0	0	0
2504		2472	2	fill	ditch		0			0	2503	0	0	0	2472	0	0	0
2505		0	1	layer	black earth		0			4	0	0	0	0	0	0	0	0
2506		2506	2	cut	ditch		0	0.8	0.45	3	2469	0	0	0	2470	0	0	0

Table 15 *Context List*

APPENDIX B. FINDS REPORTS

B.1 Lithics

By Antony Dickson

Introduction

B.1.1 An assemblage of 555 lithics was submitted for assessment from the above site. This report describes the preliminary quantification of the assemblage and assesses its technological traits and chronological indicators.

Methodology

B.1.2 For the purposes of this report individual artefacts were scanned and then assigned to a category within a simple lithic classification system (Table 16). No detailed metrical or technological recording was undertaken during the preliminary assessment. The results of this report are therefore based on a rapid assessment of the assemblage and could change if further work is undertaken.

Quantification

B.1.3 A total of 152 individual contexts (excluding a sample which was not assigned a context number) contained worked stone (Table 16). Five contexts have been assigned to Phase 1 occupation (Bronze Age? to Early Iron Age) and they contained 52 lithics comprising 9% of the assemblage (Table 16). A further 17 contexts containing 40 lithics (7% of the assemblage) have been assigned to Phase 2 occupation (Early Roman); 69 contexts containing 194 lithics (35% of the assemblage)to Phase 3 (Middle Roman); 55 contexts containing 256 lithics (46% of the assemblage) to Phase 4 (Late Roman) and two contexts containing two lithics (1% of the assemblage) assigned to Phase 5 (post-Roman). Additionally eight lithics (2% of the assemblage) have been assigned to four unphased contexts (Table 16). Given the preliminary dating of the site phasing and the technological attributes of the struck lithics described below the majority of the the lithics appear to be residual in features of a later date.

Assessment

B.1.4 In terms of raw material a dark brown, semi-translucent flint with black speckling appeared to dominate the assemblage. This material was particularly associated with the manufacture of true blades and pieces displaying evidence for their manufacture. Beyond this material, black, dark grey and mottled grey flints were also present. It is likely that the majority of the raw materials were procured locally from superficial geological deposits, although a few pieces with a worn and rolled cortex were probably derived from alluvial contexts. There was also a small number of nodules and worked pieces with a thick angular cortex indicating that a small percentage of the raw material may have been derived from primary chalk sources.

B.1.5 The identification of raw materials was hampered by the fact that approximately half of the assemblage had suffered from surface alteration. This mainly took the form of a thick, dense white re-cortication. Such material was spread throughout the context assemblages and was more often than not mixed with struck lithics that had undergone no surface alteration. It is possible that this indicated the chronological mixing of struck lithic pieces.

B.1.6 Edge damage was prevalent throughout the assemblage as a whole indicating that a significant proportion of the struck lithics had suffered from post-depositional processes.

B.1.7 The overall assemblage contained a significant number of burnt pieces (Table 16). The burnt flint category included both intentionally flaked material and chunks and nodules which were either natural or so severely burnt and shattered that no evidence for flaking activity could be identified. In terms of distribution, contexts from Phase 4 occupation contained over half of the burnt flint with feature **1061** containing 16 pieces which had a combined weight of 1.254kg. All but one of the burnt pieces from this context represented un-flaked, fire cracked flint and other stone nodules. It is possible that feature **1061** was associated with activities where burnt stone was an important component. The burnt flint and stone component of the assemblage will not be discussed any further below.

B.1.8 Thermal flakes and chunks also formed a significant part of the overall assemblage (Table 16). This category has been used to quantify both unworked flint nodules and thermally shattered flakes and chunks. At least seven of the latter could be identified as having flaked surfaces indicating that they had sheared off worked pieces. However, this figure was probably an under representation of the real number of pieces that had shattered during core reduction.

Phase 1

B.1.9 The assemblage from Phase 1 activity contained a mixed collection of struck lithics dominated by blade and flake debitage. The only core, from feature **1287**, was an opposed platform blade and narrow flake core that could date to the Neolithic period, while the chunk from the same context had battered edges from utilisation. Several of the blades had prepared platforms and one from feature **1287** had parallel blade scars on the dorsal face indicating that it could potentially be of a Late Mesolithic/Early Neolithic date. Alongside the larger blades were a number of small blade chips from the sample residues. The flakes comprised a variety of large and small forms and included examples with plain, broad platforms and pronounced bulbs along with examples with narrower, trimmed platforms with diffuse bulbs indicating a mixture of hard and soft hammer technologies.

Phase 2

B.1.10 The assemblage represented a relatively small collection of struck lithics chiefly comprising blades and flakes (Table 16). Most of these were morphologically undisgnostic apart from two blades and a thinning flake. The blades were parallel sided with well prepared platforms indicating that they were carefully manufactured and were probably of a Late Mesolithic/Early Neolithic date. The thinning flake was probably associated with biface manufacture and can therefore be seen to have affinities with Neolithic stone working traditions. The small assemblage recovered from the environmental sample from feature **2263** also contained a bladelet which could also be of a Late Mesolithic/Early Neolithic date. Beyond the blade and flake blanks the assemblage also contained an edge used piece with consistent small irregular scarring on a lateral edge which could suggest utilisation rather than edge damage from post-depositional processes. A simple undiagnostic notched piece was also present.

Phase 3

B.1.11 The assemblage contained two arrowheads (Table 16): a finely prepared leaf shaped form, with invasive pressure flaking on both faces, from feature **1274**, and a transverse form from feature **1789**. Leaf shaped arrowheads have Early Neolithic affinities while

the transverse form was a chisel type that have a currency of use spanning the Late Neolithic and have particular affinities with Grooved ware (Green 1984).

B.1.12 The core technology included a blade core from feature **1283** which can be related to Late Mesolithic/Early Neolithic reduction strategies and an undiagnostic partially flaked chunk from feature **1229**. A core fragment and an irregularly worked chunk were undiagnostic to any specific reduction methodology. Core rejuvenation pieces included two conventional core tablets from features **1235** and **1270** which were likely to be Neolithic or earlier in date. Core trimming pieces included a flake struck from the face of an opposed platform core, to remove an area of irregular stepped flake scar terminations, and a piece struck along the edge of a striking platform.

B.1.13 The blades included three bladelets or blade chips which were recovered from the sample residue from feature **1270**. There was also a large blade with parallel blade scars on the dorsal face and several finely produced blades from features **1339**, **1937** and **1986**.

B.1.14 The flakes represent reduction strategies from a variety of periods. The majority probably reflect Neolithic stone working activity, although a few squat, broad secondary flakes with obtuse platforms and pronounced bulbs could conceivably be of a Late prehistoric date. There were also several pieces of flake shatter and one flake, given its morphology and the presence of invasive flaking on the dorsal face, could represent an unfinished point. Another flake from feature **1339** had a faceted platform and could have been struck from a Levallois type core suggesting it was of a Late Neolithic date.

B.1.15 Among the miscellaneous retouched pieces was a possible unfinished oblique truncation, from feature **1056**, which had blunting partly along the distal truncation. A retouched thermal flake with a battered edge from feature **1239** could have Late prehistoric technological affinities.

B.1.16 A re-corticated end scraper also shows evidence for systematic blade production on its dorsal face.

B.1.17 A large re-corticated crested blade from feature **1682** was bilaterally flaked from a central ridge and has inverse, semi abrupt retouch on the right lateral edge, while the opposite edge had been heavily utilised. The piece could be Mesolithic in date.

Phase 4

B.1.18 The core from feature **1028** was a keeled form probably representing Late Neolithic reduction activity. The other core was a discoidal form of a possible similar date, while the example from feature **1037** representing an irregular partially flaked chunk. One of the core fragments was diagnostic to a reduction strategy and represented part of a single platform blade core. The core maintenance pieces represent a mixture of core tablets, platform edge trimming piece and pieces struck down the face of the core to remove irregular areas of flaking.

B.1.19 The flake and blade debitage comprise a similar range of pieces to those recorded from the Phase 3 features. True blades with finely prepared platforms, parallel lateral edges and punctiform butts were present in several contexts, while a number of small bladelets/chips were recorded from the sample residues from features **1103** and **1211**.

B.1.20 The miscellaneous retouched pieces included two irregularly retouched thermal flakes from features **1062** and **1148** which could be late prehistoric in date.

B.1.21 The assemblage also includes six scrapers. The style of retouch and the form of an end scraper from feature **1024** suggests that it was Late Mesolithic in date, while a side and

end form had technological affinities with Late Neolithic examples from elsewhere in the region (Bishop forthcoming). The remaining pieces were comparatively crudely produced and could date to the Neolithic and/or the Bronze Age.

Phase 5

B.1.22 The assemblage comprised two nondescript flakes.

Statement of potential ad recommendations

B.1.23 The technological and diagnostic attributes of the majority of the struck lithics indicate that a variety of core reduction strategies and tool types dating to the Mesolithic through to the Late Neolithic/Early Bronze Age were present in the assemblage. Therefore, it can be postulated that the majority of the assemblage reflects residual material. Additionally, some of the more irregularly retouched pieces and those with heavily utilised edges could represent the utilisation of flint in later prehistory; although it should be noted that those pieces were relatively scarce and morphologically undiagnostic, so their dating is unreliable.

B.1.24 It should be noted that there is a relatively large quantity of true blades and other diagnostic pieces which indicate a Late Mesolithic/Early Neolithic presence at the site. These flints should be compared with the nearby flint mining area at WIX 021 and included in the report concerning this site.

B.1.25 For the publication on WIX 022, a cut down version of this report should be included.

Cont	Phase	S. F. No.	Arrow head	Blade	Chip	Chunk	Core	Core fragment	Core rejuvenation/trimming	Crested blade	Edge used	Flake	Misc retouch	Notch	Scraper	Burnt flint	Thermal flakes/chunks	Totals
1001	5											1						1
1003	4											1						1
1004	4															1		1
1006	4								1									1
1008	4											2						2
1012	4											1						1
1013	4											1				3		4
1020	4															1		1
1024	4											1			1			2
1024	4								1									1
1027	4										1						1	2
1028	4						1				2	3			1			7
1029	4						1					5						6
1030	4					2						1				3		6
1032	4															1		1
1036	4											1			2			3
1037	4			1			1					1	1			4	6	14
1037	4			1								7						8
1041	3											1						1

Cont	Phase	S. F. No.	Arrow head	Blade	Chip	Chunk	Core	Core fragment	Core rejuvenation/trimming	Crested blade	Edge used	Flake	Misc retouch	Notch	Scraper	Burnt flint	Thermal flakes/chunks	Totals
1046	3											1						1
1048	3											2					2	4
1050	4										1	4					1	6
1050	4	1309		1														1
1052	2			1														1
1056	3											1	1					2
1060	3			1								1						2
1061	4															16		16
1062	4												1				3	4
1062	4											1						1
1063	4											2						2
1068	3															1		1
1069	3																2	2
1072	4											4						4
1073	4											1						1
1073	4				4							5						9
1080	3															1		1
1085	4											1					1	2
1086	3																1	1
1086	3			3								4						7
1089	3			4								3						7
1091	4							1				1						2
1098	4											4					2	6
1100	3					1						8					1	10
1102	3											1				1	1	3
1102	3			2														2
1103	4			4					1			6				1		12
1103	4			3								2						5
1105	4																6	6
1105	4											1						1
1125	4											1				1		2
1126	3																3	3
1126	3											3						3
1129	4											2						2
1131	4											2					1	3
1136	3			1								2					2	5
1142	4											1				3	13	17
1145	4																1	1
1146	4																6	6
1148	4												1					1
1150	4																2	2
1170	3			2				1				2						5
1172	3											1						1

Cont	Phase	S. F. No.	Arrow head	Blade	Chip	Chunk	Core	Core fragment	Core rejuvenation/trimming	Crested blade	Edge used	Flake	Misc retouch	Notch	Scraper	Burnt flint	Thermal flakes/chunks	Totals
1179	3															1		1
1190	3																1	1
1191	3																1	1
1203	4																1	1
1204	4																3	3
1211	4			2														2
1211	4			6	5							2				1		14
1215	3																2	2
1229	3						1											1
1235	3								1			2						3
1237	4			1								5	2					8
1239	3												1				2	3
1240	3															1		1
1260	4											1			1		3	5
1270	3								1			2						3
1270	3			2	1													3
1272	3											1					1	2
1272	3			1	1							1						3
1274	3			2								2						4
1274	3	2184	1															1
1278	2											1						1
1282	3			2														2
1283	3			2			1		1			2						6
1287	1			3		1	1					10					2	17
1287	1			5								8						13
1289	3											2					1	3
1292	3																1	1
1296	4			1								5						6
1314	4											1				1		2
1328	3											3						3
1332	3															2	5	7
1333	1											4						4
1333	1			4								6						10
1338	3			2								1						3
1339	3			1								3						4
1339	3											4						4
1340	3			1								2						3
1340	3											2						2
1341	3			1														1
1342	3											6						6
1343	4			1								4					4	9
1356	3			1														1
1358	0											1					1	2

Cont	Phase	S. F. No.	Arrow head	Blade	Chip	Chunk	Core	Core fragment	Core rejuvenation/trimming	Crested blade	Edge used	Flake	Misc retouch	Notch	Scraper	Burnt flint	Thermal flakes/chunks	Totals
1359	4			1								2					3	6
1363	3																1	1
1368	3																2	2
1370	3											1						1
1371	2											3						3
1377	2											1						1
1377	2			1								1						2
1379	4											1				1		2
1404	4			2								6						8
1411	4			1														1
1413	4			2														2
1428	3											1						1
1430	2											1						1
1560	2			1														1
1563	3																1	1
1563	3											1						1
1565	3			1		2			1			1					1	6
1587	4											2			1			3
1590	3											3						3
1622	2																2	2
1629	2											2						2
1636	3															1	1	2
1647	2			1														1
1669	3											1				1	1	3
1682	3									1		2						3
1702	3											1						1
1703	3																1	1
1733	3											1					1	2
1738	3																1	1
1740	4																1	1
1763	5											1						1
1789	3		1															1
1804	3											2						2
1839	2											1				1		2
1891	3											1						1
1905	3																2	2
1937	3			1														1
1977	3															1		1
1984	3															1		1
1985	3											1						1
1986	3			1														1
2006	2			1								3						4
2052	3											1					1	2

Cont	Phase	S. F. No.	Arrow head	Blade	Chip	Chunk	Core	Core fragment	Core rejuvenation/trimming	Crested blade	Edge used	Flake	Misc retouch	Notch	Scraper	Burnt flint	Thermal flakes/chunks	Totals
2055	3															1		1
2075	2													1				1
2097	3																2	2
2104	2											1				1		2
2112	2										1							1
2158	3											6	1		1		1	9
2166	0																3	3
2182	0																2	2
2196	2															2		2
2260	1			1														1
2263	2			1								7						8
2265	4											1						1
2286	4											2						2
2293	4							1				1						2
2295	4								1			1						2
2302	3					1												1
2330	3											1						1
2357	1											1				3	1	5
2359	1			1												1		2
2464	0											1						1
2469	3															2		2
2470	2			1								1				3		5
2475	4											1						1
2477	4								1								1	2
n/a				1													2	3
			2	80	11	7	6	3	9	1	5	239	8	1	7	62	114	**555**

Table 16: *Flint*

B.2 Coins

By Nina Crummy

Summary

B.2.1 A total of 113 coins was submitted for assessment, including a small hoard of five late 3rd century *antoniniani*. The majority of the coins are late 3rd to 4th century issues, but a small number of 1st century issues are also present, starting with a single bronze of Nero minted between AD 64-8 point to a post-Boudiccan origin for this small town.

Condition

B.2.2 All the coins are of copper alloy, and at least one preserves traces of silver wash. In condition they vary from poor to excellent, with traces of bronze disease on some.

B.2.3 They are all packed to a high standard of storage in small polythene bags, supported by pads of foam, and are stored in airtight Stewart boxes with silica gel, which is monitored at regular intervals.

The assemblage

B.2.4 Three, possibly four coins, are post-medieval, the rest are Roman. None of the post-medieval coins is fully legible, but one is probably of William IV (1830-7).

B.2.5 Without conservation, 72 of the Roman coins (65 per cent) can be identified to both a reign and one of the coin periods established by Reece (1995) but the remainder can only be broadly dated. Some of the latter are extremely worn, to the point where one or both faces are smooth, but others have the faces obscured by corrosion and should be identifiable after conservation. They are all listed in Table 18, where a numismatic reference is given for many of the identified coins. Where such a reference is lacking, in most cases conservation should again enable one to be given.

B.2.6 The earliest issue is of Nero, minted AD 64-8. It is doubtful if any of the unidentified coins are of Claudius or earlier. This might suggest that Wixoe is of post-Boudiccan origin, but coin loss in the Early Roman period away from military sites and major founded towns is often either low or absent, and at this stage such a proposal is necessarily tentative. Comparison with the metal-detected material from the site and from the general area should allow a firmer date to be proposed for the origins of the town. A question that might be addressed in this respect is whether the town was an organic development responding to the infrastructure of the new province, or a deliberate foundation established to support it in the wake of the Boudiccan revolt.

B.2.7 Table 17 lists the identified coins by Reece's coin periods and the unidentified coins in clusters roughly approximating to centuries. The unidentified coins that are broadly dated from the 1st to the 3rd century have been placed in the middle of that range, creating what is probably an artificially high number for the 2nd century. Nevertheless, the total number of coins shows a rise that roughly corresponds to the rise from Early to Late Roman shown by the identifiable coins alone.

Period	Date	No	No of unidentified coins	Total
1	pre-AD 41	-		
2	41-54	-		
3	54-69	1		
4	69-96	1		
5	96-117	3	4	9
6	117-138	1		
7	138-161	1		
8	161-180	-		
9	180-193	-		
10	193-222	-	13	15

11	222-238	-	17	37
12	238-260	-		
13	260-275	12		
14	275-296	8		
15	296-317	-		
16	317-330	2	4	49
17	330-348	25		
18	348-364	2		
19	364-378	13		
20	378-388	-		
21	388-402	3		

Table 17: *Wixoe coins by period*

B.2.8 The identified coins show low coin loss from the mid 1st to mid 3rd century, followed by a general increase of loss with marked peaks in Periods 13, 17 and 19, which are generally periods of high coin loss in southern Britain. Period 14, the period when barbarous copies of the radiate coinage of the 260s and early 270s were minted, is also usually high on many sites (Reece 1987, table 7; 1995, table 1; 2002, fig 1). The small town of Hacheston in Suffolk seems to have remarkably few coins of this period, but Plouviez altered the Period 13-14 balance by including barbarous copies in Period 13 (2004, 83). At Wixoe Period 14 is lower than Period 13 due to the presence of a small hoard of five Period 13 coins. Although badly corroded, two are probably of Victorinus and one may be of Tetricus II, placing the date of deposition within the range AD 268-73 at the broadest. Small hoards such as this are usually referred to as purse groups, tending to consist of coins close in date, from the same mint and often with only one or two reverse types present (Crummy 2010, 40). They are often considered to have been accidentally lost, but some have been found in votive contexts and both the depositional characteristics and the other finds associated with this group need to be examined to determine whether it was lost, deliberately buried with no intention of recovery (*i.e.* was a votive offering), or deliberately buried with the owner intending to recover it at a later date (*i.e.* was a small savings hoard buried for safe-keeping in the context of a perceived threat).

B.2.9 Periods 17 (AD 330-48) and 19 (AD 364-78) are usually times of high coin loss in the small towns of Suffolk, with Period 17 showing the greatest loss (Plouviez 2004b), as is also the case here at Wixoe. The marked difference between the two periods is also repeated in small towns across Suffolk and at Colchester, the closest large town (Plouviez 2004b, fig. 60; Crummy 1987, figs 2-5). The reason for lower coin loss in the later 360s and 370s in some parts of Suffolk rather than others is probably related to the disruptions of the barbarian conspiracy of AD 367 and the subsequent campaign to restore order by Theodosius, Valentinian I's *comes rei militaris* (Frere 1994, 340-41). A similar drop in pottery supply or meat consumption in late 4th century Wixoe may match that seen in the coins and validate this suggestion.

B.2.10 While a drop in coin loss in the 360s and 370s may represent a downturn in Wixoe's economy, the presence of at least three coins dating to Period 21, the final period of official coin supply to Britain (AD 388-402), points to the town's survival as a landscape feature into the very late 4th or early 5th century. Again this should be matched by

ceramic evidence. Similarly small numbers of coins of this period were found at other Suffolk small towns (Plouviez 2004b, fig. 60), and over 100, in addition to the three from the current excavation, have been found in the Wixoe area (see below).

B.2.11 The site and the surrounding area have long been subject to exploration by metal-detecting enthusiasts, producing a considerable number of coins from various sources, all recorded by Mr M. Cuddeford in various lists that he has kindly made available to Oxford Archaeology East: 8 Iron Age, 27 Roman silver, 3,892 Roman copper-alloy coins, and 33 medieval, post-medieval and modern coins and jetons. Of the Roman coins over 100 date after AD 388 (Period 21). Most have been plotted so that they can be related to the Romano-British town. This material represents the largest collection of coins from a small Romano-British town in Suffolk, well in excess of the 2,372 from Hacheston (Plouviez 2004b).

B.2.12 As fluctuations in coin loss relate more to fluctuation in supply rather than in occupation (Reece 2002, 100-6), analysis of the complete (excavated and metal-detected) coin assemblage from Wixoe using Reece's cumulative method of comparison against the British mean should enable the pattern of coin supply at the town to be set in its wider context in order to establish its regional associations. With Wixoe lying at the south-westerly edge of the modern county, its pattern of coin loss may have more in common with sites in south Cambridgeshire, west Essex or even north Hertfordshire than with the eastern or central towns of Suffolk. It should therefore be compared not only with the Suffolk small towns studied by Plouviez but also with other towns in the wider region where the data is in the public domain, such as Baldock, Braintree, Caistor-St-Edmund, Cambridge, Colchester, Great Chesterford, Great Dunmow, Kelvedon, Scole and Thetford, and smaller settlements such as West Stow, Spong Hill and Hinchingbrooke.

Recommendations and research potential

B.2.13 In order to facilitate full identification 43 coins should be professionally conserved (cleaned and stabilised). It is recommended that this work be done at Colchester Museum's conservation laboratory

B.2.14 A publication-level catalogue of the excavated coins should be prepared following conservation, giving numismatic references where possible.

B.2.15 The report should include a graph comparing the excavated coins to Reece's cumulative mean for Britain (1995) and a histogram allowing direct comparison with the data for Suffolk published by Plouviez (2004b).

B.2.16 The Roman coins listed by Mr Cuddeford should be used to create a graph and histogram as in Recommendation 3, enabling direct comparison with the excavated material. Mr Cuddeford's four lists comprise:

27 Roman silver 1st and 2nd century AD coins,

3,636 Roman coins, mostly 3rd and 4th century and including over 100 dating after to after AD 388

A summary of 256 Roman coins, 10 of which date to before the middle of the 3rd century, that are in the possession of the Stephens family, owners of the Wixoe site; these items were reportedly found on the site and were given to the family by metal detector users who searched the site in the 1970s and 1980s.

B.2.17 The excavated and metal-detected assemblages, together with any other Roman coins from the area (*e.g.* those listed on the HER), should be combined to create a 'standard'

graph for Roman period Wixoe that can be compared to the British mean and used to establish:

A) The town's date of origin

B) Its length of occupation

C) Its pattern of coin supply and loss, and how that might have been affected by historical events,

D) Its wider economic and geographical associations.

B.2.18 The medieval and post-medieval coins and late jetons need not be included in the report as they offer no perceived advantage in terms of understanding the history or the archaeology of the Roman site.

SF	Cont	Mat	Cons	Identification	Diam (mm)	Wt (g)	Ref	Mint	Date	Period
1448	-	cu-al	-	Nero, IMP NERO CAESAR AVG P MAX TR POT P P, *as*, rev. Victory with shield, S C	27	10.05	*RIC* 389	Lyon	64-8	3
1862	2180	cu-al	-	Domitian,IMP CAES DOMIT AVG GERM COS XVI CENS PER P P, *dupondius*, rev. MONETA AVGVSTI S C	29	12.91	*RIC* 469	Rome	92-4	4
1037	2505	cu-al	-	Trajan, -/VA TRA/-, *sestertius*, rev. worn, seated figure left	32	23.92	-	Rome	98-117	5
1098	1001	cu-al	-	Trajan, -/AVG GER DAC/-, *sestertius*, rev. worn smooth	33	21.53	-	Rome	102-117	5
1863	2180	cu-al	-	Domitian, -/NVS COS V, *as*, rev. Spes walking left, holding flower and lifting skirt, S C	29	7.2	as *RIC* (Vesp.) 745	Rome	77-8	5
1446	-	cu-al	-	Hadrian, *dupondius*, rev. Fortuna seated left, PONT MAX/-, FORT RED S C in exergue	26	8.84	as *RIC* 1168*	Rome	117-38 (118)	6
1433	2205	cu-al	y	Antoninus Pius, worn *sestertius*, rev. standing female figure, S C	31	26.23	-	-	138-61	7
1522	1359	cu-al	-	Gallienus, GALLIENVS AVG, *antoninianus*, rev. AETERNITAS AVG	19	1.67	*RIC* (S) 160	Rome	260-8	13
1438	-	cu-al, silver wash	y	Gallienus, GALLIENVS AVG, *antoninianus*, rev. VIRTVS AVG	20	3.15	-	Milan?	260-8	13
1614	1413	cu-al	-	Claudius II, *antoninianus*, rev. VICTORIA AVG, mint-mark A in left field	21	2.79	*RIC* 105	Rome	268-70	13
1290	1657	cu-al	-	Claudius II (DIVO), *antoninianus*, rev. CONSECRATIO, altar	18	2.43	*RIC* 261	Milan	270	13
1293	subsoil	cu-al	y	Claudius II (DIVO), *antoninianus*, rev. CONSECRATIO, eagle; two sprues; barbarous?	15 (+ sprues)	2.17	-	-	270	13
1030	? 1428	cu-al	y	Victorinus?, *antoninianus*, rev. illegible	28	2.66	-	-	268-70?	13
1109a	1276	cu-al	y	hoard bag 1; radiate *antoninianus*, ?Victorinus	17	-	-	-	268-70?	13
1109e	1276	cu-al	y	hoard bag 4; radiate *antoninianus*, ?Victorinus	18	2.69	-	-	268-70?	13
1572	1359	cu-al	-	radiate *antonianus* (Tetricus I/Victorinus), barbarous?	12	1.06			268-73(/-90)	13
1596	1379	cu-al	y	Tetricus I, *antoninianus*, rev. Fides Militum?	17	2.79	-	-	270-3	13

SF	Cont	Mat	Cons	Identification	Diam (mm)	Wt (g)	Ref	Mint	Date	Period
1295	1657	cu-al	-	Tetricus I, *antoninianus*, rev. Pax standing left holding wreath and upright spear, -/VS AVG, barbarous	15	1.23	-	-	270-90	14
1054	subs oil	cu-al	-	Tetricus I, *antoninianus*, rev. VIRTVS AVGG	20	2.52	*RIC* 148?	-	270-3	13
1026	? 1424	cu-al	y	Tetricus I?, *antoninianus*, rev. illegible	16	2.85	-	-	270-3?	13
1032	subs oil	cu-al	-	barbarous radiate *antoninianus*, Claudius II (DIVO), rev. CONSECRATIO, altar	12	1.24	-	-	270-90	14
1111	-	cu-al	y	barbarous radiate *antoninianus*, obv. Tetricus I, rev. uncertain	14	1.29	-	-	270-90	14
1441	2123	cu-al	y	fragment; radiate *antoninianus*, barbarous?	14	1.17	-	-	270-90	14
1539	1395, inside head of SK 1394	cu-al	-	barbarous radiate, minim	9	0.62	-	-	270-90	14
1602	1359	cu-al	-	barbarous radiate, minim	13	1.04	-	-	270-90	14
1755	2225	cu-al	y	illegible radiate *antoninianus*, damaged, barbarous?	18	3.38	-	-	270-90	14
1587	1379	cu-al	y	Carausius, *antoninianus*, rev. PAX AVG, chipped	23	3.1	-	-	287-93	14
1110	subs oil	cu-al	-	Constantine I, *follis*, rev. SARMATIA DEVICTA	19	3.13	*RIC* VII 435	Trier	323-4	16
1047	2505	cu-al	-	Constantine II, helmeted, CONSTANTINVS IVN N C, rev. BEATA TRANQVILLITAS	18	3.38	*RIC* VII 237	London	321-2	16
1070	1011	cu-al	-	Constantine II, AE3, rev. GLORIA EXERCITVS, 2 standards	17	2	HK 63	Trier	330-5	17
1049	subs oil	cu-al	-	Constantius II, AE3, rev. GLORIA EXERCITVS, two standards	17	2.48	as HK 50	Trier	330-5	17
1107	1153	cu-al	y	House of Constantine, AE4, rev. GLORIA EXERCITVS (? no of standards)	15	1.24	-	-	330-41	17
1025	? 1424	cu-al	-	Urbs Roma, AE4, rev. wolf and twins	16	2.2	HK 76	Trier	330-5	17
1616	1413	cu-al	-	Urbs Roma, AE4, rev. wolf and twins	13	1.15	-	Lyon	330-7	17
1058	1147	cu-al	-	Urbs Roma, AE4, rev. wolf and twins, mint-mark ·PLG·	14	1.29	as HK 190, but extra point at end	Lyon	330-5	17
1039	2505	cu-al	y	copy, AE4, Urbs Roma, rev. wolf and twins	13	1.15	-	-	330-45	17
1021	subs	cu-al	-	Constantinopolis, AE4, rev. Victory on prow	15	1.36	HK 52	Trier	330-5	17
1031	subs oil	cu-al	-	Constantinopolis, AE3, rev. Victory on prow	18	2.21	as HK 52	Trier	330-5	17
1015	subs	cu-al	-	Constantinopolis, AE4, rev. Victory on prow	16	2.31	HK 59	Trier	330-5	17
1099	tops	cu-al	-	Constantinopolis, AE4, rev. Victory on prow	16	1.28	HK 59	Trier	330-5	17
1044	2505	cu-al	-	Constantinopolis, AE4, rev. Victory on prow	13	0.95	HK 191	Lyon	330-5	17
1439	subs	cu-al	y	Constantinopolis, AE4, rev. Victory on prow	16	1.21	-	-	330-5	17
1038	2505	cu-al	-	Constantius II, AE4, rev. GLORIA EXERCITVS, one standard	15	1.46	HK 126	Trier	335-41	17

SF	Cont	Mat	Cons	Identification	Diam (mm)	Wt (g)	Ref	Mint	Date	Period
1112	-	cu-al	y	copy, Constantine II/Constantius II (NOB C), AE4, rev. GLORIA EXERCITVS, one standard	14	1.25	-	-	335-45	17
2027	1404	cu-al	-	copy, Constans, AE4, rev. GLORIA EXERCITVS, one standard	13	0.87	-	-	335-45	17
1027	subs oil	cu-al	-	copy, House of Constantine, AE4, rev. GLORIA EXERCITVS, one standard	13	1.41	-	-	335-45	17
1100	1001 tops	cu-al	y	copy, House of Constantine, AE4, rev. GLORIA EXERCITVS, one standard	15	1.12	-	-	335-45	17
1052	subs	cu-al	-	Helena, AE4, rev. PAX PVBLICA	15	1.54	HK 112	Trier	337-41	17
1012	subs	cu-al	-	Theodora, AE4, rev. PIETAS ROMANA	15	1.57	HK 120	Trier	337-41	17
1028	subs	cu-al	y	Theodora, AE4, rev. PIETAS ROMANA	13	1.03	-	-	337-41	17
1040	2505	cu-al	y	Constans, AE3, rev. VICTORIAE DD AVGG Q NN	17	1.51	-	-	341-6	17
1024	subs oil	cu-al	-	Constans, AE4, rev. VICTORIAE DD AVGG Q NN	12	0.62	as HK 162	Lyon	341-6	17
1103	tops	cu-al	y	fragment, AE4, House of Constantine, rev. VICTORIAE DD AVGG Q NN	15	0.97	-	-	341-6	17
1056	1359	cu-al	y	corroded, House of Constantine, AE3, FELTEMP REPARATIO, galley?	21	4.94 (corr)	-	-	346-50?	17
1013	subs oil	cu-al	y	Constans, AE3, rev. FEL TEMP REPARATIO, galley (1)	21	4.13	-	-	346-50	18
1108	? 1072	cu-al	y	copy, House of Constantine, AE4, rev. FEL TEMP REPARATIO, falling horseman?	14	1.9	-	-	350-60	18
1029	subs oil	cu-al	-	fragment, Valentinian I, AE4, rev. GLORIA ROMANORVM	16	1.94	as CK 279	Lyon	364-75	
1521	1359	cu-al	y	Valentinian I, AE3, rev. SECURITAS REIPUBLICAE?	18	2.44	-	Siscia	364-75	19
1019	? 1522	cu-al	-	Valens, AE3, rev. SECVRITAS REIPVBLICAE	17	1.97	as CK 502, but dot left	Arles	367-75	19
1014	subs	cu-al	-	fragment, AE3, Valens, rev. GLORIA ROMANORVM	>17	1.38	CK 480	Arles	364-7	19
1016	? 1437	cu-al	y	Valens, AE3, rev. SECVRITAS REIPVBLICAE	18	2.37	-	-	364-75	19
1033	subs	cu-al	y	Valens, AE3, rev. SECVRITAS REIPVBLICAE	18	2.57	-	-	364-75	19
1449	-	cu-al	y	fragment, AE4, House of Valentinian, rev. GLORIA ROMANORVM	16	1.31	-	Aquileia?	364-78	19
1101	Tops	cu-al	y	worn, House of Valentinian, AE4, rev. GLORIA ROMANORVM	15	1.84	-	-	364-78	19
1102	Tops	cu-al	y	copy?, House of Valentinian, AE4, rev. GLORIA ROMANORVM	16	1.44	-	Lyon?	364-78	19
1296	1657	cu-al	y	House of Valentinian, AE3 rev. SECVRITAS REIPVBLICAE	17	1.78	-	-	364-78	19
1447	1227	cu-al	-	fragment; House of Valentinian, AE3, rev. SECVRITAS REIPVBLICAE, mint-mark SMAQ/-	17	1.36	-	Aquileia	364-78	19
1020	subs	cu-al	y	House of Valentinian, AE3, illegible	19	1.83	-	-	364-78	19
1043	2505	cu-al	y	fragment, ?House of Valentinian, AE4, illegible	16	1.72	-	-	364-78	19
1042	2505	cu-al	y	?House of Theodosius	11	0.95	-	-	388-402?	21

SF	Cont	Mat	Cons	Identification	Diam (mm)	Wt (g)	Ref	Mint	Date	Period
1055	1150	cu-al	y	?House of Theodosius	12	1.08	-	-	388-402?	21
1227	1103	cu-al	y	House of Theodosius, chipped	12	1.31	-	-	388-402?	21
1444	? 1608	cu-al	y	illegible, *as*, or p-med?	26	10.2	-	-	C1?	-
1119	1791	cu-al	y	worn, illegible *as*	27	7.65	-	-	C1-EC2	-
1288	subs oil	cu-al	-	illegible *as*	24	5.44	-	-	MC1-EC2	-
1123	-	cu-al	y	illegible *as*?	34	20.67 (corr)	-	-	late 1st-2nd century	-
1867	1967	cu-al	y	illegible *sestertius*	33	17.79	-	-	MC1-EC3	-
1282	2079	cu-al	-	illegible *as*	24	5.39	-	-	MC1-EC3	-
1283	2223	cu-al	-	illegible *as/dupondius*	26	11.19	-	-	MC1-EC3	-
1285	subs oil	cu-al	y	illegible *dupondius*	27	10.51	-	-	MC1-EC3	-
1298	1737	cu-al	-	illegible *as*	26	6.66	-	-	MC1-EC3	-
1300	1977	cu-al	-	illegible *as*	27	6.72	-	-	MC1-EC3	-
1434	2380	cu-al	-	illegible *as*	25	4.41	-	-	MC1-EC3	-
1435	subs oil	cu-al	-	illegible *as*	26	7.68	-	-	MC1-EC3	-
1445	1572	cu-al	-	illegible *as*	26	7.12	-	-	MC1-EC3	-
1284	subs oil	cu-al	-	illegible *as* (?Hadrian)	27	8.57	-	-	C2?	-
1289	1657	cu-al	y	Antoninus Pius/Marcus Aurelius, *dupondius*	27	12.6	-	-	C2	-
1299	1300	cu-al	y	illegible *as*, radiate portrait	25	8.82	-	-	C2?	-
1443	-	cu-al	y	Antoninus Pius?, *sestertius*, rev. illegible	32	26.22	-	-	C2	-
1291	-	cu-al silver wash	y	*antoninianus*, rev. altar? (?Claudius II, DIVO)	15	1.01	-	-	M-LC 3	-
1297	1657	cu-al	y	illegible radiate *antoninianus* (Tetricus II?)	18	1.86	-	-	M-LC 3	-
1440	1291	cu-al	y	illegible radiate *antoninianus*	14	1.18	-	-	M-LC 3	-
1592	1359	cu-al	y	Valerian I?, radiate *antoninianus*	17	1.37	-	-	MC3	-
1017	subs	cu-al	y	worn, illegible radiate *antoninianus*,?barbarous	15	2.15	-	-	LC3	-
1041	-	cu-al	y	illegible radiate *antoninianus*	18	2.07	-	-	LC3	-
1109 b	1276	cu-al	y	hoard bag 1; illegible *antoninianus*	18	-	-	-	LC3	-
1109 c	1276	cu-al	y	hoard bag 2; illegible *antoninianus*	18	2.37 (corr)	-	-	LC3	-
1109	1276	cu-al	y	hoard bag 3; illegible *antoninianus*, ?Tetricus II	15	2.22	-	-	LC3	-

SF	Cont	Mat	Cons	Identification	Diam (mm)	Wt (g)	Ref	Mint	Date	Period
d						(corr)				
1018	? 1549	cu-al	y	illegible (?barbarous radiate)	14	1.93	-	-	C3-C4	-
1035	Subs	cu-al	y	corroded, illegible	20	2.43 (corr)	-	-	C3-C4	-
1116	subs	cu-al	y	worn, illegible	16	1.69	-	-	C3-C4	-
1045	1028	cu-al	-	worn, illegible copy	11	0.85	-	-	LC3-C4	
1050	subs	cu-al	-	worn, illegible copy	13	0.99	-	-	LC3-C4	-
1051	1103	cu-al	y	minim, thick flan, illegible	10	1.15	-	-	LC3-C4	-
1106	-	cu-al	y	illegible	21	4.31 (corr)	-	-	LC3-C4	-
1113	subs	cu-al	y	illegible	16	1.46	-	-	LC3-C4	-
1034	subs	cu-al	y	fragment, illegible	14	1.1 (corr)	-	-	C4th	-
1036	subs	cu-al	y	illegible copy	12	1.08	-	-	C4th	-
1048	2505	cu-al	y	worn, illegible	13	1.01	-	-	C4th	-
1104	1062	cu-al	y	illegible	15	1.07	-	-	C4th	-
1615	1413	cu-al	-	William IV?	30	17.64	-	-	1830-7?	-
1186	1062	cu-al	y	worn, illegible	24	3.95	-	-	p-med?	-
1312	1207	cu-al	y	illegible, corroded	33	23.05	-	-	p-med?	-

Table 18: *Coin catologue*

B.3 Metalwork

By Chris Howard-Davis

Copper alloy

Quantification

B.3.1 One hundred and eighteen fragments of copper alloy representing approximately 95 objects were submitted for assessment. A substantial proportion, but not all, of the material had been cleaned and conserved, but as the unconserved objects were largely small and featureless fragments, it seems unlikely that this had any serious impact on their identification. Only three of the objects were recorded as completely unstratified. Descriptions of all the copper alloy finds can be found in the archive, only those of relevance are mentioned below.

Methodology

B.3.2 Every fragment was examined, assigned a preliminary identification and, where possible, date range. An outline database was created, using Microsoft Access 2000 format, and the data recorded (context, small finds number, material, category, type, quantity, condition, completeness, maximum dimensions, outline identification, brief description, and broad date) serve as the basis for the comments below. The state of preservation (condition) was assessed on a broad four point system (namely poor, fair, good, excellent).

Date range and distribution

B.3.3 The majority of the objects identified were of Romano-British type and date, although few of them could be dated with precision. Nothing in the assemblage could be dated earlier than the 1st century AD, and there are a number of objects which seem to be of 3rd/4th-century date.

Evaluation

B.3.4 As is often the case, a significant proportion of the copper alloy objects cannot be assigned a precise date or date range. As there were distinct trends in the range of finds recovered, however, they have been discussed in functional groups, which correspond broadly with those defined by Crummy 1983. Two groups stood out, with items of personal adornment or dress (brooches, bangles, hairpins, rings *etc.*) and other items used in toilet and hygiene (nail cleaners and tweezers, *ligulae*) predominating.

B.3.5 Only three, or possibly four, brooches were noted. The earliest, from the fill (1200) of Phase 3 quarry pit **1088**, is a fragmentary and poorly-preserved Nauheim derivative type with a round-sectioned bow and a three-turn spring, although because of its condition, little further detail can be supplied and in the context, it seems most likely to be redeposited. The type is common in the south of England and dates, generally, to the very Late Iron Age, dying out in the pre-Flavian period (Crummy 1983). Part of what appears to be a simple Hod Hill-type brooch came from Phase 4 road surface **1705** (SF 1450), and can be dated to the immediate post-Invasion period (*c* AD 43 – *c* AD 60/5; Olivier 1996, 251). A large headstud brooch with rectangular enamelled cells on the bow and an integrally-cast enamelled headstud, was found unstratified. The type was in production by the AD 70s and continued into the 2nd century, but possibly not later than *c* AD 125 (Mackreth 2011, 107). A small fragment from Phase 3 boundary ditch **2379** (fill 2377; SF1945) is in poor condition, but could be the highly corroded terminal of a Fowler type A (1960, 150-2) penannular brooch. Two brooch pins, both seemingly detached from wound springs, rather than hinged, came from Phase 3 quarry pits ***1055*** (fill 1056) and **1564** (fill 1565).

B.3.6 In all, seven items have been identified as hairpins, and a further 16 fragments of fine rod, often with points, as possible hairpins. Five of the pins have flattened spherical heads, three fall into Crummy's (1983) type 3 (SFs, 1210, 1233, and 1674 from Phase 2 pit **1113** (fill 1112), and Phase 3 pits **1101** (fill 1102), and **1564** (fill 1612), and two fall into her type 5, having a slight bead below the head (SFs 1637 and 1861, from Phase 2 pit **2005** (fill 2006), and Phase 4 cobbled yard **1035**. Both types are dated to the second century. One example (SF 1754) from Phase 4 cobbled road **1740**, is probably Crummy's type 2, which seems to have come into production early in the 2nd century, and fallen out of production in the 3rd. SF 1987, from Phase 3 pit **1234** (fill 1235) clearly has a moulded head, but it is now too corroded for description. The pin fragments come from Phase 2 quarry pits **1391** (fill 1392; SF 2007), and **1942** (fill 1943 (SF 1813), Phase 3 pits **1271** (fill 1303; SF 1482), **1238** (fill 1315*;* SF 1564), ***1562*** (fill 1563; SF 1648), and **2153** (fill 1682; SF 1721), and Phase 3 enclosure ditch **1946** (fill 1985; SF 1840), Phase 4 black earths 1029 (SF 1130) and 1359=1379 (SF 1599, SF 1598), layers 1139 (SF 1242), 1144 (SF 1005), and 1587 (SF 1663), and Phase 4 town boundary ***1645*** (fill 1659; SF 1703).

B.3.7 Four bangles were recovered, from Phase 3 pit **1088** (fill 1200), Phase 4 ditch **1617** (fill 1413) and black earth 1034, and topsoil 1000**.** Copper alloy armlets or bangles were at the peak of their popularity in the later 3rd/4th century, but occasionally appear earlier (Cool and Philo 1998). SF 1146, from topsoil 1000 is penannular, the terminals

decorated with a design of bead and reels (see for instance Crummy 1983, 45, fig 46.1717). The remaining three are all examples of two- and three-ply cable bangles. A small finger ring from a burial in Phase 3 ?storage pit **2248** (fill 2249), is made from carefully beaded wire, and can be closely paralleled at Baldock (Stead 1986a, fig 54.195), where it was in a 3rd-century context.

B.3.8 There are two small buckles, one rectangular with an integral bar, from subsoil 1001 (SF 1061) and a square or D-shaped example from subsoil 1138 (SF 1120). Both seem likely to be of medieval or early post-medieval date. An unusual buckle plate or strap terminal came from Phase 3 quarry pit **1049** (fill 1048; SF 1179), thus far, no parallels have been traced for this object, but it appears to be Roman in date. Two associated fragments of sheet (SF 1504), from Phase 3 quarry pit **1130** (fill 1342), clearly originally folded in two, could be the remnant of a plain buckle plate.

B.3.9 A strap end, found unstratified (SF 1437), requires cleaning before its decoration can be described, but its form suggests a later Anglo-Saxon date (See for instance Rogers 1993, fig 652.5317).

B.3.10 Toilet articles for the individual, such as tweezers, nail cleaners, and ear scoops are widely found on Roman sites of all kinds and dates, except, perhaps isolated rural settlements. Although found separately, it is quite likely that all the examples noted here were originally from chatelaine sets. Three small pairs of tweezers came from Phase 3 ditch **1974** (fill 1977; SF 1828) and Phase 4 layer 1142 and black earth 1021 (SFs 1315 and 1088 respectively). Two examples are parallel-sided and undecorated, but SF 1828 has slightly flaring arms, and an incised groove running parallel to the edges and over the loop. A single nail-cleaner came from Phase 3 ditch **1980** (fill 1979; SF 2094), falling into Crummy's type 2a, with a leaf-shaped blade, and the suspension loop set at right-angles to the blade, this can be dated to the mid-late 1st century, continuing into the second. Two small spoons or 'ear scoops' came from pit **1214** (fill 1240; SF 1387) or were unstratified (SF 1675). Both have a small round flat scoop, and the former has a small suspension loop set at right-angles to the shaft. Such objects seem to have been made throughout the Roman period. There are also two larger spoon probes, both with long narrow spoons and a blunt, rounded probe at the other end. That from Phase 3 quarry pit **1070** (fill 1069; SF 1197) can be paralleled amongst material from Colchester (for example Crummy 1983, fig 65.1929), whilst that from quarry pit **1564** (fill 1565; SF 1650) finds a parallel at Baldock (Stead 1986b, fig 85.235) where it was from a 3rd-4th-century context.

B.3.11 There were also three needles, one, from Phase 3 quarry pit 1562 (fill 1563; SF 1649) has a flat, spatulate head (Crummy 1983, type 2, mainly a 3rd-4th-century type), one, from Phase 4 layer 1587 (SF 1659) falls into Crummy type 3, again regarded as a late type, and the third, from Phase 4 pit **2267** (fill 2265; SF 1964) is broken across the eye, but probably falls into the latter.

B.3.12 Domestic items are represented only by a single escutcheon from a copper alloy vessel (possibly a bowl), from a fill (2295) of Phase 4 waterhole **2292**, and two small fragments of an open vessel, possibly with a flat out-turned rim, both from Phase 3 pit **1564** (fill 1565; SFs 1651 and 2151). A single cast handle, possibly originally with an iron shaft, came from Phase 4 layer 1154 (SF 1002), and a small round enamelled stud or nail-head, clearly intended to be decorative, was from Phase 2 post-hole **1999** (fill 2201; SF 1436). Enamelling was at its most popular during the 2nd century. The thin, plain, domed caps of two further studs or nails came from Phase 4 layer 1148 (SF 1346) and an unstratified context (SF 1442), and again, were probably decorative in intent.

B.3.13 A decorative strap slider, probably from horse harness, came from Phase 4 road **1705** (SF 1122). Its semi-circular top is divided into four 'petals', and the rectangular loop on the underside is set off centre. It is unusual in form, but not out of place in a Roman context.

B.3.14 Two small rings, both with flattened oval sections, came from Phase 3 pits **1055** (fill 1058; SF 1178) and **2268** (fill 2269; SF 1286), and could have served a number of purposes, including horse harness. A fragment of a larger, hollow-cast (?) example was from subsoil 1001 (SF 1053). It is probable that the latter is of relatively recent date. Small triangular cut fragments of sheet from Phase 4 black earth layers 1008, 1029, and 1343 (SFs 2180, 2182, 1493), are probably off-cuts from metal-working.

B.3.15 A further 14 relatively large fragments remain enigmatic, and it is unlikely that they will be identified with confidence. There were, in addition, approximately 34 completely unidentifiable fragments, many of them crumpled sheet with no original edges surviving, which bear very little potential for further discussion.

Conservation

B.3.16 The finds are well packed and in general require no further conservation.

Potential

B.3.17 Many of the copper alloy finds have the potential to further inform the dating and interpretation of this site. It is perhaps of interest that the assemblage is largely confined to personal items from clothing or adornment, and might, for the most part, be associated with feminine attire. This apparent concentration could add to the further interpretation of activity on the site. Limited further analysis will contribute to the dating, interpretation, and understanding of the development of the site and to a lesser extent, aid in an illustration of changes through time.

Proposed further work

B.3.18 Archival catalogue entries should be completed, an illustrated report prepared for inclusion into any proposed publication, and some contribution be made to the incorporation of comment on the relevant classes of finds into the main stratigraphic test.

Iron objects

Quantification

B.3.19 There were 1193 fragments of iron representing approximately the same number of objects. The forms of all the objects examined were obscured by corrosion products, and the entire assemblage was subject to x-radiography, in order to facilitate identification. Provisional identification was made on the basis of the x-rays, and any measurements recorded at this stage were taken from the x-rays, and must be regarded as approximate. None of the material had been cleaned or conserved. Only 18 of the fragments were recorded as completely unstratified. Outline descriptions and x-rays of all the ironwork can be found in the archive, only those of relevance are mentioned below.

Methodology

B.3.20 Every fragment was examined, assigned a preliminary identification and, where possible, date range. An outline database was created, using Microsoft Access 2000 format, and the data recorded (context, small finds number, material, category, type,

quantity, condition, completeness, maximum dimensions, outline identification, brief description, and broad date) serve as the basis for the comments below. The state of preservation (condition) was assessed on a broad four point system (namely poor, fair, good, excellent).

Date range and distribution

B.3.21 The majority of the objects identified were probably of Romano-British type and date. In all, 930 nail fragments were noted, comprising *c* 78% of the assemblage. In addition 142 fragments, *c.*10% of the assemblage, were too fragmentary, or too poorly preserved for any identification to be made. The overwhelming majority of the identifiable objects, including nails, are of a structural nature, strongly suggesting an origin in buildings on the site.

Evaluation

B.3.22 As is often the case with ironwork, relatively few of the objects could be identified with confidence or dated with precision. As stated, most of the objects seem to be associated with buildings, and these are discussed together. There were few obvious groupings amongst the remainder of the assemblage, but objects have been discussed in functional groups where this was possible.

B.3.23 Nails formed the largest element of the assemblage, where it was possible to determine, all seemed to be hand-forged nails with square-sectioned shanks and a flat round head (Manning 1985, type 1b), with only a single example (from Phase 2 pit **1265**, fill 1259) exceeding *c* 60 mm in length. SF 1412, from pit **1265** is some 200 mm in length, and is clenched at *c* 165 mm, suggesting its use in a structural timber of substantial size. Many of the smaller examples showed signs of having been clenched, suggesting their use in relatively thin wooden items, for instance plank-built doors and other wooden architectural elements. Table 19 quantifies nails by phase, and it is clear that nail use and/or discard was much heavier in Phases 3 and 4 than at any other time in the life of the site, and it might be suggested than many of the nails seen in Phase 4 contexts were effectively residual from the preceding phase. A single small square rove was from Phase 4 pit **1071** (fill 1072).

Phase	Quantity
1	0
2	46
3	415
4	459
5	2
Unphased or unstratified	8
Total	*930*

Table 19: *Nails quantified by phase*

B.3.24 Other items probably originating from structures on the site included Joiner's dogs from Phase 3 pit **1327** (fill 1328) and Phase 4 layer 1379, double-spiked loops from Phase 3 pit **1088** (fill 1086), and ditch 2007 (fill 2009), and Phase 4 pit **1083** (fill 1037), and black earth 1359, and a double-spiked loop with a ring from the same black earth deposit. Seven plain rings, comparable in size with that seen above, came from Phase 3 pits **1070** (1068) and **1329** ((x2); fill 1229), and Phase 4 pits **1125** (fill 1050), **1079** (fill 1103) and **2267** (fill 2265), and unstratified. Although such plain and utilitarian objects might have had numerous uses, this is one use to which they could have been put.

B.3.25 Possible hinge fragments were recovered from Phase 3 pit **1890** (fill 1892), and unstratified (SF 1962) and a pintle or door pivot was from Phase 4 black earth layer 1036. Wall hooks came from Phase 3 pits **1273** (fill 1274) and **1320** (fill 1364), and other looped pins, thought by Manning (1985) to be structural, came from Phase 2 pit **1414**, Phase 3 pit **1214** (fill 1240), and Phase 4 black earth deposits 1013, 1024, and 1359, as well as there being two unstratified examples (SFs 1200, 1201). Small loops from Phase 3 ditch **1980** (fill 1947) and pit **2010** (fill 2099), a plain chain link from Phase 2 pit **1115** (fill 1114), and a small hook from Phase 4 layer 1516, are also most likely to have served some structural purpose.

B.3.26 One small fragment, from Phase 4 cobbled surface 1035 appears, in x-ray, to be a brooch of probably first century date, but this will require confirmation after cleaning and conservation. Otherwise items of personal adornment and dress were confined to a small number (14) of hobnails from Roman-type nailed shoes. These came from Phase 2 hearth **1378** (fill 1388), Phase 3 post hole **2365** (fill 2366), Phase 4 layer 1379, ditch **1617** (fill 1413), and black earths 1008 and 1359, and were presumably lost piecemeal in the course of daily life.

B.3.27 Almost nothing seems to be identifiable as representative of household goods, although a small fragment from Phase 3 pit **1188** (fill 1185) could be a bucket escutcheon. There were also three simple lift keys from Phase 2 pit **1414** (fill 1415) and Phase 3 pits **1284** (fill 1285 and **1564** (fill 1612), and a single latch-lifter from Phase 3 pit **1369** (fill 1370).

B.3.28 Literacy was represented by only two items, both styli from Phase 4 contexts, pit **1064** (fill 1063) and black earth 1359, although it is possible that one of the two items currently identified as a needle, will prove, on conservation, to be a stylus. A single ox-goad was from Phase 3 pit **2025** (fill 2026), apart from serving an obvious agricultural purpose, these have, on occasion, been identified as crude dip pens.

B.3.29 In all, 16 fragments have been provisionally identified as blades. Of these only four can be identified with confidence, two, from Phase 3 pit **1564** (fill 1586) and Phase 4 black earth 1359, are Manning's type 11a, one, from Phase 4 layer 1153 is a type 14, and the fourth, found unstratified, is either a type 14 or type 16; all are common and long-lived types. Other fragments, identification based on their shape and/or cross-section, come from 1359, 1563, 1668, 1972, 2302, 1062, 1122, 1150, 1413, 1598, 1669, 2265.

B.3.30 Apart from blades and blade fragments, there were relatively few objects that could be identified as tools. A small tool from Phase 3 pit **1214** (fill 1363) can be identified as a leather-workers punch (see for instance Manning 1985, E32).

B.3.31 Five socketed objects were noted, three appear to have been large pointed ferrules, presumably intended to sheath the end of poles, and came from Phase 3 pits **1081** (fill 1080) and **2248** (fill 2249), and Phase 4 black earth 1359. A more complex object, with a large barb to one side, was from black earth 1359. As yet its purpose has not been identified. A much smaller example, tapering from the socket to form an L-shaped tool, was from Phase 3 pit **1088** (fill 1200). Small spatulate items, possibly tools, were from Phase 2 pit **1414** (fill 1415) and Phase 3 pit **1345** (fill 1344).

B.3.32 A very large possible needle is from Phase 3 pit **1088** (fill 1086). Its size suggests a specialist use, perhaps as a baling, or even a thatching needle. A smaller example from Phase 4 layer 1146 is of a more common size, but it should be noted that this could possibly be a stylus.

B.3.33 What appears, from the x-ray, to be a large cylinder or collar, originally fixed with at least two short, large-headed nails, came from Phase 3 pit **1130** (fill 1340). Without cleaning and conservation, it cannot be further identified.

B.3.34 Inevitably many of the iron objects cannot be further identified, seven were classified as bar fragments (square or rectangular sectioned), 16 as strip (parallel-sided fragments of sheet), and four as amorphous small pieces of thin, sheet metal, these could be of any date, although it is assumed that most derive from the later Roman activity on the site. Five fragments appear to be relatively narrow-diameter round-sectioned wire. A large object from Phase 4 black earth 1012, appears to be a modern object used in fence building. A further 142 fragments remain completely unidentifiable.

Conservation

B.3.35 The finds are well packed and in general require no further conservation, although a small group will be selected for cleaning and conservation to confirm identification.

Potential

B.3.36 Little of the ironwork has the potential to further inform the interpretation of this site, and it is probable that only one object can contribute to the dating. Most of the material is related to the timber element of buildings on the site, and can contribute a limited amount to understanding the appearance and style of the buildings. A limited investigation of the physical distribution of nails in Phase 3 might possibly contribute to this understanding. Other classes of finds are very limited, but will contribute in small part to any understanding of craft and other activity.

Proposed further work

B.3.37 Archival catalogue entries should be completed, an illustrated report prepared for inclusion into any proposed publication, and some contribution be made to the incorporation of comment on the relevant classes of finds into the main stratigraphic test.

The Lead Objects

Quantification

B.3.38 Fifteen fragments of lead representing a similar number of objects were submitted for assessment, five of them (33%) are unstratified. All were in fair to good condition. Descriptions of all the lead finds can be found in the archive.

Methodology

B.3.39 Every fragment was examined, assigned a preliminary identification and, where possible, date range. An outline database was created, using Microsoft Access 2000 format, and the data recorded (context, small finds number, material, category, type, quantity, condition, completeness, maximum dimensions, outline identification, brief description, and broad date) serve as the basis for the comments below. The state of preservation (condition) was assessed on a broad four point system (namely poor, fair, good, excellent).

Date range and distribution

B.3.40 The assemblage comprises a range of largely chronologically undiagnostic objects, although it is likely that most are of Roman date.

Evaluation

B.3.41 Most of the lead finds cannot be assigned a precise date or date range, as lead was put to a number of practical uses, including as a building material, which means that the forms of individual artefact types have not particularly changed through time.

B.3.42 A slightly battered example of a well-known object type, made from a rectangle of cast sheet lead rolled into a tube, with one edge cut into strips, was recovered from topsoil 1137 (SF 1292). Several examples are known from Roman sites, but their purpose remains obscure, although some religious connection has been suggested (Crummy 1983, fig 207). There were also two small objects, both made from a rectangle of lead sheet rolled into a cylinder (SFs 1117, 2185), and again, both are unstratified. These small weights or closures are common on Roman sites, but could be of any date. A small disc, cut from sheet metal, was also found unstratified (SF 1287).

B.3.43 There were three cast plugs, used to repair holed pots, two were from subsoil 1001 (SFs 1059 and 1060), and a third came from a Phase 4 building (floor layer 1807; SF 1118). These are common on Romano-British sites, and suggest, like the repair of samian vessels with lead rivets, that there was an element of frugality and conservation in daily life.

B.3.44 Three lead weights were recovered, two unstratified (SFs 1023 and 1115), and one from subsoil 1001 (SF 1022). That from 1001 is effectively hemispherical, with an iron suspension loop set in the flat surface. Unstratified weight SF 1023 is extremely large and weighs several kilograms. It is more-or-less cylindrical, with the remnant of an iron suspension loop. Neither is of obviously Roman form, but equally, could be Roman. Unstratified weight SF 1115 is of more obvious Roman origin, being a biconical weight with iron suspension loop of the sort normally described as steelyard weights.

B.3.45 Odd fragments, possibly off-cuts, came from Phase 2 pit **1429** (fill 1430; SF 2150), Phase 3 layer 1670 (SF 1698), and Phase 2 ditch ***1714*** (fill 1736; SF 2093), and are almost certainly generated by the day-to-day use of lead, especially in structures. In addition, there were two small solidified spills of lead, from Phase 4 black earth 1013, and unphased hearth **1539** (SFs 1136 and 1653) which reflect the widespread use of lead in daily life.

Conservation

B.3.46 The finds are well packed and in general require no further conservation.

Potential

B.3.47 This small group of lead objects has very little potential for further analysis. It has effectively no potential to contribute to any refinement of dating on the site, except in assessing the stratigraphic integrity of individual contexts. It will, however, contribute to understanding the nature of activity on the site during the Roman period.

Proposed further work

B.3.48 Archival catalogue entries should be completed, a brief illustrated report prepared for inclusion into any proposed publication, and some contribution be made to the incorporation of comment on the relevant classes of finds into the main stratigraphic test.

B.4 Metalworking Evidence

By Peter Boardman

Introduction and methodology

B.4.1 A large assemblage of industrial residues, totaling 62.186kg, was recovered and includes ferrous and lead based slags, copper residues (55.005kg) and vitrified clay

(7.951kg). Bulk samples were also taken and processed to discover and analyse microscopic industrial residues. The assemblage was analysed using Starley (1995) and English Heritage guidelines (2001).

Results

Context No.	Cut No.	Feature Type	Sample No.	Magnetic (kg)	Non-mag (kg)	Vitrified (kg)	Slag (kg)
1001	0	layer		0.826			0.826
1004	0	layer	1000		0.007		0.007
1028	0	layer			0.002		0.002
1030	0	layer			0.051		0.051
1035	0	layer		0.081			0.081
1037	1083	pit	1003	0.136	0.108		0.244
1042	1040	ditch			0.014	0.014	
1044	1045	pit			0.007		0.007
1046	1047	pit	1004	0.045			0.045
1048	1049	pit		0.404	0.723	0.653	0.474
1050	1125	pit			0.007		0.007
1056	1055	pit	1012	0.887	0.022	0.019	0.890
1060	1059	pit		0.024			0.024
1063	1064	pit	1023	0.008			0.008
1068	1070	pit			0.010		0.010
1069	1070	pit	1006	0.154	0.008		0.162
1072	1071	pit		0.402	0.134	0.037	0.499
1074	1049	pit	1007	0.149	0.422	0.236	0.335
1086	1088	pit	1009	0.231	0.333	0.092	0.472
1089	1090	pit	1010	0.002	0.065		0.067
1092	1079	pit			0.009		0.009
1096	1094	pit	1093	0.085	0.030		0.115
1097	1055	pit			0.595		0.595
1100	1094	pit	1018	0.002	0.013		0.015
1102	1101	pit	1020		0.299	0.119	0.183
1103	1337	pit	1037	0.015	0.061		0.076
1105	1106	pit	1024	0.008			0.008
1109	1101	pit	1015	0.004	0.002		0.006
1110	1101	pit			0.062	0.062	
1114	1115	pit		0.169			0.169
1120	1059	pit			0.048		0.048
1122	1121	pit		0.059	0.028		0.087
1123	1121	pit			0.096		0.096
1126	1101	pit			0.179		0.179
1127	1101	pit			0.014		0.014
1131	1071	pit		0.011			0.011
1133	1135	pit		0.012		0.012	
1136	1088	pit	1014	0.398	0.008	0.199	0.207
1140	0	layer		0.046	0.250	0.296	
1142	0	layer			0.207		0.207
1144	1221	pit		0.021			0.021
1146	1221	pit	1031	0.006			0.006
1148	1216	pit			0.093	0.093	

Context No.	Cut No.	Feature Type	Sample No.	Magnetic (kg)	Non-mag (kg)	Vitrified (kg)	Slag (kg)
1150	0	layer		0.178			0.178
1153	0	layer			0.012		0.012
1158	?	pit			0.035	0.035	
1184	1070	pit		0.006			0.006
1185	1088	pit	1021	1.228	0.563		1.791
1200	1088	pit	1035	0.602	0.024		0.626
1215	1214	pit			0.013		0.013
1217	void				0.094		0.094
1220	1221	pit		0.169		0.169	
1224	1251	pit		0.017	0.012	0.029	
1225	1216	pit		0.149	0.654	0.149	0.654
1229	1329	pit		0.294	0.663	0.082	1.746
1231	void			0.321			0.321
1236	1197	pit		0.302			0.302
1237	1071	pit		0.552			0.552
1239	1238	pit			0.190		0.190
1240	1214	pit		1.559	1.647	0.461	2.745
1241	1238	pit		0.141	1.279	0.269	1.151
1270	1271	pit	1039	0.939	0.014		0.953
1272	1271	pit	1040	0.005			0.005
1274	1273	pit	1038	1.743	1.755		3.498
1276	1275	pit		0.068		0.068	
1282	1130	pit		0.179			0.179
1286	1273	pit		0.555			0.555
1289	1284	pit	1044	0.435	0.803		1.238
1291	1290	pit			1.547		1.547
1293	1290	pit	1058	0.088	0.054		0.142
1304	1271	pit		0.335			0.335
1314	1313	pit		0.008			0.008
1315	1238	pit		0.175	0.041	0.041	0.175
1322	1320	pit			0.040		0.040
1328	1327	pit		0.002	2.159		2.161
1332	1325	pit			0.400		0.400
1339	1130	pit		0.106			0.106
1340	1130	pit		0.061	0.204		0.265
1341	1130	pit		0.588			0.588
1343	0	layer		0.078	0.247		0.325
1348	1238	pit			0.034		0.034
1349	1238	pit		0.018		0.018	
1352	1238	pit			0.079		0.079
1370	1369	pit		3.230	0.198	0.880	2.548
1375	1367	pit		0.016		0.016	
1379	0	layer			0.014	0.014	
1380	1381	pit	1060	3.059	2.085	0.902	4.242
1398	1290	pit			0.077		0.077
1413	1617	ditch		0.345			0.345
1415	1414	pit		1.003	3.397		4.400
1430	1429	pit	1067	0.472	0.014		0.486

Context No.	Cut No.	Feature Type	Sample No.	Magnetic (kg)	Non-mag (kg)	Vitrified (kg)	Slag (kg)
1431	1429	pit	1066	0.017			0.017
1446	1445	pit			0.421		0.421
1499	1502	pit		0.649			0.649
1560	0	layer			0.151		0.151
1563	1562	pit	1072	0.016	0.021		0.037
1566	0	layer			0.001		0.001
1587	0	layer		0.466			0.466
1597	1369	pit	1061		2.019		2.019
1612	1564	pit		0.218		0.218	
1636	1637	pit			0.037		0.037
1668	1667	pit	1075	0.069	0.290	0.170	0.189
1669	1667	pit		0.445	0.356	0.636	0.165
1670	0	layer		0.034	0.371	0.034	0.371
1671	2149	pit		0.041		0.041	
1675	1562	pit		0.084			0.084
1682	?	pit		0.117	0.116	0.020	0.213
1691	1690	pit		0.048			0.048
1702	1701	pit		0.158			0.158
1703	1701	pit			0.316		0.316
1707	1706	post-hole			0.011	0.011	
1708	1710	pit			0.022	0.022	
1715	0	layer		0.353			0.353
1729	1728	ditch		0.002			0.002
1733	1732	pit			0.042		0.042
1734	1732	pit	1085		0.053	0.034	0.019
1742	1743	post-hole		0.022			0.022
1744	1746	pit			0.057	0.057	
1747	1748	ditch			0.134		0.134
1758	1757	pit			0.096		0.096
1759	1757	pit			0.120		0.120
1772	1771	ditch					0.091
1773	1771	ditch			0.082		0.816
1775	1774	ditch			0.101	0.101	
1776	1774	ditch		0.373			0.373
1786	1785	pit			0.080		0.080
1878	1879	ditch			0.071	0.071	
1891	1890	pit		0.839			0.839
1896	1895	pit			0.138		0.138
1900	1899	pit			0.045		0.045
1905	1904	pit		0.080	0.008		0.088
1906	1904	pit		0.003	0.008		0.011
1910	1908	pit			0.387		0.387
1911	1908	pit			0.010	0.010	
1936	1933	pit		0.124			0.124
1937	1933	pit	1094	0.059	0.034	0.059	0.034
1947	1980	ditch		0.017	0.040	0.045	0.012
1953	1954	ditch			0.031		0.031
1965	1964	pit		0.205	0.088	0.285	0.145

Context No.	Cut No.	Feature Type	Sample No.	Magnetic (kg)	Non-mag (kg)	Vitrified (kg)	Slag (kg)
1977	1974	ditch			0.062		0.062
1985	1946	ditch	1096		0.003		0.003
1991	1994	ditch		0.008	0.038	0.038	0.008
2099	2101	pit			0.023	0.023	
2114	2113	pit			0.106	0.106	
2123	2122	pit		0.172			0.172
2139	2138	post-hole			0.032		0.032
2158	2157	pit		0.032			0.032
2166	2165	ditch			0.073		0.073
2182	0	layer		0.266			0.266
2228	2321	ditch		0.200			0.200
2230	2327	ditch		0.051			0.051
2241	2240	gully		0.058		0.058	
2243	2242	post-hole		0.016			0.016
2249	2248	post-hole		0.103	0.002	0.104	0.001
2251	2252	post-hole			0.027		0.027
2263	2262	pit			0.043		0.043
2265	2267	pit			0.254		0.254
2269	2268	pit		0.007		0.007	
2276	2275	post-hole		0.007			0.007
2302	2303	ditch	1110	0.113	0.524	0.505	0.132
2309	2308	pit/water hole			0.143		0.143
2322	2323	post-hole			0.024	0.024	
2326	2324	ditch			0.115		0.115
2330	2308	pit/water hole			0.075		0.075
2331	2308	pit/water hole			0.010		0.010
2348	2347	ditch		0.044			0.044
2360	2361	post-hole		0.009		0.009	
2376	2375	post-hole			0.023		0.023
2377	2379	ditch		0.281	0.411		0.692
2378	2379	ditch			0.050	0.050	
2393	2392	post-hole	1113	0.208	0.305	0.062	0.451
2404	2403	ditch			0.079		0.079
2410	2409	ditch	1114	0.021	0.067	0.072	0.016
2449	2448	ditch			0.009		0.009
2450	2451	pit		0.013	0.041	0.054	
2452	2453	pit		0.789			0.789
2458	2460	ditch			0.011		0.011
2464	2463	ditch			0.049		0.049
2469	2467	ditch		0.041		0.041	
2470	2467	ditch		0.005	0.014	0.019	
2475	2473	ditch			0.258		0.258
2487	2461	ditch		0.025			0.025
2489	2460	ditch		0.118			0.118

Table 20: *Metalworking material recovered from hand-excavation*

B.4.2 The soil samples were analysed for hammerscale (Table 21). This took place during flotation of the samples, when hammerscale was extracted by running a magnet through the residues. The resultant magnetic material was then examined under a binocular microscope. This found background evidence for metalworking in a lot of samples from Area 1 with samples from Early Roman quarry pit **1381**, Middle Roman pits **1273** and **1284** having significant quantities. In Area 2, few samples contained quantities of hammerscale remains with the exceptions being Middle Roman furnace **1667** and Late Roman post hole (**2392**) relating to Building 5.

Sample No.	Context No.	Cut No.	Spheroids	Flakes	Hammerslag	weight (g)
1000	1004					
1001	1008		##	##	##	7
1002	1024		#	##	##	5
1003	1037		##	###	##	8
1004	1046	1047	###	###	##	13
1005	1041	1040	##	##	##	4
1006	1069	1070	##	####	##	14
1007	1074	1049	##	####	##	12
1008	1053	1045	##	####	##	7
1009	1086	1088	###	####	##	12
1010	1089	1090	##	###	##	7
1011	1061	1079	#	#	#	38
1012	1056	1055	##	####	###	18
1013	1116	1117				
1014	1136	1137	###	####	###	33
1015	1109	1101	###	####	###	19
1016	1170	1101	#	##	##	7
1017	1124	1101	##	####	###	22
1018	1100	1101	###	####	###	40
1019	1126	1101	###	####	###	24
1020	1102	1101	##	####	##	20
1021	1185	1186	##	####	##	8
1022	1062	1064	##	###	##	5
1023	1063	1064	#	##	#	4
1024	1105	1106	##	####	##	7
1025	1063	1064	##	####	#	4
1026	1178	1175	#	#		13
1027	1050	1125	##	###	#	6
1028	1161	1125	#	##	#	8
1029	1163	1125				
1030	1211	1213				
1031	1146		###	####	##	9
1032	1073	1071	##	###	##	6
1033	1072	1071	##	##	##	5
1034	1105	1106	##	####	##	7
1035	1200	1088	###	###	###	12
1036	1098	1099	#	#	#	29

Sample No.	Context No.	Cut No.	Spheroids	Flakes	Hammerslag	weight (g)
1037	1103	1130	##	##	##	8
1038	1274	1273	###	####	####	100
1039	1270	1271	##	##	###	17
1040	1072	1071	##	####	##	17
1041	1263	1264		#	#	4
1042	1278	1264	#	#	#	4
1043	1279	1264				
1044	1289	1284	####	####	####	196
1045	1298	1264	##	###	##	10
1046	1237	1071	##	###	#	3
1047	1303	1271				
1048	1282	1130	#	#	#	5
1049	1342	1130	#	##		4
1050	1338	1130	#	##	#	2
1051	1339	1130	#	##	#	8
1052	1340	1130	##	##	##	13
1053	1333	1334	##	##	#	9
1054	1287	1287	#	#	#	5
1055	1371	1372		##	#	5
1056	1373	1374	#	##	#	4
1057	1377	1355	##	###	#	10
1058	1293	1290	##	###	##	14
1059	1377	1378	#	##	#	5
1060	1380	1381	##	####	###	24
1061	1380	1381	####	####	####	342
1062	1384	1385				
1063	1409	1410				
1064	1404	1403	#	##	#	2
1065	1404	1403	#	##	#	3
1066	1431	1429	###	####	###	23
1067	1430	1429	###	####	##	27
1068	1540	1538				
1069	1565	1564				
1070	1590	1512	#	##	#	5
1071	1612		#	###	#	9
1072	1563	1562	##	###	##	9
1073	1663	1653				
1074	1659	1645	#	##	##	4
1075	1668	1667	##	####	###	15
1076	1669	1667	##	###	##	13
1077	1678	1633				
1078	1681					
1079	1669	1667				
1080	1675	1562		##	#	8
1081	1691	1690		#	#	2
1082	1738	1739			##	7
1083	1736	1714			#	3
1084	1763	1762		#		1

Sample No.	Context No.	Cut No.	Spheroids	Flakes	Hammerslag	weight (g)
1085	1734	1732		#	#	1
1086	1794	1795			#	3
1087						
1088	1819					
1089	1839	1838				
1090	1867	1865				
1091	1861	1850				
1092	1095	1904			##	5
1093	1096	1904			#	1
1094	1937	1933	#	#	##	
1095	1969	1968				
1096	1985	1946			#	2
1097	1815	1816				
1098	2062	2064				
1099	2047	2048				
1100	2068	2070				
1101	2057	2059				
1102	2081	2083				
1103	1967	1966		#	#	2
1104	2148	2143				
1105	2196	2195			#	5
1106	2002					
1107	2214	2213				
1108	2288	2287			#	1
1109	2291	2289				
1110	2302	2303	#	##	##	5
1111	2316	2317			#	3
1112	2357	2356				
1113	2393	2392	###	####	###	65
1114	2410	2409	#	##	###	8
1115	2413	2415		#	#	4
1116	2263					
1117	2269	2268		#	##	6
1118	2469	2467	#	#	##	7
1119	2478	2473				

Table 21: *Hammerscale recovered from bulk sampling*

Discussion

B.4.3 For the purposes of this discussion many contexts containing a small amount of industrial residues shall not be analysed in detail. This is because they are almost certainly the result of reworking of material from surrounding features. There are, however, many features of significance which require a detailed discussion, namely those features which contained a significant amount of residues or which contain more than one type of metallic element. For the purposes of this report this amount has been set at 1kg.

B.4.4 In several features material was recovered that is a mixture of vitrified clay and heavily heated slag and cinder residues. A lot of the material was observed to have clay on one side whilst the other residues adhered, forming a distinctive layering pattern. The residues attached to the vitrified clay occasionally appears to have different metallic elements. The most common component is iron, while lead is visible only within larger deposits such as that recovered from pits **1370** and **1667**. Copper appears least regularly and only in the form of tiny splash dots. It can be interpreted from these observations that copper is the least worked on the site and iron is by far the most common product. An interpretation could also be made that both decorative and functional items were being made in this area.

B.4.5 The deposits of vitrified clay and residue mix appear regularly across many features. It most commonly comes in a 'plate' like appearance, being flat and thin with vitrified clay on one side and shiny, light weight slag on the other. These deposits form around the lining of the furnace over a period of time. The upstanding construction of the furnace must withstand high and consistent temperatures. This causes the vitrification of the inner-lining of the furnace. Discolouration occurs during this process and varies dependent where in the lining it was located. On the innerlining another substance forms from the small fragments of metal, slag, ash and uncombusted fuel. Under the high temperatures this forms into a light cinder-like substance and adheres to the vitrified clay lining. Several layers of this may appear if the furnace has been re-used on several occasions. The appearance of these residues in a variety of features are the result of a cleaning or destruction of smithy furnaces or forging areas.

B.4.6 This form of industrial waste is not common on specifically smelting sites, but is more associated with the smithing process due to the longevity and consistency of use of smithy constructions. Smelting furnaces must withstand higher temperatures to ensure the extraction of the metal from the ore which causes a large amount of damage to the superstructure of the smelt after only a short period of time.

B.4.7 Across the whole of the site a large amount of slag was recovered from both ditches and pits. However the main concentrations of significant industrial residue deposits were in Area 1 and the southernmost part of Area 2. This suggests a specifically designated and established area within the settlement for the working of metals.

B.4.8 Those residues recovered from ditches are most likely to be contamination and not deliberately deposited within that feature. The slag deposited in pits, in large quantities, (for this report categorized as anything over 1kg) is more likely to have been deliberately deposited. This may have been to store it for a secondary use, such as construction of metalled surfaces or post-hole packing *e.g.* in **1706** and **1743**.

B.4.9 In Area 2 the most notable of those from which industrial residues were recovered is kiln/furnace **1667**, which was 1.3m long, 0.63m in width and 0.35m in depth, at its deepest point. It has a dish-shaped base rising to the south-west. This shape would suggest a furnace or smelt construction. In both instances the base 'dish' shape would allow undesired material, such as slag, uncombusted fuels and broken lining material to build up, away from the centre of the furnace. This allows for a more efficient build up of heat in the smelt or furnace. The rise at the base of the feature **1667** would allow space for tuyeres and bellows to be placed at a height slightly above the conglomerations in the 'dish' to prevent clogging but still allow air to be passed through most of the furnace for a more even spread of heat and completeness of combustion. No *in-situ* burning was noted during excavation and this limits the viability of a furnace interpretation, but the shape of the cut and the nature of the fills would negate the lack of burning, if this interpretation is to be accepted.

B.4.10 The fills of **1667** are 1668 and 1669, from which was recovered 0.354kg of mixed iron and lead slags and 0.806kg of vitrified clay with ferrous and lead slag conglomerations attached. Both fills were heavily laden with charcoal and small fragments of burnt clay as well as other finds such as ceramic material and bone. The vitrified clays are most likely remnants of a furnace lining. The lower fill, 1669, contained more vitrified material than 1668, which contained more slag materials.

B.4.11 The fact that there was twice as much lining material as there is actual production waste recovered suggests that smelting was not the use of kiln/furnace **1667**. Instead it may have been used as a furnace for smithing purposes, working iron and lead (Paynter 2011). There is also a possibility that copper was also being worked at this location as several fragments of vitrified furnace lining were observed to have small circular patches (no more than 2mm in diameter) of copper oxide adhering to them. Fragments of three possible crucibles were also recovered and each given small find numbers. Small find (SF) 2070, recovered from 1668, appears to be fragments of a large crucible (approx 10cm diameter). This could potential have been used for casting of trade bars and small decorative items. Two separate, smaller (approx 6-7cm in diameter) crucibles (SF 2010 and SF 2011) were recovered from 1669. SF 2010 has small amounts of lead attached to it, suggesting that it was used for the pouring of molten lead. SF 2011 has small copper concretions attached, suggesting that it was used for this particular metal. The crucibles were identified by their heavily vitrified natures and their basic rim form. The nature of the rest of the finds suggests that the furnace was destroyed or deliberately dismantled and then used as a small dump in order to back fill it. The presence of the majority of the vitrified material in 1669 suggests that although it was broken up, the remnants of the furnace remained in the original feature and then was filled over.

B.4.12 Only four other features in Area 2 produced over 0.5kg of residues from hand excavation. Pits **1890** and **2453** are both cutting earlier features and cannot be interpreted as being primary metal working areas, and were probably the site for the deliberate deposition of industrial waste material. The material gathered in ditches **2379** and **1771** is the result of either deliberate dumping of the material in those features or accidental deposition because they are contemporary to the periods of metalworking on the site but are not themselves primary sites of metalworking.

B.4.13 In Area 1 many of the pit features contained slag and vitrified clay deposits. Many of these can be spared detailed analysis as they contain small amounts of residues which may be contamination or small scale dumping deposits in a wide area. Several pits contain significant amounts of deposits which can be interpreted as large scale dumping close to the place of origin. Within a 25m range from the western edge of **1213** to the eastern edge of **1214**, five pits, **1071**, **1088**, **1130**, **1214**, **1238** and **1329** all contain significant (over 1kg) deposits of slag and vitrified clay. Pit **1055** could also be included in this cluster due to its proximity and nature of its fills. Other pits contained small amounts of deposits, but their relationship and proximity to larger deposits brings them into significance. The proximity of both large and small deposits within such a small area suggests that the origin of these materials is close by.

B.4.14 The area stated above is possibly an industrial working zone, and it can be suggested that this industry was, in part, metalworking. Features **1213**, and **1108**, as well as a potential feature combining **1337** and **1099** could all be potential furnace remains for either smelting or smithing furnaces. Features **1213** and **1337** demonstrate the same characteristics as **1667** in Area 2, having a split level base and being slightly 'dish' shaped at the deepest point. Unlike **1667**, features **1213** and **1337** both exhibit a

possible flint lining, packed on the sides. This may have been to provide a stable base on which to construct a superstructure which has not survived. Pit **1213** did not produce the levels of residues expected to initially interpret it as a furnace, but the cut construction and its proximity to the pit cluster to the east including pits **1088, 1214, 1216** and **1238** would suggest that this was the remnants of a furnace, possibly for smithing purposes. Feature **1337** not only had the same characteristics as **1213** and **1667,** also produced 1.138kg of slag, much of which contained uncombusted fuel and remnants of a calcium based flux, possibly chalk or shell, added to the smelt mix of ore and charcoal to aid extraction of the pure metal. In addition to **1337**, feature **1099**, which adjoins **1337**, could potentially be the position of the flue and tuyeres providing the air passage to a superstructure within **1337**. This evidence would point to **1337** being a smelt but with no superstructure surviving it is difficult to say whether it is a smelt or smithy furnace.

B.4.15 These two features, **1337** and **1213** could represent different phases of the same metalworking activity or could be two stages of the metal production process operating in close proximity and time. Feature **1108** may also be the remnants of a furnace within this sequence but was smaller than both **1337** and **1213** and did not produce any residues. It demonstrates the same characteristics in shape as the above features but to a lesser degree. This suggests that it may have been of an earlier date and had gone out of use before the construction of either **1337** or **1213**.

B.4.16 Nineteen metres to the west of **1213** a cluster of large, inter-cutting pits including **1271, 1273, 1290, 1327, 1369, 1381** and **1414** was excavated. These all produced over 1kg of industrial residues of both slags and vitrified clay deposits. The size and shape of these features suggest that they are not the site of primary metalworking but are the areas in which waste from those processes were dumped. The interpretation of this pit cluster is that of quarrying and the deposition of these waste materials would aid in the back-filling and leveling of such features, as well as getting rid of unwanted industrial waste.

B.4.17 All features that contained over 1kg of industrial residues can be grouped into two areas which have already been discussed. The only exceptions to this are pits **1049** and **1284**. Feature **1049** is located towards the eastern end of Area 1. It was a large quarry or rubbish pit that truncates ditch **1076**. An assemblage of 1.698kg of industrial residues was recovered from this feature. It appears to have no relationship with the other pits which contain significant or similar amounts of industrial residues. The presence of the deposits can, however, be explained in the same way. They are deliberate dumps within the cut to aid in the backfilling and leveling of the feature.

B.4.18 Feature **1284** was partially concealed under the limit of excavation on the northern side of Area 1, 10 metres to the west of **1213**. It is surrounded by three post-holes, **1039, 1307** and **1311**. 1.238kg of ferrous slag was recovered from the lower fill, 1289. The fragments of slag are mostly small and broken up. There is no *in-situ* burning and so this would suggest that this not where the slag was produced, but dumped into this feature. It is possible that **1284** was a large post-hole. This could mean that the industrial waste was crushed and dumped in the base as packing material, creating a solid base on which to place the up-standing post.

B.4.19 Large amounts of hammerscale were recovered during the processing of bulk samples taken during the excavation. It appears that there is a heavy background contamination of hammerscales of all types spread across the site, even in features that did not contain any other industrial residues. This is to be expected on a site which has had a heavy presence of metalworking for a prolonged period. The levels of both spheroidal

hammerscale and flake-scale is significant in the fact that this suggests heavy levels of smithing, not smelting. Both these types are produced primarily during the forging process. Spheroidal hammerscale can be produced during the extraction of iron in a bloomery but in the levels recovered are likely in this case to be from the smithing process. Flake hammerscale is produced when iron is heated then hammered. It is small fragments of oxide or silicate being removed from the iron under pressure.

B.4.20 Hammerscale levels observed within the samples from features **1284**, **1273**, and **1381** are significant as they are much higher than all the other samples taken (Table 21). Feature **1284** has already been interpreted as a large post-hole, but may well have been situated close to the primary site of metal working. Features **1273** and **1381** are parts of an inter-cutting pit cluster which may have been used to dump the industrial materials into. The presence of significant amounts of micro-residues in these features lends weight to this interpretation and could place them close to the primary area of metalworking on the site.

Discussion

B.4.21 The over-view of the metal working, is that the primary area in which the industrial residues were produced and retrieved is present within the area of excavation. The only feature that can be positively identified as a furnace is **1667**. However, the survival of *in-situ* burning and superstructures for industrial activities is not present anywhere within the area mentioned below. Features **1108**, **1213**, **1337** and **1099** are the correct shape and size for metal working furnaces, both smelting and smithing, although they themselves do not contain any or significant amounts of residues. The large collection of pits to the east of these features contains significant weights of residues, which could mean they are close to the origin of these materials. It appears that on this site, all industrial activity over a period of time, has been confined within a specific area within the town. The distribution of the highest percentage of the industrial residues recovered is limited to two pit clusters. This means that dumping areas were consistent throughout the presence of metalworking on this site and that the origin of the materials was also consistent in its proximity to these pit clusters.

B.4.22 The main metalworking process positively identified on the site is that of iron smithing. The area in which this has been identified may also have had other metals *i.e.* copper and lead, worked alongside iron, as some evidence for this has been recovered. The levels of residues recovered and their physical spread across the site suggest that metal working was fairly consistent throughout the sites usage period. This also suggests that the amount of metalworking occuring on on the site was more than sufficient to support the local environs and may well have been exported and traded.

Statement of Research Potential

B.4.23 The site has substantial evidence for metalworking and should be put into a wider context of the Roman settlement and regional comparisons. The remains of kiln/furnace **1667** is of particular importance and is a rare example surviving of this feature.

B.4.24 No further work is required on the assemblage.

B.5 Glass

By Stephen Wadeson and Carole Fletcher

Introduction

B.5.1 Recovered during excavations at Wixoe and submitted for identification the assemblage comprises 52 fragments of vessel glass along with a further six fragments identified as window glass. In addition three glass beads were identified within the assemblage. Associated with general settlement activity on site, the assemblage is consistent with a Roman date ranging from the 1st to 4th centuries AD. A maximum of 37 vessels were identified, of these 22 vessels (27 fragments) were sufficiently diagnostic to allow identification.

Vessel Glass

B.5.2 The assemblage can be divided into two broad categories: tablewares and storage vessels/containers and range in date from the 1st to 4th centuries AD.

B.5.3 A small number of tablewares are present in the assemblage including drinking vessels, an example of which is the rim and upper body fragment from a cylindrical beaker, SF 1874 (mid 2nd to early 3rd centuries AD). Also present are a small number of jug sherds including a curved body fragment from a yellow/brown glass convex jug with ribbed decoration SF 1530 (mid 1st to early/mid 2nd centuries AD). It is likely, however, that many of the undiagnostic body sherds recovered are also fragments of tablewares such as SF 2026, a tubular base ring from a undiagnostic yellow/green glass vessel. Yellow/green glass is typical of Late Roman tableware of *c*. 4th century AD.

B.5.4 Storage vessels account for the majority of the vessels identified, consisting largely of fragments from blue-green mould blown prismatic bottles, typical of the late 1st and 2nd centuries. These include SF1666, a small thin walled hexagonal bottle (late 1st to late 2nd centuries AD) and SF 1095, a lower neck, shoulder and upper wall fragment from a square bottle dating from *c*.AD 43 to the late 2nd century.

B.5.5 In addition to the prismatic vessels, a single example from a cylindrical bottle, (SF 1388) was also recovered. This type of vessel was commom in the later part of the 1st century, however it was short lived and appears to go out of use in the early 2nd century.

Window Glass

B.5.6 Initial analysis has identified up to six fragments of translucent blue/green, green-tinged but largely colourless and colourless window glass. All six examples have a flat-matt lower surface and a slightly uneven and glossy upper surface which is consistent with having been cast. A single fragment has the characteristic thick rounded edge and visible tool marks often seen on edges of Roman-British window glass. The shards come from square or rectangular sheets of glass of varying thicknesses, which would have functioned as window panes.

Glass Beads

B.5.7 Excavation produced three beads of varying sizes, the largest of which (SF 1806) is a undecorated annular bead of blue opaque glass (Group 6 (iva) Guido, 1978, 65-6) which is long lived and not closely datable. In addition two Roman glass beads were recovered from samples, a cylinder segment bead of blue translucent glass (Guido 1978, 94-5) and a cylinder bead; colour unknown due to iridescent weathering (Guido

1978, 93-4). Neither is closely datable. All three glass beads provide little assistance with dating due to the nature of their re-use and longevity.

B.5.8 An object of four oval pellets of poorly-fused blue frit may have been the associated with the production of blue frit melon beads (see Appendix B.12).

Conclusions

B.5.9 This is a relatively small assemblage, consisting mainly of storage and table wares, the majority of the vessels would appear to be mid 1st to 3rd centuries in date with few examples dating to the later Roman period. The majority of the material consists of fragmentary vessel shards, which suggests high levels of post-depositional disturbance such as ploughing and is consistent with most of the shards being residual.

B.5.10 The assemblage recovered is too small and fragmentary to make specific comments on the nature of glass supply to the site, however Wixoe is located on the main acess route between Colchester and Leicester (Via Devana). Possible evidence of glassworking at Wixoe is of interest - the nearest definite glass working area has been recorded at Colchester. If Wixoe was not producing this commodity, it is possible that the glass recovered during the excavation may have come from Colchester, either manufactured there or imported from elsewhere and brought to the site via the Via Devana or the River Stour.

Recommendations

B.5.11 Although the assemblage has low potential, a more detailed analysis of this assemblage combined with the results of previous excavations would add to our knowledge of Romano-British glass manufacture, use, trade and exchange in this area during the Romano-British era.

B.5.12 The glass catalogue should be ammended to include both weights and dimensions when applicable after which it will suffice as both an archive listing of the glass and if necessary a publishable catalogue of the assemblage as a whole.

B.5.13 Fragments selected for illustration or photography are indicated in the catalogue.

B.5.14 All glass in the assemblage is in a stable state of preservation and well packaged and requires no conservation.

Assessment Catalogue

SF 1073, (1011); Phase 4. Base fragment from a cylindrical cup. Circular trail applied to underside of slightly concave base (Second base ring). Blown; green-tinged colourless glass. Date; Late 2nd to mid 3rd centuries AD. Layer; Black earth, Area 1. **(Illustrate)**

SF 1076, (1008); Phase 4. Convex-curved body fragment from a vessel of undiagnostic form. Thin-walled. Blown; blue/green glass. Date; Not closely dated *c*.43 AD to 4th century AD. Layer; Black earth, Area 1.

SF 1077, (1016); Phase 4. Two joining, convex-curved body fragments from a vessel of undiagnostic form. Thin-walled with two vertical or diagonal pinched-up ribs. Blown; colourless glass. Date; Not closely dated *c*.43 AD to 4th century AD. Layer; Black earth, Area 1.

SF 1095, (1024); Phase 4. Lower neck, shoulder and upper wall fragment of square bottle. Iridescent weathering on outer surface. Mould blown; blue/green glass. Date; *c*.43 AD to late 2nd centuries AD. Layer; Black earth, Area 1. **(Illustrate)**

SF 1097, (1034); Phase 4. Convex-curved body fragment from a vessel of undiagnostic form. Thin-walled with small, applied 'tear-drop' shaped blob. Blown; blue/green glass. Date; Uncertain *c*.1st century AD. Layer; Black earth, Area 1.

SF 1156, (1044); Phase 3. Lower neck and shoulder fragment from a flask or unguent bottle. Straight sided cylindrical neck, constricted at base curving into the shoulder. Blown; blue/green glass. Date; Uncertain *c*.43 AD to 3rd century AD. Pit **1045**, Area 1.

SF 1218, (1080); Phase 3. Body fragment from a prismatic bottle. Iridescent weathering. Mould blown; blue/green glass. Date; *c*.43 AD to late 2nd century AD. Pit **1081**, Area 1.

SF 1236, (1073); Phase 4. Body fragment from a thin-walled prismatic bottle. Abraded outer surface, frequent small bubbles. Iridescent weathering. Mould blown; blue/green glass. Date; *c*.43 AD to late 2nd century AD. Pit **1071**, Area 1.

SF 1253, (1137); Phase 5. Body fragment from a ?hexagonal bottle. Mould blown; blue glass. Date; Uncertain *c*. Late 1st to late 2nd centuries AD. Layer; Topsoil Area 2.

SF 1274, (1161); Phase 4. Fragment of Roman window glass. Matt underside, glossy surface. Cast; green-tinged colourless glass. Date; Uncertain *c*.43 AD to 3rd century AD. Pit **1125**, Area 1.

SF 1379, (1236); Phase 3. Fragment of Roman window glass. Matt underside, glossy surface. Thick rounded 'Thumb' edge with tool impressions. Cast; blue/green glass. Date; Uncertain *c*.43 AD to 3rd century AD. Pit **1197**, Area 1.

SF 1380, (1237); Phase 4. Nine body fragments from a vessel of undiagnostic form. Iridescent weathering. Blown; blue/green glass. Date; Not closely dated *c*.43 AD to 4th century AD. Pit 1071, Area 1.

SF 1388, (1240); Phase 3. Lower shoulder and body fragment from a cylindrical bottle. Shoulder curving over to straight side. Blown; blue/green glass. Date; Uncertain *c*.43 AD to early 2nd century AD. Pit **1214**, Area 1.

SF 1390, (1237); Phase 4. Convex-curved body fragment from a vessel of undiagnostic form. Iridescent weathering. Blown; blue/green glass. Date; Not closely dated *c*.43 AD to 4th century AD. Pit 1071, Area 1.

SF 1392, (1240); Phase 3. Body fragment from a prismatic bottle. Mould blown; blue/green glass. Date; *c*.43 AD to late 2nd century AD. Pit **1214**, Area 1.

SF 1409, (1240); Phase 3. Body fragment from a prismatic bottle. Side curving. Mould blown; blue/green glass. Date; *c*.43 AD to late 2nd century AD. Pit **1214**, Area 1.

SF 1421, (1225); Phase 3. Body fragment from a thin-walled hexagonal bottle. Frequent bubbles. Iridescent weathering on outer surface. Mould blown; (pale) blue/green glass. Date; Uncertain *c*. Late 1st to late 2nd centuries AD. Pit **1216**, Area 1.

SF 1432, (1280); Unphased. Rim and upper body fragment from a tubular rimmed bowl or jar. In-bent double tubular rim, straight side. Iridescent weathering. Blown; blue/green glass. Date; Uncertain *c*.43 AD to late 2nd century AD. Pit **1281**, Area 1. **(Illustrate)**

SF 1470, (1293); Phase 3. Six convex-curved body fragments from a cup or beaker. Thin-walled, frequent bubbles. Blown; colourless glass. Date; Uncertain *c*.2nd to 3rd centuries AD. Pit **1290**, Area 1.

SF 1484, (1304); Phase 3. Body fragment from a thin-walled hexagonal bottle. Poor quality glass with frequent bubbles & dark specks. Mould blown; blue/green glass. Date; Uncertain *c*. Late 1st to late 2nd centuries AD. Pit **1271**, Area 1.

SF 1506, (1292); Phase 3. Neck fragment from a vessel of undiagnostic form. Straight sided cylindrical neck. Blown; semi-opaque blue/green glass. Date; Not closely dated *c*.43 AD to 4th century AD. Pit **1290**, Area 1.

SF 1530, (1328); Phase 4. Convex-curved body fragment from a convex jug. Shallow vertical or diagonal pinched-up ribs. Blown; yellow/brown glass. Date; Mid 1st to early/mid 2nd centuries AD. Pit **1327**, Area 1. **(Illustrate/Photograph)**

SF 1554, (1060); Phase 3. Handle fragment of bottle or jug. Partial edge of a ribbon handle. Blown; blue/green glass. Date; Not closely dated *c*.43 AD to 4th century AD. Pit **1059**, Area 1.

SF 1555, (99999); Unstrat. Convex-curved body fragment from a vessel of undiagnostic form. Blown; emerald green glass. Date; Uncertain *c*.43 AD to early 2nd century AD.

SF 1579, (1370); Phase 3. Body fragment from a vessel of undiagnostic form. Straight side curving along one edge. Blown; blue/green glass. Date; Not closely dated *c*.43 AD to 4th century AD. Pit **1369**, Area 1.

SF 1608, (1413); Phase 4. Body fragment from a prismatic bottle. Side curving. Mould blown; blue/green glass. Date; *c*.43 AD to late 2nd century AD. Ditch **1617**, Area 1.

SF 1609, (1413); Phase 4. Convex-curved body fragment from a vessel of undiagnostic form. Blown; blue/green glass. Date; Not closely dated *c*.43 AD to 4th century AD. Ditch **1617**, Area 1.

SF 1610, (1413); Phase 4. Body fragment from a prismatic bottle. Mould blown; blue/green glass. Date; *c*.43 AD to late 2nd century AD. Ditch **1617**, Area 1.

SF 1628, (1415); Phase 2. Body fragment from a prismatic bottle. Vertical side, curving at one end. Mould blown; blue/green glass. Date; *c*.43 AD to late 2nd century AD. Pit 1414, Area 1.

SF 1666, (1603); Phase 3. Two joining, body fragments from a thin-walled hexagonal bottle. Frequent bubbles. Mould blown; blue/green glass. Date; Uncertain *c*. Late 1st to late 2nd centuries AD. Pit **1564**, Area 1.

SF 1672, (1581); Phase 3. Fragment of Roman window glass. Matt underside, glossy surface. Cast; colourless glass. Date; Uncertain *c*.43 AD to 3rd century AD. Ditch **1580**, Area 1.

SF 1702, (1671); Phase 3. Convex-curved body fragment from a vessel of undiagnostic form. Blown; blue/green glass. Date; Not closely dated *c*.43 AD to 4th century AD. Pit **2131**, Area 2.

SF 1739, (1733); Phase 3. Body fragment from an indented vessel of unknown type. Straight sided with one partial narrow indentation. Blown; blue/green glass. Date; Uncertain *c*. Late 1st to 2nd centuries AD. Pit **1732**, Area 2.

SF 1798, (1837); Phase 4. Fragment of Roman window glass. Matt underside, glossy surface. Thick rounded 'Thumb' edge with tool impressions. Cast; blue/green glass. Date; Uncertain *c*.43 AD to 3rd century AD. Well **1801**, Area 2. **(Illustrate)**

SF 1806, (1949); Phase 3. Complete, annular glass bead, undecorated. Deep blue opaque glass (Group 6 (iva) Guido, 1978, 65-6) Date; Not closely dated *c*.6th century BC to 8th century AD. Pit **1950**, Area 2. Wgt 5g, Dia 18mm, Hgt 9mm, Per. Dia 7mm **(Illustrate/Photograph)**

SF 1807, (1906); Phase 3. Body and base fragment from a vessel of undiagnostic form. Lower body sloping into open pushed-in base ring; base missing. Blown; blue/green glass. Date; Uncertain *c*.43 AD to 2nd century AD. Pit **1904**, Area 2.

SF 1838, (1937); Phase 3. Fragment of Roman window glass. Matt underside, glossy surface. Cast; blue/green glass. Date; Uncertain *c*.43 AD to 3rd century AD. Pit **1933**, Area 2.

SF 1874, (2099); Phase 3. Rim and upper body fragment from a cylindrical beaker. Out-turned rim, edge fire rounded, vertical side. Blown; colourless glass. Date; Mid 2nd to early 3rd centuries AD. Pit **2101**, Area 2. **(Illustrate/Photograph)**

SF 1888, (1148); Phase 4. Fragment of Roman window glass. Matt underside, glossy surface. Cast; colourless glass. Date; Uncertain *c*.43 AD to 3rd century AD. Soil layer, Area1.

SF 1913, (1659); Phase 4. Convex-curved body fragment from a vessel of undiagnostic form. Blown; blue/green glass. Date; Not closely dated *c*.43 AD to 4th century AD. Ditch **1645**, Area 1a.

SF 1955, (2410); Phase 3. Two joining convex-curved body fragments from a vessel of undiagnostic form. Blown; colourless glass. Date; Not closely dated *c*.43 AD to 4th century AD. Ditch **2409**, Area 2.

SF 1971, (2265); Phase 4. A single fragment from the extended central projection/rib of an angular ribbon handle decorated with pinched projections from a conical jug. Blown; Blue/Green glass. Date; Late 1st to mid to late 2nd centuries AD. Pit **2267**, Area 2. **(Illustrate/Photograph)**

SF 2026, (1013); Phase 4. Tubular base ring from a undiagnostic Late Roman tableware. Blown; yellow/green glass. Date; Uncertain *c*. 4th century AD. Layer; Black earth, Area 1. **(Illustrate/Photograph)**

SF 2192, (1272); Phase 3. Cylinder bead; colour unknown due to iridescent weathering (Guido 1978, 93-4). Date; Not closely dated *c*.1st to late 4th/early 5th centuries AD. Pit **1271**, Area 1. Wgt <1g, Length 10mm, Dia 4mm, Per. Dia 1mm **(Illustrate/Photograph)**

SF 2193, (1161); Phase 4. Cylinder segment bead; blue translucent glass (Guido 1978, 94-5) Date; Not closely dated *c*.1st to late 4th/early 5th centuries AD. Pit **1125**, Area 1. Wgt <1g, Dia 2mm, Hgt 2mm, Per. Dia 1mm

SF 2194, (1415); Phase 2. Convex-curved body fragment from a jar or jug of unknown type. Blown; blue/green glass. Date; Not closely dated c.43 AD to 4th century AD. Pit 1414, Area 1.

B.6 Prehistoric and ?Saxon pottery

By Lisa Brown

Introduction and methodology

B.6.1 A small group of 171 sherds weighing 1.149kg was recovered (Table 22). Taking into account conjoining sherds, a maximum of 76 vessels is represented. The pottery came from 53 deposits, mostly the fills of Roman features especially pits. Some of the prehistoric sherds were found within five pits and ditches phased to the prehistoric period (Phase 1).

Results

B.6.2 The assemblage consists largely of small single fragments (some barely above crumb size) within any given context. Although abrasion is not particularly severe, despite the level of fragmentation (average sherd weight is only 7g), some one-quarter of sherds were recorded as highly abraded, in contrast to three fresh fragments. Generally, sherds exhibit moderate levels of abrasion. The small sherd size, and paucity of fragments diagnostic of form, precluded precise dating in some cases, and a broad earliest Iron Age to Early Iron Age date classification was commonly assigned.

B.6.3 The pottery spans the Late Neolithic/Early Bronze Age period to possibly the Saxon period. A substantial part of a decorated Late Neolithic /early Bronze Age Beaker came from context 1287, and a possible undecorated Beaker pot from context 2023 may be of the same date. The Beaker is comb-impressed, featuring shallow infilled triangles between horizontal rows of combed lines. A small, decorated fragment from context 1656 may be part of an Early Bronze Age Food Vessel, but this requires further examination.

B.6.4 The predominant group appears to be of earliest Iron Age date. Fabrics are mostly flint-tempered and classifable forms, though very rare, consist of carinated forms, mostly bowls, judging by the size. Two decorated sherds, one a bowl with light horizontal grooving above the shoulder, and another with slashed 'nicks' compare to examples of the 'West Harling and Fengate' style sequence, dated to *c.* 8th – 6th centuries BC. Both are in relatively fine flint-tempered wares and came from context 2143. A burnished ovoid jar rim from context 1259 is a Middle Iron Age type. A bead-rim jar fragment from context 2342 and finely-made necked jar/bowl with vertical burnished linear decoration on the neck from context 1072 probably date to the Late Iron Age.

B.6.5 Context 1647 produced a ridged bowl fragment and a distinctively wheel-turned base sherd, both of Late Iron Age or possibly Early Roman date. 60g of pottery representing two vessels in organic tempered ware is likely to be of Saxon date (John Cotter *pers. comm.*). These came from contexts 1647 and 1740.

B.6.6 The most common fabric group incorporates flint in a range of grades and assortments. This represents 41% by count (47% by weight) of the total. Sandy wares make up 29% (37% weight) of the total, but 47 sherds (0.416kg) belong to a single vessel, the Beaker from context 1287. This was a distinctive fabric that also included ferrous pellets. A clay incorporating small weathered lumps of chalk or fine limestone accounts for 20% by (all body) sherd count but only 7% by weight and represents only five vessels, and so the profile of this fabric is actually fairly low. Grog-tempered fabrics are also uncommon - three sherds/0.03kg, of which two are Early Bronze Age in character, the other Late Iron Age/Early Roman. The single shell-tempered (now vesicular) sherd (8g) is the wheel-turned sherd described above.

Recommendations

B.6.7 It is recommended that further work is carried out on the assemblage and a concise publication report is completed. Seven vessels should be drawn (Table 22).

ctx	SF	form	fabric	rim	body	base	No	wt	date	ill
1044		base	fine F sand		1	1	2	26	EEIA-EIA	
1044			med F		1		1	2	EEIA-EIA	
1060			med F		1		1	8	EEIA-EIA	
1072			fine F		1		1	3	EEIA-EIA	
1072		necked jar/bowl	med F	2	5		7	13	MIA-LIA	
1072			v coarse F		1		1	34	LBA-EEIA	
1086			v fine F		1		1	9	EEIA	y
1230			med F		1		1	12	EEIA-EIA	
1236			med F		1		1	10	EEIA-EIA	
1250			med F		1		1	16	IA	
1259		ovoid jar	fine F glauconitic clay	1			1	16	MIA	y
1259			fine F sand		1		1	11	MIA-LIA	
1260			med F		1		1	8	EEIA-EIA	
1260			med F coarse sand		1		1	12	EIA-LIA	
1272			med F		3		3	29	EEIA-EIA	
1287			fine F		2		2	1	Preh	
1287	1465	Beaker	sand and fe pellets		47		47	416	Neo-EBA	y
1296			med F		1		1	5	EEIA-EIA	
1333			coarse F		2		2	10	EEIA	
1343			fine F sand		1		1	4	MIA-LIA?	
1370			fine F		1		1	6	EEIA-MIA	
1380			fine F sand		1		1	8	IA	
1395			sand and organic		1		1	4	EEIA-MIA	
1413			med F		1		1	6	EEIA-MIA	
1417			v fine F		1		1	6	IA	
1455		small bowl neck	med F		1		1	3	EEIA-EIA	
1482			med F		1		1	7	EEIA-EIA	
1499		jar	med F		2		2	55	MBA-EIA	
1552		carinated body	med F		1		1	7	EEIA-EIA	
1560			med F sand		1		1	8	IA	
1560			v fine F		1		1	5	EEIA-EIA	
1577			fine F		1		1	4	EEIA-EIA	
1586			fine F		1		1	4	IA	
1618			med F		1		1	9	EEIA-MIA	
1620			med F		2		2	11	EEIA-MIA	
1630			med F		1		1	11	EEIA-EIA	
1637			v fine F		1		1	11	EIA-LIA	
1647		bowl	fine sand and ?grog		1		1	6	LIA-Ero	y
1647			grog nd shell			1	1	8	LIA-Ero	
1647			grog and organic		10		10	54	Saxon ?	
1656		Food Vessel? Or Neo	coarse F		1		1	11	Neo-EBA	y
1664			coarse F		2		2	10	EEIA-EIA	
1664		base	med F			1	1	21	EEIA-EIA	
1691			med F sand		1		1	9	EEIA-EIA	
1716			med F		1		1	4	EEIA-EIA	

1740			grog		1		1	10	LNEO-EBA	
1740			sand and organic		2		2	6	Saxon ?	
1947			fine F (rare)		1		1	19	EEIA	
1947			med F		1		1	6	IA	
1971			med F		1		1	1	IA	
1973			weathered chalk/limestone		1		1	1	MBA-EIA	
1976			fine F		1		1	5	EEIA-EIA	
1976			med F		1		1	2	EEIA-EIA	
2023		Beaker pot?	grog		1		1	14	LNEO-EBA	
2023		carinated body	med F		1		1	4	EEIA-EIA	
2039			weathered chalk/limestone		1		1	1	MBA-EIA	
2136		carinated body	v fine F		1		1	3	EEIA-EIA	
2139			fine F course sand		1		1	8	IA	
2143		bowl	fine F		1		1	5	EEIA	y
2143			fine F		1		1	10	EEIA	y
2181			med F		1		1	12	EEIA-MIA	
2189			med F		1		1	11	IA	
2260		jar	weathered chalk/limestone		10		10	27	MBA-EIA	
2295			medium sand		1		1	7	IA	
2326			v fine F		1		1	2	EEIA-EIA	
2342			coarse F		1		1	5	EEIA-EIA	
2342		bead-rim?	fine F sand	1			1	4	MIA	
2357			weathered chalk/limestone		22		22	48	MBA-EIA	
2357			weathered chalk/limestone		1		1	4	MBA-EIA	
2359			med F		2		2	1	EEIA-EIA	

Table 22: *Prehistoric pottery*

B.7 Romano-British Pottery

By Alice Lyons

Summary

This is a large, well-recorded, group of Romano-British pottery recovered primarily from pits, but also ditches and dark earth layers, within a previously archaeologically unexplored Roman small town at Wixoe, just within Suffolk.

The pottery assemblage consists mostly utilitarian coarse wares (from several local and regional sources) although a significant amount of imported and traded specialist wares are also present. Early Roman pottery is scarce as the majority of the assemblage belongs to the Middle Roman period, but continues (on a lesser scale) into latest Roman times.

Wixoe was located in a busy Romano-British landscape, almost exactly half way between the Roman capital at Colchester and the town at Great Chesterford. It seems the population at Wixoe received goods mainly through these two trading centres, as many of the pots were made in Cambridgeshire and its hinterland; while others were probably distributed through Colchester. Analysis of this ceramic group has the potential to increase current understanding of how pottery was made, traded, used and

deposited within a Roman small town; reflecting how the town, its culture and economy, developed.

Introduction

B.7.1 A total of 544.547kg of Romano-British pottery was recovered during the excavation at Wixoe (Table 23). Although pottery spanning the whole of the Romano-British period was identified, the majority (*c*. 61%) was assigned to Middle Roman deposits (Phase 3). A small amount of Roman pottery is residual in post-Roman deposits.

B.7.2 The pottery has survived in fairly good condition and (where measured) the average sherd weight (ASW) is 22g. The original surfaces of many vessels have survived with decorative motifs, soot and lime-scale deposits intact. Analysis of burnt residues is recognised as an area of potential research (Sealey 2007, 59–60). It is possible suitable deposits may be identified during analysis of these vessels.

Phase	Date Range	Sherd Weight (g)	Sherd Weight (%)
1	Late Neolithic/Early Bronze Age to Early Iron Age	0	0.00
2	Early Roman (mid 1st to early/middle 2nd)	71656	13.16
3	Middle Roman (mid 2nd-late 3rd)	333895	61.32
4	Late Roman (late 3rd - early 5th)	128548	23.60
5	Post Roman	424	0.08
0 or blank	(yet to be assigned)	10024	1.84
Total		**544547**	**100.00**

Table 23: *The Romano-British pottery assemblage, quantified by weight and listed by phase*

B.7.3 The vast majority of the assemblage has been retrieved from pits (*c*. 77%), with a significant amount also found in ditches, dark earth and other layers (Table 24).

Feature Type	Sherd Weight (g)	Sherd Weight (%)
Pit/?pit	421242	77.36
Ditch	58606	10.76
Black earth/?dark earth	31528	5.79
Layer	12827	2.36
As yet unassigned	7081	1.30
Cobbled surface	4338	0.80
Post hole	2769	0.51
Well	1791	0.33
Beam slot/?beam slot	1491	0.27
?Hearth	1197	0.22
Dog burial	801	0.15
Subsoil	229	0.04
Human burial/grave	208	0.04
Unstratified	193	0.04
Pit or post hole	161	0.03
Tree bole	72	0.00
Floor	13	0.00
Grand Total	**544547**	**100.00**

Table 24: *The different features at Wixoe that contain pottery, listed in descending order of weight*

Methodology

B.7.4 The assemblage was assessed in accordance with the guidelines laid down by the Study Group for Roman Pottery (Webster 1976; Darling 2004; Willis 2004). The total assemblage was studied and a preliminary catalogue was prepared (in archive).

B.7.5 The majority of the sherds were scanned rapidly (Table 25) and divided into broad fabric groups (or families) defined on the basis of inclusion types present. The fragments were weighed but no count or estimated vessel equivalent (EVE) measurements were taken at this time. Only the samian was consistently counted and weighed at this stage. Due to this method of assessment the only quantification available for comparison is weight, therefore, all percentages are also of weight.

Type of assessment	Sherd Count	Sherd Weight (kg)	EVE	Sherd Weight (%)
Rapid scan	-	489.312	-	89.86
Full catalogue	2480	55.235	38.12	10.14
Total	**Not calculated**	**544.547**	**Not calculated**	**100.00**

Table 25: *How the pottery assemblage was assessed*

B.7.6 In addition to the rapid scan a sample of the pottery assemblage (*c*. 10%) was catalogued in more detail (Table 25), with a full fabric identification, sherd count, weight and EVE measurements taken.

B.7.7 Reference is made where possible to published fabric descriptions, primarily those that appear in the Chelmsford typology (Going 1987), the Great Chesterford publication (Martin 2011), also the National Roman Fabric Reference Collection (NRFRC: Tomber and Dore 1998). The fabric codes are descriptive and abbreviated by the main letters of the title (Sandy grey ware = SGW). Vessel form was recorded (for example: jar, bowl, storage jar). Decoration and abrasion were also noted.

The Assemblage

B.7.8 Within this report the pottery is assessed by Area (Table 26) and then by phase.

Area	Sherd Weight (g)	Sherd Weight (%)
1	386853	71.04
1a	5864	1.08
2	138468	25.43
0 (Unstratified)	13362	2.45
Total	**544547**	**100.00**

Table 26: *The Romano-British pottery listed by area*

Area 1

B.7.9 The majority of Romano-British pottery (*c*. 71%), constituting 386.853kg, was recovered from Area 1 deposits at Wixoe. Of this material 22.926kg (*c*. 6%) has been fully catalogued and 363.927kg (*c*. 94%) has been rapidly scanned.

B.7.10 The vast majority of this material (*c*. 85%) was recovered from pits, although a significant amount was also found in 'black earth' and other layers (Table 27).

Feature	Sherd weight (g)	Sherd Weight (%)
Pit/?pit	330462	85.42

Black earth	20116	5.20
Layer	12102	3.13
Ditch	9461	2.44
Unstratified	6911	1.79
Cobbled surface	3499	0.90
?Hearth	1197	0.31
Post hole	1169	0.30
Beam slot	1108	0.29
Dog burial	801	0.21
Pit or post hole	27	0.01
Total	**386853**	**100.00**

Table 27: *Area 1; the Romano-British pottery (quantified by weight), listed by feature type*

B.7.11 Within Area 1 pottery has been found in features spanning the whole Romano-British period, although pottery is most common during the Middle Roman period (Phase 3; Table 28).

Area 1		
Phase	**Sherd weight (g)**	**Sherd Weight (%)**
0 (unphased)	3065	0.79
1	0	0.00
2	64965	16.79
3	213526	55.20
4	105297	27.22
5	0	0.00
Total	**386853**	**100.00**

Table 28: *Area 1; the Romano-British pottery (quantified by weight), listed by phase*

Phase 1: Bronze Age to Early Iron Age

B.7.12 No intrusive Roman pottery was recovered in prehistoric levels in Area 1.

Phase 2: Early Roman (mid 1st to early/middle 2nd)

B.7.13 Romano-British pottery, weighing 64.965kg, was recovered from Area 1 deposits assigned to Phase 2. This represents *c*. 17% of all the Romano-British pottery recovered from Area 1 at Wixoe.

B.7.14 *Characterisation:*

* Utilitarian proto sandy grey ware jar/bowl forms including cordoned jars (Thompson 1982, 139-144, B3-1) and carinated bowls or cups (*ibid*, 349-410, E1 and E2) were common.

* A small amount of supplementary unsourced sandy oxidised (flagon/beaker) material was also found.

* Thick grog tempered ware storage jar sherds were common products at this time. Where these fabrics were produced is not known although they have been identified previously at Chelmsford (Going 1987, 9, no 44) where they were particularly common in the Early Roman era.

* Several DR20 globular olive oil amphora fragments, from Southern Spain (Tyers 1996, 87-88), were also found. These were imported into Roman Britain between the

Late Iron Age and 3rd centuries AD, although most reached this region during the 2nd century.

* Fine wares were generally scarce although distinctive red glossy Gaulish samian tableware (Tyers 1996, 105-114) was found in significant quantities (59 sherds, weighing 0.933kg).

* Three features were identified as containing significant ceramic assemblages: pit (**1265**) (10.206kg), pit (**1381**) (5.902kg), pit (**1414**) (39.420kg).

Phase 3: Middle Roman (mid 2nd-late 3rd)

B.7.15 Romano-British pottery weighing 213.526kg, was recovered from Area 1 deposits assigned to Phase 3. This represents *c*. 55% of all the Romano-British pottery recovered from Area 1 at Wixoe.

B.7.16 <u>*Characterisation:*</u>

* Most of the assemblage consists of utilitarian sandy grey ware rolled rim jars (many of which have been used as cooking pots and kettles) and straight-sided dishes with triangular rims. Many (of both jars and dishes) are decorated with cross-hatch burnished decoration and are heavily influenced by the Black Burnished Ware 2 (BB2) industry (Tyers 1996, 186-7). The sources of this pottery are not known but may include several local potteries or some from other regional production centres. For a comprehensive discussion of BB2 pottery from the Essex/Kent region which reached East Anglia, see Darling with Gurney 1993, 207-8.

* Sandy oxidised wares are also found, commonly as flagons, bowls and beakers; mortarium or large distinctive mixing bowls with a gritty interior (Tyers 1996, 116-134) have also been introduced by this time. Although where most of this material is produced is unknown, at least some of the flagons and mortarium were made at Verulamium (St. Albans) (Tyers 1996, 199-201). This was an industry that flourished between the mid 1st and the end of the 2nd century AD.

* Thick grog-tempered storage jar sherds are still common and DR20 globular olive olive amphora fragments are also still found. In addition storage jars fragments from the Cambridgeshire production centre at Horningsea (Evans 1991; Evans and Macaulay in prep) are also recorded. It is worth noting that all of these large storage vessels may have been brought to Wixoe because of what they contained, rather than for the intrinsic usefulness of the vessel.

* Fine wares, although still poorly represented are commonly found in the form of domestically produced roughcast globular beakers with cornice rims. These wares were probably produced at Colchester (Going 1987, 3, fabric 1; Tomber and Dore 1998, 132), although Pakenham in Suffolk (Tomber and Dore 1998, 182) is another possible source of production for the coarser examples - they are certainly being produced nearby and are not of the Nene Valley A small amount of distinctive black-slipped glossy imported fine ware beakers (often folded) were also identified from Trier, in the Mosel Valley (Tyers 1996, 138-9); this ware was imported into Britain between 180 and 250 AD. While the red glossy Gaulish samian tablewares (Tyers 1996, 105-113) were retrieved at their most prolific levels at Wixoe (431 sherds, weighing 6613g) – it represents *c*. 3% of this group.

* This area and phase is characterised by pottery-rich pits; those with the largest ceramic assemblages are: (**1055**) (9.134kg), (**1088**) (6.135kg), (**1101**) (8.468kg), (**1197**) (9.362kg), (**1214**) (15.519kg), (**1216**) (6.378kg), (**1234**) (10.248kg), (**1271**) (24.397kg),

(**1273**) (9.335kg), (**1290**) (11.280kg), (**1327**) (9.263kg), (**1367**) (6.788kg), (**1369**) (5.739kg), (**1564**) (13.023kg), (**1604**) (8.313kg), (**2122**) (5.048kg).

Phase 4: Late Roman (late 3rd-early 5th)

B.7.17 Romano-British pottery weighing 105.297kg was recovered from Area 1 deposits assigned to Phase 4. This represents *c*. 27% of all the Romano-British pottery recovered from Area 1 at Wixoe.

B.7.18 <u>*Characterisation:*</u>

* The majority of the assemblage consists of utilitarian sandy grey ware jar/bowl forms (with rolled and everted rims); thick-walled dishes (both straight-sided and flanged) are also common. This material is still consistent with BB2 derived industry (Tyers 1996, 186-7), and was probably produced at a variety of local and regional sources.

* A small number of shell-tempered reduced ware jars (often utilised as cooking pots) are also found. Late Roman shell tempered wares are a common component of East Anglian and South Midland assemblages. At the present time the only large production centre has been identified at Harrold in Bedfordshire (Brown 1994), but other sources in Cambridgeshire and Kent are also likely (Tyers 1996, 192-193).

* Some sandy oxidised wares (mostly flagons) and some bead and flange mortarium are also found. Although it is not known where these products were made, several regional sources are known including Verulamium (Tyers 1996, 199-201), Colchester (*ibid*, 119-120) and the Nene Valley (*ibid*, 127-9). It is also possible that many of these products were made at the same location as the locally produced (but unsourced) sandy grey wares.

* Fine wares are still scarce but a small number of imported black glossy Trier beaker sherds were found (Tyers 1996, 138-9). Nene Valley colour coated material (*ibid*, 173-5) is better represented, particularly folded beakers with barbotine decoration. Late (chunky) Nene Valley colour coated material (mostly dishes and jars) were also recorded (Perrin 1999, 92). Gaulish red glossy samian tablewares were found in relatively large quantities (202 sherds, weighing 1.961kg), although importation declined after the late 2nd century and ceased by the mid 3rd AD (Tyers 1996, 105-114) so much of this material must have been quite old (residual or heirloom) at the time of deposition.

* Late Roman red wares jar/bowls were a common aspect of this phase. Two main types were recorded including Oxfordshire red ware (Young 1977, Tyers 1996, 175-8; Going 1987, 3, fabric 3; Tomber and Dore 1998, 176). Oxfordshire red ware does not occur in Essex prior to the second half of the 4th century, and perhaps does not become significant until *c*. AD 400 and after (Martin 2011, 304-8). Found in greater numbers were the Hadham red wares (Tyers 1996, 168-9; Going 1987, 3, fabric 4; Tomber and Dore 1998, 151); this fabric was known to reach the region from the later 3rd century until the early 5th century AD. This pattern of supply has also been noted at Great Chesterford (Martin 2011, 304-8).

* The unsourced thick grog-tempered storage jars (Going 1987, 9, fabric 43) are still present but in lesser numbers, some chips of southern Spanish globular olive oil amphora (Tyers 1996, 88) were also found. It is probable that both these pottery types are largely residual in the later Roman period.

* This area and phase has fewer pottery-rich features but most large pottery groups are still found mostly in pits: pit (**1064**) (10.511kg), pit (**1071**) (6.950kg), pit (**1083**) (8.559kg), pit (**1125**) (11.774kg), pit (**1275**) (5.103kg), ditch (**1617**) (7.782kg).

Phase 5: Post Roman

B.7.19 No Romano-British pottery was recovered from Area 1 and only a very small quantity from Area 2, Phase 5 deposits.

Area 1a

B.7.20 A relatively small amount of Romano-British pottery (*c*. 1%), constituting 5.864kg, was recovered from Area 1a deposits at Wixoe. Of this material 1.383kg (*c*. 24%) has been fully catalogued and 4.481kg (*c*. 76%) has been rapidly scanned. The vast majority of this material (*c*. 99%) was recovered from ditches (Table 29).

Feature	Sherd weight (g)	Sherd Weight (%)
Ditch/?ditch	5792	98.77
Tree bole	72	1.23
Total	**5864**	**100.00**

Table 29: *Area 1; the Romano-British pottery (quantified by weight), listed by feature type*

B.7.21 Within Area 1a pottery has been found in Phase 2 and Phase 4 features only (Table 30).

Area 1a		
Phase	**Sherd weight (g)**	**Sherd Weight (%)**
0 (unphased)	0	0.00
1	0	0.00
2	931	15.88
3	0	0.00
4	4933	84.12
5	0	0.00
Total	**5864**	**100.00**

Table 30: *Area 1a; the Romano-British pottery (quantified by weight), listed by phase*

Phase 1: Bronze Age to Early Iron Age

B.7.22 No intrusive Roman pottery was recovered in prehistoric levels in Area 1a.

Phase 2: Early Roman (mid 1st to early/middle 2nd)

B.7.23 Romano-British pottery weighing 931g was recovered from Area 1a Phase 2 deposits. This pottery was typified by Early Roman large grog tempered storage jar fabrics (Going 1987, 9, fabric 44) and was entirely recovered from a single ditch (**1628**).

Phase 3: Middle Roman (mid 2nd-late 3rd)

B.7.24 No Romano-British pottery was recovered from Phase 3 deposits in Area 1a.

Phase 4: Late Roman (late 3rd - early 5th)

B.7.25 Romano-British pottery weighing 4.933kg was recovered from Area 1a Phase 4 deposits.

B.7.26 *Characterisation:*

* The majority of the assemblage consists of utilitarian sandy grey ware jar sherds (with rolled and underscored rims); dishes (both triangular rimmed and straight-sided) are also common. This material is generally typical of the BB2-type material commonly in use within the region (Tyers 1996, 186-188).

* A very small number of shell tempered jar (used as cooking pots) were also recorded. As discussed earlier within this report, late Roman shell tempered material forms a common component of East Anglian and South Midland assemblages and was known to be produced at Harrold, Bedfordshire (Brown 1994), although other sources cannot be discounted (Tyers 1996, 192-3).

* Some sandy oxidised wares (mostly flagons), some with a distinctive white slip, were also noted. Where these products were made is not known, but Late Roman production of similar wares is known in the Lower Nene Valley (Perrin 1999, 108).

* Fine wares are relatively scarce although Nene Valley colour-coated beakers (folded and with barbotine scale) were found (Tyers 1996, 173-5), as were distinctive late Roman Nene Valley colour coated thick-walled dishes (Perrin 1999, 87-88). Gaulish samian tablewares were found in relatively large quantities (55 sherds, weighing 406g), although importation declined after the late 2nd century and ceased by the mid 3rd AD so this material was quite old at the time of deposition (Tyers 1996, 105-114).

* No late Roman red wares were recorded in this area of Wixoe.

* Early Roman thick grog-tempered storage jars (Going 1987, 9, fabric 43) are still present but in lesser numbers than in the earlier phase. No other amphora or storage jar types were noted.

* This area and phase is dominated by two (relatively small) ditch assemblages: ditch (**1645**) (1.981kg) and ditch (**1698**) (2.860kg).

Phase 5: Post Roman

B.7.27 No Romano-British pottery was recovered from Phase 5 deposits in Area 1a.

Area 2

B.7.28 The second largest group of pottery at Wixoe was that recovered from Area 2; it weighed a total of 124.851kg and represents *c*. 23% of the total site assemblage. Of this material 16.871kg (*c*. 13.5%) has been fully catalogued and 107.980kg (*c*. 86.5%) has been rapidly scanned.

B.7.29 The majority of this material (*c*. 61%) was recovered from pits, although a substantial amount (*c*. 35%) was also recovered from ditches, with lesser amounts from other features (Table 31).

Feature	Sherd weight (g)	Sherd Weight (%)
Pit	89748	64.81
Ditch	43353	31.31
Well	1791	1.29
Post hole	1600	1.16
Cobbled surface	839	0.61
Beam slot/?beam slot	383	0.28
Subsoil	229	0.17

Grave/human burial	208	0.16
Unstraitifed	170	0.13
Pit or post hole	134	0.10
Floor	13	0.01
Total	**138468**	**100.00**

Table 31: *Area 2; the Romano-British pottery (quantified by weight), listed by feature type*

B.7.30 Within Area 2 pottery has been found in features spanning the whole Romano-British period, although pottery is most common during the Middle Roman period (Phase 3; Table 32).

Area 2		
Phase	**Sherd weight (g)**	**Sherd Weight (%)**
0 (unphased)	466	0.34
1	0	0.00
2	5760	4.16
3	120213	86.82
4	11605	8.38
5	424	0.31
Total	**124851**	**100.00**

Table 32: *Area 2; the Romano-British pottery (quantified by weight), listed by phase*

Phase 1: Bronze Age to Early Iron Age

B.7.31 No intrusive Roman pottery was recovered in prehistoric levels in Area 2.

Phase 2: Early Roman (mid 1st to early/middle 2nd)

B.7.32 Romano-British pottery, weighing 5.760kg, was recovered from Area 2 deposits assigned to Phase 2. This represents *c*. 5% of all the Romano-British pottery recovered from Area 2 at Wixoe.

B.7.33 *Characterisation:*

* Utilitarian proto sandy grey ware jar/bowl forms including cordoned jars (Thompson 1982, 139-144, B3-1) and carinated bowls or cups (*ibid*, 349-410, E1 and E2) were common. Poppy headed beakers were also found; this type of vessel (decorated with vertical panels of raised dots) was inspired by Rhenish potters and was produced in Britain from the late 1st century and into the 2nd (Tyers 1996, 65). Dishes with triangular rims were noted which is a form inspired by the BB2 industry and not common until the mid 2nd century AD (Tyers 1996 186-187, fig. 232, IVH1).

* A small amount of supplementary oxidised (flagon/beaker) material was also found, some of which originated from the Verulamium (St. Albans) production centre (Tyers 1996, 199-201). Mortarium mixing bowls (Tyers 1996, 116- 134) were in use at this time and a 'bead and flange' (*ibid*, 119, fig 110 1-5) design was preferred.

* Thick grog tempered ware storage jar sherds were common (Going 1987, 9, fabric 43) and several DR20 globular olive oil amphora from Southern Spain were also found (Tyers 1996, 87-88). A small amount of Horningsea (Evans 1991; Evans and Macaulay in prep) storage jar material was also recorded. As noted above, it may the original contents of these vessels that brought this material to Wixoe.

* Fine wares were generally scarce; Gaulish samian (Tyers 1996, 105-114) was found but only in very small quantities (18 sherds, weighing 233g). Samian was not imported into Britain's main towns and cities until the Claudian (41-54AD) period, however, it did not consistently reach rural areas until the later part of the 1st century AD.

* Only pits, ditches and post holes were recorded as containing pottery in Area 2, Phase 2 deposits. Most features contained small groups only. Four features contained noticeably larger (although still relatively small) amounts of pottery: pit [1649] (525g), pit (**1746**) (552g), ditch (**1774**) (560g), pit (**1970**) (689g). These amounts are small when compared to Phase 2 features in Area 1.

Phase 3: Middle Roman (mid 2nd-late 3rd)

B.7.34 Romano-British pottery weighing 106.596kg was recovered from Area 2 deposits assigned to Phase 3. This represents *c*. 85% of all the Romano-British pottery recovered from Area 2 at Wixoe.

B.7.35 <u>*Characterisation:*</u>

* Most of the assemblage consists of utilitarian sandy grey ware rolled underscored rim jars (many of which have been used as cooking pots and kettles) and straight-sided dishes, some with triangular rims. Many (of both jars and dishes) are decorated with cross-hatch burnished decoration and are heavily influenced by the BB2 industry (Tyers 1996, 186-7). The sources of this pottery are not known but may include several local potteries (Darling with Gurney 1993, 207-8).

* An unsourced, but probably locally produced, black surfaced red ware fabric, commonly used to produce jar/bowl forms, was also fairly common at this time.

* A small amount of shell tempered ware jar/cooking pot material was also found. This material is fairly common in late Roman assemblages in the South Midlands and East Anglia and was known to have been produced at Harrold, in Bedfordshire (Brown 1994), although other sources cannot be discounted (Tyers 1996, 77-79).

* White sandy oxidised wares are also found, commonly as flagons, although mortarium (mixing bowls) have also been introduced by this time. Although where most of this material is produced is unknown, at least some of the earlier flagons and mortarium were made at Verulamium (St. Albans) (Tyers 1996, 199-201). A sandy red ware fabric was also used to produce flagons and jars, some of which were covered in a white slip, presumably to make them look more like the white sandy oxidised ware which were more in fashion at this time.

* Thick grog-tempered storage jar sherds (Going 1997, 9, fabric 43), many with incised decoration on the shoulder, are still common and DR20 globular olive oil amphora fragments (Tyers 1996, 87-8) are also found. In addition storage jars fragments from the Cambridgeshire production centre at Horningsea (Evans 1991; Evans and Macaulay in prep) are also found.

* Fine wares, although still poorly represented are commonly found in the form of domestically produced roughcast globular beakers with cornice rims. These wares were probably produced at Colchester (Going 1987, 3, fabric 1; Tomber and Dore 1998, 132), although Pakenham in Suffolk (Tomber and Dore 1998, 182) is another possible source of production for the coarser examples. A Nene Valley colour coated (Tyers 1996, 173-175) funnel necked beaker (Perrin 1999, 95, fig. 61, no 165-167), dating from the late 2nd to 3rd century AD, was also found. Central Gaulish samian tablewares (Tyers 1996, 105-113) were also recorded in significant quantities (135 sherds, weighing 1255g).

* This area and phase is characterised by numerous pottery-rich pits, ditches and a layer. Three features contain exceptionally large pottery assemblages: pit (**1966**) (24.364kg), ditch (**1980**) (17.704kg) and layer (1670) (12.312kg).

Phase 4: Late Roman (late 3rd-early 5th)

B.7.36 Romano-British pottery weighing 11.605kg was recovered from Area 2 deposits assigned to Phase 4. This represent *c*. 9% of all the Romano-British pottery recovered from Area 2 at Wixoe.

B.7.37 *Characterisation:*

* Most of the assemblage consists of utilitarian sandy grey ware rolled and everted rim jars (many of which have been used as cooking pots and kettles) and straight-sided dishes, some with triangular rims. Many (of both jars and dishes) are decorated with cross-hatch burnished decoration and are heavily influenced by the BB2 industry. The sources of this pottery are not known but may include several local potteries (Tyers 1996, 186-7; Darling with Gurney 1993, 207-8).

* An unsourced, but locally produced, black surfaced red ware fabric, commonly used to produce jar/bowl forms, was also fairly common at this time.

* Some sandy oxidised wares (mostly flagons) were recorded. Two mortarium forms (bead and flange, also wall-sided) were in use, both of which are consistent with manufacture at Colchester (Tyers 1996, 119, fig 110).

* Thick grog-tempered storage jars (Going 1987, 9, fabric 43) are still present but in lesser numbers, some chips of southern Spanish amphora (Tyers 1996, 87-88) were also found. It is probable that both these pottery types are largely residual in the late Roman period. A small amount of Horningsea storage jar (Evans 1991; Evans and Macaulay in prep) material was also found.

* Fine wares are still scarce but a small number Nene Valley colour coated beaker fragments (some rouletted) were noted (Tyers 1996, 173-5, fig 174, no 33-34). Gaulish samian tablewares (Tyers 1996, 105-114) were found in small quantities (25 sherds, weighing 294g), as importation declined after the late 2nd century and ceased by the mid 3rd AD this material is almost certainly residual.

* It is noteworthy that no Late Roman red wares jar/bowls were identified.

* The majority of pottery in this area and phase was recovered from pits, four of which contained notably sizable assemblages: pit (**1206**) (2.652kg), pit (**2267**) (2.236kg), pit (**1908**) (2.097kg), pit (**2292**) (2.031kg).

Phase 5: Post Roman

B.7.38 A small amount of residual Romano-British pottery (424g; *c*. 0.3%) was recovered from post-Roman deposits in Area 2. This material consisted of sandy grey ware jar/bowl sherds, thick grog-tempered storage jar fragments and a single sherd of Gaulish samian.

Overview and Statement of potential

B.7.39 This is a large, well-recorded, group of Romano-British pottery recovered primarily from pits, but also ditches and dark earth layers, within a previously archaeologically unexplored Roman small town at Wixoe, in Suffolk.

B.7.40 The pottery assemblage consists mostly of indigenous produced utilitarian coarse ware jar/bowls and storage jars (from several local and regional sources) although a

significant amount of imported and traded specialist wares are also present. Early Roman pottery is scarce as the majority of the assemblage belongs to the Middle Roman period, but continues (on a lesser scale) into latest Roman times (Table 33).

	Unphased	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total
Area 1	0.79	0.00	16.79	55.20	27.22	0.00	100.00
Area 1a	0.00	0.00	15.88	0.00	84.12	0.00	100.00
Area 2	0.37	0.00	4.61	85.38	9.30	0.34	100.00

Table 33: *The chronological distribution of Romano-British pottery (listed by weight %) by area*

B.7.41 Wixoe was located in a busy Romano-British landscape, almost exactly halfway between the Roman (*Colonia*) at Colchester and the significant town at Great Chesterford. It seems the population at Wixoe received goods mainly through these two trading centres, as many of the pots were made in Cambridgeshire and its hinterland, with others coming from (possibly) north Kent, Oxfordshire, Hertfordshire, Bedfordshire and the Roman continent - wares which were perhaps distributed from the major trading centre at Colchester.

B.7.42 Analysis of this ceramic group has the potential to increase current understanding of how pottery was made, traded, used and deposited within a Roman small town; reflecting how the town, its culture and economy, developed (Going 1997; Brown *et al* 2000).

B.7.43 Specifically the Study Group for Roman pottery (Martin and Wallace 2002) has identified several areas of research that this assemblage could significantly contribute to:

1. Pottery assemblages from Essex generally have been under published and any good stratified assemblages (such as the pit groups found at Wixoe) may help to address present and future research aims. Understanding the BB2 industry is a case in point, it would appear that Wixoe was a major consumer of this pottery type and detailed analysis could potentially contribute to understanding how this industry developed. When detailed fabric analysis has been undertaken, if there are distinctive groups it will be worth thin sectioning. Having carried out significant numbers of thin sectioning as part of my Masters degree, experience and attempts by other researchers, have shown that sourcing from East Anglia is difficult unless there are differences *e.g.* having some groups with Greensand inclusions. Suitable groups will be selected for thin section analysis.

2. Importantly the relationship between Late Roman and Early Saxon has been identified as a major gap in our ceramic knowledge (Martin and Wallace 2002, 2.1.6). As the pottery at Wixoe appears to continue seamlessly until the very latest Roman times, this assemblage may help to clarify what a ‘latest Roman’ assemblage in north Essex/S Suffolk looked like (Martin and Wallace 2002).

3. It may also be worth considering what influence the Iron Age tribal system had (if any) on the Romano-British use of pottery. Although in the territory of the Trinovantes, Wixoe borders the tribal lands of the Catuvellauni (to the west) and the Iceni (to the north). As Wixoe appears to have a Cambridgeshire/Essex ceramic supply base, does

this reflect ancient tribal links or the new Romano-British infrastructure? Analysis may help to define any cultural or economic regions (Martin and Wallace 2002, 2.1.7 and 2.1.13).

Recommendations for future work and associated method statement

B.7.44 **Task 1**: The detailed pottery catalogue needs to be completed to allow for accurate statistical analysis and interpretation to take place. This will be done in accordance with the guidelines laid down by the Study Group for Roman Pottery (Webster 1976; Darling 2004; Willis 2004). These sherds will be examined using a hand lens (x20 magnification) and will be divided into fabric groups defined on the basis of inclusion types present. The sherds will be counted and weighed to the nearest whole gram. Evidence for use, decoration and abrasion will also be noted. Reference will be made (where possible) to published fabric descriptions, primarily those that appear in the Chelmsford typology (Going 1987), Colchester pottery (Symonds and Wade 1999), the Great Chesterford publication (Martin 2011), also the National Roman Fabric Reference Collection (Tomber and Dore 1998).

B.7.45 **Task 2**: Where detailed fabric descriptions will be beneficial to understanding the source of the clay and methods of manufacture samples suitable for thin section analysis will be taken e.g. BB2 derivative wares. It is recommended that five pottery samples from each of the five main visually identified fabrics will be selected for thin section analysis. From each sample a thin-section slide will be prepared followed the methodology outlined in Gribble and Hall (1992, 32-34) and microscopically examined, allowing the components of the clay body and its inclusions to be identified.

B.7.46 **Task 3**: Relevant sherds will be selected for illustration; priority will be given to material that has not been published elsewhere.

B.7.47 **Tasks 4, 5 and 6**: When all the preliminary analysis of the pottery fabrics and forms have been completed further analysis of the pottery within the context of the site will take place. The pottery will be analysed by phase, by feature group and placed in its local, regional and national significance established.

B.7.48 **Task 7**: An archive report will be written presenting the results of this work, which will be a useful interpretative tool for the Project Officer and will also be suitable for publication in an edited format.

B.7.49 **Task 8**: The publication report will be edited with queries or changes undertaken by the author. The illustrations will also be checked at this time.

The Samian

B.7.50 A large collection of samian comprising 952 sherds, weighing 12.12kg was recovered from the excavations. This represents 2.23% of the entire assemblage. Detailed analysis and comparisons with other samian assemblages will be carried out at publication stage.

B.7.51 The material consists of 37 stamps or part stamps, 131 sherds with decoration, 12 sherds with signs of repairs. In addition one sherd had been painted (1380), two had probably been reworked (1661 and 1853) and one had grafitti (1823) (Tables 34 and 35). The samian was mostly found within Area 1 although a significant quantity was also recovered from Area 2.

Area	Sherd Count	Weight (kg)	ASW (g)
1	703	956.7	13.61
1a	55	0.406	7.38
2	187	2.037	10.89
Unstratified	7	0.111	
	952	12.121	12.73

Table 34: *Samian by area*

B.7.52 The Samian Catalogue

Cont	Cut	Area	No	Sherd Weight	Description of samian with sherd count and weight (g)
1002		1	2	44	1 stamp sherd SF 1252 (39); 1 decoration SF 1251 (5)
1004	layer	1	6	28	6 (28)
1007	layer	1	1	2	1 (2)
1011	layer	1	3	46	2 (12g); 1 stamp base SF 1164 (34)
1014	layer	1	4	21	4 (21)
1015	layer	1	22	58	22 (58)
1019	layer	1	3	21	3 (21)
1021	layer	1	1	13	1(13)
1022	layer	1	1	2	1 stamp SF 1091 (2)
1024	layer	1	2	9	2 (9)
1026	layer	1	3	19	3 including 1 mortarium (19)
1027	layer	1	1	5	1 (5)
1028	layer	1	4	20	4 (20)
1029	layer	1	1	33	1 decorated SF 1137 (33)
1030	layer	1	1	3	1 (3) decorated
1032	layer	1	2	9	2(9)
1035	layer	1	3	17	3(17g)
1036	layer	1	1	20	1 stamp SF 1908 (20)
1037	1083	1	10	135	6(55); 1 stamp SF 1158 (17); 1 decorated SF 1240 (16); 1 decorated SF 1241 (4); 1 decorated SF 1160 (43)
1038	1039	1	2	6	2(6)
1041	1040	1	1	4	1 (4g)
1042	1040	1	1	40	1 decorated SF 1155 (40)
1044	1045	1	6	49	6(49);
1046	1047	1	8	40	7 (34); 1 decorated SF 1909 (6)
1048	1049	1	9	71	5(14); 1 decorated SF 1206 (45); 3 sherds from ?vessel decorated SF 1207 (12)
1050	1125	1	6	47	6(47)
1053	1045	1	1	6	1 decorated SF 1196 (6)
1054	1045	1	2	7	2 (7)
1056	1055	1	39	562	19 (181g); 1 repair hole SF 1538 (15); 1 decorated SF 1429 (148); 1 decoration SF 1272 (7); 4 sherds from 1 vessel? decorated SF 1302 (34); 4 sherds SF 1173 (40); 1 decorated + repair hole SF 1176 (13); 2 decorated sherds SF 1301 (12); 1 deocorated SF 1172 (14); 1 decorated SF 1174 (16); 2 decorated + repair holes SF 1322 (50); 1 decorated SF 1175 (15); 1 decorated SF 1326 (27)

Cont	Cut	Area	No	Sherd Weight	Description of samian with sherd count and weight (g)
1057	1055	1	5	32	4(24); 1 decorated SF 1327 (8)
1060	1059	1	5	130	3(57); 1 stamp base SF 1214 (49); 1 decorated SF 1213 (24)
1061	1079	1	12	253	11 (235); 1 stamp SF 1185 (18)
1062	1064	1	11	80	11 (80)
1063	1064	1	7	24	5(10); 1 repair hole SF 1230 (9); 1 decoration SF 1250 (5)
1068	1070	1	1	9	1(9)
1069	1070	1	2	21	2(21)
1072	1071	1	2	20	2(20)
1073	1071	1	20	172	19 (169); 1 stamp sherd SF 2103 (3)
1077	1078	1	1	2	1 (2)
1080	1081	1	9	71	9 (71)
1085	1125	1	3	35	3 (35)
1086	1088	1	4	62	2 (5); 1 decorated SF 1368 (35); 1 decorated (burnt) SF 1369 (22)
1091	1079	1	3	18	3 (18)
1092	1079	1	3	98	2 (27); 1 stamp SF 1356 (71)
1096	1094	1	9	92	7 (75); 1 decorated SF 1254 (9); 1 decorated SF 2100 (8)
1100	1094	1	2	13	2 (13)
1102	1101	1	1	54	1 stamp SF 1995 (54)
1103	1337	1	5	14	5 (14)
1105	1106	1	4	54	4 (54)
1109	1101	1	1	21	1 (21)
1110	1101	1	2	76	2 (76)
1112	1113	2	2	26	2 (26)
1120	1059	1	1	11	1 (11)
1122	1121	2	1	3	1 (3)
1126	1101	1	2	29	2 (29)
1127	1101	1	3	39	3 (39)
1129	1337	1	1	3	1 (3)
1131	1071	1	10	71	9 (62); 1 decorated SF 1311 (9)
1138	subsoil	2	4	214	3 (192); 1 decorated SF 1249 (22)
1142	layer	1	3	19	3 (19)
1144	layer	1	1	42	1 stamp SF 1004(42)
1145	layer	1	1	15	1 (15)
1146	layer	1	2	8	2 (8)
1148	layer	1	2	12	2 (12g)
1150	layer	1	2	36	(2 (36)
1152	layer	1	2	23	2 (23g)
1153	layer	1	2	14	2 (14g)
1154	layer	1	1	9	1 (9)
1157	layer	1	4	27	4 (27)
1163	1125	1	2	12	2 (12)
1169	1101	1	1	31	1 (31)
1175	1178	2	2	49	2 (49)
1177	1178	2	3	45	2 (38); 1 stamp base SF 2012 (7)
1185	1088	1	1	98	half samian vessel decorated SF 1266 (98)
1192	1191	2	1	1	1 (1)

Cont	Cut	Area	No	Sherd Weight	Description of samian with sherd count and weight (g)
1194	1178	2	3	81	3 (81)
1198	1197	1	11	277	4 (32); 1 decorated SF1340 (85); 5 sherds from a bowl (decoration) SF 1341 (96); 1 decorated SF 1342 (64)
1200	1088	1	2	14	1 (8); 1 decorated SF 1367 (6)
1205	1206	2	2	29	2 (29)
1220	1221	1	3	133	1 (27); 1 stamp SF 1317 (70); 1 decorated SF 1318 (36)
1222	1071	1	2	39	1(15); 1 sherd SF 1332 decorated (24)
1223	1088	1	1	5	1 (5)
1225	1216	1	5	119	5 (119)
1229	1329	1	5	31	4(18); 1 decorated SF 2104 (13)
1230 = 1317	1216	1	2	24	2(24)
1235	1234	1	8	61	4(24); 1 decorated SF 1986 (23); 3 decorated SF 1992 (14)
1236	1197	1	4	48	3(20); 1 decorated SF 1363 (28)
1237	1071	1	3	16	2 (2); 1 stamp SF 1391 (14)
1239	1238	1	4	37	4 (37)
1240	1214	1	33	666	26 (414); 1 stamp base SF 1405 (17); 1 stamp base SF 1501 (8); 1 decorated sherd SF 1402 (135); 1 decorated SF 1404 (24); 1 decorated SF 1403 (40); 1 decorated SF 1500 (10); 1 decorated + repair hole SF 1499 (18)
1241	1238	1	2	13	2 (13)
1244	1245	1	7	48	7(48)
1247	Ugh		1	10	1 (10)
1255	1245	1	4	22	4 (22)
1256	1245	1	1	75	1 decorated SF 1430 (75)
1259	1265	1	6	158	2 (7); 1 sherd SF1411 decoration and lead rivet (64); 1 decorated SF 1471 (5); 2 decorated SF 1472 (82)
1262	1261	1	1	13	1 (13)
1270	1271	1	6	41	5(28); 1 decorated samian (13)
1272	1271	1	19	311	9 (153); 5 sherds from ?1 vessel one with stamp SF 1890 (50); 1 decorated sherd SF 1458 (23); 1 decorated SF 1457 (7); 1 decorated SF 1460 (43); 2 decorated SF 1455 (35)
1274	1273	1	11	76	10 (63); 1 decorated sherd SF 1428 (13)
1276	1275	1	1	21	1(21)
1277	layer	1	1	6	1 decorated SF 2095 (6)
1283	1130	1	1	13	1(13)
1286	1273	1	1	11	1(11)
1291	1290	1	16	199	11 (117); 2 decorated SF 1497 (29); 3 decorated SF 1498 (53)
1293	1290	1	1	13	1 (13g)
1296	1071	1	1	2	1 (2)
1303	1271	1	14	373	11 (164); 2 sherds from stamp base SF 1479 (166); 1 decorated SF 1481 (43)
1315	1238	1	1	2	1(2)
1328	1327	1	6	298	2(18); Three conjoining sherds-decorated SF 1524 (274); 1 decorated SF 1531 (6)
1332	1325	1	5	21	4(18); 1 decorated SF 2105 (3)
1339	1130	1	1	3	1(3)
1341	1130	1	4	48	4 (48)
1343	layer		6	29	6 (29)
1344	1345	1	5	21	3 (18); 2 decorated SF 1496 (3)
1348	1238	1	1	18	1 (18)
1349	1238	1	1	5	1 (5g)

Cont	Cut	Area	No	Sherd Weight	Description of samian with sherd count and weight (g)
1352	1238	1	1	20	1(20)
1354	1353	1	1	5	1(5)
1356	1355	1	2	11	1(3); 1 decorated SF 1508 (8)
1359	layer		2	15	2(15)
1363	1214	1	2	136	2 (136)
1364	1320	1	4	143	1 stamp SF 2004 (7); 2 joining decorated sherds (125); 1 decorated sherd SF 2001 (11)
1368	1367	1	10	137	2(24); 2 stamp base SF 2097 (35); 1 decorated SF 1566 (5); 2 decorated SF 1565 (58); 1 decorated SF 2099 (5); 2 decorated SF 2098 (10)
1370	1369	1	11	156	10 (109); 1 stamped base SF 1578 (47)
1375	1367	1	1	1	1(1)
1377	1378	1	1	3	1(3)
1380	1381	1	20	271	17(179); 1 stamp SF 1621 (62); 1 painted SF 1551 (14); 1 decorated SF 1619 (16)
1392	1391	1	1	30	1 decorated SF 2006 (30)
1413	1617	1	5	80	4 (30); 1 stamp SF 1617 (50)
1414	1414	1	1	33	1 (33)
1415	1414	1	15	326	12 (177); 1 decorated SF 1685 (86); 1 repair (pb) SF 1626 (59); 1 decorated + repair hole SF 1627 (4)
1436	1423	1	1	9	1 decorated SF 1631 (9)
1446	1445	1	9	127	9 (127)
1457	1456	1	1	4	1 (4)
1472	1472	1	1	34	1 decorated SF 1459 (34)
1482	1483	1	1	18	1 (18)
1549	1551	1	5	335	3 (25); 2 sherds SF1646 one third of a curle 15 vess (310)
1552	1554	1	1	2	1 (2)
1560	layer	1	1	3	1 (3)
1563	1562	1	6	30	5 (27); 1 decorated SF 1914 (3)
1565	1564	1	2	24	1 decorated SF 1655 (15); 1 decorated SF 2022 (9)
1570	1554	1	3	23	3(23)
1571	1551	1	7	88	7 (88)
1574	1575	1	1	4	1 (4)
1581	1580	1	2	18	2(18)
1586	1564	1	5	30	5 (30)
1587	layer	1	5	77	3 (25); 1 sherd stamped base SF 1661 (20); 1 decoration SF 1662 (32)
1598	1369	1	4	87	2 (13); 1 decorated SF 1978 (29); 1 decorated SF 1993 (45)
1602	1602	1	3	170	SF 1660 three conjoining sherds stamp on base (170)
1603	1564	1	3	42	2 (17); 1 decorated SF 1772 (25)
1613	1604	1	2	16	2(16)
1614	1604	1	2	34	2 (34)
1618	1619	1	1	2	1(2)
1636	1637	1	1	40	1 stamp SF 1677 (40)
1643	1604	1	3	9	2 (4); 1 decorated SF 1922 (5)
1656	1646	1a	1	4	1 (4)
1657	1645	1a	2	5	1 (1); 1 decorated (4)
1659	1645	1a	7	82	7 (82) incl stamp
1660	1645	1a	1	18	1 (18)
1661	1645	1a	1	63	1 (63) Samian base re-worked?
1663	1653	2	1	53	1 (53)
1670	layer	2	17	294	13 (176); 1 repair hole SF 1700 (20); 1 decorated SF 1699 (7); 1 decorated SF 1713 (31);

Cont	Cut	Area	No	Sherd Weight	Description of samian with sherd count and weight (g)
					2 repair SF 1121 (60)
1675	1562	1	1	2	1 (2g)
1681	1739	2	4	64	3 (19); 1 stamp SF 1750 (45)
1682		2	6	40	5 (27); 1 decorated SF 1719 (13)
1683	1680	2	2	6	2 (6)
1691	1690	2	1	21	1 (21)
1702	1701	2	1	7	1 (7)
1704	1704	2	1	1	1(1)
1708	1710	2	3	4	3 (4)
1715	layer	2	2	3	2 (3)
1719	1698	1a	40	228	40 sherds from 2 vessels incl stamp SF 1771 (228)
1720	1698	1a	1	1	1 (1)
1723	1698	1a	2	5	2(5)
1727	1726	2	1	6	1(6)
1733	1732	2	2	15	1 (6); 1 decorated SF 1740 (9)
1734	1732	2	1	4	1 (4)
1738	1739	2	3	7	3 (7)
1744	1746	2	1	1	1(1)
1763	1762	2	1	9	1 (9)
1802	1801	2	2	75	2 (75) Mortara
1804	1803	2	1	9	1(9)
1823	1822	2	3	18	1(7); 2 sherds one with graffiti SF 1795 (11)
1853	1853	2	1	26	1?worked samian SF1853 (26)
1892	1890	2	3	27	3 (27)
1900	1899	2	3	15	3 (15)
1905	1904	2	1	12	1 decorated SF 1804 (12)
1909	1908	2	1	42	1(42)
1910	1908	2	2	48	1(2); 1 stamp SF 2101 (46)
1911	1908	2	6	26	5(20); 1 decorated SF 2096 (6)
1918	1921	1	2	15	2 (15)
1919	1921	1	8	53	6 (14); 2 sherds from stamp base SF 1810 (39)
1926	1930	2	5	32	3(17); 2 decorated SF 1812 (15)
1936	1933	2	1	4	1 (4)
1937	1933	2	4	21	2 (12); 2 sherds one with stamp SF 1542 (9)
1943	1942	1	3	49	2 (21); 1 decorated SF 1850 (28)
1947	1980	2	6	25	6(25)
1953	1954	2	2	25	1 (25)
1965	1964	2	4	10	4 (10)
1967	1966	2	8	125	1 (11); 7 sherds - near complete vessel including stamp SF 1868 (114)
1973	1970	2	2	27	1 (20); 1 decorated SF 1827 (7)
1977	1974	2	7	10	7 (10)
1979	1980	2	2	11	2 (11)
1984	1983	1	2	30	2 (30)
1991	1994	2	5	30	4(23); 1 decorated SF 1991 (7)
2004	2003	2	1	1	1 (1)
2006	2005	2	2	42	2 (42)

Cont	Cut	Area	No	Sherd Weight	Description of samian with sherd count and weight (g)
2009	2007	2	1	25	1 (25)
2030	2029	2	2	12	2 (12)
2047	2048	2	1	2	1 (2)
2054	2056	2	1	1	1 (1)
2095	2094	2	1	2	1 (2)
2099	2101	2	1	18	1 (18)
2112	2111	1	5	42	3 (35); 2 decorated (7)
2114	2113	1	3	31	3(31)
2123	2122	1	12	103	11 (85); 1 decorated SF 1851 (18)
2124	2122	1	3	57	3(57)
2130	2129	1	1	4	1 (4)
2132	2131	1	2	6	2(6)
2182	layer	1	2	6	2 (6)
2183	1345	1	4	13	4 (13)
2197	2195	2	2	3	1 (2); 1 part stamp SF 1865 (1)
2230	2326	2	2	11	2 (11)
2231	2231	1	1	4	1 (4)
2265	2267	2	2	17	1(10); 1 stamp SF 1959 (7)
2269	2268	2	1	1	1(1)
2286	2285	2	2	4	2(4)
2293	2292	2	1	64	1(64)
2295	2292	2	3	10	3 (10)
2302	2303	2	4	81	2(12); 1 stamp SF 1881 (43); 1 decorated SF 1924 (26)
2309	2308	2	1	6	1(6)
2311	2308	2	1	13	1 decorated SF 1931 (13)
2331	2308	2	1	5	1(5)
2348	2347	2	1	8	1(8)
2377	2379	2	4	20	4 (20)
2380	2381	2	1	2	1 (2)
2386	2387	2	1	19	1(19)
2404	2403	2	7	18	7 (18)
2407	2406	2	3	35	3 decorated SF 1953 (35)
2452	2453	2	3	11	3(11g)
2469	2467	2	2	4	2 (4)
2477	2473	2	1	1	1 (1)
2505		1	1	52	1 stamp base SF 1000 (52)
9999 9			7	111	2 (18); 2 sherds from stamp base SF 1796 (77); 1 decorated SF 1891 (10); 2 decorated SF 1815 (6)
			952	12.121	

Table 35: *The Samian catalogue*

B.8 Ceramic Building Material (CBM)

By Rob Atkins and Dan Stansbie

Introduction

B.8.1 A large assemblage of Ceramic Building Material (CBM) was recovered from the excavation with 3031 fragments weighing 373.151kg from 232 contexts (Table 36). The tile is fragmentary with an average weight per fragment of 0.123kg with no whole tiles or even the majority of a tile recovered. All the CBM found in the excavation was kept except that from the topsoil and subsoil. The vast majority of the contexts with CBM have been provisionally phased although 12 contexts containing CBM (5.2% of the total) are currently unphased.

Methodology

B.8.2 The CBM has been visually identified and divided into the main categories by type (box, brick, flat, imbrex and tegula) and fabric with a catalogue recorded by context (Table 41). In addition two possible tessera were recovered. The tile was examined for type identification, surface treatment, opus signinum (op sig), signatures (17 examples) and animal footprints (two), keying (one example on a box flue tile) and counting markings (one example).

Distribution

B.8.3 There was a marked bias where the tile was found with nearly three-quarters of the 232 contexts deriving from Area 1 and just over a fifth from Area 2 (Table 36). This contrast is even greater if looked at by number or weight of tiles with well over 90% of the tile by these factors found within Area 1. The average size of each of the tiles recovered was also greater within Area 1 at 0.126kg per fragment compared with 0.095kg per fragment from Area 2.

Area	No. of contexts and %	Fragment count and % of CBM	Weight CBM (kg) and % of weight	Average sherd weight (g)
1	171 (73.8%)	2824 (93.2%)	354.903 (95.1%)	125.7
1a	9 (3.9%)	45 (1.5%)	2.971 (0.8%)	66
2	51 (22%)	161 (5.3%)	15.256 (4.1%)	94.8
?	1 (0.3%)	1 (0%)	0.021 (0%)	21
Total	**232**	**3031**	**373.151**	**123.1**

Table 36: *CBM by area*

B.8.4 In Area 2, the 51 contexts had on average 3.16 CBM fragments in each compared with 16.5 CBM fragments in each of the Area 1 contexts. This sparsity of CBM from Area 2 is further magnified by the fact that Area 2 was a lot larger in size than Area 1. The relative lack of CBM from Areas 1a and 2 may suggest that within and near to the area of excavation there were probably few or even no buildings which originally contained CBM. In contrast the relatively large quantities of CBM from Area 1 suggests there had been buildings fitted with CBM in the proximity. The average size of the CBM sherds was larger in Area 1 for all phases with the exception of Phase 2, Area 2 fragments but this latter sample is not significant as only 13 fragments were recovered (Table 37).

Period

B.8.5 Differential deposition of CBM can also be analysed by period (Table 37). This shows that only small quantities of CBM were found in Early Roman (Phase 2) features with

moderate quantities recovered in Middle Roman (Phase 3) contexts and large amounts from the Late Roman period (Phase 4).

Phase	No. of contexts	Fragment count	Weight CBM (kg)
2	18 (7.8%)	77 (2.5%)	13.288 (3.6%)
3	106 (45.7%)	516 (17%)	74.575 (20%)
4	93 (40.1%)	2412 (79.6%)	276.933 (74.1%)
5	2 (0.9%)	3 (0.1%)	978 (0.3%)
0	12 (5.2%)	22 (0.7%)	7356 (2%)
uncert	1 (0.4%)	1	21
	232	**3031**	**373151**

Table 37: *CBM by phase*

B.8.6 The differences in CBM recovered by phase and area is further illustrated in Table 38.

Area	Phase	No. of Contexts	Fragment count	Weight CBM (g)	Average sherd weight (g))
1	2	11	62	11290	182.1
1	3	75	414	64457	155.7
1	4	76	2332	272073	116.7
1	0	9	16	7083	442.7
1a	2	1	2	178	89
1a	4	8	43	2793	65
2	2	6	13	1820	140
2	3	31	102	10118	99.2
2	4	9	37	2067	55.9
2	5	2	3	978	326
2	0	3	6	273	45.5
uncert ain		1	1	21	21
		232	**3031**	**373151**	**123.1**

Table 38: *CBM by area and phase*

Phase 2

B.8.7 There were only 18 Early Roman (Phase 2) contexts containing CBM and these comprised 77 fragments (Table 38). The 18 contexts were located across the excavation (Areas 1, 1a and 2; Table 38). Area 1 had nearly double the contexts containing CBM compared with Area 2 (11 and 6 respectively) and had five times as

many CBM fragments (62 and 13 respectively) although the sherd size from both were relatively close and above average for the site (182.1 and 140g per sherd).

B.8.8 The type of contexts containing CBM also varied with 11 contexts originating from pits, three from ditches, three from post holes and one from a layer. The three post holes (**1616**, **1999** and **2037**) were probably not part of building structures and all three were unrelated with two of the post holes being in Area 1 and one in Area 2. The type of CBM within the 18 contexts also varied, with most having flat tiles but there were a few contexts with imbrex, tegula and box tiles. Three Phase 2 contexts had box tile (1380 (Area 1), 2112 (Area 1) and 1647 (Area 2)) which seems to suggest that by the mid 2nd century there was at least one building in the town which had a hypocaust system. More than half of the Phase 2 CBM (by number and weight) was recovered from two contexts (1380 (21 fragments weighing 3.394kg) and 1415 (26 fragments weighing 4.3kg)), and these were fills of two separate pits within the middle of Area 1. All the remaining 16 contexts had only up to six CBM fragments and the CBM weight in these contexts ranged from 1g to 0.893kg.

Phase 3

B.8.9 In Phase 3 there were 106 contexts with CBM material which accounts for nearly half the contexts with CBM from the site, although the number of CBM (17%) and weight (20%) of the CBM fragments within this phase are far less than the Late Roman phase (Phase 4). The CBM largely originated in pits (84 of the contexts), 16 contexts were from ditches, five from post holes and one was a layer.

Area 1

B.8.10 There were 75 contexts containing 414 CBM fragments in Area 1 and these weighed 64.457kg at an average of 155.7g per sherd. This accounts for nearly 14% of the CBM from the site. The context with the most CBM by number and weight was 1291 (pit **1290**) with 34 fragments (5.267kg). There were just 10 contexts where CBM weighed more than 2kg and the top 12 contexts were fills of different pits within Area 1 (**1039**, **1214**, **1216**, **1271**, **1290**, **1345**, **1353**, **1445**, **1551**, **1564**, **1604** and **1921**. Three of the pits were within the eastern side of Area 1, with the majority being in the middle and just two on the western side. Therefore, although there was a slight concentration of material in one area of the site, the majority of these 12 contexts were backfilled with only relatively small quantities of CBM implying that the deposition was secondary. The tile from context 1240 (pit **1214**) was mostly heavily burnt post firing flat tile pieces and it is possible these tile pieces were involved in a fire or from an oven/kiln structure.

Area 2

B.8.11 Area 2 had 31 contexts containing CBM and these weighed less than a sixth of the weight of CBM from Area 1 at just 10.118kg; the sherd size was also more than 50% less at 99.2g per sherd (Table 38). Overall, Area 2 (Phase 3) accounts for just over 3% of the CBM found from on site. There was a spread of CBM in the 31 contexts with no concentrations of material with the highest number of CBM fragments was just eight (context 1173) and the greatest by weight was 1.39kg (1947).

Phase 4

B.8.12 In Phase 4 there were less contexts (93) containing CBM compared with Phase 3 but the overall number of CBM was far more at 2412 fragments (79.6% of the CBM from the site) and this weighed 276.933kg (Table 37). The sheer quantity of the material from

Area 1 implies this was more than a background scatter of material. When Phase 4 CBM is recorded by Area (1, 1a and 2) there is a clear contrast in the quantity recovered in the three locations.

Area 1

B.8.13 The Area 1, Phase 4 CBM material is the only location/time period where significant quantities of CBM was recovered at Wixoe. There were 76 contexts containing 2412 CBM fragments which weighed 276.933kg (Table 38). This is a fairly large quantity of material to be found in contexts with a date span of just over 100 years (late 3rd to latest Roman/early 5th century) from just one part of the site. To put the quantity into perspective this is just over three-quarters of the CBM from the whole site. If these Area 1 figures are compared with the other Phase 4 areas (1a and 2) this shows that the 76 contexts from Area 1 represent nearly 82% of the Phase 4 contexts which contained CBM. This percentage is even greater when the number and weight of the CBM is reviewed (96.7% and 98.2%).

B.8.14 To understand where this Area 1 CBM originated, the material has been calculated by feature/layer and sub-phase (Table 39). There are two Phase 4 sub-phases with the earliest presently represented only by features and the latest by layers dating to the end of the period. It is possible that a few of the features belong to the second sub-phase but this will be calculated at full report stage.

Feature	No. contexts	No. Fragments	Weight (kg)	Average sherd weight (kg)
Sub-phase 1				
Cobbled area/layer beneath 'black earth'	3	428	92.232	0.2155
Pits	26	337	42.466	0.126
Ditch	1	33	5.903	0.1789
Beam slot	1	12	1.131	0.0943
Post hole	2	3	0.132	0.044
	34	**814**	**142.111**	**0.1746**
Sub-phase 2				
'Black earth' near road (western end)	37	1419	118.309	0.0834
Layer (eastern end)	6	100	11.900	0.119
	42	1518	129.962	0.0856
Total	**76**	**2332**	**272.073**	**0.1167**

Table 39: *Area 1, Phase 4 CBM by feature type*

B.8.15 In sub-phase 1 just over one-third of the CBM from the area was recovered and these were found in 34 contexts although by weight it was 52% of the material. The average sherd size at 0.175kg was relatively large for the site. The majority of CBM from this sub-phase originated from the cobbled layer (1035/1516) and layer 1587 with 92.232kg of CBM; these contexts were located below the black earth later. It is noticeable that the average sherd weight per fragment at 0.216kg is relatively high. This cobbled layer contained a significant quantity of flat tile but no flue tile and it is therefore likely this material had been used to patch the cobbled surface. The 4th century date for this context was presumably contemporary with the beamslot and post hole building

(Building 7), mostly within the excavation area, directly to the west and existing stone buildings found adjacent to the east and west of the site at this location. The beamslot and post hole building was presumably relatively average in status compared with the nearby stone buildings and may not relate to the cobbled surface or be the structure from where the CBM originated. A small quantity of CBM was recovered from a beamslot section of this building (**1475**) and one of the post holes (**1488**) with a total of 14 fragments weighing 1.257kg, although the CBM included box flue tile. Clearly this CBM therefore originated elsewhere and did not relate to this particular building.

B.8.16 There were 13 pits containing CBM (26 contexts) and these were found across Area 1 in three concentrations (Table 40). The six eastern pits were all similar, probably former quarry pits with the exception of **1337** which was a probable industrial kiln reusing part of an earlier quarry pit. Four of these pits were fully excavated except **1125** and **1071** which were half excavated. These six pits contained moderate quantities of CBM except **1106** which had little and **1125** which had a large but relatively abraded collection. Collectively these pits had more than three-quarters of the CBM recovered from the 13 pits with 264 CBM fragments weighing 27.186kg. In the middle of the site, two adjacent pits (**1275** and **1313**) produced similar moderate quantities of CBM. In the western part of the site four adjacent similar small pits (**1416**, **1418**, **1456** and **1493**) all produced small quantities of CBM (between one and seven pieces) although a medium size pit (**1554**) some distance to the west produced a moderate collection.

Pit or kiln	contexts	No. of CBM	Weight of CBM	Pit size	Location
1064	1062+1063	33	3047	Very large	Eastern
1071	1072, 1073, 1222 +1237	34	2712	Very large	Eastern
1079	1061,1091 +1092	27	4701	Very large	Eastern
1106	1105	7	615	Very large	Eastern
1125	1050,1085 +1125	117	11277	Extremely large	Eastern
1337	1103 + 1129	46	4834	very large	Eastern
1275	1260,1275 +1276	25	4283	Medium-large	Middle
1313	1313 +1314	20	1252	Medium-large	Middle
1416	1417	2	3952	small	Western
1418	1419	2	351	small	Western
1456	1457	7	476	small	Western
1493	1496	1	45	small	Western
1554	1552 +1570	16	4921	medium	Western
		337	**42466**		

Table 40: *Phase 4, Area 1 pits and kiln*

Sub-Phase 2

B.8.17 The vast majority of the CBM was from the 'black earth' layer on the western side nearest the road. It should be noted that the 'black earth' layer was sampled by test pits. The sherd weight of the CBM from the black earth is relatively small at 83.3g per sherd and seems to imply that the material had been discarded as of little use possibly as

demolition rubble. This suggestion is supported by the fact the layer sealed the 4th century cobbled surface which probably related to the adjacent stone buildings (did they fall out of use at the same time?) and this early *c*.5th century + date is also suggested by Latest Roman pottery recovered in the layer. The large quantities of all types of CBM including flue also implies this layer dated to after the destruction of this building (s). The layer at the eastern end of Area 1 is roughly the same period (Latest Roman/early 5th century) and in contrast there were relatively few CBM fragments.

Area 1a

B.8.18 In the small area between Areas 1 and 2, there were 43 CBM fragments (2793g) recovered from eight contexts (Table 38). Seven of the contexts were backfill deposits within two sections through the former defensive town boundary ditch. The other context may have been related to this ditch. The date of this backfill is likely to have been latest 4th to early 5th century and the small sherd size (65g per fragment) presumably reflects the secondary nature of the deposits.

Area 2

B.8.19 In contrast to Area 1, there were just 37 CBM fragments (2067g) from only nine contexts (six separate features) within Area 2. This was just over 1% of the CBM of the site's CBM and the abraded nature of these few artefacts (55.9g per sherd) implies the material had probably been lying for some time in the soil, well away from its original position. The CBM came from a number of features comprising a fill of a grave (1395), a road surface (1704), two pits (**1950** and **2267**), three fills within well **2292** and two deposits from adjacent sections through the former defensive town boundary ditch. The vast majority of the CBM (25 fragments weighing 1712g) came from the well.

Phase 5

B.8.20 Just two post-Roman contexts contained CBM and these contexts were from a single ditch located in the middle of Area 2.

Discussion

B.8.21 The CBM was recovered mostly from two features, a cobbled surface in Phase 4, Area 1, and in the black earth sealing it. The tile probably does not relate directly to any building within the excavation area. Most of the CBM found within the site derives therefore from secondary depositing within features, especially in Area 1.

B.8.22 It is therefore extremely likely none of the buildings within Area 2 were roofed with this material and they were presumably constructed of wood or thatch.

B.8.23 The CBM can be compared to Hacheston Roman small town where similarly the CBM was within general secondary deposits (Caruth 2004b, 129). The exceptions at Hacheston were the Area I and II hearth deposits, feature F42 RU and tiles found in the layer near Building III may have been associated with it (*Ibid*, 129). The tile quantities found at Hacheston were slightly lower at 1203 pieces weighing 211.4kg although the average size at 0.176g per sherd was larger (*ibid*, 129-130).

Recommendations

B.8.24 The CBM has been catalogued and recorded and no further work is recommended on the assemblage apart from the two tiles with animal footprints which will be passed to the animal bone specialist for identification. For the proposed publication report, this report will be reduced in size.

Ctxt	Area	Phase	No	Wt.(g)	Fabric	Form	comments
1002	1	4	1	247	Sandy	Box	
1004	1	4	22	1064	Sandy; sandy and shell	Flat, box, tegula, unid	
1005	1	4	16	350	Sandy	Flat	
1006	1	4	8	490	Sandy	Flat, imbrex, unid	
1007	1	4	11	786	Sandy	Flat, imbrex, tegula	
1008	1	4	52	4886	Sandy	Flat, box, imbrex	
1009	1	4	8	26	Sandy	Flat, box, unid	
1010	1	4	6	535	Sandy	Flat	
1011	1	4	13	323	Sandy	Flat, unid	
1012	1	4	128	10872	Sandy	Flat, box, tegula, imbrex, unid	1 burnt
1013	1	4	124	9144	Sandy; sandy organic; sandy shell	Flat, box, imbrex, tegula	some box burnt
1014	1	4	15	503	Sandy	Flat, box, imbrex	op sig
1015	1	4	42	1172	Sandy	Flat, tegula	
1016	1	4	10	648	Sandy	Flat, tegula	
1017	1	4	5	853	Sandy	Flat, imbrex, tegula	
1018	1	4	10	809	Sandy; shell	Flat, imbrex, tegula, unid	
1019	1	4	4	38	Sandy	?Imbrex, unid	
1020	1	4	18	942	Sandy	Flat, tegula	
1021	1	4	7	429	Sandy	Flat	
1022	1	4	63	2994	Sandy	Flat, box	
1023	1	4	17	414	Sandy	Flat, imbrex, tegula	
1024	1	4	34	2027	Sandy; sandy/shell	Flat, box, tegula	keying in box
1025	1	4	11	328	Sandy; sandy/shell	Flat, tegula	
1026	1	4	71	4616	Sandy	Flat, tegula	
1027	1	4	13	1850	Sandy	Flat	
1028	1	4	4	1005	Sandy	Flat	
1029	1	4	96	7834	Sandy; sandy organic	Flat, box, tegula, unid	Some burnt; signature; paw print
1030	1	4	12	202	Sandy; sandy organic; sandy/shell	Flat, unid	
1031	1	4	52	5011	Sandy	Flat, tegula	Finger Signatures
1032	1	4	28	1423	Sandy	Flat, box, imbrex	
1034	1	4	15	519	Sandy	Flat	
1035	1	4	71	8090	Sandy	Flat, box, brick, tegula	Finger signature; 1 heavily burnt
1036	1	4	31	2517	Sandy; 1 yellow sandy	Flat, tegula	1 modern?
1037	1	3	15	675	Sandy	Flat, box, imbrex, tegula	
1038	1	3	3	3412	Sandy	Flat	
1041	1	3	1	44	Sandy	Flat	
1044	1	3	1	28	Sandy	Flat	
1046	1	3	3	149	Sandy	Flat	
1050	1	4	99	9664	Sandy	Flat, box, brick, imbrex, tegula	op sig; animal print
1054	1	3	1	173	Sandy; sandy organic	Tegula, unid	
1056	1	3	3	120	Sandy	Imbrex, unid	
1057	1	3	2	36	Sandy	Unid	
1058	1	3	3	399	Sandy	Flat	
1060	1	3	1	17	Sandy	Unid	

Ctxt	Area	Phase	No	Wt.(g)	Fabric	Form	comments
1061	1	4	5	1324	Sandy	Flat, tegula (including cutaway)	
1062	1	4	22	2293	Sandy	Flat, box, imbrex, tegula, unid	
1063	1	4	11	754	Sandy; sandy shelly	Flat, imbrex, tegula	
1070	1	3	1	121	Sandy		
1072	1	4	8	574	Sandy; sandy organic	Flat, unid	
1073	1	4	19	1561	Sandy	Flat, imbrex	some burnt
1080	1	3	5	584	Sandy	Flat	
1084	1	3	2	199	Sandy	Flat	
1085	1	4	16	1543	Sandy; sandy shell	Flat, box, imbrex	
1086	1	3	2	76	Sandy; sandy organic	Flat, tegula	
1089	1	3	1	30	Sandy		
1091	1	4	21	3264	Sandy; sandy organic	Flat, imbrex	Finger signature
1092	1	4	1	113	Sandy	Flat	
1096	1	3	2	321	Sandy	Flat	
1100	1	3	1	107	Sandy	Flat	
1102	1	3	6	552	Sandy	Flat, tegula	
1103	1	4	45	4593	Sandy; sandy organic	Flat, box, tegula, ?brick	op sig; 1 finger signature
1105	1	4	7	615	Sandy	Flat	
1120	1	3	1	203	Sandy	Imbrex	
1123	2	3	6	1031	Sandy	Flat	
1125	1	4	2	70	Sandy	Tegula, unid	
1126	1	3	2	236	Sandy	Flat, imbrex	
1129	1	4	1	241	Sandy	Flat	
1136	1	3	1	163	Sandy	Flat	
1140	1	4	15	3018	Sandy; sandy organic	Flat, tegula, unid	
1144	1	4	1	80	Sandy	Flat	
1148	1	4	36	4762	Sandy	Flat, box, imbrex, tegula	possible tessera (SF 1889); finger signature
1152	1	4	29	1992	Sandy; sandy and shell	Flat, imbrex, unid	
1153	1	4	18	2003	Sandy; sandy shell	Flat, box, imbrex	
1154	1	4	1	45	Sandy	Flat	
1171	2	3	8	604	Sandy	Flat	
1173	2	3	1	90	Sandy	Flat	
1177	2	3	1	56	Sandy	Flat	
1198	1	3	1	58	Sandy	Flat	
1199	1	3	3	48	Sandy	Flat, unid	
1200	1	3	3	86	Sandy	Flat	
1217	1	3	2	171	Sandy		
1220	1	3	3	226	Sandy	Flat, imbrex	
1222	1	4	1	12	Sandy	Unid	
1225	1	3	17	2548	Sandy	Flat, box, imbrex, tegula	
1228	1	3	1	98	Sandy	Flat	
1229	1	3	4	216	Sandy	Flat, box, ?imbrex	1 burnt
1239	1	3	1	335	Sandy	Flat	Burnt
1235	1	3	3	44	Sandy	Flat, ?tessera	
1236	1	3	1	975	Sandy	Flat	
1237	1	4	6	565	Sandy	Flat, imbrex, tegula	

Ctxt	Area	Phase	No	Wt.(g)	Fabric	Form	comments
1240	1	3	13	2553	Sandy	Flat	Most heavily burnt
1241	1	3	2	397	Sandy	Flat	
1244	1	3	1	117	Sandy	Tegula	
1255	1	3	5	297	Sandy	Flat, unid	
1259	1	2	1	414	Sandy	Flat, unid	SF 1416 finger signature
1260	1	4	14	3220	Sandy	Flat, box, imbrex, tegula	Keying; finger signature
1270	1	3	6	1224	Sandy	Flat	
1272	1	3	5	164	Sandy	Unid	
1274	1	3	9	1027	Sandy; sandy shell	Flat, box, unid	
1275	1	4	2	288	Sandy	Flat	
1276	1	4	9	775	Sandy	Flat, box	
1282	1	3	1	215	Sandy	Flat	
1283	1	3	1	100	Sandy	Box	
1286	1	3	3	176	Sandy	Flat, imbrex	
1291	1	3	34	5267	Sandy	Flat, imbrex, tegula	signiture mark on flat
1303	1	3	19	3554	Sandy	Flat, tegula	1 flat burnt; 1 sooted
1313	1	4	17	1216	Sandy; sandy shell	Flat	op sig
1314	1	4	3	36	Sandy	Unid	
1328	1	3	2	889	Sandy	Tegula	
1338	1	3	11	407	Sandy	Flat, unid	
1339	1	3	8	773	Sandy; sandy organic	Flat	
1340	1	3	3	139	Sandy	Flat	
1341	1	3	6	1218	Sandy	Flat, box	
1343	1	4	99	15501	Sandy; sandy organic; sandy chalk	Flat, box, imbrex, tegula	op sig on box
1344	1	3	14	3230	Sandy; sandy organic	Flat, box, tegula	
1352	1	3	1	151	Sandy		
1354	1	3	12	4042	Sandy	Flat, tegula	Signature mark on flat
1359	1	4	327	29969	Sandy; shell	Tegula, imbrex, flat, box	1 finger signature; some burnt; 1 possibly modern
1370	1	3	6	1315	Sandy	Flat, tegula	
1379	1	4	41	7344	Sandy	Flat, box, imbrex	1 burnt
1380	1	2	21	3394	Sandy; sandy shell; sandy organic	Flat, box, tegula	1 finger signature
1395	2	4	1	4	Sandy	Unid	
1398	1	3	1	130	Sandy	Flat	
1413	1	4	33	5903	Sandy; sandy organic	Flat, box, tegula	
1415	1	2	26	4300	Sandy; sandy shell	Flat	Some heavily burnt on one side
1417	1	4	2	3952	Sandy with shell	Flat	
1419	1	4	2	351	Sandy	Flat	
1433	1	0	2	159	Sandy	Flat	
1446	1	3	6	2042	Sandy	Flat, box	
1457	1	4	7	476	Sandy	Flat, box	
1475	1	4	12	1131	Sandy; sandy organic	Flat, box, tegula	
1488	1	4	2	126	Sandy	Flat	
1496	1	4	1	45	Sandy	Flat	
1503	1	0	4	1698	Sandy	Flat, tegula	
1516	1	4	332	78600	Sandy; sandy/shell	Flat, imbrex, tegula, Brick	1 flat with circular hole column; tile with op sig on one side; some burnt; notable absence of

Ctxt	Area	Phase	No	Wt.(g)	Fabric	Form	comments
							box flue tile
1517	1	4	1	6	Sandy	Unid	
1526	1	0	1	1581	Sandy	Flat	
1528	1	0	1	961	Sandy	Flat	
1539	1	0	2	177	Sandy	Flat, unid	
1543	1	0	1	124	Sandy	Flat	
1549	1	3	6	203	Sandy	Flat, box, unid	
1552	1	4	11	3340	Sandy	Flat, box	
1557	1	4	1	383	Sandy	Flat	
1558	1	4	4	255	Sandy	Flat, imbrex	Finger signature
1560	1	2	2	342	Sandy	Flat	
1563	1	3	1	40	Sandy	Unid	
1565	1	3	7	437	Sandy	Flat	
1568			1	21	Sandy shell	Flat	
1570	1	4	5	1581	Sandy	Flat, imbrex, tegula	
1571	1	3	11	5009	Sandy	Flat, box, imbrex, tegula	
1572	1	3	4	152	Sandy	Flat, ?tegula	
1574	1	2	4	1601	Sandy	Flat	
1577	1	3	5	382	Sandy	Flat	1 burnt
1579	1	3	21	1153	Sandy	Flat, imbrex	
1581	1	3	3	183	Sandy	Flat, imbrex	
1583	1	0	2	1716	Sandy; sandy shell	Flat	Flat with op sig; op sig uses crushed CBM
1586	1	3	7	1967	Sandy	Flat, tegula	Burnt
1587	1	4	25	5542	Sandy	Flat, brick, imbrex, unid	Several tiles have op sig; 1 tegula cut away. Brick op sig on both faces
1603	1	3	6	885	Sandy	Flat	
1605	1	3	3	955	Sandy	Tegula, imbrex	
1612	1	3	3	540	Sandy	Flat, imbrex	Some burnt
1613	1	3	6	735	Sandy	Flat, imbrex, tegula	
1614	1	3	9	1728	Sandy	Flat, tegula	3 burnt
1615	1	2	1	370	Sandy	Imbrex	
1618	1	2	1	313	Sandy	Tegula	
1627	1	0	1	18	Sandy	Unid	
1629	1a	2	2	178	Sandy	Flat, tegula	
1641	1	0	2	649	Sandy	Flat	
1647	2	2	1	44	Sandy	Box	
1656	1a	4	7	407	Sandy	Flat	
1658	1a	4	4	362	Sandy	Flat	
1659	1a	4	7	831	Sandy	Flat, ?tegula	Finger signature, counting markings down one side
1660	1a	4	2	360	Sandy	Flat, unid	
1663	2	3	2	26	Sandy	Box	
1670	2	3	8	436	Sandy	Flat, imbrex, tegula, unid	
1672	2	3	1	620	Sandy	Flat	
1682	2	3	3	227	Sandy	Flat, imbrex	
1684	2	0	1	112	Sandy	Unid	
1704	2	4	6	71	Sandy	Flat	

Ctxt	Area	Phase	No	Wt.(g)	Fabric	Form	comments
1708	2	3	1	615	Sandy	Flat	
1720	1a	4	5	204	Sandy	Imbrex, unid	
1721	1a	4	14	379	Sandy	Flat, unid	
1723	1a	4	1	37	Sandy	Flat	
1724	1a	4	3	213	Sandy	Flat	SF 1744
1729	2	3	1	12	Sandu	Unid	
1733	2	3	6	131	Sandy	Flat, unid	
1777	2	2	1	175	sandy	Flat	
1842	2	5	1	671	sandy	Brick	op sig
1900	2	3	4	200	sandy	Flat	
1918	1	3	21	4426	Sandy	Flat, box	op sig on box
1937	2	3	6	604	Sandy	Flat, tegula	
1947	2	3	3	1390	Sandy	Flat, tegula	
1949	2	4	1	218	Sandy	Flat	
1953	2	3	1	135	Sandy	Flat	
1965	2	3	5	517	Sandy	Flat, tegula	
1967	2	3	3	201	Sandy	Flat	
1973	2	2	6	292	Sandy	Flat, imbrex	
1975	2	3	1	54	Sandy	Flat	
1976	2	3	3	84	Sandy	Unid	
1982	1	3	1	1636	Sandy organic	Brick	op sig on body
1984	1	3	11	757	Sandy	Flat, box, tegula	
1988	2	3	2	72	Sandy	Flat	
1995	2	2	1	415	Sandy	Flat	
2000	2	2	1	1	Sandy shell	Unid	
2006	2	2	3	893	Sandy	Flat	
2012	2	3	1	96	sandy		
2038	1	2	1	1	sandy	Unid	
2060	2	3	1	361	sandy	Flat	
2065 or 2084	2	3	4	124	sandy	Flat, unid	
2090	2	3	3	52	sandy	Flat, imbrex	
2108	1	2	1	22	sandy	Flat	
2112	1	2	3	156	sandy	Flat, box, tegula	
2114	1	3	11	388	sandy	Flat	
2123	1	3	13	1004	Sandy	Flat, imbrex, tegula	op sig on flat
2133	1	2	1	377	Sandy	Tegula	op sig
2230	2	3	3	518	Sandy	Tegula	op sig
2249	2	3	2	200	Sandy	Flat, unid	
2265	2	4	1	10	Sandy	Unid	
2269	2	3	6	510	Sandy	Flat, inbrex	
2270	2	3	1	312	Sandy	Flat	
2293	2	4	1	208	Sandy	Unid	
2294	2	4	8	1149	Sandy	Flat, tegula	
2295	2	4	16	355	Sandy	Flat	
2312	2	5	2	307	Sandy	Flat, unid	
2329	2	3	1	300	Sandy	Flat	

Ctxt	Area	Phase	No	Wt.(g)	Fabric	Form	comments
2377	2	3	10	282	Sandy	Flat, ?tegula, unid	
2404	2	3	4	258	Sandy	Flat	
2458	2	4	1	23	Sandy	Unid	
2476	2	4	2	29	Sandy	Flat	
2494	2	0	2	153	Sandy	Flat	
2502	2	0	3	8	Sandy	Unid	
Total			3031	373151			

Table 41: *Catalogue of CBM*

B.9 Fired Clay

By Rob Atkins

Introduction

B.9.1 A moderate collection of fired clay was recovered from the excavation comprising 540 fragments of fired clay weighing 10.209kg from 99 contexts (Table 42).

Methodology

B.9.2 The fired clay was visually identified and divided by fabric with a catalogue recorded by context (Table 44). The main fired clay fabric is a grey to orangey pink sandy clay though occasionally up to red in colour with frequent small rounded chalk pieces having an average size of *c*.4mm as well as very rare small flint inclusions. Some of the chalk inclusions are up to 1cm in size, but a small number are larger, up to 25mm by 21mm in size. A few fired clay fragments are in an orange or orangey brown sandy fabric with rare chalk inclusions and occasional rare small flint inclusions.

B.9.3 The assemblage can be defined by various characteristics with 81 of the fragments having a smoothed side surviving, ten have rare straw/vegetation impressions and three had ?twig impressions.

Distribution

B.9.4 More than half the fired clay came from contexts in Area 1 with nearly 40% originating from Area 2 (Table 42). In contrast, by number there were more recovered from Area 2, although the Area 1 fragments are far larger forming well over 80% of the assemblage by weight.

Area	No. and % of contexts	No. and % of Fragments	Weight of fired clay and % of weight (kg)	Average fragment weight (g)
Area 1	56 (56.6%)	252 (46.7%)	8.415 (82.4%)	33.4
Area 1a	4 (4%)	11 (2%)	0.167 (1.6%)	15.2
Area 2	39 (39.4%)	277 (51.3%)	1.627 (15.9%)	5.9
	99	**540**	**10.209**	**18.9**

Table 42: *Fired clay by area*

Period

B.9.5 Differential deposition of fired clay was clearly different by period (Table 43). Only small quantities of fired clay were found in the Early Roman period (Phase 2) with nearly half of the fired clay originating from the Middle Roman (Phase 3) and just over 30% from the Late Roman period (Phase 4).

Phase	No. of contexts	No. of fired clay	Weight (g)
2	9 (11%)	97 (18%)	466 (4.6%)
3	54 (54.6%)	283 (52.4%)	5819 (57%)
4	33 (33.3%)	144 (26.7%)	3785 (37.1%)
0	3 (3%)	16 (3%)	139 (1.4%)
	99	**540**	**10209**

Table 43: *Fired clay by phase*

Phase 2

B.9.6 There were only nine Early Roman (Phase 2) contexts containing fired clay comprising 97 fragments (Table 43). In Area 1 there was only one context with fired clay (pit **1414)** and this had five fragments (56g). This context dates to the end of the phase (early to mid 2nd century). The lack of fired clay from Area 1 in this phase is surprising considering the number of features and quantities of other artefacts found here. Area 1a was represented also by one context which had a single fired clay piece. The remaining seven contexts were from Area 2 with the vast majority (68 fragments weighing 0.243kg) from context 1973 (pit **1970**).

Phase 3

B.9.7 In Phase 3 there were 54 contexts with over half the contexts with fired clay from the site, and this is reflected in the number of CBM (52.4%) and weight (57%) of the fired clay fragments (Table 43). In contrast to Phase 2, Area 1 had the majority of the fired clay with 112 fragments (4.739kg) recovered from 25 contexts - all pits. No large concentrations of material were found in the site with only two pits (**1088** and **1225**) containing more than 0.6kg of fired clay. The former had 16 fragments (1.31kg) of fired clay in three layers whereas the latter had seven fragments (1.052kg) within a single context. In Area 2 there were 171 fired clay fragments (1.080kg) from 29 contexts (17 pits, 7 ditches, 3 post holes, a well and a possible beam slot). None of the contexts had over 0.2kg of fired clay. The three post holes (**2056**, **2059** and **2061**) were adjacent from the same building but collectively this comprised just 20 tiny fragments (0.042kg).

Phase 4

B.9.8 In Phase 4 there were only 33 contexts containing fired clay comprising 144 fragments (3.78kg) (Table 43). The vast majority originated from Area 1 with 131 fragments (3.6kg) from 29 contexts. In sub-phase 1 there were 14 contexts (all from eight pits in the central and eastern area) with 77 fragments weighing 2.37kg. There were two pits with moderate quantities of fired clay (**1071** and **1125**) within the eastern side of the area. The former had 16 fragments (716g) from two deposits and the latter 42 fragments (1.126kg) from five contexts. In sub-phase 2 there were ten contexts from the black earth layer (31 fragments weighing 0.792kg) and five contexts were from the eastern layer (23 fragments weighing 0.439kg). In Area 1a there were 10 fragments (0.155kg)

from three contexts within two sections excavated through the town boundary ditch. Fired clay was found in a single context from Area 2 with just three fragments (0.024kg) within grave fill 1395. The lack of fired clay from Area 2 seems to be significant but the reasons are uncertain.

Discussion

B.9.9 The fired clay was all recovered as fragmentary secondary deposits. A significant quantity had smoothed surfaces but only a small minority impressions from wood. It is possible that most were fragments of domestic or industrial ovens with few representing wattle/daub. The lack of Phase 2 deposits with fired clay would therefore suggest that there may have been little domestic/industrial activity especially in Area 1 in this period. In contrast the majority originating in the Middle Roman period may suggest this was the period of most activity in this area of the town. The lack of fired clay in Phase 4, especially from Area 2, may signify a decline in settlement activities here.

Recommendations

B.9.10 The fired has been recorded and no further work is recommended on the assemblage. For the proposed publication this report will be reduced in size.

Ctxt	Cat	Area	Phase	No.	Wt.(g)	Comments
1004	Layer	1	4	1	46	
1006	Layer	1	4	7	66	One with a smoothed side
1010	Layer	1	4	1	40	
1013	Layer	1	4	3	60	One with a smooth side
1024	Layer	1	4	1	6	
1026	Layer	1	4	2	19	
1027	Layer	1	4	1	32	
1032	Layer	1	4	1	15	
1037	Pit	1	4	2	33	One with a smooth side
1044	Pit	1	3	3	11	
1050	Pit	1	4	5	218	Two with smoothed side
1060	Pit	1	3	3	22	One with a smoothed side
1061	Pit	1	4	1	88	Orange brown sandy fabric with rare small chalk inclusions
1062	Pit	1	4	3	64	One with a smoothed side
1068	Pit	1	3	1	6	Smoothed side
1071	Pit	1	4	1	4	
1072	Pit	1	4	11	391	2 have smoothed sides
1073	Pit	1	4	4	20	Orange brown sandy fabric with rare small chalk inclusions
1085	Pit	1	4	11	498	3 smooth sides and 1 ? twig impressionc.13mm in diameter
1086	Pit	1	3	3	107	Orange brown sandy fabric with rare small chalk inclusions
1103	Kiln	1	4	8	130	1 smooth side
1109	Pit	1	3	1	99	Orange brown sandy fabric with very rare small chalk inclusions
1131	Pit	1	4	10	269	Five have a smoothed side
1142	Layer	1	4	1	5	
1144	Layer	1	4	1	6	
1148	Layer	1	4	10	132	

Ctxt	Cat	Area	Phase	No.	Wt.(g)	Comments
1152	Layer	1	4	4	165	One with a smoothed side
1153	Layer	1	4	7	131	
1177	Ditch	1	3	1	25	Orange sandy fabric with frequent extremely small chalk and flint inclusions up to 1mm in length
1200	Pit	1	3	12	1104	Smoothed sides on Six. Mostly large pieces. 1 Straw impression.
1223	Pit	1	3	3	98	Two have a smoothed side
1225	Pit	1	3	7	1052	Six have a smoothed side. A few rare straw impressions on three
1229	Pit	1	3	5	539	Four have a smoothed side. One with rare straw impressions
1235	Pit	1	3	1	3	Orange sandy fabric
1237	Pit	1	4	16	442	Three with a smoothed side. One ?twig impression c.15mm diameter
1240	Pit	1	3	6	302	Three have a smoothed side. One (6g) in an orange brown sandy fabric with frequent very small chalk and flint inclusions
1241	Pit	1	3	3	53	2 with smooth sides
1260	Pit	1	4	2	2	
1276	Pit	1	4	2	213	One with a smoothed side
1282	Pit	1	3	2	32	Both have a smoothed side. One with a straw impression
1304	Pit	1	3	7+	82	Many crumbs
1328	Pit	1	3	7	87	
1343	Layer	1	4	11	263	Four have smoothed sides
1344	Pit	1	3	8 +	100	Many crumbs
1349	Pit	1	3	2	49	Both have a smoothed side, one (40g) also had a straw impression and was in an orange brown sandy fabric with rare small chalk inclusions.
1359	Layer	1	4	3	245	One with a smoothed side
1395	Grave	2	4	3	24	One with smoothed side
1415	Pit	1	2	5	56	Two burnt. They are in an orange sandy fabric. One has smoothed side
1446	Pit	1	3	7	435	Five have a smoothed side. One has straw impressions. One a ?twig impression c.14mm in diameter.
1539	?Hearth	1	0	4	14	
1586	Pit	1	3	7	123	One with smoothed side and this fragment has straw impressions
1603	Pit	1	3	13	269	Two with a smoothed side
1612	Pit	1	3	1	16	Smoothed side
1614	Pit	1	3	2	81	Both have smoothed side
1629	Ditch	1a	2	1	12	Has a smoothed side
1643	Pit	1	3	2	8	
1657	Ditch	1a	4	3	26	
1659	Ditch	1a	4	6	108	Four (31g) in an orange sandy fabric with rare mostly extremely small flint inclusions. Reduced interior
1668	Pit	2	3	15	97	Eleven (57g) in an orangey brown sandy fabric with extremely rare very small flint inclusions
1669	Pit	2	3	2	45	Orange sandy fabric with extremely small flint inclusions
1681	Pit	2	3	1	28	Orange brown sandy fabric with very small chalk inclusions
1689	Pit	2	3	1	24	

Ctxt	Cat	Area	Phase	No.	Wt.(g)	Comments
1691	Pit	2	3	6	34	One with a smoothed side
1723	Ditch	1a	4	1	21	Smoothed sided
1733	Pit	2	3	7	83	Three with smoothed sides
1734	Pit	2	3	3	25	
1772	Ditch	2	2	2	7	
1775	Ditch	2	2	1	2	
1806	Ditch	2	3	4	18	
1900	Pit	2	3	15	190	Two with a smooth side
1937	Pit	2	3	7	61	
1953	Ditch	2	3	1	16	Smooth side
1965	Pit	2	3	6	64	Two with a smooth side
1967	Pit	2	3	4	23	One with a smoothed side
1973	Pit	2	2	68	243	Largely comprising very small fragments
1976	Ditch	2	3	2	18	
1977	Ditch	2	3	29	88	Six (15g) in an orange sandy fabric with rare extremely small flint inclusions up to 1mm in length
2004	Ditch	2	0	10	87	
2009	Ditch	2	3	1	4	
2026	?Beam Slot	2	3	5	20	Orange sandy fabric with rare small flint inclusions
2028	Post hole	2	0	2	38	
2054	Post hole	2	3	16	5	Crumbs. The fabric is orange sandy burnt dark grey to black with some very small flint inclusions
2057	Post hole	2	3	2	21	The fabric is orange sandy burnt dark grey to black with some very small flint inclusions
2060	Post hole	2	3	2	16	
2099	Pit	2	3	11	67	One (8g) in an orange sandy fabric
2143	Pit	1	4	1	3	
2181	Pit	1	3	5	58	
2183	Pit	1	3	1	3	
2196	Pit	2	2	7	49	One with a smoothed side
2197	Pit	2	2	4	32	Two with smoothed sides
2198	Pit	2	2	2	18	One with a smoothed side
2249	Pit	2	3	2	5	
2250	Pit	2	3	17	11	Many crumbs in an orange sandy fabric - been burnt
2268	Pit	2	3	5	56	Four (48g) in an orange brown sandy fabric with extremely rare very small flint inclusions
2270	Pit	2	3	1	3	
2309	Well	2	3	1	6	
2404	Ditch	2	3	3	18	
2452	Pit	2	3	1	9	Orange sandy fabric with extremely rare small flint inclusions
2470	Ditch	2	2	7	47	
				540	**10209**	

Table 44: *Catalogue of fired clay*

B.10 Opus Signinum

By Rob Atkins

Introduction

B.10.1 A very small collection of 90 'lumps' of opus signinum weighing 2.926kg was found within 21 separate contexts from only Area 1 (Table 45).

Methodology

B.10.2 The cement was largely grey to orange pink with regular pieces of small crushed CBM and occasional small chalk and flint pieces. Three fragments were in a creamy to grey coloured fabric with frequent small flint inclusions.

Distribution

B.10.3 Ten opus signinum fragments were found within four Phase 3 contents (0.182kg). All the other fragments came from Phase 4 contexts (apart from an unphased pit). The majority of opus signinum came from sub-phase 2, the black earth layer, where 66 lumps weighing 2.101kg were recovered from 10 contexts.

Discussion

B.10.4 The distribution of the opus signinum further implies that cement had been used on buildings in the vicinity of the Area 1 excavations during the Middle and Late Roman phases. The lack of this material from Areas 1a and 1b further suggests this part of the town was less affluent.

Recommendations

B.10.5 The opus signinum has been recorded and no further work is recommended on the assemblage.

Context	Category	Area	Phase	No.	Wt.(g)	Comments
1006	Layer	1	4	2	9	
1008	Layer	1	4	1	23	
1011	Layer	1	4	2	95	
1012	Layer	1	4	16	570	
1013	Layer	1	4	2	38	
1014	Layer	1	4	3	59	
1018	Layer	1	4	5	211	
1026	Layer	1	4	6	197	
1027	Layer	1	4	4	159	
1031	Layer	1	4	16	502	
1103	Kiln	1	4	6	216	1 in a creme to grey colour fabric with frequent small flint inclusions.
1272	Pit	1	3	3	103	
1313	Pit	1	4	1	24	

1343	Layer	1	4	4	50	
1359	Layer	1	4	5	188	
1413	Ditch	1	4	1	26	
1543	Pit	1	0	2	266	
1587	Layer	1	4	4	111	
1603	Pit	1	3	2	29	creamy to grey colour fabric with frequent small flint inclusions.
1636	Pit	1	3	4	42	
1984	Post hole	1	3	1	8	
				90	2926	

Table 45: *Catalogue of Opus Signinum*

B.11 Wall Plaster

By Rob Atkins

B.11.1 There were just 10 pieces of wall plaster (0.07kg) from four contexts (1005, 1019, 1030 and 1276) all dating to Phase 4 and all from within Area 1. The first three contexts were test-pits excavated through the 'black earth' layer (sub-phase 2) and the latter was a pit **1275** located within the centre of the Area 1.

B.11.2 Context 1005 (SF 1074) contained a single piece (7g) of plaster with a pinky-red paint. Context 1019 also had a single piece (18g) comprising white plaster spread on opus signinum, collectively 14mm thick. There were two small fragments within context 1030 (SF 1129; 0.02kg). The fragments were also 14mm thick and consisted of opus signinum, with white plaster and yellow-brown paint. Six fragments (0.049kg) were recovered from pit **1275** with the largest measuring 39mm by 21mm in size. Fragments were 14mm thick and consisted of opus signinum, with white plaster and the pink-red paint.

Recommendations

B.11.3 The wall plaster fragments were deposited as secondary deposits and presumably originated from either the high status buildings adjacent to the north or south of the site. No further work is recommended on the assemblage.

B.12 Miscellaneous Small Finds Objects

By Chris Howard-Davis

Quantification

B.12.1 Three fragmentary objects were grouped together under this heading for convenience. All were fragmentary but otherwise in fair to good condition. Full descriptions can be found in the archive.

Methodology

B.12.2 Every fragment was examined, assigned a preliminary identification and, where possible, date range. An outline database was created, using Microsoft Access 2000 format, and the data recorded (context, small finds number, material, category, type, quantity, condition, completeness, maximum dimensions, outline identification, brief description, and broad date) serve as the basis for the comments below. The state of preservation (condition) was assessed on a broad four point system (namely poor, fair, good, excellent).

Date range and distribution

B.12.3 All three objects are of Roman date.

Evaluation

B.12.4 The three objects are discussed separately. A small fragment from a white pipeclay figurine of a ?ram came from Phase 4 kiln **1337** (fill 1103; SF1217), with the fleece represented by raised circles, as seen in the three examples recovered from a burial at Wraggs Farm, Arrington, Cambs (Taylor 1993, 199). It resembles them closely, and is thus most likely to be a product of the central Gaulish manufactories at Allier (Green 1993). Such figurines are often found in graves, especially those of children (a second such burial was found in Godmanchester (Taylor 1997)) and other burials containing such figurines are known in the region, for instance from Colchester. In general, these figurines were produced in the first two centuries AD.

B.12.5 Part of a plain turned shale bangle came from Phase 3 pit **1290** (fill 1291; SF 1540). These are a common find in Roman Britain, and cannot be dated with any particular precision.

B.12.6 The third object, from Phase 3 ditch **2324** (fill 2228=2325), remains enigmatic. It appears to be four oval pellets of poorly-fused blue frit, slumped together, presumably as a result of heating. No identification can be offered, but it is possible that they are associated with the production of blue frit melon beads.

Conservation

B.12.7 The finds are well packed and require no further conservation.

Potential

B.12.8 This small and disparate group of objects has very little potential for further analysis, and cannot contribute to any refinement of dating on the site. It will, however, contribute to understanding the nature of activity on the site during the Roman period.

Proposed further work

B.12.9 Archival catalogue entries should be completed, a brief illustrated report prepared for inclusion into any proposed publication, and some contribution be made to the incorporation of comment on the relevant classes of finds into the main stratigraphic test.

B.13 Stone Objects

By Ruth Shaffrey

Summary and Quantification

B.13.1 A total of over 500 pieces of stone was retained during the excavation, of which the vast majority are worn lava quern fragments. The assemblage also includes a variety of other objects, mostly tools (Table 46).

Methodology

B.13.2 The stone assessment is based on a very rapid scan of the assemblage. Recording was not carried at out this stage.

Description

B.13.3 The assemblage mainly comprises tools including three whetstones and up to 12 quern fragments (excluding the lava), of which at least one is a saddle quern. Other objects include marble possible inlay or wall veneer, a weight, rubbers and polished stones and some items of indeterminate function. Stone lithologies appear to be typical of the region with the assemblage dominated by Millstone Grit and Hertfordshire Puddingstone as well as the occasional stone that has probably made use of some glacial erratics. One piece of Puddingstone may be French in origin and a small piece of marble is certainly imported.

Ctx	SF	Descrip	Notes	Lithology	Illust	Phase	Area
1013	1086	Whetstone	NOT RECORDED	grey green micaceous sandstone	Poss	4	Area 1
1037	1181	Indeterminate	thin bit of limestone, poss natural NOT RECORDED similar to above, poss shell?		No	4	Area 1
1037		Indeterminate	thin bit of limestone, poss natural NOT RECORDED		No	4	Area 1
1062	2189	Whetstone	NOT RECORDED	grey green micaceous sandstone	Poss	4	Area 1
1103	1329	Whetstone	NOT RECORDED	grey green micaceous sandstone	Poss	4	Area 1
1127	1260	Rotary quern	NOT RECORDED	HPS (puddingstone)	Poss	3	Area 1
1129	1452	Possible quern fragment	NOT RECORDED	MG	No	4	Area 1
1215	2190	Saddle quern or processing slab	NOT RECORDED	fine grained sandstone	Poss	3	Area 1
1240	1410	Possible polished stone	linear pebble with some polish but NOT RECORDED		No	3	Area 1
1244		Possible rubber	also blackened burnt circle on one side NOT RECORDED		Poss	3	Area 1
1282	2188	Probable quern fragment	NOT RECORDED	MG	No	3	Area 1

1359		Possible weight	looks natural but NOT RECORDED	limestone	Poss	4	Area 1
1380	1550	Possible quern or unworked	heavily burnt but NOT RECORDED	MG	NO	2	Area 1
1516	1640	Probable saddle quern	NOT RECORDED	MG	Poss	4	Area 1
1560	2187	Probable quern fragment reused as hone	NOT RECORDED	MG	No	2	Area 1
1560	1676	Cut stone	palette? Neat cuts. NOT RECORDED	Slate or similar	No	2	Area 1
1629		Possible rubber	one smoothed side NOT RECORDED	Gneiss?	No	2	Area 1a
1669		Possible unworked	NOT RECORDED	micaceous sandstone	No	3	Area 2
1669	2186	Possible quern or unworked	NOT RECORDED		No	3	Area 2
1671	1701	Probable quern fragments	NOT RECORDED	MG	No	3	Area 2
2370	1947	Rotary quern fragment	NOT RECORDED	Puddingstone	Poss	4	Area 2
2456		Rotary quern	NOT RECORDED	HPS (puddingstone)	Poss	0	Area 2
99999	1687	Inlay or wall veneer	NOT RECORDED	white marble	No		

Table 46: *Catalogue of worked stone*

Statement of potential

B.13.4 The stone assemblage has good potential. The tools such as the querns, rubbers and whetstones can all inform about the nature of activity on site and potentially add to current understanding of differences across the site. They can also add to a broader understanding of quern use across the area and region.

Recommendations for further work

B.13.5 A rapid scan of the material was carried out for this assessment and no recording has been done, so detailed recording will be required during post-excavation analysis. Up to ten items are suitable for illustration, although it should be possible to reduce this list during further recording.

B.14 Worked Bone

By Chris Howard-Davis

Quantification

B.14.1 Thirty-six fragments of worked bone, representing probably 33 objects, were submitted for assessment. All were from stratified contexts, 28 in total, with only one context (black earth ***1011***) producing more than two objects. All were in very good condition.

Methodology

B.14.2 Every fragment of worked bone was examined, assigned a preliminary identification and, where possible, date range. An outline database was created, using Microsoft Access 2000 format, and the data recorded (context, small finds number, material, category, type, quantity, condition, completeness, maximum dimensions, outline identification, brief description, and broad date) serve as the basis for the comments below. The state of preservation (condition) was assessed on a broad four point system (namely poor, fair, good, excellent).

Date range and distribution

B.14.3 The assemblage comprised a relatively narrow range of objects, dating from the Romano-British period. The majority of the bone objects from the site are clearly intimate personal possessions, mainly hairpins and needles.

Evaluation

B.14.4 The assemblage is dominated by hairpins, made from splinters of bone. In all, 31 fragments have been recognised, many of them mid-shaft and point fragments, but a range of different head-types are present (Table 47). There is slight evidence for reuse or repair, and it seems likely that SFs 1064 and 1065, both from Phase 4 black earth **1011**, have been broken and re-sharpened to points. One shaft fragment from Phase 3 pit **1055** (fill 1056; SF 1177) appears to have been stained green, which is regarded by Greep as an earlier trait (1996).

Type	Qty	SF nos	Dating
Pins with a conical head with a series of grooves below. Type 2.2	7	SFs 1209, 1393, 1424, 1512, 1999, 1858, 2008	AD 40 – AD 200/250
Pins with a flat head and tapering shaft. Type A1	3	SFs 1063, 1064, 1093	Mid-second to third century AD
Pins with simple oval or round heads and swelling shaft. Type B1	7	SFs 1065, 1083, 1194, 1271, 1520, 1586, 1654	AD 150/200 – AD 400
Other types	4	SFs 1168, 1262, 1532, 1586	

Table 47: *Hairpin types present, following Greep 1995*

B.14.5 In all, there were probably 28 pins represented, only 21 of which retained their heads. Although it is widely accepted that hairpins are a largely Roman introduction (Allason-Jones 1989, 137), it has proved difficult (Greep 1995) to date bone hairpins with any precision. There are, however, broad chronological trends, first summarised by Crummy (1979), but as it is likely that pins were always locally made, dating probably varies from area to area. The earliest type represented on the site (Greep 1995; type 2.2) can be placed in the period *c.* AD 40 to *c.* AD 200.250; examples came from Phase 2 pit **1391** (fill 1392), Phase 3 pits **1101** (fill 1102), **1214** (fill 1240), **1290** (fill 1347), **1320** (fill 1364), and **2122** (fill 2124), and Phase 4 pit **1275** (fill 1260). Three examples of Greep's type A1 were noted, all coming from Phase 4 black earths 1005, 1011, and 1024. That from **1011** (SF 1064) bore simple cross-hatched decoration just below the head. This group can be slightly more tightly dated, to the mid 2nd and 3rd centuries, suggesting a high degree of residuality. The latest type, Greep's type B1, was found only in Phase 4 contexts, black earths 1011, 1020, and 1359=1379, pits **1072** (fill 1061) and **1064** (fill 1062), and ditch **1617** (fill 1413), and dates to after AD 150/200.

B.14.6 The most immediately attractive and unusual of the remaining pins is a complete example from Phase 4 pit **1125** (fill 1050; SF 1262), the head of which is decorated with a three-dimensional carving of a small terrier-like dog. Although at *c* 115 mm, it is a relatively long pin, the swelling mid-way along the shaft suggests that it falls into the later group. There is possibly reason to suggest that the dog represented is a specific

breed, as an almost identical animal is represented by a small copper alloy statuette of 2nd century date, from Coventina's Well in Northumberland (Allason-Jones and McKay 1985, object 38), where it is tentatively identified as an illustration of the Agassaean breed of small, strong, rough-haired terrier (*op cit*, 21).

B.14.7 Other one-off examples also came from Phase 3 pit **1327** (fill 1328; SF 1532), Phase 4 pit **1125** (fill 1050; SF 1168), and black earth 1359=1379 (SF 1586). SF 1168 superficially resembles Crummy's (1983) type 5 pins, which in Colchester are dated to the 4th century. SF 1532 has a flat head, perhaps a single bead, with crudely cut decoration on the top and the sides of the reel, and SF 1586 seems to come to a chisel-shaped end.

B.14.8 A second, much smaller group comprises objects conventionally associated with textiles. There are three needles, from Phase 3 pits **1055** (fill 1056; SF1303), and **1059** (fill 1060; SF1212), and Phase 4 black earth 1011 (SF 1066). Two (SFs 1066 and 1212) have a large rectangular eye (Greep 1996, type 3), the third with a figure-of-eight eye and slightly pointed head (Greep 1996 type 2.1; SF 1303), discoloration suggests that this example was originally stained green, which seems to be an Early Roman practice (Greep 1996, 530). It is not easy to date individual needle forms, but in general, they tend to be most common on earlier sites. A possible double-ended pin-beater, used in weaving, came from Phase 4 layer 1152 (SF 2183). Whilst otherwise relatively unworn, with sharply-cut facets, there are distinctive scratches towards the centre of the object. These are common finds in the Saxon period (MacGregor 1985, 188-9) but they are also known from Roman sites (Greep 1996), and wouldn't be out of place in a domestic context at either date.

B.14.9 There was also a single turned bone gaming counter from Phase 3 pit **2153** (fill 1682; SF 1717) with three concentric circles cut in the upper face, and a roughly-scratched cross on the underside. This falls into Greep's type 3 (1995), in use throughout the Roman period.

Conservation

B.14.10 The finds are well packed and in general require no further conservation.

Potential

B.14.11 The worked bone finds have only limited potential to further inform the dating of the site. They do, however, have some potential to contribute to the interpretation of activity, and possibly social zoning within the Roman town, and should be considered in conjunction with other contemporary finds from the site.

Proposed further work

B.14.12 Archival catalogue entries should be completed, and a brief illustrated report prepared for inclusion into any proposed publication. The worked animal bone will be sent to the animal bone specialist for identification.

APPENDIX C. ENVIRONMENTAL REPORTS

C.1 Human Remains

By Zoë Ui Choileáin

Introduction

C.1.1 This report presents the findings of a full specialist examination of two adult inhumations and a skull found during the excavation of the small Roman settlements at Wixoe. Both of the skeletons were dated by the grave goods associated with them to the Late Roman period. One of the burials (1394) had a grave cut (1393), while the second (2258) was buried within a pit (2248). The skull (1547) was recovered from the top fill of the main boundary ditch (1648) around the settlement. In addition four other fragments of disarticulated bone were examined. These were recovered from differing fills of the same boundary ditch (1648).

Methodology

C.1.2 Standard anthropological and palaeopathological examination was undertaken in accordance with published guidelines (Brickley and McKinley 2004) and used to record the completeness of the skeletons. They are graded into one of four categories; 0-25%, 25-50%, 50-75% and 75-100%.

C.1.3 Fragmentation was scored as either high (most bones are fragmented), moderate (approximately half of the skeletal remains is fragmented) or low (few bones are fragmented.) Condition (the surface preservation) of the bone was scored as either excellent, good, poor or destroyed, and graded on a scale of 0 (no erosion) to 5+ (extensive erosion), in accordance with the criteria set out by McKinley (2004, 16).

C.1.4 Biological sex was estimated based on observations of cranial, mandibular (Bass 1995; Aksàdi and Nemeskéri 1970), and pelvic (Buikstra and Ubelaker 1994) morphology.

C.1.5 Skeletons were aged based on the pubic symphysis (Brooks and Suchey 1990), changes to the auricular surface (Lovejoy *et al* 1985) and the degree of attrition on the molar teeth (Miles 1963; Brothwell 1981). To age the skull the stages eruption of permanent dentition, most accurate in juveniles, as well as the formation of sutures, were used. Skeletons were assigned to one of six age categories (Table 48).

Age category	Age range
Juvenile	5 – 12 year
Adolescent	13 – 15 years
Young adult	18-25 years
Prime adult	26-35 years
Mature adult	36-45 years
Adult (non-specific)	>18 years

Table 48: *Human Age categories*

C.1.6 A stature estimate was possible on one adult skeleton using the method outlined in Trotter (1970).

C.1.7 No metric analysis was undertaken, due to the fragmentation of the bone.

C.1.8 Any pathology was fully described and recorded with reference to standard texts (Buikstra and Ubelaker 1994, Rogers 2000).

C.1.9 The disarticulated bone was examined in order to identify the skeletal elements present. The minimum number of individuals represented was calculated by identifying the presence of repeated skeletal elements.

Results

C.1.10 The results are summarised in the Table 49 below:

Skeleton	Burial type / position	Orientation*	Grave depth (cm)	Age	Sex	Stature (cm)	Pathology	Grave goods
1394	Extended	NW-SE	0.15	30-35	Male	-	Calculus, OA	Coin
2258	Extended	NW-SE	1.24	30-35	Female	169	Calculus, Caries, OA, Schmorls nodes	Vessel, Cu Ring, F.E ferrule object
1547	Disarticulated skull	-	-	8 – 12	-	-	-	-

Table 49: *Inhumation Results*

* Position of the skull referred to first
OA = osteoarthritis

Skeleton 1547

C.1.11 This burial consisted of a near complete skull found in the top fill of the main boundary ditch (1648) surrounding the settlement. The skull is in good condition, McKinley's grade 2 (2004, 16); broken in two; missing only the mandible and the parietal bones, as well as half of the occipital surrounding the foramen magnum region.

C.1.12 With the mandible missing only the maxilliary teeth were left for observation. The first and second incisors were missing, as were the deciduous canines. The secondary canines were present but un-erupted. The permanent first molars and both pre-molars were present; erupting at around six years old and ten to twelve years old respectively. The secondary deciduous molars were lacking and the permanent secondary molars on the verge of erupting, which happens around the age of twelve years old giving the individual an age of between ten to thirteen.

C.1.13 The greater majority of the skull bones were fused including the frontal bone which generally closes around the age of six. Interestingly the frontal suture was only partially closed. Given the probable age of the individual it is probable that even had the individual survived into adulthood the suture may have remained open (Stedman 2000). This is known as a metopic suture and they are the result of natural variation and of no clinical significance.

C.1.14 Due to the age of the individual a determination of sex was not possible although the mastoid process and orbital ridge may suggest more female characteristics.

C.1.15 Although careful excavation of the area was completed no more of this individual was recovered. While it was originally presumed that the skull was damaged by machining, the completeness and good condition suggests that this is unlikely; skulls damaged by

machine strikes are more often than not crushed and badly fragmented. Likewise it is doubtful it could have been damaged by shovel as the lack of fresh breaks and indeed the absence of the parietal bones, suggests that the damage occurred prior to this excavation. It is possible, although unlikely, that this may have been a complete burial which has been disturbed over time, but it is common to find skulls within boundary ditches during the Roman period; therefore this may have been the only part of the body that was ever deposited here. If so the body would most likely have previously been disposed of and later the defleshed skull was recovered and deposited here. It is also possible that this skull may have been discovered accidentally and dumped within the ditch (1648), while it was still open.

Skeleton 1394

C.1.16 Skeleton 1394 was between 25 – 50% complete and highly fragmented. The majority of the skull was present, as well as the arms and legs which were only partially fragmented. Some right and left hand bones were recovered. The ribs and vertebrae were present but very badly fragmented as was the pelvis, making them impossible to use for calculations of age or sex. The surface preservation of the bone was rated as fairly good, consistent with McKinley's grade 3, as the general morphology of bones has been retained, but most of the bone surfaces have been affected by some degree of erosion, which has masked some details (McKinley 2004, 16).

C.1.17 The skeleton was aged as an adult and the stage of dental attrition places it in the mature adult category (35 – 45 years old). The stage of osteoarthritis seen in the skeleton is also that associated with an older individual. Several cranial traits were available for estimating the sex of the individual. Most traits were found to be of a male morphology varying from probably male to definitely male with the mastoid process and the lower margin of the mandible being very robust and the mental eminence appearing highly pronounced. It was therefore concluded that the individual was a male. This conclusion was further supported by the general robustness of the skeleton.

C.1.18 A total of 12 teeth were present for observation. Much of the mandible was present although it was partially fragmented. Most of the teeth displayed deposits of calculus, graded as by Brothwell (1981), as flecks or slight. Calculus is formed by the mineralisation of organic material and bacteria and, as such, reflects the lack of importance (or inability owing to illness) given to maintaining healthy teeth.

C.1.19 Two of the teeth in the mandible, the 1st right molar and the 2nd left molar were lost ante-mortem and complete resorption of the bone was apparent implying that they had been lost quite some time before death.

C.1.20 The only pathology observed was osteoarthritis; as evidenced by the new bone growth around the proximal and distal ends of the left first metacarpal, known as an osteophyte. This growth was quite significant and probably had a noticeable effect during his life. Similarly the larger fragments of the vertebrae showed some lipping and bone growth and the remaining proximal and distal parts of both femurs showed the beginnings of osteophytes and osteoarthritic porosity. Osteoarthritis is extremely common in both modern and archaeological populations, and its presence increases markedly with age.

Skeleton 2258

C.1.21 Skeleton 2258 was between 75 – 100% complete and in very good condition. The majority of the bones excluding the ribs and upper vertebrae were present and either complete or only slightly fragmented. The ribs and upper vertebrae were present but badly fragmented. The surface preservation was fairly good, consistent with McKinley's

grade 3 (2004, 16). The first left finger and some upper rib fragments showed a slight discolouration caused by the presence of a copper ring on this hand.

C.1.22 The skeleton was aged as a prime adult (25 – 35 years old) using the auricular surface of the pelvis (Lovejoy *et al* 1985) and the pubic symphysis (Brooks and Suchey 1990). The degree of attrition on the molar teeth (Miles 1963; Brothwell 1981) was also used as a secondary method of aging. Both pelvic and cranial traits were present to determine the sex of the individual. As with skeleton 1394 the skull, while shattered, remained in large enough fragments to show four sexually dimorphic traits; including the mastoid process. Five traits of the pelvis, including the greater sciatic notch, were also present. Seven traits in total were scored as definitely female while two were scored possibly female; thus the individual's sex was concluded as female.

C.1.23 This individual retained 26 teeth for observation. The degree of attrition on the the incisors, premolars and molar teeth (Miles 1963; Brothwell 1981) are consistent with the age group of the individual. The teeth display signs of calculus to a similar level as the male skeleton (1394). Many of the teeth show signs of advanced caries. Caries are cavities in the teeth which can often be the result of a diet high in carbohydrates (Hillson 1996, 278). Three of the right maxillary teeth and the two of the right mandibular teeth show advanced caries, including the upper right canine which is, in general, less likely to be afflicted. The left first premolar on the maxilla is at an extremely advanced stage of caries, with the majority of the tooth missing. The other premolar and molars of the left side of the maxilla are otherwise unaffected. This is unlike skeleton (1394) where no dental caries were found which may therefore suggest a difference in diet; the comparable calculus deposits showing a similar state of oral hygiene.

C.1.24 A stature estimate was possible on this skeleton as the left femur was fully intact. A standard regression formula (Bass 1995) was used to determine the height of the individual at around 169 cm with an error margin of 3.72 cm.

C.1.25 Osteoarthritis was once more present. This was evidenced by the porosity of the bones and a slight lipping around the pelvis and femur which was also observed on the remaining vertebrae. The lumbar vertebrae also display slight depressions indicative of schmorls nodes, which is a condition that forms most commonly due to aging. Otherwise no unusual pathologies were recorded.

C.1.26 The skeleton was also shown to have extremely pronounced muscle attachments on both humerii suggesting greater stress on the upper body, most likely caused by frequent lifting.

C.1.27 The skull was positioned beside the right femur. The placing of the head either besides or between the legs of Romano-British and Early Saxon skeletons has previously been observed in this region (Dodwell 2009, 88, Taylor 2001, Simmons *et al* 2008). Some of these burials have clearly been decapitated whereas others show no sign of cut marks and the head seems to have been moved post decomposition. With 2258's skull and vertebrae being too badly fragmented it is not possible to tell what exactly occurred here.

Other Disarticulated Remains

Element	Small find no.	Fill no.	Cut no.	No. of fragments
Skull fragments	1748	1721	**1698**	2
Metatarsal	1743	1724	**1698**	1

Skull fragment	1747	1716	**1700**	1

Table 50: *Other disarticulated human remains*

C.1.28 Disarticulated material came from fills of the the main boundary ditch (1721, 1724) and the fill of a tree bole on the edge of the ditch (1716; Table 50). The remains were given small find numbers in order to identify them. There is a high probability that the bone from the tree bole originated from the ditch and was merely disturbed over time. A total of three skull fragments and a single metatarsal were recovered. The overall condition of the disarticulated bone was graded as fairly good or McKinley's grade 3 (2004, 16). All fragments of bone were adult. A more precise age, sex, pathology or non-metric traits could not be identified due to the absence of diagnostic parts. No elements were repeated, meaning that a minimum of one individual could be recorded. Skull 1547, as mentioned earlier, is that of a juvenile and so this other material being adult is therefore unrelated.

Summary and comment

C.1.29 Summary tables of both the inhumations and the disarticulated bone are given within the results section of this report. Of the burials the male skeleton (1394) was 25%-50% complete while the female (2258) was between 75% - 100% complete. The better preservation of the female individual is most likely due to her burial within a pit (2248), much deeper than the grave **1393** of skeleton 1394. Surface conditions were fairly good on skull 1547.

C.1.30 Dentition was present for all of the skeletons. Both of the adults, 1394 and 2258 had slight calculus deposits. The female 2258 showed several severe caries while the male 1394 had lost two teeth with total resorption of the bone. These conditions are indicative of poor oral hygiene. Levels of caries and calculus are reported to be high for the Romano-British period in general (Roberts and Cox 2003, 140). With only three individuals it is not appropriate to compare the rates of these conditions with those for the overall period.

C.1.31 Limited skeletal pathology was observed. Both adult skeletons showed signs of slight osteophytes around the joints including a more pronounced example in the case of one of the male's (1394) metacarpals. The female skeleton (2258) showed signs of schmorls nodes on the lumbar vertebrae. The high fragmentation levels of the torsos and the incompleteness of the male 1394 are possibly responsible for the lack of pathology observed. Evidence for strenuous physical activity in the upper body of the female 2258 was identified by large muscle attachments.

C.1.32 The analysis of the disarticulated human bone indicates that a minimum of one adult was represented. It is not possible to make inferences about burial practice relating to these remains, as it is probable that they are secondary / residual deposits, rather than a primary burial.

C.1.33 The above osteological findings, whilst limited in terms of pathology, are comparable with other contemporary skeletal assemblages. The burial practice observed is also comparable with other Roman assemblages. The orientation of the skeletons being north-east to south-west, the presence of grave goods and the lack of Christian symbolism in both inhumations suggests that despite the late period these burials were probably not Christian. Inhumations of this type are common from the Roman period, as it gradually replaces cremation as the favoured disposal rite from the 2nd century AD onwards (Philpott 1991, 53).

Further Work and Methods statement

C.1.34 No further analysis is required on this assemblage.

C.2 Animal Bone

By Andy Bates

Introduction

C.2.1 In total, 9411 animal bone or teeth fragments were recorded for the purposes of assessing the faunal remains. This constitutes 67% of the bone collected by hand, and all of the bone recovered from soil samples that have been processed to date. Projected totals for the whole assemblage are provided where appropriate. All of the material has been attributed to the Roman period.

C.2.2 This assessment quantifies the potential of the bone for analysis, assess its potential to contribute to specific research questions, and makes recommendations for the analysis.

Methodology

C.2.3 The material was identified using the reference collection held by the author. All parts of the skeleton were identified where possible, including long bone shafts, skull fragments, all teeth and fairly complete vertebrae. In the identification of species reference was made to Halstead and Collins (1995) and Schmid (1972). Sheep/goat distinctions were made using reference material and published work by Boessneck (1969) and Prummel and Frisch (1986), and similarly Red from Fallow Deer following (1996).

C.2.4 The material was recorded as 'A' bones and 'B' bones, following the method set out in Dobney, Jaques and Johnstone (1999). For each 'A' bone, the following information was recorded where appropriate: context reference; species or species group; element; number of bones; side; the diagnostic zone as either more than or less than half present; fusion state; butchery; measurements; tooth wear development; and other comments. Pathology and other developmental or congenital anomalies were also noted. 'B' bones were recorded by species group only, unless they were measurable, displayed butchery marks, pathology or congenital traits, in which instance they were recorded in the same detail as 'A' bones.

C.2.5 The condition and fragmentation of the bone was recorded by deposit, as represented by surface erosion, how robust the bone was, dulled or sharp edges, the percentage of the original bone present and the overall fragment size. Where the condition of the bone varied within a deposit was also recorded.

C.2.6 The recording of diagnostic zones for mammals followed Serjeantson (1996), and for birds Cohen and Serjeantson (1996). Measurements followed those set out in von den Driesch (1976). Tooth wear development for mandibular teeth were recorded following Payne (1973) and (1987) for sheep, Grant (1982) and Halstead (1992) for pigs, and Grant (1982) and Halstead (1985) for cattle. Skull and horncores were described following Grigson (1976), Armitage (1982) and Armitage and Clutton-Brock (1976).

Quantification and Condition

C.2.7 In total, the 9411 fragments of bone or teeth represented 9299 individual specimens, counting articulating or adjoining bones as one specimen, and weighed 146kg. Of

these, 3447 (37%) were identified to a species level (NISP) or low order group (Tables 51 and 52). The vast majority of this material was collected by hand, with only 6.4% recorded from soil samples. Comparing Tables 51 and 52, it is evident that sheep bones, or animals of a similar size, are more likely to be recovered from soil samples than those of larger cow sized animals. There is, therefore, likely to be some bias in the hand collected material towards cattle.

C.2.8 Overall the animal bone is well preserved being in a robust condition, with often less than 50% of its surface eroded (Table 53). The fragmentation of 'A' bones presented in Table 53 is derived from ranked data (1-7) recording the type of fragmentation from a shaft or end splinter to a complete bone. Most specimens were described as comprising the bone end and shaft (25%) or shaft cylinders (27%), but with typically less than 50% of the original bone present. Of the complete bones (17%), most are the smaller bones of the feet and ankles that are less prone to fragmentation.

C.2.9 Of the sheep and goat bones, where the two species could be distinguished the bones in most cases were identified as of sheep (Table 51). Goats bones are evidently present at the site, but only in smaller number. This is in line with the national norm (Maltby 1981, 159-161). The principal domestic stock animals recovered from the site, therefore, are cattle, sheep and pig. Cattle and sheep appear to been present in roughly equal numbers, possibly with slightly larger numbers of cattle, and pig in significantly lower numbers.

Species	**'A' or 'B' Bone**		**Total NISP**
	A	**B**	
Equus sp	57	3	**60**
Cattle	1130	405	**1535**
Pig	182	99	**281**
Sheep/Goat	1002	274	**1276**
Sheep	78	1	**79**
Goat	5		**5**
Dog	36	2	**38**
Cat	1		**1**
Badger	1		**1**
Rabbit	1		**1**
Hare	1		**1**
Red Deer	13	3	**16**
Roe Deer	12		**12**
Deer	3	1	**4**
Cattle/Horse	2	6	**4**
Cattle/Red Deer	52	182	**234**
Sheep/Goat/Roe Deer	23	69	**92**
Red/Fallow Deer	4		**4**
Cat Sized Mammal		11	**11**
Medium Mammal	1	1300	**1301**
Large Mammal	12	2657	**2638**
Small Mammal	1	3	**4**
Unidentified Mammal		1026	**1026**
Dom. Fowl	11		**11**
Carrion Crow	4		**4**
Dom. Fowl/Bantam	2		**2**
Dom. Fowl/Pheasant	2		**2**

Galliform	3		**3**
Anatinae sp	1		**1**
Unidentified bird	11	5	**16**
Total NISP	**2650 (3955)**	**6048 (9027)**	**8698 (12982)**
NISP identified to a species level or low order group	**2533 (3781)**	**788 (1176)**	**3321 (4957)**
Main Domestic Species as a percentage of their total NISP			
Cattle	**47.2%**	**52.0%**	**48.4%**
Pig	**7.6%**	**12.7%**	**8.9%**
Sheep/goat + sheep	**45.2%**	**35.1%**	**42.7%**

Table 51: *NISP of animal bones collected by hand, with the projected NISP in brackets*

Species	**'A' or 'B' Bone**		**Total**
	A	**B**	
Cattle	9	1	**10**
Pig	11	2	**13**
Sheep/Goat	51	6	**57**
Dog	2		**2**
Cat	2		**2**
Red Deer	1		**1**
Cattle/Red Deer	2	1	**3**
Sheep/Goat/Roe Deer	9	6	**15**
Cat Sized Mammal		9	**9**
Medium Mammal	1	59	**60**
Large Mammal	1	22	**23**
Unidentified Mammal	6	215	**221**
Mouse	4		**4**
Vole	3		**3**
Shrew	11		**11**
Rodentia sp	12	1	**13**
Small Mammal	45	39	**84**
Frog	21		**21**
Toad	1		**1**
Frog/Toad	9	12	**21**
Herpetofauna	13	8	**21**
Dom. Fowl	1		**1**
Unidentified bird	2	3	**5**
Total	**217**	**384**	**601**
NISP identified to a species level or low order group	**105**	**21**	**126**
Main Domestic Species as a percentage of their total NISP			
Cattle	**12.7**	**11.1**	**12.5**
Pig	**15.5**	**22.2**	**16.3**
Sheep/goat + sheep	**71.8**	**66.7**	**71.3**

Table 52: *NISP of animal bone recovered from soil samples*

Category	Normalised Value	Percentage "Variable"	Percentage of bone fragments
Robustness (by deposit)	0.77	11.5	
Surface erosion (by deposit)	0.75	14.3	
Fragmentation of 'A' bones	0.56		
Butchered bone			14.0
Burnt bone			5.1
Canine gnawed bone			4.2

Table 53: *Condition of the animal bone presented as normalised values, the percentage of deposits with bone of variable condition, or a percentage of all bone fragment (excluding loose teeth)*

Provenance

C.2.10 Residual animal bone from earlier periods is inevitably a problem, but this is mitigated by the fact the majority of archaeological features excavated at the site are Roman in date. Division by sub-period should be a consideration during the analysis of the bone, but is not feasible at this time.

C.2.11 With no knowledge as to how long bone fragments have suffered predepositional taphonomic processes it is difficult to assess where bone derived from an earlier period or sub-period. Where variable preservation of bone has been noted within a deposit, it could be suggested to contain potentially reworked material. This was recorded in 29 of the 185 deposits recorded in this assessment. However, in some cases this was thought to be only marginal, the result of the presence of the more fragile bones of younger animals, or a variable state of preservation was noted on the same bone (suggesting exposure time within a feature prior to complete burial was a factor). In total, 25 bones were assessed as potentially residual from 15 deposits. In each case the 'residual?' bone comprised only a minority of the bone within the deposit.

C.2.12 Residual animal bone would, therefore, appear to be a minor problem in the analysis of the material. In analysis comparison could also be made to other finds groups, such as pottery, although this is complicated where different groups of artefact or ecofact have been disposed of in different manners.

Conservation and Discard Policy

C.2.13 The animal bone requires no specialist conservation measures. The material should be stored in dry conditions in acid free bags with the relevant site code, context, small finds and sample number marked on the bag where appropriate. These in turn should be within acid free boxes, marked with the site code and material group and containing appropriate box lists, placed in a storeroom of a constant temperature and humidity.

C.2.14 All of the bone should be retained, with the exception of any modern or unstratified material which have no interpretative value. The animal bone will not be analysed until after the full reports on pottery on small finds artefacts have been finished and the final stratigraphic phasing done.

Comparative Material

C.2.15 There are a number of sites within East Anglia with a published analysis of comparable faunal remains. These include military sites, towns, rural sites, villas and temples. Within *c* 30km of the site a number of excavations have been identified which have yielded small, medium and large collections of animal bones.

C.2.16 The most significant of these, in terms of sample size and proximity to WIX 022, is the large quantity of material from the Roman town of Great Chesterford. It includes late 3rd to 4th century bone from the town (Serjeantson 1986), and late 1st/early 2nd century to early 4th century bone from the Temple Precinct (Baxter 2011, 320 – 44). The animal bone excavated from the Temple Precinct of Great Chesterford comprised largely young sacrificial sheep. Excavations within a second Roman town, that of Braintree located *c* 20km south of Wixoe on the road to Colchester, produced a sizeable faunal assemblage published in Smoothy (1993) and Luff (1976). A sizeable collection of faunal remains was also excavated from Chignall Roman Villa (Luff 1998).

C.2.17 Generally, faunal assemblages from rural or native sites of the area have produced lower numbers of animal bone compared to those from urban sites. They include material from three Romano-British sites at Edmundsoles, excavated on the M11 western by-pass near Cambridge (Miller and Miller 1981) and Wimpole Hall (Wilson 1994) located to the east. To the south, excavations outside of Braintree at Rayne (Smoothy 1989), and from Stansted Airport (Mainland 2004; Bates 2008) provide further comparative rural sites. Work along the A120 produced two small samples of faunal remains from the Romano-British site at Strood Hall, and a possible proto villa at Rayne Road (Evans 2007). A small quantity of largely 3rd to 4th century bone was also recovered from the farmstead at Great Holts Farm, from which significantly larger cattle interpreted as imported stock were identified (Albarella 2003).

C.2.18 Further afield, but within the counties of Cambridgeshire, Norfolk, Suffolk or Essex, large collections of animal bones have been excavated from the Saxon Shore forts of Brancaster (Jones *et al* 1985 and Jones 1985) and Caister-on-Sea (Harman 1993), as well as the fort at Longthorpe (Marples 1974). In addition the temple site at Ivy Chimney (Witham) produced substantial numbers of animal bone published in Luff (1999), with smaller quantities of bone from the temple sites of Harlow (Legge 1985) and Caesaromagus (Chelmsford; Luff 1992). To the south is the Roman colonia and Legionary fortress at Colchester, with the faunal remains from a number of excavations within the town published in Luff (1993). This volume also includes a useful discussion of the town in comparison to the surrounding hinterland.

C.2.19 The smaller Roman towns of Hacheston (King 2004) and Scole-Dickleburgh (Baker 1998) have produced medium sized faunal assemblages. Material has also been published from the rural sites of Stonea (Stallibrass 1996), Orton Longueville (Davis 2001), and Grandford (Stallibrass 1982), and the villa site at Scole (Jones 1977). To the south, a large collection of material was recovered from excavations as Elms Farm, Heybridge, published in Johnstone and Albarella (2002).

C.2.20 These as well as sites from further afield and regional reviews such as King (1984) provide a background to which the Roman faunal remains WIX 022 may be compared. Although, it should be noted varying methodologies and the level of published detail may restrict comparisons.

C.2.21 On line resources include the Animal Bone Metrical Archive Project (University of Southampton 2003), a database of biometric data from over 100 sites excavated in southern Britain; A Review of the Animal Bone Evidence from Central England

(Albarella and Pernie 2008); and A Review of the Animal Bone Evidence from Southern England (Hambleton 2009). Each provides substantial quantities of downloadable data.

Potential for Further Work

C.2.22 The number of recorded data concerned with the mortality of the principal stock animals, in the form of records of tooth wear and epiphysial fusion states, biometric records, used to assess the size, differentiate between breeds and in some cases assess the male:female ratio of the stock, and butchery records are given in Table 54. The projected final number of records for each form of data, taking into account the unassessed portion of hand collected bone, is presented in brackets.

C.2.23 The available data of cattle and sheep is promising, and should facilitate a discussion of the subjects described above. Division by sub-period will result in small sample sizes, but has the potential to produce results. The projected number of records associated with pig bones are more limited, but should allow some discussion of the mortality and butchery of these animals. Grouping biometric records in Table 54 is possibly somewhat misleading, as the numbers in Table 54 represent different measurements taken from different bones of the animal. Where the number of specific measurements proves to be low, a broader approach may be made by comparing a number of different measurements to a standard animal following the methodology described for sheep in Davis (1996).

Species	Tooth Wear	Fusion	Butchery	Biometric
Cattle	98 (146)	409 (609)	235 (350)	313 (466)
Sheep/Goat + Sheep	173 (258)	256 (377)	76 (112)	441 (656)
Pig	19 (28)	58 (85)	12 (18)	45 (67)

Table 54: *Quantity of specimens from which tooth wear, epiphysial fusion, butchery and biometric may be obtained from the principal domestic stock animals, with the projected final number of records presented in brackets*

Associated or articulated bone groups (ABG's)

C.2.24 Any analysis of the animal bone requires work on identifying what comprises background deposition of bone, whether this varies spatially, and identification of bone deposits which vary from this pattern. These variations are designated as articulated or associated bone groups (ABGs), as discussed in Hill (1995, 29-30). With regard to this, certain bone deposits have been identified at this initial stage for further work and discussion in the analysis. Specifically:

Twelve pits from a 60m to 70m area of the southern part of the pipe route that contained significant quantities of cattle or sheep/goat bones. They include features **1055**, **1064**, **1071**, **1101**, **1125**, **1216**, **1214**, **1234**, **1265**, **1271**, **1367** and **1381***;*

Significant quantities of cattle, sheep/goat and pig were excavated from 31 deposits described as 'black earth' in the records, with high numbers of cattle bone (NISP of 80) from deposit 1329. This material includes a cow scapulae with a hook hole, where the forelimb has been hung possibly in a smoker or a vat of brine (Dobney *et al* 1996);

The near complete skeleton of a young goat from pit **1045**;

The partial remains of at least two piglets from pit **1106**;

A partial dog skeleton from deposit 1566 of pit **1397**.

Other work associated with depositional characteristics of the bone and ABG's should include, where feasible, include a comparison of bone within deposits of different stratigraphic position, between different feature types, by area and by association with other artefacts. An analysis should also be made, where possible, of the treatment of neonatal and newborn remains in comparison to adult animals.

Research Agenda

C.2.25 The written scheme of investigation (Finch 2010) details the key research agenda for the Roman Period to include:

Food: consumption and production, agricultural production, landscapes, and rural settlements.

Further to this volume one the Research and Archaeology Framework for East Anglia (Glazebrook 1997), the resource assessment states that:

Settlements of all kinds need to be examined not only as isolated entities but also in relation to their hinterland (Going 1997, 37);

[Small towns that] produce not only well-preserved secular structures but also present the chance of recovering organic remains (for example palaeobotanical data, or well stratified assemblages of animal bone), should merit special attention (Going 1997, 37).

C.2.26 Volume two, the research agenda and strategy (Brown and Glazebrook 2000), states that:

Excavations at Colchester have provided several large bone assemblages (Luff 1993), but there is little material from other towns (Going and Plouviez 2000, 21);

The analysis of the faunal remains from WIX 022 presents a rare opportunity to contribute to the knowledge of husbandry regimes and the consumption patterns of a rural Roman town, in comparison to other sites of the region and wider Roman Britain.

Recommendations

C.2.27 It is recommended that the remainder of the hand-collected bone be fully recorded, and incorporated into the site archive. Following this, a report should be compiled that addresses certain intra- and inter-site analyses. These should include:

An analysis to identify any taphonomic or cultural bias in the animal bone;

An assessment of relative proportion of the principal stock animals identified in the archaeological record as a representation of live animal population;

An analysis of deposits containing Articulated or Associated Bone Groups (ABG's), providing a narrative for their deposition;

An analysis of the spatial distribution of bone;

An analysis of the kill-off pattern of the principal domestic stock, contributing to a narrative on husbandry regimes;

An analysis of the butchery marks and an assessment of the use, or lack, of the Roman butchers cleaver at the site, as described in Seetah (2002);

An analysis of the size of the domestic stock in comparison to other sites, and the possibility of imported breeds being present or influencing the size of the local stock;

A discussion of the pathological bone in relation to the health of the animals;

Where appropriate a comparisons of the bone, husbandry of animals, and patterns of consumption to other published sites of the region;

A discussion of the sites in comparison to wider national trends.

C.3 Environmental samples

By Rachel Fosberry

Introduction and Methods

C.3.1 A total of one hundred and twenty bulk samples were taken from features within the excavated areas of the Roman small town at Wixoe in order to assess the quality of preservation of plant remains and their potential to provide useful data as part of further analysis. Features sampled include both secure and undated archaeological contexts within large rubbish pits, ditches, hearths and features associated with structures such as beam slots post holes and layers. The majority of the features were dated to the Roman period.

C.3.2 Initially up to ten litres (one bucket) of each sample were processed by water flotation (using a modified Siraf three-tank system) for the recovery of charred plant remains, dating evidence and any other artefactual evidence that might be present. The flot was collected in a 0.3mm nylon mesh and the residue was washed through a 0.5mm sieve. Both flot and residue were allowed to air dry. The dried residue was passed through 5mm and 2mm sieves and a magnet was dragged through each resulting fraction prior to sorting for artefacts. Any artefacts present were noted and reintegrated with the hand-excavated finds. The flot was examined under a binocular microscope at x16 magnification and the presence of any plant remains or other artefacts are noted on Table 55. Identification of plant remains is with reference to (Stace 1997), the Digital Seed Atlas of the Netherlands (Cappers *et al* 2006) and the authors' own reference collection.

C.3.3 Based on this initial appraisal, those samples deemed to have archaeobotanical potential then had the full volume of soil processed (the remaining buckets) and will then be subject to a more detailed assessment in which cereals and weed seeds will be identified. It should be noted that processing only ten litres of a sample gives a good general idea of potential and distribution of plant remains but there is the danger that, if a deposit is of large volume, this small volume will not be representative.

C.3.4 Eleven samples are yet to be processed and will be included in the analysis stage.

Quantification

C.3.5 For the purpose of this initial assessment, items such as seeds, cereal grains and small animal bones have been scanned and recorded qualitatively according to the following categories

= 1-10, ## = 11-50, ### = 51+ specimens

C.3.6 Items that cannot be easily quantified such as charcoal, magnetic residues and fragmented bone have been scored for abundance

+ = rare, ++ = moderate, +++ = abundant

Results

C.3.7 The results are recorded in the catalogue (Table 56). Preservation is by charring and charcoal occurs in the majority of the samples, often in significant quantities. There is no evidence of preservation by waterlogging. Mineralised arthropod remains were noted in approximately 10% of the samples and included millipede segments and fly puparia and/or millipede segments that commonly occur in cess/midden deposits. Such remains are therefore indicative of cess deposits although no mineralised plant remains were noted. The number of mineralised fly and millipede remains are relatively small and not statistically viable for a full report. There were only a few fragments of fish scales recovered from the bulk samples. This indicates that small quantities of fish were presumably consumed but it is perhaps significant that none of the small bones recovered from the bulk samples proved to be fish (Table 52).

C.3.8 Charred cereals remains are common throughout the assemblage and include grains and chaff of spelt wheat (*Triticum spelta*), grains of fee-threshing durum/bread/club wheat (*T. durum/aestivo-compactum*) and grains of barley (*Hordeum* sp.).

C.3.9 Spelt chaff is rare and only occurs in a few samples. Sample 1072, fill 1563 and Sample 1080, fill 1675, both fills of pit **1562** contain significant quantities of spelt glume bases and rachis fragments as does Sample 1067, fill 1430 of pit **1429.**

C.3.10 Sprouted grains occur in sample 1086, ill 1794 of pit 1795, Sample 1088, layer 1819 and Sample 1115, fill 2413 of hearth 2415 and to a lesser extent in Sample 1090, fill 1867 of pit 1865. Detached embryos were noted in Sample 1007, fill 1074 of pit 1049.

C.3.11 Legumes occur rarely and are small suggesting that they are wild/sweet pea/vetchling (*Lathyrus* sp) rather than the cultivated pea (*Pisum* sp.)

C.3.12 Charred seeds include those of plants commonly found in cultivated soils such as vetches (*Vicia* sp.), Rye grass *(Lolium* sp.), brome (*Bromus* sp.), corncockle *(Agrostemma githago),* cleavers (*Gallium* sp.) and field gromwell (*Lithospermum arvense*) and dock (*Rumex* sp.)

C.3.13 Seeds of pants that represent pasture include meadow grass *(Poa* sp.), sheep's sorrel (Rumex acetosella), goosefoot (*Chenopodium* sp.), cloer/medick (*Trifolium/Medicago* sp.) and plantain (*Plantago major).*

C.3.14 Wetland plants include rushes (*Juncus* sp.), bull rush (*Scirpus* sp.), sedges (*Carex* sp.) and spike rush (*Eleocharis* sp.) and hemlock (*Conium maculatum*).

C.3.15 Metalworking residues in the form of hammerscale were retrieved from the residues of several samples in Area 1

C.3.16 The samples from the earliest features on site (pre-Roman) do not contain charred plant remains other than a single dock seed and charcoal.

Discussion

C.3.17 The charred plant remains recovered from excavations at Wixoe are typical of Roman small town sites in that wheat and barley are the principal crops bring utilised. Spelt wheat is the major cereal cultivated during the Roman period along with barley and bread wheat. Wheat would mainly have been used as flour and barley would have been used in soups, stews, brewing and as animal feed.

C.3.18 Spelt wheat is a hulled wheat in which the grain is tightly enclosed in spikelets. The process of dehusking cereal grains involves several stages including parching, pounding, threshing, winnowing and sieving, each stage producing characteristic

products that can be identified as crop processing waste. If this waste material has been accidentally or deliberately burnt, examining the proportions and ratios of the grains, chaff and crop weeds can be used to interpret the stages involved in the processing of the crops (Hillman 1981; Stevens 2003). Parching of the spikelets often resulted in some of the grain becoming accidentally charred in the process and the fine chaff provides excellent tinder for fires. Chaff was also commonly used as a fuel in metalworking and evidence of this may be seen in Sample 1067, fill 1430 of pit **1429** which also contained metalworking slag.

C.3.19 Spelt chaff occurs in relatively few samples at Wixoe. In quarry pit **1562** (Sample 1080 and 1072) in Area 1 (Phase 3) spelt chaff occurs along with significant quantities of charred grains and crop weed seeds and has been interpreted as the result of the burning of crop processing waste. This is the only feature that contains possible evidence of crops being processed on site. Cereals would have been imported into Roman towns from villas in the hinterland. Villas were the centres of agarian estates and the crops were processed by villagers on their own farms and the clean grain was sent to the villas for export to towns and further abroad.

C.3.20 Many of the weed seeds are from plants that are usually found growing in cultivated fields and would be harvested along with the crops. It would appear that the cereal crops are being part-processed off-site (the initial processes being threshing, winnowing and coarse sieving) and then the dehusked grain is being brought onto site for the final stages of processing. Seeds of plants such as corncockle, brome and corn gromwell are of a similar size to the cereal grains and are likely to have been picked out by hand and discarded. Corncockle in particular is extremely poisonous to both humans and livestock, even if cooked, so any contaminating seeds have to picked out by hand prior to consumption. It is an imaginable scenario that this activity took place whilst sitting around the hearth and the picked out contaminants were thown directly into the fire. The hearth would have been regularly cleaned out and the sweepings discarded onto middens or into pits and ditches. Accidental spillage also results in cereal grains being included in this waste material.

C.3.21 Weeds are commonly found in cultivated soils and are harvested with the crop can vary depending on cultivation conditions and harvesting methods, for example cleavers and corncockle are autumn germinating weeds suggesting that the wheat crop was sown in autumn.

C.3.22 Sprouted grains and detached embryos are evidence of cereal grains having germinated. This occurs either accidentally in wet conditions resulting in spoilt grain that is then disposed of by burning or deliberately during the malting/brewing process. They have been found in Area 2 in Early to Middle Roman contexts.

C.3.23 Legumes were surprisingly rare and only occur in six samples as small peas which may be the wild/sweet pea rather than the cultivated variety. Vetch seeds are leguminous weeds that could be crop contaminants or were possibly grown as a fodder or nitrogen-fixing crop to improve soil conditions.

C.3.24 Grassland plants including grasses and plantain indicate pasture and may have been brought in with hay as animal fodder or bedding. Evidence of hay meadows has been recovered in the form of grass seeds and grassland plants and may suggest managed hay meadows through crop rotation.

C.3.25 Sedges and rushes are wetland species which include plants of damp ground such as the banks of water-filled ditches, ponds and some wetland secies such as spike-rush are commonly found with crop assemblages and were probably growing in damp field

margins. Hemlock (*Conium maculatum*) is also a plant species that prefers damp soils near streams and ditches but may also be found on the edges of cultivated fields.The presence of these species within a charred assemblage also suggests the use of local wetland resources for thatching, fuel etc.

C.3.26 The quantities of slag and hammerscale recovered from the excavations at Wixoe strongly suggest that blacksmithing and other metalworking activities were taking place on site. Metalworking requires large quantities of fuel and coppicing and charcoal burning would have been likely to have been carried out in the near vicinity. A large volume of charcoal (300ml) was recovered from Sample 1061 from a lense (1308) of charcoal found in pit **1381**.

C.3.27 In summary, the samples from deposits from Area 1 are generally from Roman quarry pits that have been backfilled with domestic, culinary and industrial waste, pesumably from activities carried out on the outskirts of the town. There is substantial evidence of pasture plants that were possibly from hay and used for fodder. It is most likely that stable waste would have been used for manuring cultivated fields so the origin of these assemblages require further consideration.

C.3.28 The structures in Area 1 did not produce any plant remains that could assist in interpretation of these features. The 'black earth' produced sparse charred cereal grains, charcoal and a rich assemblage of other organic remains such as oyster and mussel shell, animal bones (including rodent bones) and fish scales. Black earth deposits are thought to be derived from a mixture of material from industrial, domestic, stable and building waste that has either been deliberately used to level out areas or is a natural accumulation of material as the result of abandonment of Roman towns (Clearey 1989 in Dark 2000).

C.3.29 The samples from Area 2 were mainly taken from ditches, structures and pits assumed to be associated with the structures. The ditch samples were mainly unproductive in charred plant remains suggesting that rubbish was discarded in pits and the ditches maintained. Several of the post holes of the structures contained charred grain that had most likely derived from accidental spillage in the domestic hearth that had become incorporated in the post holes when the interiors of the buildings were swept clean. The potential evidence of malting in the form of germinated charred grain was found in this area although there was no evidence of a malting oven/corn drier. This could have been sited beyond the limit of excavation or it may simply be that the sprouted grain had accidentally spoiled.

Statement of potential

C.3.30 The initial assessment of the charred plant assemblage from excavations at Wixoe indicates good potential for further archaeobotanical study. The cereals and weed seeds appear to be typical of villa sites and small towns in the east of England and no notable Roman imports such as grape or lentil were identified (but may yet be found in further samples) although corncockle and hemlock are thought to be Mediterranean arable weeds introduced by the Romans (Godwin 1984). Cereals appear to have been brought into the site semi-cleaned and there is evidence of the final stages of crop processing and possibly brewing. The quernstone fragments recovered provide evidence of the use of cereals for flour. Sprouted grain indicates malting/brewing activities which would have been expected to be taking place at a site of this importance. Sprouted spelt was interpreted as evidence of malting at Catsgore (Hillman 1982) and chaff as fuel for kilns.

C.3.31 The environmental samples from Wixoe provides a rare opportunity to study the archaeobotanical assemblage of a Romano-British small town. Several contemporary sites were excavated at a time when environmental samples were not considered *e.g.* Wanborough, Wiltshire, Hacheston, Suffolk and Great Chesterford, Essex. A small number of samples taken at Fosse Lane, Shepton Mallet (Straker 2001) produced a similar assemblage of partially-cleaned wheat and barley crops and crop processing waste interpreted as used for fuel and grass seeds.

Further Work and Methods Statement

C.3.32 The extensive sampling programme of Wixoe has demonstrated that many of the features contain plant remains preserved by carbonisation. The initial assessment of these samples has highlighted those with the potential for further archaeobotanical study. Further assessment of selected samples will involve identification of plant species and charcoal and recommendations for analysis will be made at this stage.

Sample No.	Context No.	Cut No.	Feature Type	Area	Phase
1066	1431	1429	Pit	1	2
1067	1430	1429	Pit	1	2
1007	1074	1049	Quarry pit	1	3
1019	1126	1101	Quarry pit	1	3
1051	1339	1130	Quarry pit	1	3
1052	1340	1130	Quarry pit	1	3
1072	1563	1562	Pit	1	3
1080	1675	1562	Quarry pit	1	3
1115	2413	2415	Hearth, building 1	2	3
1011	1061	1079	Quarry pit	1	4
1028	1161	1125	Quarry pit	1	4
1040	1072	1071	Quarry pit	1	4
1076	1669	1667	?kiln	2	3
1088	1819		Layer, building 1	2	3
1086	1794	1795	Post hole, building 1	2	4

Table 55: *Environmental samples selected for further work*

C.3.33 The samples that contain mineralised arthropod remains may also contain mineralised seeds in the residues although not on the few fly or millipede remains where quantities involved are not statistically viable. It is recommended that the fine residues of these samples be examined under the microscope.

C.3.34 Further analysis of the samples containing germinated grains will determine whether brewing is taking place on site and which cereals were being utilised.

C.3.35 No further analysis is recommended on the few fish scales found as the numbers involved are not statistically viable.

Sample	Cont	Cut	Area	Ph	Type	Sample Size (L)	Flot Volume (ml)	Cereals	Chaff	Legumes	Weed	Snails	Small Bones	Charcoal <2mm	Charcoal > 2mm	Charcoal > 10mm	Fish scale	Mineralised arthropod remains	Charred stems	Flot comments
1062	1384	1385	1	0	grave	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
1068	1540	1538	1	0	?hearth	20	0	0	0	0	0	0	0	0	0	0	0	0	0	
1053	1333	1334	1	1	pit	20	2	0	0	0	0	##	0	++	+	0	0	0	0	
1054	1287	1287	1	1	pit	30	3	0	0	0	0	##	0	++	++	0	0	0	0	
1041	1263	1264	1	2	hearth		5	0	0	0	0	##	0	+	0	0	0	0	0	
1042	1278	1264	1	2	hearth		5	0	0	0	0	##	0	+	+	0	0	0	0	
1043	1279	1264	1	2	?hearth		0	0	0	0	0	0	0	0	0	0	0	0	0	
1045	1298	1264	1	2		20	15	#	0	0	0	##	##	+++	++	0	0	0	0	
1055	1371	1372	1	2	?post hole	5	1	0	0	0	#	0	0	++	0	0	0	0	0	sedge seed
1056	1373	1374	1	2	?post hole	5	1	0	0	0	0	###	0	+	+	0	0	0	0	
1059	1377	1378	1	2	?hearth	10	1	0	0	0	0	##	0	++	++	0	0	0	0	
1061	1380	1381	1	2	pit	30	300	0	0	0	0	0	0	+++	+++	0	0	0	0	
1067	1430	1429	1	2	pit	30	20	#	##	0	##	##	0	+++	+++	+	+	+	0	rye grass, dock, chickweed, grass seeds
1004	1046	1047	1	3	pit	30	20	##	0	0	#	##	#	+++	++	0	0	0	0	
1005	1041	1040	1	3	ditch	30	15	#	#	0	0	##	#	+++	++	0	+	0	0	
1006	1069	1070	1	3	pit	30	30	##	0	0	0	##	#	+++	++	+	0	+	++	
1007	1074	1049	1	3	pit	30	25	##	0	0	##	##	0	+++	+++	+	+	+	0	grass seeds, rye grss, clover/medick, buttercup, cereal embryo, barley
1008	1053	1045	1	3	pit	30	20	#	#	0	#	#	0	+++	++	0	+	++	0	
1009	1086	1088	1	3	pit	30	10	0	0	0	0	##	0	+++	++	0	0	0	0	
1010	1089	1090	1	3	pit	30	5	0	0	0	0	##	0	+++	++	+	0	0	0	
1012	1056	1055	1	3	pit	40	30	#	0	0	0	#	#	+++	++	+	+	0	0	
1014	1136	1137	1	3	pit	30	20	#	0	0	0	##	0	+++	++	++	0	0	0	
1015	1109	1101	1	3	pit	30	50	#	0	0	#	##	0	+++	+++	++	+	0	0	
1016	1170	1101	1	3	pit	30	1	0	0	0	#	#	0	++	+	0	0	0	0	
1017	1124	1101	1	3	pit	10	30	#	0	#	#	#	0	+++	++	0	+	0	++	
1018	1100	1101	1	3	pit	30	90	#	0	#	#	#	0	+++	+++	+++	0	0	0	pea/tare, clover/medick, goosefoot
1019	1126	1101	1	3	pit	30	15	#	0	0	##	##	#	+++	++	0	0	+	0	numerous small seeds
1020	1102	1101	1	3	pit	30	60	#	0	0	#	##	0	+++	+++	++	0	0	0	barley, cleaver, buttercup

Sample	Cont	Cut	Area	Ph	Type	Sample Size (L)	Flot Volume (ml)	Cereals	Chaff	Legumes	Weed	Snails	Small Bones	Charcoal <2mm	Charcoal > 2mm	Charcoal > 10mm	Fish scale	Mineralised arthropod remains	Charred stems	Flot comments
1021	1185	1186	1	3	pit	30	5	#	0	0	0	#	#	+++	++	+	+	0	0	
1035	1200	1088	1	3	pit	30	25	#	0	0	0	##	0	+++	+++	0	0	0	0	
1038	1274	1273	1	3	pit	30	40	#	0	#	0	#	0	+++	+++	+	0	0	0	
1039	1270	1271	1	3	pit	30	40	#	0	#	#	##	#	+++	+++	+	+	0	0	
1044	1289	1284	1	3	pit	30	140	#	0	0	0	#	0	+++	+++	+++	0	0	0	
1047	1303	1271	1	3	pit	30	0	0	0	0	0	0	0	0	0	0	0	0	0	
1048	1282	1130	1	3	pit	30	1	#	0	0	0	#	#	++	+	+	0	0	0	
1049	1342	1130	1	3	pit	10	3	0	0	0	0	#	0	++	++	0	0	0	0	
1050	1338	1130	1	3	pit	30	1	0	0	0	0	#	0	++	0	0	0	0	0	
1051	1339	1130	1	3	pit	30	10	0	0	0	##	##	#	+++	++	0	0	0	0	small seeds
1052	1340	1130	1	3	pit	30	30	##	0	0	###	#	0	+++	++	+	0	0	0	several corn gromwell and brome seeds, lover, buttercup
1058	1293	1290	1	3	pit	30	20	##	0	0	#	##	0	+++	+++	0	0	+	0	
1069	1565	1564	1	3	pit	30	40	#	0	0	0	0	0	+	+	0	0	0	0	
1070	1590	1512	1	3	post hole	30	20	#	0	0	0	##	0	+++	+++	0	0	0	0	
1071	1612		1	3	pit	30	20	#	0	0	0	##	0	+++	++	0	0	0	0	spike rush, few sprouted grains
1072	1563	1562	1	3	pit	30	15	##	##	0	#	##	#	+++	++	0	0	0	0	brome, vetch
1077	1678	1633	1	3	kiln	30	0	0	0	0	0	0	0	0	0	0	0	0	0	
1080	1675	1562	1	3	pit	30	40	###	###	0	##	##	0	+++	++	0	0	0	0	goosefoot, spike rush
1092	1095	1904	1	3	pit	10	5	0	0	0	#	#	0	+++	++	0	0	0	0	hazelnut shell
1093	1096	1904	1	3	pit	10	1	0	0	0	0	#	0	+	+	0	0	0	0	
1000	1004		1	4	black earth	30	10	#	0	0	0	##	0	++	+	0	+	0	0	
1001	1008		1	4	black earth	30	20	#	0	0	#	#	#	+++	++	0	0	0	0	
1002	1024		1	4	black earth	30	1	#	0	0	0	##	0	+	+	0	0	0	0	
1003	1037		1	4	pit	30	3	#	0	0	0	##	#	++	++	+	+	0	+	
1011	1061	1079	1	4	pit	30	15	#	0	0	###	##	0	+++	++	0	0	0	+	
1022	1062	1064	1	4	pit	30	20	#	0	0	0	##	0	+++	++	+	0	0	0	
1023	1063	1064	1	4	pit	30	15	#	0	#	#	##	#	+++	++	0	0	0	0	
1024	1105	1106	1	4	pit	30	10	#	0	0	#	#	0	+++	0	+	+	+	0	grass seed
1027	1050	1125	1	4	pit	30	1	0	0	0	0	##	0	+++	++	+	+	0	0	
1028	1161	1125	1	4	pit	30	65	0	#	0	###	#	0	+++	++	0	0	0	+++	pasture seeds, nettle, lantain, dock, buttercup
1029	1163	1125	1	4	pit	30	20	#	0	0	0	##	0	++	+	0	0	0	0	
1030	1211	1213	1	4	pit	30	10	#	0	0	0	##	0	+	+	0	0	0	0	

Sample	Cont	Cut	Area	Ph	Type	Sample Size (L)	Flot Volume (ml)	Cereals	Chaff	Legumes	Weed	Snails	Small Bones	Charcoal <2mm	Charcoal > 2mm	Charcoal > 10mm	Fish scale	Mineralised arthropod remains	Charred stems	Flot comments
1031	1146		1	4		30	10	0	0	0	0	##	#	+++	+++	+	+	0	0	
1032	1073	1071	1	4	pit	30	10	0	0	0	0	##	0	++	++	0	0	0	0	
1034	1105	1106	1	4	pit	30	25	#	#	0	#	##	0	+++	++	0	+	0	0	small grass seeds
1036	1098	1099	1	4	?oven	30	30	0	0	0	0	#	0	+++	+++	+	0	0	0	
1037	1103	1130	1	4	pit	30	10	0	0	0	0	##	0	+++	++	+	0	0	0	
1040	1072	1071	1	4	pit		30	#	0	#	#	#	#	+++	+++	++	#	#	0	corn gromwell.rye grass, buttercup, grass seeed
1046	1237	1071	1	4	pit	30	15	#	0	0	#	#	#	+++	++	0	+	+	0	grass seed, corn gromwell, vetch/tare, cleaver
1060	1380	1381	1	4		2	25	#	0	0	#	##	0	+++	++	++	+	+	0	dock, campion, vetch/tare
1063	1409	1410	1	4	beam slot	10	0	0	0	0	0	0	0	0	0	0	0	0	0	
1065	1404	1403	1	4	beam slot	60	10	0	0	0	0	#	0	+	+	0	0	0	0	
1074	1659	1645	1a	4	ditch	30	10	#	0	0	0	##	0	+++	+++	+	++	0	0	
1106	2002		2	0	hearth	10	1	0	0	0	#	0	0	++	+	0	0	0	0	small seeds; sorrel, hemlock
1108	2288	2287	2	0	post hole	10	1	0	0	0	0	#	0	+	+	0	0	0	0	
1104	2148	2143	2	1	pit	30	5	0	0	0	#	#	0	+++	++	0	0	0	0	sorrel
1107	2214	2213	2	1	pit	40	2	0	0	0	0	#	0	+++	++	+	0	0	0	
1112	2357	2356	2	1	pit	30	5	0	0	0	0	#	0	+++	++	0	0	0	0	
1083	1736	1714	2	2	ditch	10	2	0	0	0	0	#	0	++	+	+	0	0	0	
1089	1839	1838	2	2	post hole	10	20	##	0	0	0	#	0	++	++	0	0	0	0	
1090	1867	1865	2	2	post hole	20	10	#	0	0	0	#	0	+++	+++	+	0	0	0	occ sprouted grains incl barley
1091	1861	1850	2	2	post hole	10	0	0	0	0	0	0	0	0	0	0	0	0	0	
1097	1815	1816	2	2	post hole	5	10	##	0	0	0	#	0	+++	++	0	0	0	0	
1105	2196	2195	2	2	pit	30	10	#	0	0	#	#	0	+++	+++	+	0	0	0	hazelnut shell
1109	2291	2289	2	2	post hole	10	5	0	0	0	0	#	0	+++	++	++	0	0	0	
1116	2263		2	2	pit	30	2	0	0	0	0	#	0	+++	+	0	0	0	0	
1026	1178	1175	2	3	ditch	30	40	#	0	0	0	##	0	+++	++	0	0	0	0	
1073	1663	1653	2	3	ditch	30	5	0	0	0	0	##	0	++	++	+	0	0	0	
1075	1668	1667	2	3	pit	10	30	#	0	0	0	##	0	+++	+++	++	0	0	0	
1078	1681		2	3	pit		0	0	0	0	0	0	0	0	0	0	0	0	0	
1079	1669	1667	2	3	pit		0	0	0	0	0	0	0	0	0	0	0	0	0	
1081	1691	1690	2	3	pit	30	0	0	0	0	0	0	0	+	+++	++	0	0	0	
1082	1738	1739	2	3	pit	10	10	0	0	0	0	0	0	+++	++	++	0	0	0	
1085	1734	1732	2	3	pit	30	2	0	0	0	0	#	0	++	++	0	0	0	#	
1088	1819		2	3		30	40	###	#	0	#	0	0	+++	+++	++	0	0	0	malted grain,

Sample	Cont	Cut	Area	Ph	Type	Sample Size (L)	Flot Volume (ml)	Cereals	Chaff	Legumes	Weed	Snails	Small Bones	Charcoal <2mm	Charcoal > 2mm	Charcoal > 10mm	Fish scale	Mineralised arthropod remains	Charred stems	Flot comments
																				brome, corn cockle
1094	1937	1933	2	3	pit	40	1	0	0	0	0	#	0	+	+	0	0	0	0	
1095	1969	1968	2	3	ditch	30	5	#	0	0	0	#	0	+++	++	+	0	0	0	
1096	1985	1946	2	3	ditch	30	2	#	#	0	#	#	0	++	++	0	0	0	0	Slender rush (juncus tenuis)
1098	2062	2064	2	3	post hole	10	5	0	0	0	0	#	0	+++	++	+	0	0	0	
1099	2047	2048	2	3	post hole	30	2	#	0	0	#	#	0	+++	++	0	0	0	0	dock, hempnettle
1100	2068	2070	2	3	post hole	10	20	#	#	0	0	#	0	+++	+++	+	0	0	0	
1101	2057	2059	2	3	post hole	20	15	##	0	0	0	#	0	+++	+++	+++	0	0	0	
1102	2081	2083	2	3	post hole	20	30	0	0	0	0	#	0	+++	+++	+++	0	0	0	
1103	1967	1966	2	3	pit	30	10	0	0	0	0	#	#	+++	++	0	0	0	0	small rodent bones
1110	2302	2303	2	3	ditch	30	25	#	0	0	0	##	0	+++	+++	++	0	0	0	
1111	2316	2317	2	3	ditch	30	40	#	0	0	0	##	#	+++	+++	++	0	0	0	
1114	2410	2409	2	3	ditch	30	15	0	0	0	0	0	0	+++	++	+	0	0	0	
1115	2413	2415	2	3		30	50	###	#	0	##	#	0	+++	++	0	0	0	0	malted grain, brome, corn cockle, detached embryo
1117	2269	2268	2	3	pit	30	2	0	0	0	#	0	0	+	+	0	0	0	0	clover
1118	2469	2467	2	3	ditch	30	0	0	0	0	0	0	0	0	0	0	0	0	0	
1013	1116	1117	2	4	pit	30	15	#	0	0	0	##	0	+++	+	0	0	0	0	hazelnut shell
1086	1794	1795	2	4	pit	30	40	###	#	0	#	0	0	+++	++	0	0	0	0	malted grain, brome, corn cockle
1113	2393	2392	2	4	post hole	10	20	#	0	0	#	#	0	+++	++	+	0	0	0	grass seeds, hemlock
1119	2478	2473	2	4	ditch	20	1	0	0	0	0	##	0	+	+	0	0	0	0	
1084	1763	1762	2	5	ditch	30	1	0	0	0	0	###	0	0	0	0	0	0	0	
1025	1063	1064				30	10	0	0	0	0	##	#	+++	++	0	0	++	0	
1033	1072	1071				30	1	0	0	0	0	#	0	+	+	0	0	0	0	
1057	1377	1355				30	10	0	0	0	#	##	0	+++	++	0	+	0	0	
1064	1404	1403				40	1	#	0	0	0	##	0	+	+	0	0	0	0	
1066	1431	1429				30	1	#	#	0	##	###	0	+++	+++	0	0	0	0	brome, grass seeds, spelt glume base, FAS
1076	1669	1667				20	15	0	0	0	##	0	0	+++	+++	+	+	0	0	dock, grass, plantain, clover, goosefoot

Table 56: *Catalogue of environmental samples*

C.4 Shells

By Rachel Fosberry

Introduction and Methods

C.4.1 A total of 87.4Kg of marine shell was recovered from 376 contexts during excavations at the Roman small town at Wixoe (Tables 57 and 58). The shells were quantified and examined in order to assess the diversity and quantity of these ecofacts and their potential to provide useful data as part of further archaeological investigations.

C.4.2 Oyster shell occurs in most of the features excavated on this site most commonly in rubbish pits, ditches and spread within dark/black earth layers. This assemblage is the result of hand collection and does not include shell recovered from environmental samples. During the excavation oyster shell was found to be abundant in quarry pits **1564** and **1604** in Area 1. The bulk of the shell from these features was discarded on site and only a small sub-sample retained for assessment.

Results

		Area 1	Area 1a	Area 2	Total contexts	Total weight
Phase 2	No of Contexts	22	2	21	45	
	Weight (Kg)	1.11	0.06	1.2		2.37
Phase 3	No of Contexts	102		71	173	
	Weight (Kg)	30.52		7.54		38.06
Phase 4	No of Contexts	78	10	20	108	
	Weight (Kg)	42.07	1.6	2.77		46.44
Phase 5	No of Contexts			3	3	
	Weight (Kg)			0.08		0.08
Unphased	No of Contexts	3		4	7	
	Weight (Kg)	0.14		0.17		0.31

Table 57: *Shells*

C.4.3 Oyster shell occurs in most of the features excavated on this site most commonly in rubbish pits, ditches and spread within dark/black earth layers. This assemblage is the result of hand collection and does not include shell recovered from environmental samples.

C.4.4 The predominant species of the assemblage was oyster (*Ostrea edulis*), representing 99.9% of the marine shell recovered. Mussel (*Mytilus edulis*) shells occur in three

contexts distinct from the oyster shell. A shell of whelk (*Buccinum undatum*) was noted as a contaminant in the oyster assemblage.

C.4.5 All of the bivalve shells were unhinged. Evidence of parasitic infestation was noted on several of the oyster shells but was not studied in detail. Notches caused by prising the valves apart prior to consumption were evident on many of the shells.

Discussion

C.4.6 Oyster shells predominate in this assemblage. *Ostrea edulis* is a bivalve mollusc that has an oval shaped left valve that is concave in shape with a rough, scaly surface and a right valve that is flattened and has a smoother surface. The percentage of mussels (%) and whelks in this assemblage are low. Both shellfish were consumed in the Roman period but were possibly not as commonly exploited as oysters were.

C.4.7 A small proportion of the oyster shells retrieved were fragmented and abraded which is an indication of the degree of post-depositional damage, however the majority of the shell was well preserved suggesting rapid disposal. The largest assemblages were recovered from quarry pits **1088**, **1101**, **1214**, **1216**, **1238**, **1320**, **1551** and **1564** all located in Area 1. These pits were used for general rubbish disposal and it can be assumed that shell refuse would have been disposed of as soon as possible and away from settlement areas due to the smell they would have generated.

C.4.8 The size of the oyster shells varies between 3cm and 8cm measured at the widest part of the left valve. The average size in the larger assemblages is 6-7cm. The proportion of left to right oyster valves are normally recorded at assessment stage to see if any information can be ascertained on preparation and consumption activities (raw oysters are often served in the left valve). During this rapid appraisal no significant differences were noticed but further analysis may determine significant variations. Although the oyster shells were not examined in detail, no evidence was observed of infesting organisms such as polychaetic worms that leave holes in the shell neither was there evidence of other uses such as paint containers *etc.*

C.4.9 The mussel shells occur in contexts that did not contain oyster shells. The assemblage is small and would not have constituted a single meal. Had the mussel shells been mixed with oyster shells they could have been interpreted as contaminants of the oyster harvest but their occurance in pits and a ditch suggest deliberate deposition of refuse.

C.4.10 The majority of the shell is found in deposits dating to the Middle to Latest Roman dates (mid 2nd – early 5th century AD). There was no evidence of marine shell from Phase 1 prehistoric contexts. This is to be expected as fish and shellfish was generally avoided during this period.

Statement of Research Potential

C.4.11 The marine shell recovered from this site suggests that oysters were a significant addition to the diet of the occupants at Wixoe particularly in the Middle to Late Roman period. Oysters can have a fairly long shelf-life of up to around two months if stored in brine (*pers. comm.* Chris Howard-Davis). However, they should be consumed when fresh, as their taste reflects their age. Fresh oysters could be carted or carried on the waterways to those inland settlement and a possible source could have been the Colne estuary near Colchester. The oyster shells found at the Roman small town at Wixoe could provide a rare opportunity to study a large assemblage of this date with the application of statistical analysis of the physical characteristics and morphology of the shells and their context. It may be possible to determine the source of the oysters and

whether they were farmed, fattened or derived from natural oyster beds. There is the potential for ageing the specimens and investigation into the parasitic infestations. This will contribute to the reconstruction of the patterns of interaction between the site and its hinterland and may contribute to studies of long distance trade.

Further Work and Methods Statement

C.4.12 Counts of shells per context have not been recorded at this stage .Specimens need to be counted to enable an assessment of the minimum number of individuals (MNI). For a context to be considered suitable for detailed analysis, 100+ measurable shells per context are recommended for statistical viability (Winder 1993) . Assuming that an average oyster shell weighs approximately between 10-15g, contexts containing more than 1kg could be considered for analysis.

Cont	Cut	weight (g)	average width (cm)	Category	Type	Phase	Area	Function
1003	0	52	6	fill	pit	4	1	
1004	0	7100	7	layer	black earth	4	1	
1004	0	7		layer	black earth	4	1	
1005	0	1561	7	layer	black earth	4	1	
1006	0	415	6	layer	black earth	4	1	
1007	0	136	6	layer	black earth	4	1	
1008	0	816	7	layer	black earth	4	1	
1010	0	6114	8	layer	black earth	4	1	
1011	0	55	6	layer	black earth	4	1	
1012	0	56	6	layer	black earth	4	1	
1013	0	614	5	layer	black earth	4	1	
1014	0	1166	6	layer	black earth	4	1	
1015	0	76	4	layer	black earth	4	1	
1016	0	74	6	layer	black earth	4	1	
1017	0	56	5	layer	black earth	4	1	
1019	0	764	7	layer	black earth	4	1	
1020	0	726	6	layer	black earth	4	1	
1021	0	30	5	layer	black earth	4	1	
1022	0	322	5	layer	black earth	4	1	
1023	0	3	f	layer	black earth	4	1	
1024	0	3727	7	layer	black earth	4	1	
1025	0	1099	7	layer	black earth	4	1	
1026	0	132	5	layer	black earth	4	1	
1027	0	144	6	layer	black earth	4	1	
1030	0	11	5	layer	black earth	4	1	
1031	0	248	6	layer	black earth	4	1	
1032	0	127	5	layer	black earth	4	1	
1035	0	1898	7	layer	cobbled surface	4	1	courtyard
1036	0	17	5	layer	black earth	4	1	
1037	1083	164	5	fill	pit	4	1	quarry
1038	1039	90	7	fill	pit	3	1	
1041	1040	15	6	fill	ditch	3	1	
1042	1040	57	6	fill	ditch	3	1	
1044	1045	49	6	fill	pit	3	1	quarry
1046	1047	407	5	fill	pit	3	1	quarry

Cont	Cut	weight (g)	average width (cm)	Category	Type	Phase	Area	Function
1048	1049	290	5	fill	pit	3	1	quarry
1050	1125	302	6	fill	pit	4	1	quarry
1053	1045	25	6	fill	pit	3	1	quarry
1054	1045	35	f	fill	pit	3	1	quarry
1056	1055	302	7	fill	pit	3	1	quarry
1060	1059	237	6	fill	pit	3	1	quarry
1061	1079	1375	7	fill	pit	4	1	quarry
1062	1064	178	5	fill	pit	4	1	quarry
1063	1064	288	6	fill	pit	4	1	quarry
1068	1070	22	3	fill	pit	3	1	quarry
1072	1071	605	6	fill	pit	4	1	quarry
1073	1071	289	7	fill	pit	4	1	quarry
1074	1049	589	5	fill	pit	3	1	quarry
1077	1078	15	5	fill	ditch	2	1	
1080	1081	181	6	fill	pit	3	1	quarry
1085	1125	72	6	fill	pit	4	1	quarry
1086	1088	405	7	fill	pit	3	1	quarry
1088	1088	51	5	cut	pit	3	1	quarry
1089	1090	8	4	fill	pit	3	1	
1091	1079	103	7	fill	pit	4	1	quarry
1092	1079	14	6	fill	pit	4	1	quarry
1096	1094	18	6	fill	pit	3	1	quarry
1097	1055	498	8	fill	pit	3	1	quarry
1101	1101	1599	8	cut	pit	3	1	quarry
1102	1101	142	5	fill	pit	3	1	quarry
1103	1337	385	7	fill	pit	4	1	
1105	1106	257	6	fill	pit	4	1	
1109	1101	70	5	fill	pit	3	1	quarry
1110	1101	97	6	fill	pit	3	1	quarry
1111	1101	35	6	fill	pit	3	1	quarry
1116	1117	31	6	fill	pit	4	2	
1120	1059	18	4	fill	pit	3	1	quarry
1125	1125	232	5	cut	pit	4	1	quarry
1126	1101	202	7	fill	pit	3	1	quarry
1127	1101	102	5	fill	pit	3	1	quarry
1129	1337	26	7	fill	pit	4	1	
1131	1115	407	6	cut	pit	2	2	
1136	1071	312	8	fill	pit	4	1	quarry
1138	0	51	8	layer	topsoil	5	2	
1140	0	357	5	layer		4	1	
1142	0	154	6	layer		4	1	
1144	0	52	5	layer		4	1	
1145	0	17	4	layer		4	1	
1146	0	53	5	layer		4	1	
1148	0	488	6	layer		4		
1150	0	525	6	layer		4	1	
1153	0	379	6	layer		4	1	
1154	0	291	6	layer		4	1	
1156	0	61	5	layer		4	1	
1158	0	14	6	layer		3	1	

Cont	Cut	weight (g)	average width (cm)	Category	Type	Phase	Area	Function
1163	1125	50	7	fill	pit	4	1	quarry
1175	1178	110	6	fill	ditch	3	2	
1179	1180	300	8	fill	pit	3	2	
1182	1182	18	4	cut	ditch	3	2	
1183	1088	26	5	fill	pit	3	1	quarry
1185	1088	474	7	fill	pit	3	1	quarry
1188	1187	47	3	fill	pit	2	2	
1190	1189	65	6	fill	ditch	3	2	structure
1191	1191	3	f	cut	ditch	3	2	structure
1198	1197	89	5	fill	pit	3	1	quarry
1200	1088	1354	6	fill	pit	3	1	quarry
1203	1206	114	6	fill	pit	4	2	
1204	1206	273	6	fill	pit	4	2	
1205	1206	270	8	fill	pit	4	2	
1215	1214	133	7	fill	pit	3	1	
1217	1216	48	6	fill	pit	3	1	
1220	1221	175	6	fill	pit	3	1	
1222	1071	51	5	fill	pit	4	1	quarry
1223	1088	293	7	fill	pit	3	1	quarry
1224	1251	305	6	fill	pit	3	1	
1225	1216	2358	6	fill	pit	3	1	
1229	1329	533	6	fill	pit	3	1	
1235	1234	9	f	fill	pit	3	1	
1237	1071	247	7	fill	pit	4	1	quarry
1239	1238	251	6	fill	pit	3	1	
1240	1214	3201	6	fill	pit	3	1	
1241	1238	490	6	fill	pit	3	1	
1250	1197	21	4	fill	pit	3	1	quarry
1255	1245	116	7	fill	pit	3	1	
1256	1245	256	6	fill	pit	3	1	
1260	1275	117	6	fill	pit	4	1	
1268	1269	87	6	fill	pit	4	1	
1270	1271	36	4	fill	pit	3	1	
1272	1271	153	7	fill	pit	3	1	quarry
1275	1275	21	4	cut	pit	4	1	
1276	1275	105	5	fill	pit	4	1	
1291	1290	15	6	fill	pit	3	1	quarry
1293	1290	20	6	fill	pit	3	1	quarry
1297	1071	17	5	fill	pit	4	1	quarry
1303	1271	127	6	fill	pit	3	1	quarry
1304	1271	24	6	fill	pit	3	1	quarry
1313	1313	8	4	cut	pit	4	1	
1314	1313	9	4	fill	pit	4	1	
1315	1238	206	6	fill	pit	3	1	
1322	1320	70	5	fill	pit	3	1	quarry
1328	1327	44	5	fill	pit	3	1	quarry
1332	1325	87	5	fill	pit	3	1	
1339	1130	4	f	fill	pit	3	1	quarry
1340	1130	119	6	fill	pit	3	1	quarry
1341	1130	1	f	fill	pit	3	1	quarry

Cont	Cut	weight (g)	average width (cm)	Category	Type	Phase	Area	Function
1343	0	143	7	layer	?dark earth	4	1	
1344	1345	47	5	fill	pit	3	1	?quarry or cess
1347	1290	91	6	fill	pit	3	1	quarry
1348	1238	71	6	fill	pit	3	1	
1349	1238	315	6	fill	pit	3	1	
1352	1238	31	6	fill	pit	3	1	
1354	1353	267	6	fill	pit	3	1	
1356	1355	196	6	fill	pit	3	1	
1359	0	1320	6	layer	black earth	4	1	
1363	1214	187	6	fill	pit	3	1	
1370	1369	85	6	fill	pit	3	1	quarry
1377	1378	58	6	fill	?hearth	2	1	structure
1379	1320	2237	6	fill	pit	3	1	quarry
1380	1381	112	8	fill	pit	2	1	quarry
1395	1393	23	7	fill	grave	4	2	human burial
1413	1617	1304	7	fill	ditch	4	1	
1415	1414	397	5	fill	pit	2	1	
1417	1416	64	6	fill	pit or post hole	4	1	
1430	1429	8	3	fill	pit	2	1	
1446	1445	396	6	fill	pit	3	1	
1457	1456	9	4	fill	pit	4	1	building
1475	1476	11	f	fill	beam slot	4	1	building
1495	1493	826	5	fill	pit	4	1	
1516	0	380	5	layer	cobbled surface	4	1	courtyard
1522	1523	67	4	fill	pit	4	1	
1539	1538	39	7	fill	?hearth	0	1	
1548	1327	6	f	fill	pit	3	1	quarry
1549	1551	415	6	fill	pit	3	1	quarry
1552	1554	692	6	fill	pit	4	1	quarry
1557	0	84	6	layer	black earth	4	1	
1558	0	27	4	layer	black earth	4	1	
1560	0	8	5	layer		2	1	
1563	1562	103	6	fill	pit	3	1	quarry
1565	1564	3	f	fill	pit	3	1	quarry
1570	1554	1821	8	fill	pit	4	1	quarry
1571	1551	1948	7	fill	pit	3	1	quarry
1572	1573	181	6	fill	ditch	3	1	
1574	1575	141	5	fill	ditch	2	1	
1579	1578	54	6	fill	pit	3	1	
1581	1580	1547	7	fill	ditch	3	1	
1586	1564	1421	6	fill	pit	3	1	quarry
1587	0	90	6	layer		4	1	
1590	1592	87	6	fill	post hole	3	1	?fence line
1603	1564	843	6	fill	pit	3	1	quarry
1605	1607	119	6	fill	post hole	3	1	?fence line
1612	1564	151	6	fill	pit	3	1	quarry
1613	1604	169	7	fill	pit	3	1	quarry
1614	1604	1025	7	fill	pit	3	1	
1618	1619	33	5	fill	pit	2	1	
1622	1623	6	5	fill	ditch	2	1	

Cont	Cut	weight (g)	average width (cm)	Category	Type	Phase	Area	Function
1627	1626	13	f	fill	ditch	0	1	
1629	1628	23	5	fill	ditch	2	1a	
1630	1628	38	4	fill	ditch	2	1a	
1632	1564	136	6	fill	pit	3	1	quarry
1636	1637	41	7	fill	pit	3	1	
1647	1649	20	6	fill	pit	2	2	
1656	1646	51	5	fill	?ditch	4	1a	
1657	1645	33	4	fill	ditch	4	1a	town boundary
1658	1645	13	6	fill	ditch	4	1a	town boundary
1659	1645	925	6	fill	ditch	4	1a	town bowndary
1660	1645	72	6	fill	ditch	4	1a	town boundary
1661	1645	48	8	fill	ditch	4	1a	town boundary
1663	1653	48	5	fill	ditch	3	2	
1664	1655	11	f	fill	ditch	2	2	
1665	1666	9	4	fill	ditch	3	2	
1668	1667	18	6	fill	pit	3	2	
1669	1667	17	5	fill	pit	3	2	
1670	0	167	6	layer		3		
1671	2151	64	6	fill	pit	3	2	quarry
1675	1562	15	5	fill	pit	3	1	quarry
1681	1739	28	6	fill	pit	3	2	
1682	2153	32	5	fill	pit	3	2	quarry
1689	1688	191	5	fill	pit	3	2	
1691	1564	90	5	fill	pit	3	1	quarry
1696	1697	18	6	fill	ditch	5	2	
1702	1701	158	7	fill	pit	3	2	
1703	1701	179	6	fill	pit	3	2	
1708	1710	332	6	fill	pit	3	2	
1711	1712	2		fill	pit	3	2	
1716	1700	15	6	fill	tree bole	4	1a	
1719	1698	31	6	fill	ditch	4	1a	town boundary
1720	1698	388	6	fill	ditch	4	1a	town boundary
1721	1698	21	6	fill	ditch	4	1a	town boundary
1733	1732	191	6	fill	pit	3	2	
1734	1732	34	6	fill	pit	3	2	
1736	1714	39	4	fill	ditch	2	2	
1738	1739	8		fill	pit	3	2	
1740	1741	33	5	fill	cobbled surface	4	2	road
1744	1746	59	5	fill	pit	2	2	
1747	1748	298	5	fill	ditch	3	2	
1758	1757	9	3	fill	pit	2	2	
1772	1771	29	6	fill	ditch	2	2	
1775	1774	51	6	fill	ditch	2	2	
1777	1774	3	5	fill	ditch	2	2	
1786	1785	50	4	fill	pit	3	2	quarry
1802	1801	196	6	fill	well	4	2	
1804	1803	47	7	fill	ditch	3	2	
1806	1803	43	7	fill	ditch	3	2	
1823	1822	51	4	fill	ditch	3	2	road
1878	1879	31	6	fill	ditch	2	2	road

Cont	Cut	weight (g)	average width (cm)	Category	Type	Phase	Area	Function
1900	1899	377	6	fill	pit	3	2	
1906	1904	6	f	fill	pit	3	2	
1911	1908	215	6	fill	pit	4	2	
1918	1921	139	6	fill	pit	3	1	
1919	1921	198	6	fill	pit	3	1	
1926	1930	22	3	fill	ditch	3	2	
1927	1930	22	5	fill	ditch	3	2	
1937	1933	160	6	fill	pit	3	2	
1938	1933	25	6	fill	pit	3	2	
1939	1933	14	6	fill	pit	3	2	
1941	1940	5	f	fill	pit	2	1	
1943	1942	20	f	fill	pit	2	1	quarry
1947	1980	423	6	fill	ditch	3	2	
1948	1921	288	7	fill	pit	3	1	
1949	1950	128	5	fill	pit	4	2	
1953	1954	67	5	fill	ditch	3	2	
1965	1964	470	6	fill	pit	3	2	
1967	1966	94	6	fill	pit	3	2	
1972	1950	11	4	cut	pit	4	2	
1973	1970	131	5	fill	pit	2	2	quarry
1975	1974	20	4	fill	ditch	3	2	
1976	1974	164	7	fill	ditch	3	2	
1977	1974	107	7	fill	ditch	3	2	
1979	1980	8	2	fill	ditch	3	2	
1984	1983	286	6	fill	post hole	3	1	?fence line
1985	1946	103	6	fill	ditch	3	2	enclosure
1988	1958	175	7	fill	ditch	3	2	
1991	1994	121	6	fill	ditch	3	2	enclosure
1995	1996	46	6	fill	pit	2	2	
2006	2005	138	5	fill	pit	2	2	
2008	2007	112	8	fill	ditch	3	2	
2009	2007	266	8	fill	ditch	3	2	
2026	2025	9	4	fill	?beam slot	3	2	?structure
2034	2033	35	5	fill	post hole	2	1	
2038	2037	17	4	fill	post hole	2	1	
2052	2053	3	f	fill	post hole	3	2	building
2054	2056	35	6	fill	post hole	3	2	building
2062	2064	38	5	fill	post hole	3	2	building
2075	2076	28	6	fill	ditch	2	2	road
2079	2080	16	6	fill	post hole	3	2	structure
2090	2090	18	f	cut	pit	3	2	
2095	2094	31	5	fill	ditch	0	2	
2097	2098	10	3	fill	post hole	3	2	building
2099	2101	438	6	fill	pit	3	2	
2110	2109	3	f	fill	pit	2	1	
2112	2111	40	6	fill	pit	2	1	
2114	2113	121	5	fill	pit	3	1	
2123	2122	112	5	fill	pit	3	1	quarry
2124	2122	40	5	fill	pit	3	1	quarry
2125	2122	50	6	fill	pit	3	1	quarry

Cont	Cut	weight (g)	average width (cm)	Category	Type	Phase	Area	Function
2126	2122	84	6	fill	pit	3	1	quarry
2128	2122	55	4	fill	pit	3	1	quarry
2130	2129	42	4	fill	pit	2	1	
2132	2131	57	5	fill	pit	2	1	
2133	2131	11	5	fill	pit	2	1	
2136	2135	11	5	fill	post hole	2	1	
2141	2140	33	6	fill	post hole	2	1	
2166	2165	92	5	fill	ditch	0	2	
2178	2177	18	5	fill	post hole	0	2	building
2180	1345	36	4	fill	pit	3	1	?quarry
2181	1345	92	6	fill	pit	3	1	?quarry
2182	0	91	5	layer		0	1	
2183	1345	47	7	fill	pit	3	1	?quarry
2185	2184	23	5	fill	pit	2	1	
2189	2186	31	6	fill	pit	2	1	
2190	2142	1	f	fill	pit	4	1	
2193	2194	30	6	fill	post hole	0	2	building
2196	2195	51	6	fill	pit	2	2	
2197	2195	1	f	fill	pit	2	2	
2225	2224	17	5	fill	ditch	4	2	road
2228	2324	150	8	fill	ditch	3	2	
2230	2327	67	6	fill	ditch	3	2	
2236	1345	95	5	fill	pit	3	1	?quarry
2241	2240	5	3	fill	ditch	2	2	
2249	2248	126	5	fill	pit	3	2	?storage
2251	2252	10	2	fill	post hole	3	2	building
2263	2262	15	5	fill	pit	2	2	
2265	2267	1244	7	fill	pit	4	2	
2266	2267	11	5	fill	pit	4	2	
2269	2268	19	5	fill	pit	3	2	
2271	2248	25	6	fill	pit	3	2	?storage
2276	2275	23	4	fill	post hole	2	2	building
2278	2273	58	6	fill	ditch	2	2	road
2279	2274	7		fill	ditch	3	2	road
2286	2285	29	5	fill	ditch	4	2	
2293	2292	61	6	fill	pit	4	2	waterhole
2294	2292	2	1	fill	pit	4	2	waterhole
2295	2292	58	5	fill	pit	4	2	waterhole
2302	2303	307	6	fill	ditch	3	2	
2309	2308	96	6	fill	well	3	2	
2311	2308	39	6	fill	well	3	2	
2326	2324	27	5	fill	ditch	3	2	
2330	2308	54	6	fill	well	3	2	
2331	2308	18	5	fill	well	3	2	
2348	2327	21	6	fill	ditch	3	2	
2352	2351	25	5	fill	ditch	3	2	road
2377	2379	275	5	fill	ditch	3	2	boundary
2382	2383	13	4	fill	ditch	5	2	
2404	2403	294	6	fill	ditch	3	2	boundary
2410	2409	138	6	fill	ditch	3	2	boundary

Cont	Cut	weight (g)	average width (cm)	Category	Type	Phase	Area	Function
2452	2453	26	8	fill	pit	3	2	
2469	2506	51	4	fill	ditch	3	2	
2475	2473	9	4	fill	ditch	4	2	town boundary
2477	2473	31	5	fill	ditch	4	2	town boundary
2490	2460	14	5	fill	ditch	4	2	

Table 58: *Catalogue of shells*

APPENDIX D. PRODUCT DESCRIPTION

Product number: 1
Product title: Full Report (Analysis, Publication and Archiving)
Purpose of the Product: To analyse the site and address the research aims and objectives stated in this report, to disseminate to the local community and to archive in the county stores to allow access to site records and artefacts.
Composition: Standard analysis report, in accordance with the relevant journal/monograph series and EH guidelines
Derived from: Analysis of site records, specialist reports and data and background research
Format and Presentation: .PDF documents derived from Open office/Word document and Adobe Illustrator
Allocated to: Rob Atkins (RA)
Quality criteria and method: Checked and Edited by Elizabeth Popescu (EP)
Person responsible for quality assurance: EP
Person responsible for approval: EP
Planned completion date: Publication Report December 2013 (submission of analysis report to East Anglian Archaeology Monograph Series). Archiving December 2015

APPENDIX E. RISK LOG

Risk Number: 1
Description: Specialists unable to deliver analysis report due to over running work programmes/ ill health/other problems
Probability: Medium
Impact: Variable
Countermeasures: OA has access to a large pool of specialist knowledge (internal and external) which can be used if necessary.
Estimated time/cost: Variable
Owner: James Drummond Murray (JDM)
Date entry last updated: January 2012

Risk Number: 2
Description:non-delivery of full report due to field work pressures/ management pressure on Co-authors
Probability: Medium
Impact: Medium - High
Countermeasures: Liaise with OA Management team
Estimated time/cost: Variable
Owner: James Drummond Murray (JDM)
Date entry last updated: January 2012

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RIC Roman Imperial Coinage

APPENDIX G. OASIS REPORT FORM

All fields are required unless they are not applicable.

Project Details

OASIS Number	See vol. 1		
Project Name	Excavations at Wixoe Roman Town (WIX 022)		
Project Dates (fieldwork) Start	31-01-2011	Finish	06-05-2011
Previous Work (by OA East)	Yes	Future Work	No

Project Reference Codes

Site Code	WIX 022	Planning App. No.	N/A
HER No.	WIX 022	Related HER/OASIS No.	

Type of Project/Techniques Used

Prompt: Water Act 1989 and subsequent code of practice

Please select all techniques used:

☐ Field Observation (periodic visits)	☐ Part Excavation	☐ Salvage Record
☒ Full Excavation (100%)	☐ Part Survey	☐ Systematic Field Walking
☐ Full Survey	☐ Recorded Observation	☐ Systematic Metal Detector Survey
☐ Geophysical Survey	☐ Remote Operated Vehicle Survey	☒ Test Pit Survey
☐ Open-Area Excavation	☐ Salvage Excavation	☐ Watching Brief

Monument Types/Significant Finds & Their Periods

List feature types using the NMR Monument Type Thesaurus and significant finds using the MDA Object type Thesaurus together with their respective periods. If no features/finds were found, please state "none".

Monument	Period	Object	Period
A few pits and a dit	Late Prehistoric -4k to 43	Pottery and flint	Select period...
Small Town	Roman 43 to 410	Domestic and indust	Select period...
	Select period...		Select period...

Project Location

County	Suffolk	Site Address (including postcode if possible)	
District	St Edmundsbury Borough	Fields to the south and north of Anglian Water pumping station, Wixoe, Suffolk	
Parish	Wixoe		
HER	Wix 022		
Study Area	Linear pipeline	National Grid Reference	TL 7043

Project Originators

Organisation	OA EAST
Project Brief Originator	N/A
Project Design Originator	Nick Finch (URS-Scott Wilson)
Project Manager	James Drummond-Murray (OA East)
Supervisor	Rob Atkins (OA East)

Project Archives

Physical Archive	Digital Archive	Paper Archive
Bury St Edmunds	OA East	Bury St Edmunds
WIX 022	WIX 022	WIX 022

Archive Contents/Media

	Physical Contents	Digital Contents	Paper Contents
Animal Bones	☒	☒	☒
Ceramics	☒	☒	☒
Environmental	☒	☒	☒
Glass	☒	☒	☒
Human Bones	☒	☒	☒
Industrial	☒	☒	☒
Leather	☐	☐	☐
Metal	☒	☒	☒
Stratigraphic		☒	☒
Survey		☒	☒
Textiles	☐	☐	☐
Wood	☐	☐	☐
Worked Bone	☒	☒	☒
Worked Stone/Lithic	☒	☒	☒
None	☐	☐	☐
Other	☐	☐	☐

Digital Media		Paper Media
☒ Database	☐ Aerial Photos	
☒ GIS	☐ Context Sheet	
☐ Geophysics	☐ Correspondence	
☒ Images	☐ Diary	
☒ Illustrations	☐ Drawing	
☐ Moving Image	☐ Manuscript	
☒ Spreadsheets	☐ Map	
☐ Survey	☐ Matrices	
☒ Text	☐ Microfilm	
☐ Virtual Reality	☐ Misc.	
	☐ Research/Notes	
	☐ Photos	
	☐ Plans	
	☐ Report	
	☐ Sections	
	☐ Survey	

Notes:

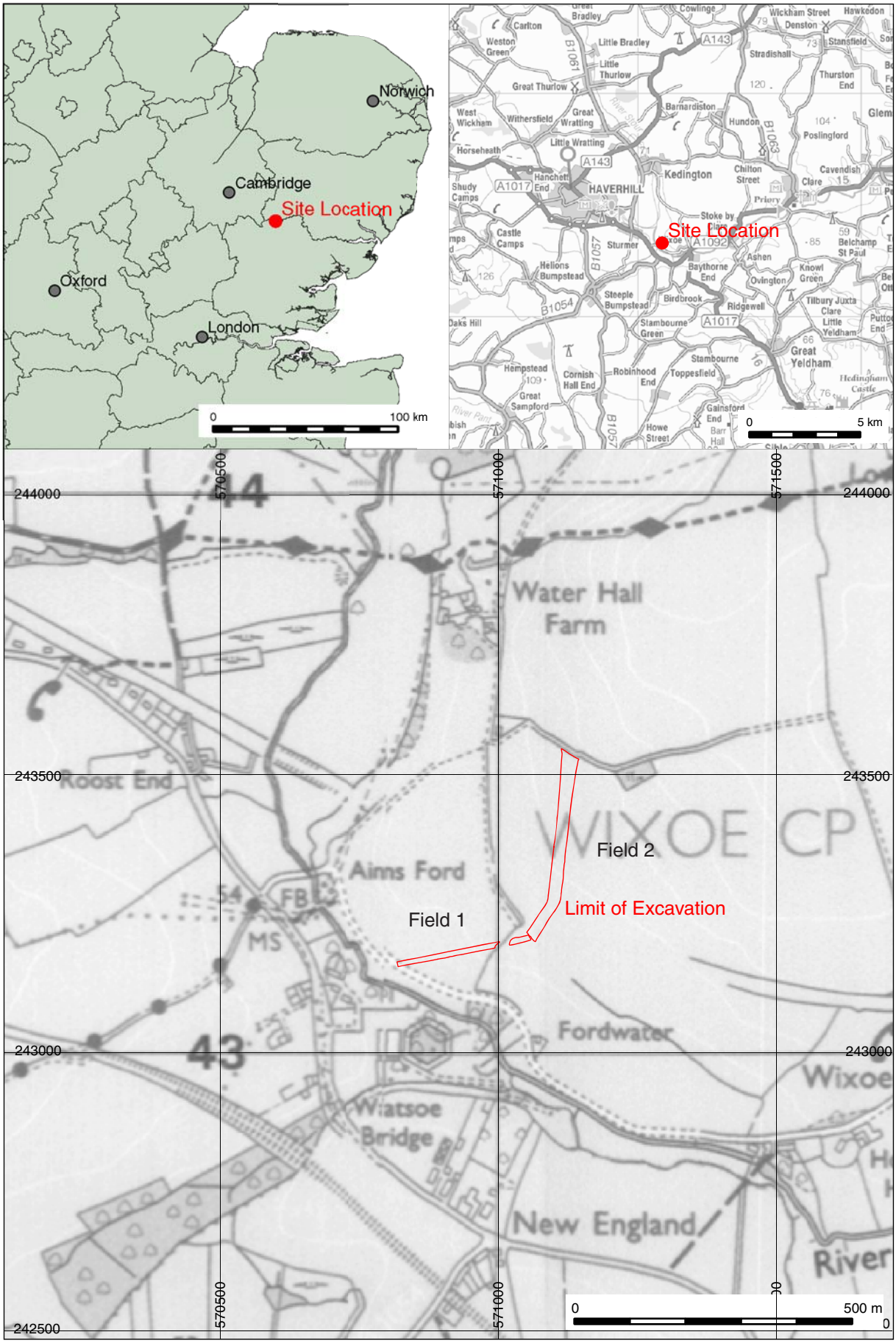

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Figure 1: Site location

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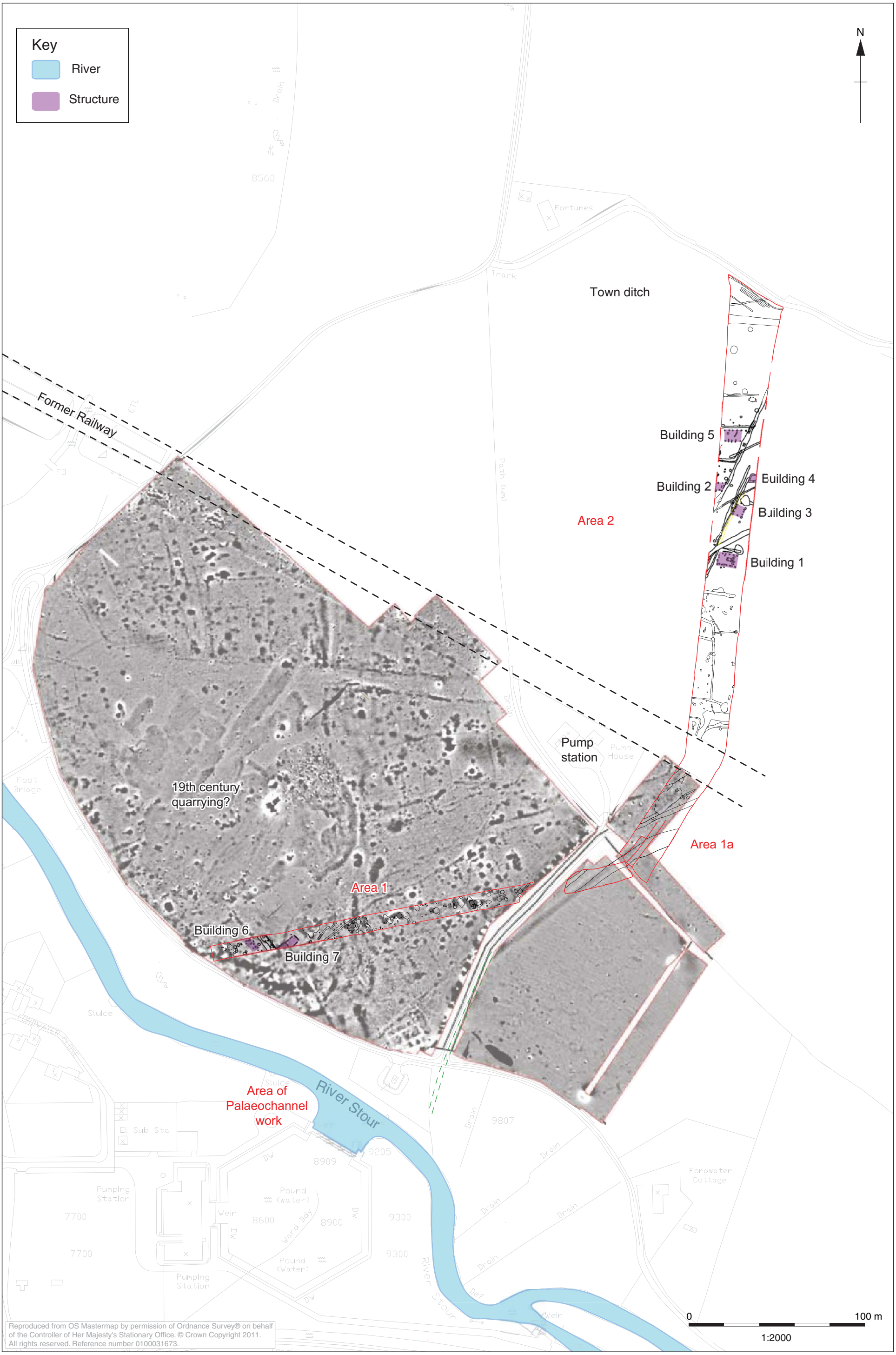

Figure 2: WIX 022 excavation area overlying geophysical survey

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Figure 3: WIX 022 excavation area overlying geophysical interpretation (after Baldwin 2009 fig 3a, with additions)

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Figure 4: WIX 022 Area 1, Phases 1-4

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Figure 5: WIX 022 Areas 1a and 2 (south), Phase 2-4

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Figure 6: WIX 022 Area 2 (central), Phases 1-5

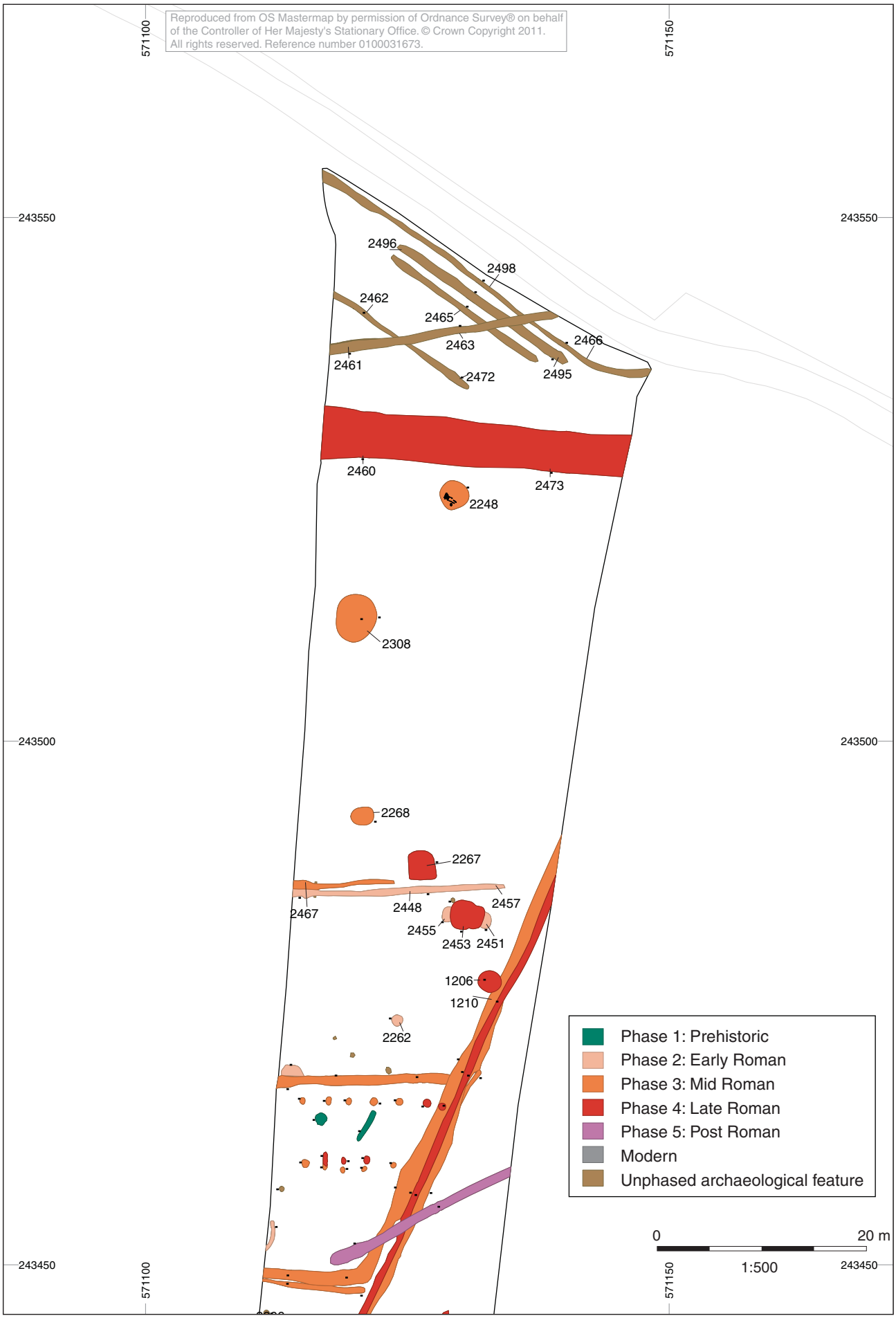

Figure 7: WIXO22 Area 2 (north)

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