

WYNG Gardens, Thompson's Lane, Cambridge

An Archaeological Excavation



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SUMMARY

Archaeological excavations by the Cambridge Archaeological Unit at WYNG Gardens (formerly St. Clement's Gardens), Thompson's Lane, Cambridge, on behalf of Trinity Hall between February and September 2015 revealed several phases of past activity. A Middle/Late Bronze Age–Late Bronze Age/Early Iron Age palaeochannel of the river Cam dated by dendrochronology had good waterlogged preservation, but negligible evidence of human activity. This was followed by alluvial flood deposits dated to the Middle–Late Iron Age, again with relatively little evidence for a human presence in the immediate vicinity. Three phases of Romano-British activity, spanning the late 1st to mid/late 4th centuries, included the rear boundary of the lower town/suburban settlement fronting onto Bridge Street, waterside activity and an area of inhumation burials. After a further period marked by natural alluviation the area was reclaimed in the 11th–12th centuries, probably linked to the enclosure of the area by the King's Ditch in the mid-12th century. During the 13th–15th centuries there is relatively sparse evidence for activity, the area was probably part of the garden or curtilage meadow of a property with its main occupational focus to the west. Occupation increased markedly in the 16th century, when the area was sub-divided into nine plots, probably after St. John's College acquired the site in 1533. There is evidence for communal facilities shared between the plots, including a stone-lined cesspit and a well. Later there was further investment in the early/mid-17th century, with the construction of a new communal well and privy, plus an associated drain. In the 1791–95 the area was converted into a garden and later in 1911 a terrace of buildings was constructed.

Significant finds, some of which are probably linked to the sites location close to the river Cam, include a Samian sherd with graffiti, an atypically high proportion of Stamford ware in the 11th–12th century assemblage, a rare 13th century imported Saintonge ware pitcher, significant quantities of limestone in 16th century contexts that probably represents material used as ballast, a stone with an incised coat of arms 'trial piece' and ceramic assemblages of the 1790s. The alluvial sequence, which spans c. 2500–3000 years from the Middle/Late Bronze Age to the 12th century AD, allowed various forms of analysis of long-term patterns to be undertaken including plant remains, pollen and X-ray fluorescence.

INTRODUCTION

Archaeological investigations were undertaken in advance of the WYNG Gardens development on Thompson's Lane in Cambridge, formerly known as 1–8 St. Clement's Gardens, by the Cambridge Archaeological Unit (CAU). The work was commissioned by Bidwells on behalf of the landowner Trinity Hall and took place between the 16th of February and the 15th of September 2015, with the main phase of excavation taking place between the 8th of June and the 18th of August (Figures 1–3). This included a public open day attended by approximately 70 individuals on the 24th of July (Figure 3). The work was undertaken as a condition of an application for planning permission, related to the construction of student accommodation and associated infrastructure. The site is located on the eastern side of Thompson's Lane and the overall development area covers 1117 square metres. The excavation was carried out and this report produced in accordance with an archaeological specification written by the CAU (Dickens 2014), in response to a brief by the Historic Environment Team, Cambridgeshire County Council (Thomas 2014). The specification and evaluation were approved and monitored by members of that team.

Location, Topography and Geology

The site (centred at TL 44823 58965) is located on the eastern fringe of the historic core of Cambridge, within the circuit of the medieval town boundary known as the King's Ditch. The Holocene and earlier geological sequence of the river Cam has been investigated in detail by Boreham (Boreham 2002; Boreham 2013; Boreham & Rolfe 2009). Geologically the site is situated upon 1st terrace river gravels, which are underlain by Gault clay (British Geological Survey, sheet 188), with the current ground surface sloped downwards from south to north lying at *c.* 7.4m OD (south) to *c.* 6.6m OD (north). The main phase of excavation commenced at a height of *c.* 6.5m OD with un-truncated natural occurring at *c.* 5.1m OD (southern end of site) and *c.* 3.4m OD (northern end of the site). A deeper palaeochannel in the northwest corner of the site had its base at *c.* 2.0m OD.

Archaeological and Historical Background

The archaeological background of the development area has previously been considered in detail in a desktop assessment (Newman 2013). As a consequence only information immediately pertinent to the excavation will be presented here. Although limited in their scale previous archaeological investigations, particularly at Riverside (Firman & Pullinger 1987), 5 Thompson's Lane (Baker & Kenny 2004), 24 Thompson's Lane (Newman 2008a), on the route of the 33kv reinforcement cable (Davenport *et.al.* 2008) and at the Old Vicarage (Newman 2011), have provided

reasonable insights into the archaeology of the immediate environs. Although evidence for human occupation is absent during the Late Neolithic/Early Bronze Age the area lay within the flood plain of the Cam, which appears to have been a broad, slow-flowing and potentially highly braided river. During the Romano-British period the area appears to have been significantly drier and appears to have lain on the fringes of a settlement, located to the south running along the Romano-British road which underlies the current Bridge Street. During the Early and Middle Saxon periods the area appears to have reverted to a wetter state and there is no evidence for human occupation.

Occupation associated with the medieval town of Cambridge is thought to have commenced between the 10th and 12th centuries and the area was enclosed by the circuit of the King's Ditch constructed in the early 12th century. The medieval forerunner of Thompson's Lane, *Aungeryslane* or *Aungers Lane*, was established by 1279 at the latest. A 'tenement next to St. Clement's Churchyard' was recorded in the Hundred Roll as being present 'at the head of Aungers Lane' (Faber 2006, 759). In 1279, the site itself appears to have comprised part of the *curia* (court, or more probably holding) of Richard Laurence (Faber 2006, 87–91), although the nature of the activity on the investigated site is unclear. By the late 14th century the area appears to have been incorporated into the holdings of Harleston manor; based upon leases of 1377 and 1391 it has been suggested that at least one *messuage* was present within the investigated area, although the documents are unclear and more dwellings may also have existed (Faber 2006, 89–90).

In 1533 St. John's College took possession of the site (Faber 2006, 89; Underwood 1993, 173) and from the late 16th century onwards the earliest maps depict relatively dense occupation along the street frontage. The college owned the site until 1795; by the end of this period ten *messuages* are recorded as having been present (Faber 2006, 88). The property was leased to an individual called Purchas in 1791, at which point the boundary between the property and the King's Ditch was straightened. Purchas bought the property in 1795, by which time the structures had been cleared in order to make way for a formal garden associated with newly constructed houses (30 Thompson's Lane) situated on the opposite side of Thompson's Lane (Faber 2006, 88). This is clearly depicted in a plan of 1798. By 1803 the property was owned by William Hollick and was a garden with a greenhouse and summerhouse, additionally a coach-house and stables were also located there. In 1911 the eight terraced town houses that constitute 1–8 St. Clement's Gardens were constructed (Dickens & Newman 2016), these stood on the site until their demolition in 2014.

Methodology

Following on from an earlier desk-based assessment and deposit model incorporating the monitoring of trial pits and window samples (Newman 2013) and historic building recording (Dickens & Newman 2016), all on site structures were demolished during November and December 2014. There were then seven phases of subsequent archaeological investigation, which are reported upon here (Figure 2). In total *c.* 640 square metres were subject to excavation (*c.* 57 per cent of the overall development area) and *c.* 100 square metres were subject to watching brief (*c.* 9 per cent of the overall development area). The remaining area around the edges of the development area was not significantly impacted upon by the groundworks.

- 1) Once the debris from the demolition of the standing buildings had been cleared, nine machine dug test pits measuring *c.* 1.6m by 1.6m in extent and *c.* 1.5–1.6m deep were excavated in February 2015. These test pits were excavated principally to determine the nature of the upper sequence of deposits.
- 2) In February 2015 service diversion works around the southeastern corner of the site were subject to archaeological monitoring.
- 3) In March 2015 it was determined that the piling process would require the removal of a significant depth of deposit to permit the creation of a piling mat. Previous work had identified that there was a significant depth of 19th/20th-century garden soil and as a result the area was levelled to a depth of *c.* 6.5m OD. This process was monitored archaeologically and no significant features were revealed. A 6m by 6m area on the southeastern side of the site that had to be lowered to *c.* 6.2m OD to create a 'launch area' for the piling rig was hand-cleaned and excavated.
- 4) During March and April 2015 the machine excavation of a *c.* 1.2m wide leader trench for the piling rig was monitored. This trench was dug to depths of *c.* 6.2, 6.0 and 5.7m OD around the edges of the excavation area, although where substantial wall footings were encountered the trench was extended deeper to permit their removal. After the insertion of the piling several areas of machine excavation adjacent to the piles were monitored during April 2015.
- 5) In May and June 2015 the leader trenches for eight steel propping beams were monitored. These were *c.* 1.6m wide and of variable depth.
- 6) The main phase of excavation took place between the 8th of June 2015 and the 18th of August 2015. At this time all remaining archaeological deposits were investigated. The area measured *c.* 42m north–south by *c.* 14–17.5m west–east, covering *c.* 640 square metres.
- 7) Following on from the main phase of excavation a watching brief was carried out during September 2015, while the upper deposits in the northeast corner of the site outside the main piling area were reduced to create the basement access ramp.

As the initial investigations indicated that the archaeological deposits at the site consisted of a relatively low density of discrete features with thick relatively homogeneous layers, a strategy of repeated lowering by machine was adopted. A 3.5 tonne machine with a 1.6m wide toothless bucket was used to remove overburden. The surface was then hand-cleaned and all features manually base planned at a scale of 1:20 and all features and layers metal detected. All discrete features were at least 50 per cent excavated, while all linear features were at least 20 per cent excavated in

1.0m wide slots (Figure 4). Additionally, between 10 and 12 1.0m by 1.0m test pits were excavated through the homogeneous layers at each stage. Once this hand excavation phase was completed the area was again machine lowered by 0.1–0.3m, with a typical depth of 0.2m, and the process repeated. The one significant exception to this was the bicycle ramp extension on the eastern side of the site; due to various constraints, this was investigated by using the machine to create a series of vertical faces at *c.* 1.0m intervals.

Features and layers were recorded using the CAU modified Museum of London Archaeology Service system (Spence 1994). Context numbers are indicated within the text in square brackets (e.g. [300]); all features have been assigned feature numbers denoted by the prefix F (e.g. F.100). Feature numbers are generally used in discussion in preference to context numbers and all contexts have been assigned to features. Details of all features and contexts are provided in appendices at the end of the report (Appendices 1–2). Photographic recording was primarily digital. No features containing dense concentrations of charred plant remains were identified in the field, as a result a number of bulk environmental samples were taken to provide broad spatial coverage and from a range of feature types. Several waterlogged features were identified and all such deposits were sampled. Additionally, two sets of continuous column samples were taken from the palaeochannel/alluvial sequence at the northern end of the site. All orientations in this report are based upon the site grid, rather than true north. This means that north in the report is actually north-northeast, south is south-southwest, west is west-northwest and east is east-southeast.

All work was carried out in strict accordance with statutory Health and Safety legislation, the recommendations of FAME (Allen & Holt 2010) and in accordance with a site specific risk assessment and the general CAU Health and Safety policy. The CAU site code is SCG15 and the event number is ECB4294 (planning ref 14/0133/FUL). The human remains from the site were removed under a Ministry of Justice license (15-0184).

Archive

1210 contexts from 304 features were recorded during the archaeological investigations. Artefacts including pottery, coins and jettons, metalwork (copper-alloy, iron, lead), worked stone, worked bone, clay tobacco pipe, vessel and window glass, slag, struck and burnt flint, ceramic building material, wood and timber, moulded stone, animal and human bone and shell were recovered and both bulk and column samples taken and processed. The documentary records and accompanying artefacts have been assembled into a catalogued archive and are currently stored at the CAU offices, pending final deposition.

RESULTS

The results will be presented on a phase by phase basis. In total nine phases have been recognised, although some of these are of limited archaeological significance. It should be noted that the site was heavily disturbed by several phases of gardening between the 13th and 20th centuries (Phases 7, 9–10). This means that the site is relatively poorly stratified in comparison to other urban sites in Cambridge. Whilst localised stratigraphic sequences could be recognised with reasonable certainty, these could not be traced site-wide. Additionally, many features possess relatively limited dating evidence and there is considerable residuality with Romano-British, medieval and Post-Medieval pottery often occurring in the same features, or in some cases features only contain pottery that must be considerably earlier than the actual feature. The most significant issues arose when distinguishing the latest Romano-British features (Phase 4) from the 11th–12th century features (Phase 6). As a result some phase attributions are not entirely certain.

Phase 1:	Geological sequence, including palaeochannel
Phase 2:	Middle/Late Bronze Age–Late Bronze Age/Early Iron Age Palaeochannel
Phase 3:	Middle–Late Iron Age alluviation
Phase 4:	Romano-British occupation
Phase 5:	Early–Late Saxon alluviation
Phase 6:	11th–12th-century reclamation and land division
Phase 7:	13th–15th-century garden
Phase 8:	rental development by St. John's College (1533–1791/5)
Phase 9:	Modern detached garden (1791/5–1911)
Phase 10:	Edwardian terrace (1911–2014)

Phase 1: Geological Sequence, Including Palaeochannel

The lowest geology encountered was stiff grey bedrock clay identified as the Gault clay, deposited during the Lower Cretaceous Period (Upper and Middle Albian) 113.0±1.0 Ma to 100.5±0.9 Ma (million years ago). Although the present course of the river Cam has been subject to change and modification, around Cambridge it appears to have largely been inherited from a Late-glacial incisional event, apparently remaining relatively stable throughout the Holocene. It drains a *c.* 1000 square kilometre catchment of low chalky hills to the south of Cambridge. The gault was overlain by river terrace gravels. Although traditionally divided into four terraces (fourth to first; Worssam & Taylor 1969), this system is no longer necessarily accepted as appropriate. Based upon location these gravels probably date to around 50,000 BP (Steve Boreham pers. comm.). During the bulk removal of the gravels a

south–north aligned palaeochannel was observed in the southwestern corner of the site (F.355). This palaeochannel was *c.* 2.0m deep and 4.0m+ wide and was filled with sands and gravels similar to the river terrace gravels at the site, no other material such as bone was observed. The dating of this feature is uncertain, but a date around 15,000 BP is possible (Steve Boreham pers. comm.). Nearby at Chesterton Lane Corner the ‘natural consisted of mixed clays, sands and gravels interpreted as a river palaeochannel’; the direction of the palaeochannel etc. could not be determined but two snail shells indicate slow moving water and an earlier Holocene date was suggested (Mortimer & Regan 2001, 2).

Phase 2: Middle/Late Bronze Age–Late Bronze Age/Early Iron Age Palaeochannel

At some point a southwest–northeast aligned palaeochannel was scoured through the river terrace gravels in the north-western corner of the site (F.354: Figures 5–8). Apart from this the only other features that appear to pre-date the Middle/Late Iron Age are two small pits (F.312, 353). These pits contained no datable material, but were stratigraphically early, had gravelly fills and appear to have been sealed by later silt deposits of Middle–Late Iron Age date. A few pieces of residual struck and burnt flint were recovered, some of which are broadly comparable to Bronze Age and later prehistoric assemblages. The material therefore provides evidence, albeit very limited, of background Prehistoric activity on site. The palaeochannel F.354 contained no pottery etc. or struck or worked flint. The dating of the palaeochannel is therefore based principally upon the fact that it contained wood dated to the Late Bronze Age and was sealed by deposits dated to Middle–Late Iron Age. The earliest deposits in the palaeochannel probably date to the latter part of the Middle Bronze Age (1500–1000 BC) or the Late Bronze Age (1000–700 BC). It is likely that the bulk of the sequence dates to Late Bronze Age, whilst the uppermost deposits probably date to the Late Bronze Age or the Early Iron Age (700–400 BC). Whilst there are some waterlogged plant remains, wood, charcoal, animal bone etc. that would be potentially be suitable for radiocarbon dating the remains are sparse and generally poorly preserved. Additionally, specialist analysis suggests that the plant remains are particularly unsuitable for radiocarbon dating. There is therefore a high probability that any results might prove residual, as appears to have been the case at 24 Thompson’s Lane (see below).

Only a small proportion of the overall width of palaeochannel F.354 was revealed and it is therefore difficult to characterise in its entirety. It was aligned southwest–northeast, with a gently sloping edge, and at its deepest the fills in the palaeochannel were 0.95–1.0m thick. The actual base of the palaeochannel was somewhat ambiguous, as the process of the river scouring away the overlying gravel deposits meant that some gravel had become firmly embedded into the surface of the clay. It is possible that the uppermost stiff grey silt was reworked bedrock; this could not be

conclusively distinguished from the undisturbed bedrock, but there was a *c.* 0.05–0.10m thick ‘transitional’ zone. Although the fills of the palaeochannel varied somewhat they were broadly similar in character and can be characterised as; black-grey organic silt [2078], grey-brown sandy silt [2076], black organic silt [2075], grey-black organic silt [2074], black organic silt [2073] and grey-black organic and shelly silt [1997]. The palaeochannel sequence was intensively sampled, with two sets of column samples taken for pollen and geochemical analysis and a sequence of bulk samples that were floated for environmental and artefactual recovery (Figure 9). These deposits contained very little cultural material; no pottery or flint was recovered during excavation and although 84l were wet sieved only an extremely small quantity of animal bone (6 pieces, 6g) and charcoal was recovered. The animal bone included a cow radius fragment and fragments of four unidentifiable cattle-sized elements. The bone did not have any cut marks etc., but its general appearance is suggestive of domestic waste. On the edge of the palaeochannel there was a group of at least seven small stakes [1971], driven vertically into the underlying clay. This provides the clearest evidence for localised human activity of some kind beside the channel.

There was a group of 13 large branches and trunks *c.* 0.45–2.65m long with no signs of working [2034], these were all relatively high up in the palaeochannel sequence at roughly the same height (within the upper portion of [2074] and the base of [2073]), were concentrated within a small area and shared a common west–east alignment. This suggests that these are the result of a single event, or a short period of particular conditions, when wood was washed into the river and deposited on the slower and shallower side of a meander bend in the river. This group probably extended westwards beyond the area of excavation; although 13 separate pieces of wood were identified, it is possible that in some cases multiple pieces might derive from a single tree. The base of the pieces of wood overlay 0.7–0.8m of alluvial deposit in F.354, indicating that the origins of the palaeochannel are considerable earlier than the wood. The three samples submitted for dendrochronological analysis had 163, 191 and 298 rings, with the measured sequences ending in 1052 BC, 1035 BC and 948 BC. This suggests that the three trees died in 1042–997 BC, 1025–980 BC and 938–893 BC. Even allowing for some delay between the death of the latest tree and it coming to rest at this location in the palaeochannel the general horizon of the palaeochannel that they were recovered from can therefore be firmly attributed to the Late Bronze Age (1000–700 BC). The base of the pieces of wood overlay 0.7–0.8m of alluvial deposit in F.354, indicating that the origins of the palaeochannel are rather earlier than the wood.

The lower deposits may date to an earlier point in the Late Bronze Age, or could fall within the later part of the Middle Bronze Age (1500–1000 BC). The oak trees from which the wood was derived presumably grew close to the river some distance upstream. The longest 298 year sequence came from a tree that was probably *c.* 400

years old, a quite uncommon age for an oak. The differences between the tree ring sequences indicates that one of the trees died around 60 years before one of the others. The pollen analysis provides little evidence for intensive human activity near the river at this time, with cereal pollen entirely absent except in the very uppermost deposit ([1997]), and presents a picture of reed-swamp and mixed-oak woodland. Given the presence of wood from oaks in the palaeochannel it is noteworthy that the palaeochannel sequence also contained a large proportion of oak pollen (4–14 per cent). Waterlogged preservation was present, particularly in the basal half of the deposits, and quantities of plant remains were recovered. Unfortunately these plant remains were generally highly comminuted and, in some instances, also very poorly preserved. The plant remains indicate that the deposits accumulated over a considerable period, during which they were subjected to frequent episodes of post-depositional desiccation and re-wetting. The habitat surrounding the palaeochannel was predominantly marshy, although some areas of drier grassland (some of which may have been disturbed) are also suggested. Some colonisation by trees/woody shrubs is also indicated, although the evidence for this is minimal.

In the area of Cambridge the River Cam flows along a relatively constrained course, bounded by a mixture of deposits of gravel and bedrock. It flows northwards along the Backs, before the geology around Magdalene Bridge creates a distinct 'pinch point' forcing it to loop to the east and south before it eventually resumes its northwards course. The river in this area is likely to have been asymmetrical, with the current site located on the southern slower and shallower side of a meander bend, which effectively formed an area of reed-swamp. The main palaeochannel of the river with the fastest and deepest water would have been on the far northern side. Nearby work at Thompson's Lane also fell within this same broad area of the river and the deposits were broadly similar in character (Newman 2008a). Although these deposits were radiocarbon dated to the Late Neolithic or Early Bronze Age (3823±30 BP, 2460–2140 BC, WK-24825) this was based upon a single determination with no supporting evidence. The pollen showed a herb-rich and generally post-clearance assemblage with cereal pollen and it is possible that the deposits were in fact Iron Age or later and the material dated was residual. The northern side of the river has seen less investigation, but boreholes and geophysical survey at Magdalene College have located its probable edge (Boreham in Dickens & Appleby 2015).

A possible palaeochannel was also recorded at the Thompson's Lane Racquet Courts in 1892, where 'a large limb bone of *Bos* (wild or domestic cattle) and specimens of *Planorbis corneus*' (the great ramshorn, a freshwater snail) were observed at a depth of 22 feet (c. 6.7m) 'in the gravel and silt' and 'bones, pottery and oyster shells' were 'found in large quantities in the upper part of the section' (Hughes 1907, 403, fig. 10). It appears that there was a 'trough' or 'old channel' at a depth of 24 feet 8 inch (c. 7.5m) to 29 feet 8 inch (c. 9.05m). This was deepest at the 'middle part of the east room' and 'seemed to bend round to a more southerly course towards the south-

west corner. Given its proximity this may well be the same palaeochannel as **F.354**, although it appears to be significantly deeper (**F.354** is a maximum of *c.* 5.6m deep from the ground surface) it is possible that it was more centrally located within the palaeochannel. Additionally, various boreholes and other observations broadly along the line of Park Parade have identified relatively thick alluvial deposits (Steve Boreham pers. comm.). Unfortunately, as a line of the medieval King's Ditch ran broadly along the current line of Park Parade it is eminently plausible that some of the borehole observations relate to this rather than the palaeochannel.

Phase 3: Middle–Late Iron Age Alluviation

Much of the site was covered by a distinctive grey silt-rich alluvial sediment (**F.385**), which was up to *c.* 0.55–0.6m thick at the northern end of the site and *c.* 0.15m thick at the southern end of the site (Figure 8). At the northern end of the site where this deposit was thickest it could be sub-divided into a sequence of; grey organic silt [1994], grey-brown silt [1993] and grey silt [1992]. The deposit covered almost the entire investigated area, although towards the southern end of the site it changed character somewhat becoming more of a silty clay. This deposit corresponds to the 'Romano-British silt', which probably dates to the Middle Iron Age (400–100 BC) at the earliest (*c.* 2,250 years calBP). **F.385** represents the material deposited by a series of flood events; these were probably caused by a combination of tree clearance and deep ploughing, which led to large amounts of soil erosion in the catchment of the upper portions of the Cam. This overwhelmed the river system, leading to over-bank sedimentation and is widespread in the floodplains of river valleys in southern England. The silty clay at the southern end of the site is characteristic of slower moving deposits, located at the limit of flood events. The pollen record has abundant evidence for agriculture and land disturbance, indicative of a post-clearance signal. There were negligible quantities of material culture in this deposit and some of the small quantity present may be residual or intrusive. This indicates an absence of settlement or significant human activity in the immediate vicinity, although the pollen evidence points to agricultural activity in the wider landscape.

There was no evidence for any form of buried soil or subsoil surviving under these deposits, except at the extreme southern end of the site. Instead they directly overlay river terrace gravels. Micromorphological analysis at other sites in Cambridge has revealed the presence of a B horizon of a palaeosol at the base of the archaeological sequence overlying the river terrace gravels (French in Cessford & Dickens in prep). These suggest a relatively well developed argillic brown earth soil, which probably formed underneath stable woodland and there is evidence that this soil was subsequently disturbed by ploughing or other human activities. It is likely that a similar palaeosol was originally present at the current site indicating that the flooding, possibly in conjunction with other erosion, removed the palaeosol.

Phase 4: Romano-British Occupation

Following on from the Middle–Late Iron Age alluvial inundations of the area it is likely that some form of soil began to develop; unfortunately, the degree of later disturbance meant that no deposits associated with this could be identified. When occupation of the site began in the Romano-British period (Figure 10) topographically the site consisted of a high area at the southern end at *c.* 5.2–5.3m OD, a relatively gentle slope downwards and a lower area at the northern end of the site at *c.* 4.4m OD, with a *c.* 0.8–0.9m fall. This occupation relates to the lower town/roadside suburb of Cambridge and there appear to be three phases of Romano-British activity (Figure 11), albeit with a considerable degree of continuity.

Romano-British Phase 1

Romano-British occupation probably begins in the late 1st century, although the possibility of some mid-1st-century activity cannot be entirely discounted. The principal feature on the higher northern end of the site is a substantial west–east aligned ditch, which runs across the entire width of the excavation area (F.307, 342). It was *c.* 3.4m wide and 1.1m+ deep, with a broad relatively flat-bottomed profile (Figure 12). The evidence from the infilling of the ditch suggests that there was a substantial bank, created from the up-cast of the ditch, lying to the north of the ditch. This ditch probably defines the rear edge of a linear or ribbon roadside settlement fronting onto Bridge Street, *c.* 65m away. This is a relatively major boundary, suggesting that it may represent some form of centralised authority rather than simply the boundary of a single property. The location of the putative bank, on the outside of the ditch, suggests that it may have been intended to act as a defence against flooding. This also makes sense in terms of its location, on the edge of an area of higher ground a short distance from the start of a downwards slope.

Lying on the base of the ditch were some semi-complete ceramic vessels (F.342), several of which had broken *in situ*, plus large pottery fragments (Figure 12, lower). These included a Black-Burnished 1 cooking pot, two cooking pots and one bowl that were locally manufactured imitations of Black-Burnished 1, a buff sandy ware flagon and two handles from a Dressel 20 amphora. Taken as a group these suggest a date in the early 2nd century for the deposition of refuse in the base of the ditch.

The southern edge of the ditch was only *c.* 2.6m from the limit of excavation; this meant that only a small area of settlement inside the ditch was exposed. No features were present in this small area, which is unsurprising as the area immediate beside a large open ditch would not be a favoured location for excavating other features. The only other feature of this are alluvial deposits (F.386), which were accumulating at the lower northern end of the site. These alluvial deposits continued to be deposited throughout the Romano-British period and it proved impossible to distinguish those

deposited in this particular phase. The lower portion of the alluvial deposit contained very little cultural material and it appears that refuse was not being deposited here at this time.

Romano-British Phase 2

Romano-British phase 2 spans the mid-2nd–mid-3rd centuries. The large west–east aligned ditch (F.302, 305) was partially backfilled, although even in this reduced state it was *c.* 3.0m wide and 0.8m+ deep with a broad relatively flat-bottomed profile. The bank to the north appears to have been entirely or largely flattened, some of this material was deposited in the ditch and it is likely that some was also deposited down-slope to the north. This effectively created a flat area, upon which a rectangular structure was built (Figure 13). This structure was 9.0m+ long by 4.6m wide, it was aligned west–east parallel to the ditch and located *c.* 1.0 m from its edge. The western side of the structure had been entirely removed by later truncation. Its southern side was a relatively substantial trench (F.247/263/268) *c.* 0.9m wide by *c.* 0.2–0.4m deep, with *c.* 0.4m diameter posts (F.292, 304) up to *c.* 0.5m deeper in it. The eastern side was a shallower trench/gully (F.327/343), *c.* 1.1m wide and 0.15m+ deep, with a series of small *c.* 0.12m diameter stakes in its base arranged in pairs (F.344–49). The northern side had a *c.* 2.6m wide gap at its eastern end, indicating a door or entrance. Adjacent to this was a substantial sub-rectangular posthole (F.328), *c.* 1.5m by 1.2m in extent and 0.5m+ deep. There was then a trench (F.257) *c.* 0.8m wide and 0.3m+ deep, with *c.* 0.6m diameter postholes (F.329, 331) in it that were up to 0.35m deeper (Figure 13). Running southeastwards from the southeastern corner of the structure there was a short length of gully (F.294/321), leading to a small posthole-like feature (F.271/322). Whilst this gully might be part of the structure it might also be a drainage feature directing water into the ditch.

In terms of dating evidence, which probably largely relates to the abandonment of the building, several of these features contain 3rd-century pottery with some late 3rd–4th-century pottery (F.247). F.247 contained coins minted in AD 164–69 and 260–378, whilst F.327 produced a coin minted AD 353–64. This latest coin was poorly stratified and is probably intrusive. Other features at the northern end of the site included three small nondescript pits (F.252, 338, 341). The presence of one neonate bone and an adult bone in later ditches indicate that inhumation burials were occurring in the vicinity at around this time. The only other feature assigned to this phase are the alluvial deposits that were building up at the lower northern end of the site (F.386). It is possible that some more significant activity began at the lower northern end of the site, although it is more likely that these date to Romano-British phase 3 and are discussed below.

Romano-British Phase 3

Romano-British phase 3 spans the period between the mid-3rd–mid/late 4th centuries. The west–east aligned ditch that had been such a significant feature of the earlier phases was still extant, but had effectively become a relict linear hollow (F.260, 303) *c.* 0.6m wide and 0.3m+ deep. This ‘hollow’ contained late 3rd–4th-century and mid/late 4th-century pottery, plus coins minted in AD 140–44, 286–87, 293–96, 330–35 and 330–41.

The hollow was cut through by a north–south aligned ditch (F.298/412), which was *c.* 1.4m wide by 0.5m+ deep with a U-shaped profile. Just beyond the west–east aligned hollow, where the ground began to slope downwards, this ditch curved to the east, creating a new enclosure of some kind. Where the ditch curved there was evidence of two re-cuts (F.315, 316/335, 317), these were *c.* 1.4–1.8m wide by 0.3–0.75m+ deep. At around the point where this ditch curved there were a series of stakes indicating some form of relatively ephemeral structure (F.332–34, 336–37, 350–52). The fill of this ditch contained coins minted in AD 330–35 and 330–48, plus 4th-century pottery.

Down-slope from this, between the area of activity and the alluvial zone, there were two inhumations (Figure 14). One of these (F.319) was of an extended prone male aged *c.* 38–48 years and *c.* 5’9” tall aligned southwest–northeast. The fill of this grave contained a coin minted in AD 268–70, which provides some dating evidence although it does not appear to represent a deliberate grave good. The other inhumation (F.330) of a probably male individual aged *c.* 18–25 years and *c.* 5’6” tall was aligned roughly south–north and only the legs and part of the pelvis were present. The upper portion of the body had apparently been scoured away by water action at a later date. This parallels discoveries from Roman London, where at a cemetery occupying marginal land human remains were frequently exposed and washed out, to be transported by floods, migrating Walbrook tributaries and drainage channels and despite the obvious disturbance formal burial continued (Harward *et al.* 2015). In addition to these two *in situ* inhumations, various disarticulated human bones were recovered from later deposits (Figure 15). These indicate the presence originally of at least five adults. A south–north aligned *c.* 1.0m wide spread of stones and gravel (F.414) appears to represent an attempt to create some form of pathway, or at least an area of firmer footing leading down the slope.

Beyond these inhumations at the northern end of the site alluvial deposits continued to build up (F.386). In addition, a west east aligned ditch (F.381) *c.* 1.4m wide and 0.3m deep was cut across through the alluvial deposits, presumably for drainage and perhaps to make the area at least seasonally more usable. This phase of ditch contained a coin minted in AD 275–364. This ditch was subsequently re-cut slightly to the north (F.313), this phase was *c.* 1.8m wide by 0.6m deep and contained coins minted in AD 198–20, 268–70 and 275–86 plus 4th-century pottery. After these

ditches went out of use the alluvium (F.386) continued to build up, this contained coins minted in AD 330–35, 341–48, 330–48, 353–64, 367–75(x2) and 364–78(x2). Pushed into the alluvium and ditch fills were a series of wooden stakes (F.323–25, 339–40, 368–70, 387, 416–17). The precise dating of these is unclear; they are probably mid/late 4th century although a Post-Roman date cannot be entirely discounted. Some of these stakes could form alignments for two fence lines or similar features (F.323–24, 339–40 and F.368–70), which is somewhat supported by similarities in the stakes. They could also potentially represent an agglomeration of individual stakes for tying up small boats, tethering grazing animals etc.

Romano-British Discussion

The three phases of Romano-British activity relate to the rear of a settlement focused upon Bridge Street, a waterside area with some activity and some burials located between the two. The extent and nature of the Romano-British lower town/roadside suburb of Cambridge has recently been summarised by Newman (2008, 61–69; see also Timberlake & Webb 2016). These investigations have contributed to our understanding of this by indicating that the settlement extended further to the north than was previously recognised. Additionally, the nature of the boundary ditch implies a scale of centralised organisation not previously recognised. The only previous investigations in the immediate vicinity that were deep enough to reach Romano-British deposits were at 24 Thompson’s Lane. Here there was evidence that during the Late Iron Age the area became drier and some Romano-British pottery was recovered (Newman 2008a). The descriptions of these deposits are similar to those at the northern end of the current investigations, indicating that both sites lay within the same waterside area. This appears to have been a more widespread phenomenon, as it was also recorded at St. John’s College (Dickens 1996). Most of the previous work in this settlement has recovered relatively small assemblages of most materials, apart from pottery, and opportunities for environmental work have been limited so the material from the current investigations — although only of moderate scale — makes a significant contribution. Amongst the most significant contributions are the coin evidence, which indicates that occupation continued until the 360s or 370s, the suggestion from the tile of a building of some pretensions in the vicinity, the animal bone being more cattle-dominated and possibly in a sense ‘Romanised’ than the Castle Hill area and the implications of the Samian ware sherd with graffiti (Figure 25.1). The pollen evidence for a mosaic landscape of hazel scrub, alder and willow wet woodland (carr), arable and pastoral agriculture and large areas of reedswamp greatly improves our understanding of the local landscape. The presence of what may be part of a broken wooden paddle (Figure 27.1) hints at waterside activities taking place.

Phase 5: Early–Late Saxon Alluviation

There is no evidence for any occupation at the site or in the immediate environs between the 5th–10th centuries, although two sherds of mid-5th–7th-century pottery were recovered at 24 Thompson’s Lane (Hall in Newman 2008a, 37–38), where the evidence suggests rather wetter conditions than in the Romano-British period (Newman 2008a). These wetter conditions appear to have been relatively widespread and were also recorded at St. John’s College (Dickens 1996). Alluvial deposits continued to build up at the northern end of the site (F.288), these are distinctly lighter in character and this may denote the transition from the Romano-British to Saxon periods (Figure 8). In total *c.* 0.45m of alluvium was deposited after the Romano-British period. The very uppermost *c.* 0.1m of this alluvial sequence contained pottery dating to the 10th–12th centuries. It has been suggested, most notably by Haslam (1984), that the parishes of St. Clement’s and St. Sepulchre’s formed part of the Danelaw period settlement of Cambridge (875–917). Despite several archaeological investigations within this area no evidence of activity of this date has been identified and it appears almost certain that this hypothesis is incorrect.

Phase 6: 11th–12th-Century Reclamation and Land Division

Although the earliest Post-Roman activity can only broadly be dated to the 10th–12th century via ceramic evidence, the features all probably date to the 11th–12th century and could even be entirely 12th century in date (Figure 16). At the northern end of the site alluvium continued to build up (F.288/402), the lower parts of this sequence contained only Romano-British pottery but the uppermost phase contained large unabraded sherds of 10th–12th-century Stamford ware (Figure 25.3–4). There were several possible cut features within this alluvium (F.274, 284, 389), none of which are particularly convincing and all probably represent minor hollows on the surface of the deposits. The excavations at Grand Arcade indicate that the King’s Ditch which, surrounded much of Cambridge, was constructed between the mid-11th–early 13th centuries. The most probable date is in the 12th century and an association with events during the Anarchy in 1143–44 is possible. The initial line of the King’s Ditch ran just to the northeast and north of the current site and the cessation of the build-up of alluvium may well relate to the creation of the King’s Ditch.

The earliest activity proper appears to consist of the creation of some relatively shallow gullies, one running west–east and located near the beginning of the slope down towards the alluvial area (F.311) which joined another running south–north (F.301/306). These were *c.* 0.3m wide by 0.2m+ deep and probably represent part of a network of drainage channels. Located just to the south of this were some large amorphous pits (F.255–56, 300); the function of these is unclear but one possibility is

that they were effectively large sumps, dug so that water from surrounding deposits would naturally flow into them and could then be disposed of via the gullies.

The next event was the creation of a significant ditched enclosure, of which part of its western (F.254) and northern (F.250, 259, 290) sides were discovered. The western side (F.254) was *c.* 1.2m wide by 0.2–0.3m deep, with evidence of only a single cut. The northern side (F.250, 259, 290), which presumably defined the boundary with a wet/damp zone, was *c.* 1.8m wide by 0.2–0.5m deep, with evidence for two or three phases of re-cutting. Running westwards from the corner of the ditched enclosure and then turning to run northwards was another ditch (F.242), *c.* 0.6m wide and 0.1–0.3m deep. Whilst this could have demarcated the edge of another enclosure it is more likely that it was a drainage feature which took away water from the main enclosure ditches. It is likely that the enclosure proper fronted onto Bridge Street, making the enclosure *c.* 80m long. Excavations elsewhere indicate that properties fronting onto Bridge Street were probably created in the 10th century (Newman 2008b), so this phase of enclosure probably represented the opportunistic extension of an existing plot as the area away from Bridge Street became drier. Within the enclosure there was little evidence for activity, with only a single rather amorphous pit (F.261).

It is likely that the area to the west of the enclosure also formed part of a plot, perhaps one that was only defined in a *de facto* manner by the edges of other entities. This may also have fronted on to Bridge Street, although it is also possible that it fronted onto the forerunner of Thompson's Lane known as *Aungeryslane* or *Aungers Lane* located to the west, although this is not documented until 1279. Features in this probable plot include a relatively amorphous pit (F.281) and a carefully constructed rectangular vertically-sided and flat-bottomed cesspit (F.289 Figure 16), 1.9m by 1.05m in extent and 0.75m+ deep with associated stakeholes (F.296, 299). The location of this distinctive feature, at or towards the rear edge of a plot and immediately adjacent to the ditched boundary (F.254) of the adjacent property, is typical of cesspits of this period.

Other features of this period includes a general 'garden soil' type deposit (F.287/291/400) and similar deposits in some amorphous hollows, which are unlikely to represent deliberately cut features but may represent damp/wet areas that were disturbed/churned up by human activity (F.286, 295, 309, 401, 405). In some localised areas (F.406) there was a significantly higher concentration of pottery, animal bone etc. in such hollows. Whilst these were still 'garden soil' type deposits there also appears to have been an element of the deliberate dumping of material. The only significant item of this period recovered was a gilded binding strip with 12th-century parallels recovered from a later feature.

Phase 7: 13th–15th-Century Garden

There is a general paucity of 13th–15th-century archaeological features, with a complete absence of the gravel quarry pits, cesspits and wells that typically characterise excavations of this period in Cambridge (Figure 17). There is also an absence of any convincing structural remains. The features that were identified consist of amorphous pits (47), a clay-lined pit (1), postholes (15), gullies (6), 'garden soil' including hollows filled with 'garden soil' and limited evidence for dumping of material and alluvium.

In 1279 the investigated area appears to have comprised part of the *curia* (court, or more probably holding) of Richard Laurence (Faber 2006, 87–91). Laurence had constructed a drawbridge across the adjacent King's Ditch by this date (Faber 2006, 36), suggesting that part of the site may have been used to pen animals, although at least one contemporary *messuage* – or dwelling house, together with its appurtenances – also appears to have been present (Faber 2006, 88). By the late 14th century the area appears to have been incorporated into the holdings of Harleston manor, a substantial property that was situated to the west. During the late 14th century the holdings of Harleston manor included a grange, a dovecote, part of a landing stage, a toft, shops, two *curtilage* meadows (i.e. land in the immediate vicinity of a house), ponds and gardens (Underwood 1993, 173). Based upon leases dating to 1377–91 it has suggested that at least one *messuage* was present within the investigated during this period, though the documents are unclear and more dwellings may also have existed (Faber 2006, 89–90). During the Peasant's Revolt of 1381 Roger de Harleston, who was then mayor of Cambridge, was the target of an angry mob and his dovecote was set ablaze. Indeed, so closely were the Harlestons associated with the area, by the 15th century Thompson's Lane was commonly referred to as Harleston Lane. Although no archaeological evidence for Harleston manor has been excavated something of the nature of high status properties in the area is suggested by excavations conducted by Clive Partridge in 1973 at 28 Bridge Street which 'revealed a 13th-century building. Much worked building stone, including imported Hainault marble, Purbeck marble and Northampton limestone, and stained glass were found' (Webster & Cherry 1974, 199).

The documentary evidence suggests that although the investigated area was part of a significant quite high status property, the main occupational/activity focus of this was located to the west on the opposite side of Thompson's Lane. Given the sparsity of archaeological evidence the most likely possibility is that the investigated area was a *curtilage* meadow or garden, which provided access via a bridge across the King's Ditch. The evidence from 24 Thompson's Lane indicates land reclamation and the area becoming drier in the 14th century (Newman 2008a). As such processes continued the current site would have progressively become further and further away from wet and seasonally inundated areas. The pottery etc. is broadly typical of

Cambridge excavations, the only evidence that indicates high status is a near-complete imported 13th-century Saintonge pitcher (F.233; Figure 25.5). Another relatively rare find, of some interest given the proximity of both the river and the King's Ditch, is a concentration of articulated fish bone (F.399 [1273]).

Pits

The most common form of cut feature were 48 pits of various forms, these all appear to be relatively short-lived features, where no particular care was taken over the creation of the feature and there is no particular evidence relating to what the function of these pits was. There was a single pit that appears to have been more carefully constructed; this was F.234 a 15th-century circular clay-lined pit, with a reasonable quantity of pottery in the fill. Many of these pits can only be relatively broadly dated to the 13th–15th century and only a small proportion can be dated to a particular century:

13th–15th century (20): F.165, 169, 178, 193, 219, 222, 231, 236, 238, 253, 258, 270, 273, 280, 285, 318, 360, 374, 377, 393.

13th–14th century (2): F.209, 227.

13th century (1): F.202.

14th–15th century (10): F.152, 179, 198, 200, 207, 215, 221, 361–63.

14th century (4): F.183, 359, 373, 375.

15th century (11): F.167, 170, 175, 184, 186, 201, 204, 211, 228, 230, 234.

Postholes

There are 15 postholes, none of which form identifiable structures, alignments etc. and all of which can only be relatively broadly dated to the 13th–15th century: F.163, 180, 196, 199, 203, 206, 224, 232, 240–41, 243, 251, 272, 293, 297.

Gullies

Some relatively minor gullies, with one group at the southwestern end of the site (F.262, 378–79) and some at the northern end (F.245, 267, 279). Neither of these is particularly coherent or amenable to particular interpretation, these are probably all 13th century although the dating evidence is quite limited.

Garden Soil, Alluvium etc.

A general 'garden soil' type deposit that built up over the entire site over time (F.399), this can only be relatively crudely distinguished from the similar earlier and later 'garden soil' type deposits. In addition there are some nondescript hollows (F.213, 216) and some more regular linear hollows that lie over an earlier 10th–12th-century ditch (F.233, 248–49) filled with 'garden soil' type material. All these hollows are probably 13th-century although the dating evidence is quite restricted apart from F.233, which contained most of an imported Saintonge ware pitcher. There are also some concentrations of material within the 'garden soil', which are indicative of some level of dumping of refuse such as pottery, animal bone etc. These are quite restricted and relatively unimpressive (F.235, 237, 239, 404) and are relatively poorly dated, apart from F.404 which is 14th century. A relatively minor amount of alluvium that continued to be deposited at the northern end of the site (F.269, 278), probably during the 13th century.

Phase 8: Rental Development by St. John's College (1533–1791/5)

There is a considerable increase in the amount and significance of archaeological features in the 16th–17th centuries compared to the 13th–15th centuries (Figure 18). St. John's College acquired ownership of the site in 1533 and retained possession until 1795; by the end of this period ten *messuages* are recorded as having been present (Faber 2006, 88). The street frontage is depicted by Lyne in 1574 as having been fully occupied by buildings (Figure 19, upper), whilst in 1592 a more reliable map by John Hammond shows the site as occupied by at least three properties, possibly with an orchard and dovecot at the northern end (Figure 19, middle). By 1688 when the town was mapped by David Loggan there appear to be at least nine properties along the street frontage, with small yards and ancillary structures behind and a large open area to the rear (Figure 19, lower).

The archaeological evidence appears to be divided into three south–north aligned zones that correspond broadly to the cartographic evidence; from west to east these are the street frontage, the yard area and the rear garden (Figure 20). This is not to argue that these were absolute entities or that they did not vary over time, they nonetheless form a useful approximation. The archaeological evidence also suggests that the site was divided into nine plots (Plots I–IX), which were *c.* 5.1m wide. These were broadly rectangular and aligned west–east, although towards the rear of the plots there is evidence that at least those at the northern end of the site curve northwards, probably due to the topographic influence of the King's Ditch. The evidence concerning plot widths in Cambridge suggests that there was no fixed plot width. There is some documentary evidence for a medieval plot width of 21–22ft (6.4–6.7m; Hall & Lovatt 1989, 10), whilst at the Grand Arcade site there was a wide degree of variation, with no identifiably 'standard' width although a typical value was *c.* 7m (Cessford and Dickens in prep). At the Eastern Gate site excavation indicates that plots were typically 6.9–7.8m wide (Newman 2013, 15). The closest local parallel is possibly at Chesterton where *c.* 1560 eight new plots were established, each around 4m in width (Newman 2015, 98). None of the features relating to this phase can be categorically dated to pre-1533 and the development was clearly well-established by the end of the 16th century; it is therefore quite likely that this represents a deliberate development by St. John's College after they acquired the site and aimed at maximising their income from the area. This may in part explain why the plots established in the 16th century were significantly narrower than those of the medieval period. As far as can be determined the majority of these features date to the 16th century. The principal exception to this appears to be a cellar (F.115 etc.), well (F.142 etc.) and drain (F.112 etc.) in Plot VI and a separate structure in Plot IX (F.371) that were constructed in the early/mid-17th century (Figure 21).

The majority of the street frontage structures were poorly represented and little can be said of them. The significant exception to this was cellar **F.115** (Plot VI: Figure 21, upper left) and related elements. Although well preserved, potentially only a small proportion of the cellar was investigated as it extends beyond the western limit of investigation, so its interpretation is of necessity limited. At 4.0m wide it was a relatively large cellar and at 2.0m+ deep it was of full-depth, allowing an adult to stand upright within it. The uppermost portion of surviving cellar wall was at *c.* 7.1m OD, this was below ground floor level and it is likely that the ground surface was located at between *c.* 7.2–7.5m OD. Allowing for a robbed-out floor the base of the cellar was probably at *c.* 5.1m OD. There is evidence for a chute at the rear of the cellar, which would have allowed materials to be easily moved into the cellar. A stone- and brick-lined shaft (**F.310**; Figure 21, upper and middle right) with internal dimensions of 0.8m by 0.8m allowed water to be supplied from a well behind the cellar; the bottom of this shaft was at *c.* 4.15m OD making it nearly a metre deeper than the cellar floor. It appears that this shaft was initially open and would have naturally part-filled with water; it seems that this rapidly proved unsatisfactory and the shaft was backfilled. Water was still obtained, but now probably through a lead pipe (which was ultimately removed when the cellar was abandoned) and a pump set in the corner of the shaft (again robbed; **F.308**). There is also evidence for the disposal of water, via a cask-lined soakaway (**F.320**). The most likely interpretation, given the effort taken to supply and dispose of water, is that this cellar was a kitchen or washroom. The only non-structural features of note in the street frontage are some ovens in Plot I (**F.376**) and Plot IX (**F.365–67**). These are all relatively small and probably for domestic use, such as baking etc.

There is relatively little evidence for activities in the yard areas, although some probably had gravel surfaces. One specific issue is the provision of wells and cesspits. The earliest examples appear to be possible cesspit (**F.229**; Plot II) and well (**F.191**; Plot II), which were both relatively insubstantial and do not appear to have been very long-lived. These were probably replaced in the mid/late 16th century by a much more substantial probably cask-lined well (**F.223**; Plot II) and well-built stone-lined cesspit (**F.190**; Plot II: Figure 22, left). The well was 1.9m+ deep with its base at *c.* 3.9m OD and probably had a central circular shaft *c.* 0.6m in diameter. The cesspit, which had a surviving depth of *c.* 1.9m with its base at *c.* 5.1m OD and an internal diameter of *c.* 0.8–0.85m. This well and cesspit appear to have been partly demolished and then backfilled in the late 17th century. At broadly the same time a 3.2m+ deep brick-lined well (**F.142**; Figures 21 lower left and 27.3) with its base at *c.* 3.9m OD and a brick-lined drain (**F.112, 397**; Figure 21, lower right) and probable brick privy building (**F.110**) were constructed in Plot VI. The well was relatively unusual, as well as supplying water in the yard area it was also directly connected to a nearby cellar (**F.115**). Although there were nine plots only three cesspits and wells of the period *c.* 1533–1791/5 were identified and these appear to have operated consecutively rather than concurrently. In particular, only one well and the brick

privy building/drain contained any definitely 18th-century material and it is almost inconceivable that the other wells and cesspits could have been backfilled after *c.* 1740 without containing distinctive ceramics, clay pipes etc. Taken at face value the property plans would tend to indicate the opposite; that the wells/cesspits were for use at the same time and linked to smaller groups of households. This indicates that some form of access arrangements must have been in place.

Cesspits and wells are amongst the most distinctive, easily recognisable and likely to survive features of 16th–18th century urban archaeology in Cambridge. Whilst it is possible that some may have existed outside the area of excavation, this is unlikely to account for a significant number of examples. Similarly, later truncation cannot be readily invoked as a mechanism for explaining their absence. It therefore appears that the cesspits and wells represent communal features shared by all nine properties and presumably supplied by the landowner St. John's College or its principal tenants — who leased and then sub-let the site but appear not to have generally been resident there — rather than the actual occupants of the site.

There were two well-constructed, substantial, vertically-sided flat-bottomed pits that were partly filled with layers of stone located in Plots III (**F.160**; Figure 22, middle right) and IV (**F.150**; Figure 22, upper right). This limestone, probably from a local Cambridgeshire source, was not re-used material from earlier buildings and is best interpreted as ballast. The only other feature on the site to contain similar stone was well **F.223**, the limestone from which derives from deposits linked to the construction of the well probably in the mid-16th century and the otherwise poorly dated pits with stone-rich fills are probably of similar date. This stone was clearly not a lining and there was no evidence either from the tops of the layers of stone or the sediment immediately around them in terms of wear or accumulating deposits that the layers of stone ever formed an exposed surface. Instead, it appears that the pits were immediately backfilled with stone-rich and gravelly fills. The pits do not appear to be foundations/footings, but it seems that they were deliberately created for a specific purpose. The most likely possibility is that they were for percolation and represent facilities for the communal disposal of liquid waste. There were also some ovens (**F.135, 148**; Figure 22, lower right).

There is little evidence for distinctive activities in the rear garden area apart from some planting beds (**F.177, 208, 246**), a structure (post-pads **F.220, 380, 408**) and a pit dug to dispose of a dead dog (**F.120**). The material culture of this period is generally relatively sparse, with no evidence that can be linked to specific occupations or activities. Semi-articulated concentrations of fish bone were present in two features (**F.173, 176**) paralleling a similar earlier group. Such remains are rare and may link to proximity to either the river or the King's Ditch. The other distinctive find was a pierced 16th-century jetton, which was presumably worn as an item of jewellery.

The Street Frontage

The bulk of the street frontage must have lain to the west, under the current pavement and road, and only the rearmost elements were present in the investigated area. From south to north by putative plot there were:

Plot I: an oven (F.376).

Plot II: no features.

Plot III: a north–south aligned wall footing (F.390).

Plot IV: no features.

Plot V: a north–south aligned wall footing (F.392).

Plot VI: a substantial brick-lined cellar (F.115) with deeper shaft (F.310) plus robber cut (F.308) and cask-lined soakaway (F.320).

Plot VII: a north–south aligned wall footing (F.114).

Plot VIII: a posthole (F.132).

Plot IX: three ovens (F.365–67) succeeded by a west–east and north–south aligned wall footing (F.371).

The Yard Area

Plot I: the main feature in this plot was a substantial well (F.223) that was probably cask-lined, which may have been for communal usage, and there were also two rather amorphous pits (F.108, 372).

Plot II: the main feature in this plot was a substantial stone-lined cesspit (F.190, plus associated robber-cut F.189) a possible cesspit (F.229) and well (F.191), a specialised pit (F.154) and one rather amorphous pit (F. 195). The possible cesspit (F.229) and well (F.191) appear to have been backfilled in the mid/late 16th century, with a jetton of c. 1550–1580s in the cesspit backfill, may well be earlier than the much more substantially-built cesspit in the same plot (F.190) and the well in the neighbouring plot (F.223) suggesting two phases of activity. If the first phase dates to soon after St. John's College acquired the site in 1533 then the second phase was probably soon after as the stone-lining of the cesspit probably derives from structures demolished during the Dissolution of the Monasteries (1536–41) which was at its most readily available in Cambridge c. 1536–50/60.

Plot III: the most significant feature was a large pit with stone-rich fills (F.160); there were also two small brick-lined soakaways (F.119, 121) one of which had a drain leading into it (F.124), a posthole probably located on the boundary between the yard and the garden areas (F.130) and three amorphous pits (F.123, 125, 155).

Plot IV: the most significant feature was a large pit with stone-rich fills (F.150); there were also some small postholes (F.116–17, 188) and a large posthole probably located on the boundary between the yard and the garden areas (F.151).

Plot V: there were a row of postholes probably located on the boundary between the yard and the garden areas (F.156–57, 159, 176), plus two other postholes (F.158, 164), a gully (F.185/187) and three amorphous pits (F.161–62, 192).

Plot VI: the main feature in this plot was a brick-lined well (F.142) connected to the cellar on the frontage by a pipe trench (F.314). There were also two postholes (F.171, 415) and two amorphous pits (F.172, 225). Probably located on the boundary of the yard and garden areas was a robber cut (F.110), this is probably some form of outside privy as it connects to a drain.

Plot VII: There was a footing located on the boundary between Plots VI and VII (F.174) and another footing (F.107) abutting the wall defining the rear of the frontage. These probably both relate to an ancillary structure of some kind. There was also a single amorphous pit (F.212). Probably on the boundary between the yard and garden areas was a wall footing (F.113), suggesting that either the area was enclosed or that there was a structure of some kind.

Plot VIII: the most significant feature in this plot were two ovens (F.135, 148), the better preserved of which had some postholes and stakeholes (F.145–47) linked to the construction and removal of its superstructure. The only other features were a posthole (F.103) and five amorphous pits (F.137, 139, 214, 217–18).

Plot IX: no features.

The Rear Garden

Plot I: the only feature solely associated with this plot was an amorphous pit (F.109). There are also two re-used stone blocks (F.220, 380) that appear to form the corner post-pads of the southern side of a structure that lies half in Plot I and half in Plot II, which is represented by a similar post-pad to the north (F.408) with the north-western corner apparently removed by later truncation. This structure was 4.8m west–east by 4.2m north–south in extent, although there is no evidence for its function it is located close to a well (F.223).

Plot II: apart from a structure already discussed with regard to Plot I the features associated with this plot are three relatively amorphous pits (F.111, 149, 153), which might be planting holes.

Plot III: the features associated with this plot are three amorphous pits (F.205, 356, 365), which might be planting holes, and two gully like features (F.357–58) that may also be planting related.

Plot IV: two relatively regular sub-rectangular features in this plot are probably planting beds (F.208, 246); the only other feature is a posthole (F.166).

Plot V: a relatively regular sub-rectangular feature is probably a planting bed (F.177), cut into the top of this was a small pit dug to dispose of a dog (F.120). Probably on the boundary between Plots V and VI was a west–east aligned wall footing (F.391).

Plot VI: the main feature in this plot was a broadly west–east aligned brick-lined drain whose line curved slightly to the north as it progressed eastwards (F.112, 397). This well-constructed feature appears to have discharged into the Kings' Ditch. At its western end, located on the boundary between the rear garden area and the yard area was a robber cut (F.110), this plus a few bricks at the end of the drain suggest the existence of a small privy structure with brick footings. Other features consisted of two amorphous pits (F.143, 173) and two postholes (F.141, 144). Probably on the boundary between Plots V and VI was a west–east aligned wall footing (F.391).

Plot VII: the main feature in this plot was a large deep circular pit (F.140), whilst this may have been a well this appears unlikely and its function is unclear. There were also two amorphous pits (F.382, 394). A curving broadly southwest–northeast aligned ditch (F.136) although apparently located within Plot VII, may have formed the boundary between it and Plot VIII. This ditch probably fed into the Kings' Ditch and was probably a drainage feature, perhaps indicating that the northern end of the site remained relatively wet.

Plot VIII: the only features in this plot were six relatively amorphous pits (F.127–29, 131, 133–34, 266), at least one of these (F.127) is 17th-century as it contains a jetton of c. 1650–70.

Plot IX; no features.

Additional Features

In addition there was a general 'garden soil' type deposit (F.398) covering most of the site with some localised evidence for limited dumping of material within it (F.403).

Phase 9: Modern Detached Garden (1791/5–1911)

Few discrete features that could be associated with the garden that existed between 1791/5 and 1911 were identified (Figure 23). In the northeast corner of the site there

was a broadly southeast–northwest aligned substantial wall footing (F.395) and a west–east aligned wall that joined on to it (F.396). These relate to the period in the early 1790s after the site was leased to an individual named Purchas and the boundary between the property and the King’s Ditch was straightened. The other significant feature was a substantial west–east rectangular building footing towards the northern end of the site that was 9.6m+ long by 4.5m+ wide (F.100–02, 104–106). This corresponds to the location a building depicted on the Custance plan of 1798 (Figure 24, upper) and the Ordnance Survey plan of 1885/86 (Figure 24, middle), although these may be two different buildings. Given the depth of the remains encountered these are likely to be the remains of a coach-house and stables mentioned in 1803 (Faber 2006, 89). The only other feature consists of some general layers which can be broadly characterised as ‘garden soil’ (F.413). In part the lack of features relates to the substantial disturbance of the area in the early 20th century; it does however indicate that any foundations, planting beds etc. were relatively shallow.

When the site was converted into a garden in *c.* 1791–95 quantities of material were deposited, and whilst not large by the standards of late 18th-century deposits they are nonetheless significant. Material in the backfilling of cellar F.115 probably derives from that property (Plot VII), whilst a dump of material at the rear of the same plot relates to dumping associated with the straightening of the boundary between the property and the King’s Ditch and contains material suggesting that it is partly of collegiate origin (F.398 [2096]; Figure 26, lower). There was also material in drain F.112 located in the same plot, this appears to have accumulated whilst the drain was in use and probably dates to the last few years of its life in the 1780s and early 1790s.

Possible coach-house and stables: the archaeological investigation revealed only fragmentary remains of a raft-type foundation (F.102, 104, 129, 138), which probably represents the make-up for the floor of a large cellar, with ceramic drains running around its sides (F.105, 106) and a square brick-lined soakaway (F.101) plus part of the foundation of its southern wall (F.100).

Phase 10: Edwardian Terrace (1911–2014)

The historic building recording of the Edwardian terrace is reported upon elsewhere (Figure 24, lower: Dickens & Newman 2016). The terrace of eight middle class townhouses had relatively shallow wall footings, which had little archaeological impact. Associated with the construction of the Edwardian terrace were some thick homogeneous ‘garden soil’ type deposits (F.413), these appear to have been at least in part deliberately imported to the site to raise the height particularly at the northern end of the site and create a largely level area but could not be readily distinguished from the preceding garden phase. The only discrete features associated with this phase were a number of services and a small pit (F.244), which probably relates to construction activities.

FINDS AND ENVIRONMENTAL EVIDENCE

Pottery

Craig Cessford

A moderately sized pottery assemblage with over 5000 sherds weighing c. 120kg was recovered. This consists of Romano-British material plus pottery spanning the 10th–20th centuries (Table 1). As well as pottery from excavated features and layers a significant body of unstratified pottery from machining and cleaning was recovered; whilst useful in terms of broad dating and ware types, this material should be discarded except where inherently important.

Period	Number	Weight (g)	MSW (g)
Romano-British	1942	37448	19.3
10th–12th century	460	14275	31.0
13th–15th century	1362	19657	14.4
16th–17th century	1019	27121	26.6
18th–20th century	544	20921	38.5
Total	5327	119422	22.4

Table 1: All pottery by period of production

Romano-British Pottery

Francesca Mazzilli

A moderately-sized assemblage of 1,942 sherds of Romano-British pottery weighing 37448g (mean sherd weight 19.5g, or 18.0g when amphorae fragments and semi-complete vessels are excluded) was recovered. Although not particularly large, this represents one of the most substantial assemblages yet recovered from the lower town/roadside suburb of Cambridge located to the south and east of the river Cam. The pottery was examined and details of fabric, form, decoration, use-ware and date were recorded in accordance with the guidelines set out by the Study Group for Roman Pottery (Darling 1994) and the National Roman Fabric Reference Collection (Tomber & Dore 1998). The only difference between this and the fabric system used by the previous CAU specialist is that the former provides nomenclatures for each fabric, such as Q1–9, whereas the current report explicitly names the type of fabric depending on if it is coarse or fine, the inclusions and the firing technique (e.g. oxidised, reduced; see Table 2). All percentages in this report are based on sherd counts. A significant percentage of the assemblage occurred residually in later deposits. As it is believed that all the Romano-British pottery arrived at the site during the Romano-British period, rather than being introduced at a later date through dumping etc., the material is treated as a single assemblage.

The assemblage had a mean sherd weight (MSW) of 19.5g; this relatively high value is partly the result of the heavy weight of the storage vessels present, especially the amphorae and Horningsea wares, and by the recovery of five semi-complete vessels. The MSW is still high value even once we exclude the amphorae fragments and the semi-complete vessels (18.0g). The size of pottery sherds recovered from the site varies as suggested by the percentage of the rims present, which range from 3 per cent to 40 per cent. Semi-complete vessels or vessels with a high percentage of the rim preserved are usually found in the bottom of features, as in the case of **F.342 [1958]** (see feature analysis below). The assemblage presented a wide variety of fabrics: unsourced local Romano-British coarse and fine wares, local wares from Horningsea and Verulamium/Godmanchester, coarse and fine wares from further afield in Britain including Alice Holt/Farnham, Black Burnished 1 from Dorset, Nene Valley, Hadham, Oxfordshire and New Forest wares, plus imports from Gaul (Samian ware) and Spain (amphorae: Table 2).

The dating of the assemblage spans the late 1st–4th centuries. From the pottery that can be more precisely dated (660 sherds; 34.0 per cent), mostly fine wares plus a few coarse wares such as buff sandy flagons and Black-Burnished 1, the assemblage can be broadly divided into phases. There is little if any Late Iron Age or Roman Conquest material, with just two coarse sandy oxidised ware sherds with wavy decoration potentially from the first–early 2nd century and a 1st-century Pascual 1 amphora sherd (see below). There is a relatively high percentage from the late 1st–2nd century (40 per cent), with a small quantity that can be dated specifically to the 2nd–3rd century (6 per cent). The majority of the pottery is from the mid-3rd–4th century (53 per cent).

As is typical of Romano-British assemblages in Cambridgeshire, unsourced local coarse wares dominate (67.6 per cent; 1313 sherds, 22208g). These are: buff sandy wares, whitewares, grog-tempered and shell-tempered wares, coarse and fine sandy micaceous or non- micaceous greywares with or without slip, coarse and fine sandy micaceous or non- micaceous oxidised wares with or without slip, black-slipped wares, reduced coarse sandy ware, shell-tempered and grog-tempered ware, coarse granular greyware with quartz, whiteware and imitation Black-Burnished 1 ware (Table 2). Some observations can be drawn from these groups. The site does not appear to be a poor rural settlement, on the basis of the relatively good quality of the coarse ware. The reduced coarse sandy ware, which can be considered a poor quality ware because of the bad firing, is almost absent (6 sherds, 106g). This is contrasted by a higher percentage of buff sandy ware (6.8 per cent of unsourced local Romano-British ware; 90 sherds, 106g), which is a better quality ware and includes an almost entire flagon broken into 54 sherds.

A small quantity of Black-Burnished 1 was recovered (24 sherds, 882g), interestingly more of a local unsourced imitation was recovered (53 sherds, weighting 1743g) than

the actual Black-Burnished 1. This imitation presents the same form and burnished decorations as those of Black-Burnished 1, but the fabric does not contain the inclusions of Black-Burnished 1. By visually examining the fabric of the imitation Black-Burnished 1, it is possible to distinguish two types of fabric. One consists of fine or coarse micaceous or non-micaceous greyware and the other one is poorly-tempered oxidised ware. The presence of the locally produced imitation Black-Burnished 1 and its recovery in a relatively high quantity has some implications. It means that, firstly, this ware was considered of good quality, and, therefore, prestigious, for the local community and, secondly, there was a high demand for it that it was needed to be locally reproduced. Katie Anderson (2004) notes the recovery of imitation Black-Burnished 1 sherds from sites on Castle Hill, although the quantity of material is not specified (Anderson 2004)

Amongst the coarse greyware, there is a distinct unsourced type, consisting of coarse granular greyware with quartz (11 sherds, 102g). Despite its small quantity, the presence of whiteware from either Verulamium or Godmanchester (11 sherds, 321g) is still remarkable, as it is not common in assemblages from Cambridgeshire. With regards to late Romano-British cooking pottery a relatively high percentage of shell-tempered ware, dated to the 3rd–4th century was recovered (5.1 per cent; 99 sherds, 1915g). Horningsea greyware and oxidised ware was recovered in relatively small quantities (5.8 per cent; 112 sherds, 5518g); this indicates that the site was not a significant market for local goods or for their storage.

Imported amphorae sherds from Spain were also found; they include two Dressel 20 handles, which as they are found in the same context probably come from a single amphora. This amphora typologically dates to the 1st–3rd centuries, but was probably deposited in the early 2nd century. There was also a rim fragment of Pascual 1 amphora, dated to the 1st century. The recovery of amphorae sherds can provide an insight of the significance of the site, as their recovery is not extremely common in Cambridgeshire and they do not appear in huge quantities in England especially away from the coast. The recovery of Dressel 20 fragments is not unusual, as it is a widespread type in Britain (Williams & Peacock 1983) as is one the most common amphorae types in Cambridgeshire (Pullinger in Alexander & Pullinger 1999, 113). Two sherds were also recently recovered from an evaluation at Jesus College, a few hundred metres from the current site (Mazzilli in Timberlake & Webb 2016). Pascual 1 amphorae are much rarer and only a few examples have been recovered from southern Britain (Tyers 1986; Williams 1981; Williams in Woodward 1987, 79). The majority of the British examples are from late Augustan–Tiberian contexts, although production may continue into the later 1st century (Tyers 1996). This would potentially make it amongst the earliest Romano-British pottery from the site, although unfortunately the sherd was an unstratified discovery.

In spite of the predominance of unsourced local Romano-British coarse wares, the high percentage of fine wares and its variety is remarkable (22.7 per cent; 441 sherds, 5528g). As is typical of Romano-British assemblages from this area, Nene Valley colour-coated wares dominated (50.6 per cent of the fine wares; 223 sherds, 3082g). Samian ware from Gaul was also well represented (20.9 per cent of the fine wares; 92 sherds, 956g), together with a high number of non-local Late Roman (mid/late 3rd–4th century) fine wares. These are Oxfordshire red-slipped ware and parchment ware (18.4 per cent of the fine wares; 81 sherds, 978g), Hadham red-slipped ware (9.8 per cent of the fine wares; 43 sherds, 478g) and two New Forest-slipped sherds. The Nene Valley colour-coated sherds recovered range from the 2nd to the 4th century. Amongst the examples that can be more closely dated the majority appears to be 3rd–4th century, including 3rd–4th-century beakers with painted decoration and rouletting and 4th-century dishes, bowls, jars and jugs. Fragments from the earlier phase, from the 2nd–3rd century, are rare; they are mostly a few beakers, including one sherd with unusual decoration (**F.247 [1790]**). This decoration consists of circular dimples above a horizontal line, which demarcates a fascia of oblique and horizontal lines forming rhomboids. This design resembles decorative patterns on Gaulish pottery dated to the mid-late second-3rd century (Perrin 1999, N184) although the depositional context is rather later as there is a coin minted in AD 260 or later.

Gaulish Samian ware sherds dated to between the 1st–early 3rd centuries, but the majority is 2nd century. They mostly come from Central Gaul (71.7 per cent: 66 sherds, 59g), which is a common pattern in sites from Cambridgeshire, plus some from Southern Gaul (19.6 per cent; 18 sherds, 203g) and Eastern Gaul (12.0 per cent; 11 sherds, 69g). There are some examples from late production, dating from the mid–late 2nd century and the 3rd century as shown by three sherds from Eastern Gaul (Cup Drag.22, Dish Drag.18/31R and Cup Drag.40). There are two Samian ware base sherds with stamps, three fragments with decoration and one sherd with graffiti. One stamp is *Aeternus* from Lezoux (Central Gaul) of AD 155–180, from a small fragment of the base of a dish (possibly Drag.31) and with this stamp seem to be common in Cambridge (e.g. War Ditches, Cherry Hinton; Hartley & Dickinson 2008, 92). The name of the potter from the other stamped fragment is *Reginus* (*vi*) from the Rheinzabern pottery manufacturing site (Eastern Gaul) of AD 155–180. This sherd is part of the base of a dish, possibly Drag.18/31 or 18/31R (Hartley & Dickinson 2008, 357).

On the outer surface below the rim of a Samian beaker sherd (form Drag.67) there is graffiti in Latin (Figure 25.1). Due to the fragmentary nature of the fragment it is not possible to be certain of the name inscribed. It seems to be *Pio(t)ri(x)* in Latin, which means a pious female person if the reading of the graffiti is correct. The graffiti appears to be incised after the vessel was produced, it is located on the outer surface below the rim and it is probable that the graffiti was incised when the complete vessel was still complete. Inscribed sherds of Romano-British pottery are

rare locally, for example Hassall only records six from the Castle Hill assemblage none of which are on Samian ware (Hassall in Alexander & Pullinger 1999, 157). However, they appear in Britain as shown in a catalogue on graffiti on Samian ware in Britain (Frere 1995). We know that graffiti on tablewares usually stand for owner's names (Evans 1987, 201). Being high value ware, finewares are the most common ware where people marked their ownership by inscribing their name (Evans 1987, 202). Most of the graffiti of names are in genitive to indicate the idea of possession of the vessel to a person, but in the sherd from this assemblage it seems nominative or vocative which is common for female names (Frere 1995). This can support the supposition that the owner of this vessel was female. The sherd was recovered from 'garden soil' deposits dating to the 11th–12th centuries (F.400 [1601]).

Although extremely small (2–7g), there are two decorated fragments. One includes a barbotine decoration with an ovolo motif from Lezoux of mid–late 1st century to early 2nd century date. The other has a barbotine decoration representing human and animal figures with circle and beaded patterns, which also come from Lezoux and dates to the 2nd century (Webster 1996, 84 fig.60). Based upon the decoration of this second fragment it appears to have been produced by the potter *Cinnamus* (Webster 1996, 84 fig.60) and this sherd is from a Drag.37 bowl.

A variety of vessel forms were identified (Table 3), although 50.5 per cent of the assemblage is comprised of non-diagnostic body sherds. The most common vessel form was bowls, representing 29.9 per cent of all diagnostic sherds (287 sherds, 6146g), followed by jars (26.1 per cent; 251 sherds, 4107g). Apart from local greywares, shell-tempered and black-slipped ware, the bowl form is used for the Black-Burnished 1 and imitation Black-Burnished 1 wares, and also for fine wares. The latter include Samian ware, Oxfordshire red-slipped ware and Nene valley coloured-coated ware. For the Samian ware the most common bowl forms are Drag.37 and Drag.31R of the 2nd century. With regards to Oxfordshire red-slipped and Nene Valley coloured-coated ware, the imitation of Drag.38 is the most common bowl form. The rims of the bowls vary and include flat, everted, flanged and occasionally beaded shapes. Similar types of rims are recovered for jars. Jars occur in greyware, shell-tempered and black-slipped wares.

Fabric	No.	Wt. (g)
Alice Holt /Farnham greyware	1	38
Baetican amphora (Pascual 1)	1	285
Baetican amphora (Dressel 20)	3	1674
Black-Burnished 1	24	882
Black-Burnished 1 – unsourced local imitation	53	1743
Black-slipped ware – unsourced	85	1565
Buff sandy ware – unsourced	90	839
Coarse sandy greyware – unsourced	406	7499
Coarse granular greyware (limestone and quartz inclusions) – unsourced	11	102
Coarse sandy micaceous greyware - unsourced	122	2380
Coarse sandy greyware (white slip) - unsourced	5	100
Coarse sandy micaceous greyware (white slip) – unsourced	1	98
Coarse sandy oxidised ware - unsourced	102	1719
Coarse sandy oxidised ware (shiny ochre slip) - unsourced	11	172
Coarse sandy micaceous oxidised ware - unsourced	22	215
Coarse sandy oxidised ware (white slip) - unsourced	11	175
Coarse sandy micaceous oxidised ware (white slip) – unsourced	5	98
Fine sandy greyware – unsourced	165	2254
Fine sandy greyware (ochre slip) – unsourced	1	6
Fine sandy micaceous greyware - unsourced	79	873
Fine sandy oxidised ware – unsourced	10	88
Fine sandy micaceous oxidised ware - unsourced	4	80
Fine sandy oxidised ware (dark brownish slip) - unsourced	5	42
Fine sandy oxidised ware (white slip) - unsourced	15	100
Fine sandy micaceous oxidised ware (white slip) – unsourced	2	11
Grog-tempered ware	9	304
Hadham Red-slipped ware	43	478
Horningsea greyware	46	2913
Horningsea oxidised ware	66	2605
Nene Valley colour-coated ware	223	3082
Nene Valley whiteware	17	1226
New Forest-slipped ware	2	34
Oxfordshire red-slipped ware	79	963
Oxfordshire parchment ware	2	15
Oxfordshire whiteware	2	61
Reduced sandyware – unsourced	6	106
Samian ware (Central Gaul)	66	59
Samian ware (East Gaul)	11	69
Samian ware (South Gaul)	18	203
Shell-tempered ware	100	1929
Verulamium/Godmanchester whiteware	11	321
Whiteware – unsourced	7	42
Total	1942	37448

Table 2: Romano-British pottery by fabric type

Beakers were recovered in a relatively small percentage (11.0 per cent; 106 sherds, 741g). They were mostly Nene Valley colour-coated ware of the 2nd–4th centuries, often with rouletted decoration. Only two body sherds were of New Forest red-slipped ware. Looking at Nene Valley colour-coated ware one rim and one body sherd of Castor box, dated to the late 3rd–4th century, were found. A small quantity of dishes were found (5.7 per cent; 55 sherds, 658g), these were mostly Samian ware a plus few Black-slipped ware, Black-Burnished 1 and local greywares (Webster 1996). The most common dish form for Samian ware is Drag.18/31R, which is a common form in Britain. Other Samian ware dish forms include Drag.18 (R) Drag.36 and Drag.79. A small percentage of Samian ware cups were recovered (2.9 per cent; 28 sherds 35g), they were mostly Drag.33 form from the 2nd century. The quantity of storage vessels and mortaria was low in this assemblage compared with other sites in Cambridgeshire. Horningsea ware storage ware vessels comprised 12.1 per cent of the assemblage (116 sherds, 5768g). Mortaria were 2.3 per cent of all diagnostic sherds (22 sherds, 1342g); they were mostly Nene Valley whiteware and a few Oxford whiteware and red-slipped ware. The unexpected relatively high number of sherds of flagon forms (7.3 per cent; 70 sherds 900g) is due to the recovery of an almost entire flagon broken into 54 sherds. Eight sherds of cooking pot form were recovered from the semi-complete imitation Black-Burnished 1 vessels. There were 12 lid fragments recovered (400g) and they appear to be used for Romano-British coarse greyware, apart from one Nene valley coloured coated ware with barbotine decoration.

Form	Number	Weight (g)
Amphora	4	1959
Beaker	106	741
Bowl	287	6146
Castor box	2	44
Cooking pot	8	574
Cup	28	435
Dish	55	658
Flagon	70	903
Jar	251	4107
Jug	1	32
Lid	12	400
Mortaria	22	1342
Storage vessel	116	5768
Unknown	981	14290
Total	1942	37448

Table 3: Romano-British pottery by form

Feature Analysis

Major West–East Aligned Ditch (F.302 etc.: 419 sherds, 9860g)

During excavation this feature displayed signs of re-cutting, which indicated that it was relatively long-lived and there was also a distinct concentration of pottery in one area of the ditch lying directly upon its base. The material on the base of the ditch (Figure 12, lower; F.342 [1958], [2033]: 101 sherds, 4159g) dates to be the earliest phase of the site in the 2nd century. The semi-complete vessels include two unsourced local imitation Black-Burnished 1 cooking pots and one probable bowl, one Black-Burnished 1 cooking pot and an almost complete buff sandy ware flagon broken into 54 sherds. There were also two handles from a Dressel 20 amphora, dated from the 1st–3rd century. In addition there were a few small sherds of local Romano-British greyware and oxidised ware, which can be dated to the 2nd–4th century. The later phases of the same ditch (F.260, 302, 303, 305, 307) contain 2nd–4th-century pottery. This consists mostly of local Romano-British pottery (greyware, oxidised ware, black-slipped ware, Horningsea ware). With regards to the pottery whose dating can be narrowed down, there is a predominance of 2nd-century pottery (imitation Black-Burnished 1 ware, Black-Burnished 1, Verulamium or Godmanchester white ware, buff sandy ware, Samian ware), with only few sherds of 3rd–4th-century pottery (Oxfordshire red-slipped ware and Hadham red-slipped ware) and a Nene Valley coloured-coated barbotine beaker sherd from the late 2nd–early 3rd century. Whilst the MSW of 17.9g from the main ditch fills is broadly comparable to the value for the overall assemblage, that for group F.342 is noticeably higher (41.2g).

North–South Aligned ditch (F.412: 412 sherds, 2278g)

Apart from local Romano-British greyware, oxidised ware, black-slipped ware, Horningsea ware generally dated from the second to the 4th century, this ditch contains Late Roman pottery from the 3rd–4th century which included shell-tempered ware, Oxfordshire red-slipped ware, Hadham red-slipped ware. The Nene Valley coloured-coated ware and mortaria sherds are too small for precise, so we cannot suggest a specific date apart from the second to the 4th century. There are only four fragments of Black-Burnished ware 1 and Verulamium or Godmanchester white ware, both 2nd century, but these are mixed with Late Roman pottery in [1921]. One exception is the context [2026], which contains one Verulamium or Godmanchester white ware from the 2nd century and one second to the 4th-century greyware fragment.

Soil Layers (F.410 [1547], [1602] 85 sherds, 1843g)

Both layers present similar types of pottery; quite a lot of local Romano-British pottery of the second to the 4th century (e.g. Horningsea ware, Black-slipped ware, greyware and oxidised ware), with a predominance of Late Roman pottery of the 3rd–4th century (Oxfordshire red-slipped ware and Shell-tempered). Even the Nene Valley colour-coated sherds seem to be from the 3rd–4th century, including a Nene Valley imitation of the Samian bowl Drag.38 dated to the late 3rd–4th century pottery recovered in [1602]. This layer also has a possible intrusive Post-Roman sherd.

West–East Aligned Waterside Area Ditch (F.313: 24 sherds, 730g) and Alluvium (F.386: 74 sherds, 1951g)

Both features F.313 and F.386 have local Romano-British pottery from the 2nd–4th century, but between the two features there are differences in terms of pottery. F.313 has 4th-century Nene Valley colour-coated ware, shell-tempered of the 3rd–4th century, a Nene Valley white ware mortarium fragment of the 3rd century. The earliest pottery is a rim fragment of Samian ware dish Drag18/31 from Central Gaul (AD 120–150). F.386 has late 3rd–4th-century pottery, with a significant quantity dated to the 4th century, including Oxford parchment ware, Oxfordshire red-slipped ware, Nene Valley colour-coated ware, Hadham red-slipped ware and shell-tempered ware of the 3rd–4th century. Only two Nene Valley colour-coated beaker sherds come from the end of the 2nd–3rd century. From this context there is an interesting Nene Valley colour-coated fragment with circular white painted decoration. An intrusive sherd of St. Neots ware was also recovered from this feature.

Discussion

This moderately-sized assemblage of Romano-British pottery represents a significant addition to the known material from the lower town/roadside suburb of Cambridge. As such it can make an important contribution to our understanding of this settlement and could also form a component for inter-site comparisons with the settlement on Castle Hill and other local sites such as those located at North West Cambridge. At a broad level this assemblage presents a wide variety of pottery from the late 1st century to the 4th century, including the predominance of Romano-British coarse ware from the second to the 4th century, as expected from Romano-British assemblages in Cambridgeshire. However, the percentage of fine wares (22.8 per cent), is significant, and the variety and percentage of Late Roman pottery (roughly 53 per cent from the pottery whose dating can be narrowed down), from the mid-3rd century to the 4th century, is remarkable.

The Late Roman pottery consists of a small percentage of shell-tempered ware of the 3rd–4th century, and an interestingly high quantity of fine wares from the mid-late 3rd century to the 4th century. They include Oxfordshire red-slipped and parchment wares, Hadham red-slipped ware and sherds of New Forest-slipped ware. Even when looking at Nene Valley coloured-coated ware, the majority appears to be dated to the 3rd–4th century, including 3rd–4th-century beakers with painted decoration and rouletting and 4th-century dishes, bowls, jars and jugs. Overall the high quantity of fine wares, and, especially, the variety of their Late Roman ware and their percentage differs from the pottery recovered in nearby sites in the same settlement (Whittaker 2003, 9; Monteil in Alexander *et al.* 2004, 84–87; Evans & Williams 2004, 24; Anderson in Newman 2008b; Anderson in Cessford 2012, 7–8) and the Castle Hill settlement (Anderson 2004). In contrast to the current assemblage, the peak on the pottery from the other sites is early mid-second to early mid-3rd century, with a decrease in the mid–late 3rd century and 4th century and these sites overall present a small percentage of fine wares. In particular, there is hardly any or only a small quantity of Oxfordshire red-slipped and parchment wares, Hadham red-slipped ware and Late Roman Nene Valley coloured-coated ware.

The majority of fine wares at these sites are Samian ware and Nene valley coloured-coated ware. The nearby Divinity School and St. John's Triangle/Corfield Court sites (which are adjacent to one another) are exceptions in terms of the high percentage of fine wares (26 and 20 per cent respectively). However in both cases these are relatively small assemblages, with 625 and 510 sherds respectively (Anderson in Newman 2008b; Anderson in Cessford 2012). Furthermore, looking in detail at Oxfordshire red-slipped ware and Hadham red-slipped ware that are known to be Late Roman fine wares, there are only two Hadham red-slipped ware sherds at the Divinity School and one Oxfordshire red-slipped ware fragment at St. John's

Triangle/Corfield Court. Therefore, a more careful reading of the data from these sites indicates that they are not exceptions but they follow the common pattern of the other sites in the suburbs (the almost complete absence of Late Roman fine ware) and they differ from the current assemblage. During the Castle Hill excavations of 1956–88 Oxfordshire red-slipped ware is described as having been found in many features together with some Hadham red-slipped ware (Hull & Pullinger in Alexander & Pullinger 1999). Unfortunately this material is not quantified and only eight per cent of the fine ware recovered more recently from eight sites on Castle Hill is Oxfordshire red slip ware (Anderson 2004). Therefore, the high presence of fine ware from the current site indicates an assemblage from a civilian settlement and this is reinforced the good quality coarse ware pointed out in the assemblage composition. The high percentage of the Late Roman fine wares also indicates the prolonged existence of the settlement into the Late Roman period, in contrast to the pottery from previously excavations which indicated the earlier decline of the settlement. The unexpected high number of Oxfordshire red-slipped sherds potentially revises our understanding of trade and exchange with the Oxfordshire that the almost lack of this ware in the nearby sites does not reveal.

Once looking at the context of the Romano-British pottery, the high number of Late Roman pottery mostly comes from mixed layers, as demonstrated by the pottery found in the wet end of the site (such as soil layers [1547] and [1602], for instance). By looking at the Romano-British pottery in context it is also possible to phase the site and it presents a slightly different picture of the settlement than the one proposed from the analysis of the pottery as a whole assemblage. The 2nd-century pottery recovered from the earliest feature (F.342 [1958]) confirms what previous archaeologists have suggested in other suburb sites, such as St. John's Triangle excavation (Newman 2008b, 66–67), the ADC Theatre evaluation (Whittaker 2003, 9), the Park Street, Jesus Lane and Jesus College field systems (Alexander *et al.* 2004, 68 and 91; Evans & Williams 2004, 24), that this settlement was probably established in the 2nd century. At the same time, the high percentage of Late Roman pottery does not, however, correspond with the findings of the Romano-British assemblages from other nearby sites that suggest the abandonment of this settlement. The analysis of the current assemblage has revised the previous picture of the decline of the settlement, suggesting a prolonged Romano-British presence into the mid-late 3rd century and 4th centuries. It is unclear what this area was used for in this later period, as this phase does not seem to comprise specific features and instead consists of general layers and due to the disturbance of these later layers of this site where the Late Roman pottery has been recovered.

In terms of individual discoveries the 2nd-century ditch group (F.342 [1958] and [2033]) is of interest and should be illustrated, as should the Samian ware sherd with graffiti and the Nene Valley colour-coated sherd with unusual decoration. Interesting is also an uncommon floral decoration on a Nene Valley colour-coated

sherd that requires further investigation. Some of the fabrics are of interest, such as the two types of unsourced local imitation Black Burnished 1, the distinctive coarse granular greyware with quartz and the whiteware which may be from either Verulamium or Godmanchester. Whilst this assemblage is not large enough to properly address issues concerning these wares it could contribute to future broader-based studies.

10th–12th-Century Pottery

David Hall & Craig Cessford

The earliest Post-Roman pottery present dates to the 10th–12th-centuries and is dominated by the typical triumvirate of wares found in southern Cambridgeshire; with St. Neots-type ware and Thetford-type ware occurring in broadly comparable quantities by count plus an atypically high proportion of Stamford ware (Figure 25.3–4; Table 4). Most of the forms and fabrics are typical of these wares and some of the material present is probably Pre-Conquest in date. In addition a number of coarsewares appear to have begun to be produced around the mid/late 12th century, overlapping with the principal 10th–12th-century wares. The unusually high proportion of Stamford ware (28.3 per cent by count and 19.7 per cent by weight of the three principal 10th–12th-century wares) compares to values of 1.6–8.7 per cent by count for other sites in Cambridge and South Cambridgeshire. There are also several semi-complete vessels that have broken *in situ*, with two or three jugs and a pitcher, and some unusual probably unglazed vessels. This is extremely unusual for Cambridge, whilst this could relate to some factor such as high status occupation (for which there is no other evidence) it is perhaps more likely given the site's location that it relates to the disposal of vessels damaged whilst being shipped along the river or during off-loading.

St. Neots-type ware comprised a wheel-thrown shelly ware that is typically dark reddish purple in colour with a slightly 'soapy' feel; the resultant vessels often appear to have been too porous to have contained liquids. Although first identified at St Neots, this ware was also produced at a number of different locations situated along the Jurassic Limestone belt that roughly extends between Oxfordshire and Cambridgeshire. Its manufacture is generally dated to between *c.* 900–1100, although production in some form most probably began in the late 9th century and continued into the 12th century. Whilst this ware has previously been identified within early 10th-century contexts in Cambridge, it is more usually associated with 11th–12th-century activity. Sherds from jugs and bowls were relatively common, plus a few fragments from jugs.

Thetford-type ware was a wheel-thrown ware that is typically reduced hard grey and tempered with occasional sub-angular or sub-rounded quartzite inclusions. It was manufactured at numerous kiln sites in Thetford, as well as at other locations scattered across East Anglia. Thetford-type ware is dated to the period *c.* 900–1100, although limited production probably began in the 9th century and continued into the 12th century. Whilst the kilns at Thetford itself only appear to have been in operation between the 10th–12th centuries, the ware was probably already being manufactured at Ipswich by the mid-9th century (Paul Blinkhorn pers. comm.). Thetford-type ware sherds are

generally thin, except for those derived from large storage vessels, and jar rims tend to be smaller and more finely made than those of contemporary St. Neots-type pots. Jugs, bowls, jars and large storage jars with applied thumb-strip decoration were all present.

Stamford ware is a wheel-thrown ware that is slightly superior in quality to both the Thetford-type and St. Neots-type wares. Sherds are typically off-white or pale pink/grey in colour and often contain occasional quartz and black or red ironstone inclusions; they are usually glazed with a yellow, pale or sage-green slip. Production of this ware is dated to c. 900–1200 and, in general, early sherds (c. 900–1100) have a clear light green glaze. Unlike the widely produced St Neots-type and Thetford-type wares, Stamford ware was largely produced in a single locale, although another kiln has recently been identified at Pontefract (Roberts & Cumberpatch 2009). Although Stamford ware material originated in the 10th century its widespread distribution, including its presence in Cambridge, is largely 11th century and later phenomenon; this is around a century later than the introduction of the St Neots-type and Thetford-type wares. Stamford ware was the most widely distributed pottery of the period and Cambridge lies at the southeastern limit of one part of its distribution network (Kilmurry 1980, figs 31–32). On such distant sites, Stamford ware rarely exceeds five per cent of the assemblage and is often less than one per cent (Kilmurry 1980, 162). The majority of sherds were derived from jugs, the most common form of Stamford ware vessel, but a number of jar fragments and a possible pitcher were also present. Unusually for Cambridge there were a significant number of unglazed sherds, some of these appear to derive from entirely unglazed vessels although it is difficult to be certain of this.

Production of Thetford-type ware, St. Neots-type ware and Stamford ware declined and then ceased around the late 12th–early 13th century and were replaced in Cambridge by various coarsewares. A relatively heterogeneous range of coarsewares that based upon their fabrics and forms probably date to the mid/late 12th century were identified, none are particularly distinctive and the Cambridge-type sandy ware identified at the Divinity School site (Cessford 2015) was not present.

Ware	Number	Per cent of principal wares by number	Weight (g)	Per cent of principal wares by weight	MSW (g)
St. Neots type	144	37.4	2407	19.0	16.7
Thetford type	132	34.3	8085	63.9	61.3
Stamford	109	28.3	2151	17.0	19.7
<i>Principal 10th–12th century wares</i>	385		12643		32.8
Grey coarseware	68		1525		22.4
Buff coarseware	5		76		15.2
Brown coarseware	2		31		15.5
<i>Mid/late 12th century coarsewares</i>	75		1632		21.8
Total	460		14275		31.0

Table 4: 10th–12th-century wares

13th–15th-Century Pottery

David Hall & Craig Cessford

A moderate to small assemblage of 13th–15th-century pottery was recovered (1362 sherds weighing *c.* 19.7kg, MSW 14.4g) mostly consisting of forms and fabrics typical of sites in and around Cambridge (Table 5). These will not be discussed in detail as much larger assemblages have been recovered from the town. There are, however, a few noteworthy points. The most significant discovery is a near-complete 13th century Saintonge ware pitcher (**F.233 [1475]**; Figure 25.5). Imported pottery is extremely rare in assemblages from Cambridge and this represents the only 13th-century import known to the authors. The only other Saintonge ware from Cambridge is part of a 16th-century vessel (5 sherds, 90g) with a white wash/slip and sgraffito decoration cut down to the oxidised red core from the Hostel Yard excavations (Cessford 2005).

Saintonge ware was made from a fine clay that was well suited to the throwing of light, thin-walled shapes. The trade in pottery from the Saintonge area to Britain spanned the period *c.* 1250–1650. At the start of this period the English kings ruled neighbouring Gascony, and the vessels probably arrived in Britain as part of the wine trade from the ports of La Rochelle and Bordeaux. This is a rather atypical vessel as it is not one of the commoner polychrome tall jugs with parrot beaks, but it does parallel published forms (e.g. Barton 1963, fig 4.13–14). This discovery is probably indicative of either high status occupancy or possibly the breakage of material during river trade or offloading. There is no other evidence from the site of ceramics of high status.

It has recently been recognised that a significant proportion of the pottery from the site of Howes, a short distance to the northwest of Cambridge, was probably produced in the Huntingdon area (Cessford 2015). The pottery at Howes was dominated by material the same as, or similar to, a recently identified fabric known as Huntingdonshire Fen Sandy Ware (HFSW) representing 39.7 per cent (by count) or 43.8 per cent (by weight) of the 13th- to 15th-century assemblage. As a result a consistent attempt was made to identify Huntingdon wares in this assemblage, however only a negligible quantity was present (3 sherds, 101g). It has also recently been recognised in similarly low quantities in assemblages from the Newmarket Road area, where the ceramic specialists are much more familiar with the ware.

Fabric	Count	Weight (g)	MSW (g)
Blackborough End-type	4	40	10.0
Cambridge-type scrafitio	4	36	9.0
Coarseware (brown)	39	891	22.8
Coarseware (buff)	244	3351	13.7
Coarseware (grey)	652	8734	13.4
Coarseware (orange)	2	35	17.5
Coarseware (pink)	128	2307	18.0
Coarseware (red)	14	159	11.4
Developed St. Neots-type	4	75	18.8
Developed Stamford	9	59	6.6
Ely ware	42	857	20.4
Ely Grimston ware	1	18	18.0
Essex greyware	14	159	11.4
Essex redware	118	1080	9.2
Essex redware (Hedingham)	6	85	14.2
Finewares (misc.)	11	276	25.1
Grimston ware	47	751	16.0
Hunts. wares	3	101	33.7
Saintonge ware	11	558	50.7
Scarborough	5	10	2.0
Surrey Borders	4	75	18.8
Total	1362	19657	14.4

Table 5: 13th–15th-century wares

16th–17th-Century Pottery

David Hall & Craig Cessford

The small to moderate sized 16th–17th-century assemblage consists principally of a range of unglazed plain wares, various wares produced in Ely and imported stonewares (Table 6). This material is typical of sites in Cambridge and none is of particular significance.

Ware	Number	Weight (g)	MSW (g)
Plain greyware	75	1432	19.1
Plain redware	114	4330	38.0
Plain buffware	2	34	17.0
Glazed red earthenware	553	16986	30.7
Staffs-type glazed red earthenware	1	15	15.0
Ely bichrome	14	479	34.2
Ely fineware	22	290	13.2
Essex redware (late)	1	14	14.0
Fineware (misc.)	10	52	5.2
Frechen stoneware	23	787	34.2
Raeren stoneware	28	991	35.4
Langerwhe stoneware	1	18	18.0
Iron glazed	175	1693	9.7
Total	828	21325	25.8

Table 6: 16th–17th-century wares

18th–20th-Century Pottery

Craig Cessford

The small to moderate sized 18th–19th-century is almost exclusively 18th century in date, with a negligible quantity of 19th century material (Table 7). This material is typical of sites in Cambridge, but is of some significance. This significance arises from two factors; firstly it appears that a high percentage of it was deposited in *c.* 1791–95, when the area was cleared, and is closely dated. This comes from a range of features, but principally derives from cellar **F.115** (Figure 26, upper) and drain **F.112**. Secondly some collegiate material is present. Five marked plates are present in a dump **F.398 [2096]**; of these definitely three and probably four can be linked to St. John’s College, or cooks who worked at the college (Figure 26, lower). At this time college cooks were semi-independent entrepreneurial businessmen whose responsibilities often included supplying crockery which remained their own property, which explains why their names occur on vessels. The two cooks (William Scott and Christopher Smithson) appear to have been employed at the same time. This suggests, that as was the case for much of the 19th century, the college employed two head cooks. One was responsible for the fellows whilst the other was responsible for the scholars (students). As Thomas Scott, the son of William Scott, was subsequently the fellows’ cook (*c.* 1808–23) it is likely that this was also the position that William Scott held. The letters S I C indicate that the college itself also supplied some ceramics; one possibility is that these represent an earlier phase before the cooks became responsible for doing so. The presence of three different

services (Scott, Smithson, S I C) suggests that this disposal was in some respect a 'communal' one, undertaken by the college (or at least the college kitchens) as a whole. The quantities involved are however small, suggesting that this was an *ad hoc* exercise to dispose of unwanted — perhaps slightly damaged or old-fashioned — material rather than a larger scale clearance event.

Contextual and other details suggest that the pottery deposited in *c.* 1791–95 consists of two groups of material. One group derives from St. John's College who owned the property, whereas a second relates to the occupants of one of the properties. This provides the opportunity for a tightly dated comparison.

1) Creamware plate: blue hand painted letters on the underside of the base S I C. Additionally, on the base there is an impressed letter A, which is a manufacturer's mark. The letters S I C denote St. John's College, suggesting that this plate was purchased by the college itself rather than one of its cooks. The letter A indicates that the plate was probably manufactured by one of two Staffordshire potters named William Adams who began manufacturing creamware in 1775 and 1779 respectively.

2) Creamware plate with moulded rim: blue hand painted surname on upper side of rim is the surname [S]cott. William Scott was a cook at St. John's College 1768–1805.

3) Pearlware plate: blue hand painted surname on the underside of the base is the surname Smithson. Additionally, on the base there is an impressed mark consisting of the number 3 over the initials IH, which is a manufacturer's mark. Christopher Smithson was a cook at St. John's College in 1782, but may have been working as early as *c.* 1769. Smithson appears to have initially ordered plain creamware plates with his name hand-painted on the underside in blue, but switched to using pearlware at some point after *c.* 1775. The initials IH indicate that the plate was manufactured by John Harrison of Stoke, who is listed in directories of 1781–83 (Pomfret 2008).

4) Creamware plate: blue hand painted on underside of base consisting of a single letter S... This is probably the start of either Smithson or S I C.

3) Creamware plate: blue hand painted on underside of base consisting of a single letter: E... or F... Additionally, on the base there is an impressed letter T, which is a manufacturer's mark. This initial cannot be convincingly linked to any known college cook of the appropriate period. The letter T suggests that the plate may have been manufactured by Jacob Tittensor, *c.* 1780–95 (Godden 1964, 618).

Ware	Count	Weight (g)	MSW (g)
Late unglazed (buff)	36	5176	143.8
Late unglazed (red)	10	821	82.1
Glazed red earthenware	73	4089	56.0
Staffs-type slipware	55	3958	72.0
Staffs-type iron glazed	1	3	3.0
Staffs-type lead glazed	2	4	2.0
Tin glazed earthenware	28	252	9.0
Creamware	206	4106	19.9
Pearlware	6	153	25.5
Industrial slipware	3	17	5.7
London-type stoneware	25	618	24.7
Notts./Derby. stoneware	19	423	22.3
Staffs-type white salt glazed stoneware	43	558	13.0
Westerwald stoneware	11	488	44.4
Utilitarian English stoneware	5	113	22.6
Chinese export porcelain	9	57	6.3
English soft paste porcelain	12	85	7.1
Total	544	20921	38.5

Table 7: 18th–20th-century wares

Romano-British Coins

Adrian Marsden

In total there are 34 Romano-British coins, which have been divided into two groups; those from the settlement area (19) and those from the waterside area (15). Both groups include coins recovered from residual Post-Roman contexts that are likely to derive from the underlying Romano-British deposits. Neither group is large and one should be wary of drawing meaningful conclusions from such a relatively small sample. Nonetheless, the two groups are each interesting in their way and some suggestions can be advanced on the basis of their composition.

Coins from the Settlement (Southern) Area

The coin list begins with a range of early material, five *aes* issues from Nero (AD64–68) to Lucilla (AD 164–69). This forms a high proportion of the total and provides good evidence that the settlement site was inhabited from a relatively early date, most likely from the last decades of the 1st century. The earliest coin, an *as* or *dupondius* of Nero, is badly corroded but it does not seem to have seen a very long period of circulation. Some of the other large bronzes are not very worn, suggesting dates of loss at various points in the 2nd century. There are three radiates of the later 3rd century and three coins of the British usurpers Carausius and Allectus which testify to occupation from the 270s to the 290s and

a small scatter of the Constantinian bronzes of the 320s, 330s and 340s. The lack of the large and fairly uncommon *nummi* of the early 4th century is not significant and no doubt occupation continued during this intervening period. The closely-associated contexts [1932] and [1933], part of ditch F.412, produced an VRBS ROMA commemorative issue issued under Constantine I between AD 330–35, and an irregular copy of the same. Neither coin would have been legal tender after the demonetisation of earlier coinage in AD 348 and so, assuming – as is likely – they are losses from circulation, it is tempting to date this feature to the late 330s or 340s. There is, however, very little coinage after this date, only an irregular falling horseman imitation and a solitary *nummus* of the House of Valentinian. The lack of any other coins from the third quarter of the 4th century – or later – is powerful testimony that activity at the settlement site was tailing off sharply in this period.

Coins from the Waterside (Northern) Area

The earliest coin is a denarius of Septimius Severus (AD 198–202) in crisp condition struck in the eastern city of Laodicea. It was probably lost in the early years of the 3rd century and, given the lack of any earlier material, suggests that the waterside area was not being developed until this period. The settlement area has a relatively large proportion of early large bronzes; their complete absence from this site must have implications for dating the waterside area's period of use. Any putative development of this area at this date could be connected with the campaigns of Septimius Severus in Britain from 208–11, when Severus died at York. Certainly, the presence of the emperor and his court in the province would have provided the sort of economic impetus that may lie behind the development of waterside areas on the province's river systems. Equally, we should not ascribe much significance to a single coin which could be simply a stray loss in an area that was still without any development whatsoever. There seems to have been some activity in the area throughout the 3rd and 4th centuries although the relatively small number of coins implies that this was at a very low level. One of the *radiates*, of Claudius II, from a burial, dates the interment to the 270s.

A burial in the waterside area – since burials were normally confined to the area outside of settlements or working areas – further suggests that activity here was neither intensive nor extensive in this period. There are a few coins from the 330s and 340s, and these may be taken as evidence for growing activity at the site towards the middle of the 4th century. Coins <10132>, <10135> and <10136>, all belonging to context [1829], cluster closely in date. <10132> is an irregular falling horseman issue in the name of Constantius II, probably dating to the late 350s or early 360s whilst the other two coins, *nummi* of Valentinian I, cannot have been issued later than AD 375. They provide a fairly narrow dating window for this context, in the 360s or early 370s. The presence of other Valentinianic *nummi* in the waterside area – albeit not in large numbers – suggest that the site was in use in the 360s and 370s. This may imply that activity at the waterside area continued a little later than at the settlement area or at least that this activity was more intensive. Moorhead has suggested that the presence of Valentinianic bronzes at some sites may be connected with the export of British grain to the continent (Moorhead 2001, 94–95). Given the intensive metal detecting of the site the lack of anything later in date suggests that activity at the site may have ceased in the 380s and 390s and that the waterside area – like the settlement area – was in sharp decline by the late 4th century.

Discussion

The two areas are certainly different in their coin lists. It is surely the case that the settlement area is the earlier one, with inhabitation most likely dating back to the later 1st century and continuing into the second half of the 4th century. The coins from the waterside area imply a very low level of activity until the middle of the

Constantinian period in the 330s and 340s. This activity continues into the Valentinianic period of the 360s and 370s, apparently at the expense of the settlement area. We might suggest that the waterside area became more important in this later period as activity – or at least coin use – at the settlement area stagnated. Perhaps an increased reliance on river traffic – perhaps involving the shipping of local grain to other areas – resulted in the waterside area supplanting the settlement area in the third quarter of the 4th century. But it is unlikely that any brief economic boom in the waterside area lasted very long. Both sites must have been in sharp decline by the last quarter of the 4th century. The conclusions offered here are – as stated earlier – based on a small number of coins and this must be borne in mind when considering the two areas from a purely numismatic viewpoint.

Coins from the Settlement Area

- Nero, *as* or *dupondius*, Rome. *Obverse* [...], Head right. *Reverse* illegible. AD64–68. <10192> **sf.42 [1373] F.399** 13th–15th century ‘garden soil’.
- Trajan, *dupondius*, Rome. *Obverse* [...]GER DAC[...], Radiate head right. *Reverse* illegible. AD 103–17. <10200> **sf.54, F.223** 13th–15th century pit fill.
- Antoninus Pius, *as*, Rome. *Obverse* [...]AVG PIVS[...], Laureate head right. *Reverse* illegible. AD 138–61. **10206> sf.61 F.399** 13th–15th century ‘garden soil’.
- Marcus Aurelius *as* Caesar under Pius, *sestertius*, Rome. *Obverse* AVRELIVS CAESAR AVG PII F COS, Barehead bust, draped (from rear), right. *Reverse* [...], Iuventas standing left over altar. *RIC* III, 1230. AD 140–44. <10199> **sf.49 F.303** upper fill of Romano-British ditch.
- Lucilla, *as*, Rome. *Obverse* LVCILLAE[...]ANTON[...], Draped bust right. *Reverse* VENVS, Venus standing left. *RIC* III, 1674. AD 164–69. <10209> **sf.64 [1790] F.247** Romano-British ditch.
- Claudius II, *radiate*, Rome. *Obverse* [...]DIVS AVG, Radiate, cuirassed bust right. *Reverse* [...], standing figure. Mintmark illegible. AD 268–70. <10251> **sf.134, F.254** 10th–12th-century ditch.
- Gallic empire, *radiate*, Mint II. *Obverse* [...], Radiate, cuirassed bust right. *Reverse* [...], female standing left. AD 269–74. <10210> **sf.65a F.410** general Romano-British layer.
- Irregular radiate of uncertain emperor. *Obverse* [...], Radiate bust right. *Reverse* illegible. Diameter 15mm. AD 275–86. <10123> **[1812], F.411** Romano-British dump layer.
- Carausius, *radiate*, uncertain mint, probably a semi-regular, early London product. *Obverse* [...]AVSIV[...], Radiate bust right. *Reverse* illegible. AD 286–87. <10202> **sf.56 F.303** upper fill of Romano-British ditch.
- Allectus, *radiate*, London. *Obverse* IMP C ALLECTVS P F AVG, Radiate, cuirassed bust right. *Reverse* PROVID[...], Providentia standing left with baton and cornucopia. Mintmark S/A//ML. AD 293–96. <10208> **sf.63 [1765] F.303** Romano-British ditch.
- Allectus, *Q-radiate* (*quinarius*) of the ‘C’ mint. *Obverse* IMP C ALLECTVS P F AVG, Radiate, cuirassed bust right. *Reverse* LAETITIA AVG, Galley. Mintmark QC. AD 293–96. <10252> **sf.135 F.254** 10th–12th-century ditch.
- Constantine I, *nummus*, possibly London. *Obverse* CONSTANTINVS AVG, Laureate head right. *Reverse* PROVIDENTIAE AVGG, Campgate. Mintmark P[LON?]. AD 324–25. <10193> **sf.43 F.399** 13th–15th century ‘garden soil’ layer.
- House of Constantine, *nummus*, Trier. *Obverse* VRBS ROMA, Helmeted bust left. *Reverse* Wolf and twins. Mintmark [wreath]//TRP. AD 330–35. <10198> **sf.48 F.303** upper fill of Romano-British ditch.
- House of Constantine, *nummus*, Trier. *Obverse* [...], Helmeted bust left. *Reverse* Wolf and twins. Mintmark illegible. AD 330–35. <10148> **[1933] F.412** Romano-British ditch.

House of Constantine, *nummus*, uncertain mint. *Obverse* illegible. *Reverse* GLORIA EXERCITVS 1 or 2 standard type. Mintmark illegible. AD 330–41. <10247> **sf.129 F.303** Romano-British ditch.

Irregular *nummus*, House of Constantine. *Obverse* VRBS ROMA, Helmeted bust left. *Reverse* Wolf and twins. Mintmark TR.P. AD 330–48. <10147> [1932] **F.412** Romano-British ditch.

Irregular *nummus*, *Obverse* [...], Bust right. *Reverse* [...], Falling horseman derivative. Mintmark illegible, diameter 14mm. AD 353–64. <10224> **sf.95 [1882] F.327** Romano-British ditch.

House of Valentinian, *nummus*, uncertain mint. *Obverse* [...], Diademed bust right. *Reverse* GLORIA ROMANORVM type. Mintmark illegible. AD 364–78. <10223>, **sf.94 F.410** general Romano-British layer.

Radiate or *nummus*. Completely illegible. AD 260–378. <10113> [1699] **F.247** Romano-British ditch.

Coins from the Waterside Area

Septimius Severus, *denarius*, Laodicea-ad-Mare. *Obverse* L SEPT SEV AVG IMP XI PART MAX, Laureate head right. *Reverse* IVSTITIA, Iustitia seated left. *RIC* IV.1, 505. AD 198–202. <10232> **sf.104 F.313** Romano-British ditch.

Claudius II, *radiate*, Rome. *Obverse* [...], Radiate head right. *Reverse* illegible. AD 268–70. <10155> **sf.125 [1980] F.313** Romano-British ditch.

Claudius II, *radiate*, probably Rome but possibly irregular. *Obverse* [...], Radiate head right. *Reverse* illegible. AD 268–70. <10142> **sf.78 [1855] F.319** Romano-British grave.

Tetricus I, irregular *radiate*. *Obverse* [...]TETRICVS[...], Radiate bust right. *Reverse* [...], Pax standing left. AD 275–86. <10245> **sf.127 F.313** Romano-British ditch.

House of Constantine, *nummus*, uncertain mint. *Obverse* CONSTAN[...], Helmeted bust left with sceptre over shoulder. *Reverse* Victory on prow. Mintmark illegible. AD 330–35. <10219> **sf.75 F.386** Romano-British alluvium.

House of Constantine, *nummus*, uncertain mint. *Obverse* [...], Bust right. *Reverse* GLORIA EXERCITVS 1 or 2 standard or VICTORIAE DD AVGG Q NN type. Mintmark illegible. AD 330–48. <10205> **sf.60 F.278** 13th–15th century alluvium.

Constantius II, *nummus*, Trier. *Obverse* CONSTANTIVS P F AVG, Diademed, draped bust right. *Reverse* VICTORIAE DD AVGG Q NN, Two Victories. Mintmark D//TRP. AD 341–48. <10238> **sf.111 F.386** Romano-British alluvium.

Irregular *nummus*, House of Constantine. *Obverse* CONSTAN[...], Helmeted bust left with sceptre over shoulder. *Reverse* Victory on prow. Mintmark illegible, diameter 13.5mm. AD 330–48. <10220> **sf.76 F.386** Romano-British alluvium.

Irregular *nummus* of Constantius II. *Obverse* [...], Diademed bust right. *Reverse* Falling horseman derivative. Mintmark illegible, diameter 15mm. AD 353–64. <10132> **sf.86 [1829] F.386** Romano-British alluvium.

Illegible irregular *radiate* or *nummus*, diameter 10mm, AD 275–364. <10228> **sf.100 F.381** Romano-British ditch.

Valentinian I, *nummus*, Arles or Lyons. *Obverse* D N VALENTINI[...], Diademed bust right. *Reverse* GLORIA ROMANORVM type. Mintmark OF/II//[...]. AD 367–75. <10136> **sf.89 F.386** Romano-British alluvium.

Valentinian I, *nummus*, Arles. *Obverse* D N VALENTINI[...], Diademed bust right. *Reverse* GLORIA ROMANORVM type. Mintmark OF/[...]/[...].JCON. AD 367–75. <10135> **sf.88b F.386** Romano-British alluvium.

Valens, *nummus*, Aquileia. *Obverse* D N VALENS P F AVG, Diademed bust right. *Reverse* GLORIA ROMANORVM type. Mintmark -//SMAQP. AD 364–78. <10194> **sf.44 F.399** 13th–15th century 'garden soil'.

House of Valentinian, *nummus*, uncertain mint. *Obverse* [...], Diademed bust right. *Reverse* GLORIA ROMANORVM type. Mintmark illegible. AD 364–78. <10221> sf.77 F.386 Romano-British alluvium).

House of Valentinian, *nummus*, uncertain mint. *Obverse* [...], Diademed bust right. *Reverse* GLORIA ROMANORVM type. Mintmark illegible. AD 364–78. <10218> sf.74 F.386 Romano-British alluvium.

15th–20th-Century Coins and Jettons

Martin Allen

Six 15th–17th-century jettons and two 18th–20th-century coins were recovered. One of the jettons <10020> had been pierced, presumably for re-use as a piece of jewellery. The coins and jettons are of limited significance beyond providing dating evidence, no further analysis is warranted.

<10014> [1073] F.115: George II (1727–60), copper halfpenny, 1737, 8.14g.

<10015> F.413: George V (1910–36), copper alloy farthing, date illegible, 3.40g.

<10020> [1108] F.398: Nuremberg, copper alloy jetton, c. 1500–1580s, Anonymous ‘Lion of St Mark’ type (for obv., cf. Mitchiner 1988, 359–64, no’s 1093–1120), 25mm, 5.64g (pierced).

<10047> [1218] F.153: Nuremberg, copper alloy jetton, c. 1500–1580s, Anonymous ‘Rose/Orb’ type (cf. Mitchiner 1988, 381–83, no’s 1227–47), 23mm, 1.27g (chipped).

<10074> [1396] F.127: Nuremberg, copper alloy jetton, Wolf Lauffer III (fl. 1650–70), ‘Cross/Orb’ type (cf. Mitchiner, 494, no’s 1756–59), 21mm, 1.18g.

<10089> [1458] F.229: Nuremberg, copper alloy jetton, c. 1550–1580s, ‘Rose/Orb’ type, 21 mm, 0.88g.

<10166> sf.10 F.398 Tournai, copper alloy jetton, late 15th century. Obv. field of fleur de lis, rev. cross patty fleuretty, Gettes Bien Paies Bien (for rev., cf. Mitchiner 1988, 208–09, no’s 589–93, 595–99), 25mm, 8.60g.

<10173> sf.23 F.398: Nuremberg, copper alloy jetton, c. 1500–1580s, Anonymous ‘Rose/Orb’ type?, 24mm, 1.32g.

Metalwork

Craig Cessford, with contributions on selected items by Andy Hall

Copper-alloy

In total 123 copper-alloy objects weighing 343g were recovered. Although items were recovered from deposits of all periods the vast majority of the assemblage was of 16th–18th century date (88.6 per cent by count: Table 8). The two Romano-British items were an unidentified lump and an undiagnostic sheet fragment. The two items from 10th–12th-century deposits were an unidentified lump and a fragment of a thin circular sectioned curving hoop or loop. There was also a gilded binding strip with 12th century parallels discovered in a 16th–18th-century context. Items from 13th–15th contexts included two pins and a hollow tube. Additionally two buckles from 16th–18th century contexts are typologically 14th–15th-century. The 16th–18th-century material included 18 pins, all of which are of simple form, and nine aiglets which are common finds in assemblages of this period. There were also five buckles, three fragments of hoops/rings, three sheet fragments, a hook and eye, a vessel fragment, a toilet implement/stylus, a mount, a pierced disc, a spoon, a domed stud, a thimble and a tube. These are relatively simple and common artefacts of the period.

<10022> **sf.22 [1121] F.403:** double oval shaped buckle, with plain undecorated frame. This is a common type, dating to the 16th century. Traces of a heavily corroded iron pin are present on the central bar. Measuring 33 by 29 mm and weighing 8g. Close parallels can be found within the Norwich finds corpus (Margeson 1993, 30).

<10175> **sf.25 F.398:** incomplete double oval shaped buckle, very similar in size and form to **sf.22**. One side of the frame is missing, as is the pin. The frame is plain and undecorated. Measuring 32 by 28 mm and weighing 5g.

<10178> **sf.28 F.398:** plain circular buckle frame with copper alloy pin weighing 14g. This simple buckle of 33mm diameter has an undecorated frame of circular cross section. Similar buckles from the London area dated to the late 14th–15th centuries (Egan & Pritchard 2002, 58).

<10179> **sf.29 F.398:** rim fragment from a large cast vessel, possibly a pan or steep sided bowl such as a pancheon, with a rim diameter of c. 30cm and weighing 56g. The exterior is covered in a thick layer of sooting, with heavy corrosion to the interior surface. Such vessel fragments, often made from a gun or bell metal alloy are common finds within both rural and urban contexts. A 15th–17th century date range is suggested by similar fragments from London (Egan 2005, 99).

<10181> **sf.31 F.398:** large buckle of 15th–16th century date. The frame is of kidney-shaped form (Margeson 1993, 25) with a rectangular, sheet copper alloy plate with vertical reeds. The copper alloy pin is intact. Measuring 45 by 57 mm and 20g in weight.

<10183> **sf.33 F.398:** cast buckle plate of lobed form with rounded terminal. There is a recess for the buckle frame (which is missing) and a slot for the pin. The surface of the plate is heavily corroded and any surface detail/decoration is obscured by corrosion products. The plate is folded over with the gap between the front and back plates of 3mm, suggesting this was attached to a leather strap or belt. A single rivet is situated centrally towards the rounded terminal. This is difficult to attribute to a specific date range and would likely benefit from either a more intensive clean or an x-ray to reveal any potential surface detail. Measuring 60 by 37mm and weighing 27g.

- <10185> **sf.35 F.398**: small, finely cast oval shaped buckle (Figure 25.2). The ornate frame has an offset bar, two very prominent knobs decorated with engraved zig zags flanking three grooves, the central of which acts as a seat for the pin. The pin is formed from a length of copper alloy wire. Similar examples from London date from the 12th–14th centuries (Egan & Pritchard 2002, 73). Measuring 24 by 18mm and weighing 6g.
- <10186> **sf.36 F.398**: cast toilet implement or a possible stylus, with shaft tapering to a point. The opposite end is flattened into a rectangular sheet of 1mm thickness and bent over approximately 15 degrees. The flattened end is unfortunately broken making attribution all the more uncertain. Measuring 80mm in length and 5g in weight.
- <10189> **sf.39 F.398**: plain circular buckle frame with copper alloy pin very similar to **sf.28**. This simple buckle of 40mm diameter weighing 16g has an undecorated frame of circular cross section. Similar buckles from the London area dated to the late 14th–15th centuries (Egan & Pritchard 2002, 58).
- <10191> **sf.41 F.177**: fragment of a binding strip 33mm in length weighing 4g, with traces of gilding on the curved upper surface. One end is wider with a centrally positioned rivet. This may have been originally attached to a book or casket. Similar to examples recovered from Castle Acre and dated to the 12th century (Coad & Streeten 1982).
- <10215> **sf.70 F.398**: fragmentary, ornate, openwork cast mount, possibly from a book or a casket. Formed to fit around the edge of a right angled box or book with pairs of rivet holes for attachment on both faces. The larger panel is roughly circular in shape, but lobed with punched dot decoration along the upper surface of the framework. This is a fine object worthy of further research to identify published parallels. A 16th–17th century date seems stylistically appropriate. Measuring 50 by 25 mm and weighing 20g.
- <10104> **[1601] F.400**: A cast copper alloy pierced disc of thick (5mm) gauge with one flattened side. The central hole is roughly circular in shape and the flattened edge has three triangular grooves. It is possible that this is one piece from a more complex composite object. The toothed edge may be part of a ratchet mechanism. Probably 16th–18th-century in date. Measuring 25 by 5mm and weighing 14g.

Period	Count	Weight (g)
Romano-British	2	22
10th–12th	2	19
13th–15th	8	44
16th–18th	109	252
19th–early 20th	2	6
Total	123	343

Table 8: Copper alloy

Iron

Just over 500 pieces of iron weighing just over 10kg were recovered (Table 9). The majority of the assemblage is heavily corroded and in poor condition and consists principally of nails (261, 50.6 per cent) and unidentified fragments (228, 44.2 per cent). There is a relatively small quantity of Romano-British material, there are no particular concentrations of material within the Romano-British assemblage and none of the nails appear to relate to *in situ* timbers. The only other identifiable items

are a knife blade, a staple and a hobnail. The 10th–15th assemblage is relatively small, contains no significant items or concentrations of material and it is likely that some is residual Romano-British material. There was a relatively large assemblage of 16th–18th-century material with a few identifiable items. The only item of any real interest is a complete trowel <10146> [1931] F.190 which comes from the 17th-century robbing of a well and may represent a tool being used in the process that was lost. 19th–early 20th-century ironwork was generally not retained. The bulk of the assemblage should be discarded with the exception of the material from Romano-British contexts and a few 10th–18th-century items.

Period	Nails	Unident.	Other	Count	Weight (g)
Romano-British	43	9	1 hobnail, 1 knife blade, 1 staple	55	821
10th–12th	13	6	1 plate fragment	20	455
13th–15th	50	39	7 strips	96	1006
16th–18th	153	170	4 knife blades, 3 fittings, 2 strips, 2 plate fragments, trowel, hinge, latch rest, loop	338	6601
19th–early 20th	2	2	Shovel head	5	1344
Unphased	–	2	–	2	21
Total	261	228	27	516	10248

Table 9: Ironwork

Lead/Lead-Alloy

41 pieces of lead weighing 1481g were recovered, the majority of the assemblage was recovered from 16th–18th-century contexts but some material was from Romano-British and 13th–15th-century contexts (Table 10). The only Romano-British piece that may be an object is an irregular lozenge shaped lead or lead alloy fragment measuring 39 by 10mm and weighing 12g (sf.133 <10250>) but even this is more likely simply to be some form of waste.

<10012> sf.14 [1067] F.403: a circular token or pan weight with indistinct impressed design on the upper face, probably 16th century in date. Diameter 17mm and weight 10g.

<10160> sf.2 F.398: unfired musket ball c. 12mm diameter indicating that it was for use in a pistol (c. 0.51in diameter).

<10170> sf.18 F.398: perforated conical weight c. 28mm diameter and 11mm high (58g, c. 2.0oz).

<10177> sf.27 F.138: semi-perforated conical weight c. 18mm diameter and 32mm high (43g, c. 1.5oz).

<10180> sf.30 F.398: perforated cylinder c. 25mm diameter and 20mm high, probably used as a weight (74g, c. 2.5oz: see Cessford *et al.* 2005, fig. 69.2).

<10182> sf.32 F.399: perforated roughly circular disc c. 30mm diameter. This is probably a piece of caulking and is unlikely to have been a weight (34g, c. 1.2oz).

<10188> **sf.38 F.399**: perforated roughly circular disc c. 30–35mm diameter. This is probably a piece of caulking (to seal boat joints) but could have functioned as a crude 1.5oz weight (46g, c. 1.6oz: see Cessford *et al.* 2005, fig. 69.3).

<10190> **sf.40 F.399**: pottery repair oval c. 45mm by 35mm.

<10195> **sf.45 F.399**: a rolled sheet 25mm wide, probably a rolled fishing line weight (see Cessford *et al.* 2005, fig. 67).

<10197> **sf.47 F.399**: perforated conical weight c. 24mm diameter and 10mm high (29g, c. 1.0oz).

Period	Unident.	Sheet fragments	Other	Total count	Total weight (g)
Romano-British	–	1	1	2	22
13th–15th	6	2	–	8	317
16th–18th	11	8 (1 with material cut from it)	Weights (6), token or pan weight, fishing weight, pottery repair, perforated plate, vessel fragment, musket ball, small decorated disc	31	1142
Total	17	11	13	41	1481

Table 10: Lead/lead alloy

Worked Stone

Craig Cessford, with petrological identifications by Simon Timberlake

Very few worked stone artefacts were recovered. They include five whetstones two quern fragments, a jet bead and a pot lid or similar item. The whetstones are all made from made from Norwegian quartz schist.

<1515> [1399] **F.190**: fragment of Niedermendig quern weighing just over 4.9kg, from a 17th-century cesspit fill.

<2268> **sf.8**: fragment of Niedermendig quern weighing just over a kilogram, from a 16th–17th-century deposit.

<2135> [1894] **F.386**: a c. 22mm thick flat piece of stone shaped into a c. 65mm wide hexagon weighing 158g. Some form of pot lid or similar item. From Romano-British alluvium. This is possibly made from Reigate Stone (Upper Greensand) and may come from Merstham on the North Downs. This was a freestone valued as a building stone during 13th–15th centuries, this particular lithology is calcareous (CaCO₃ cement).

<1084> [1019] **F.104**: broken whetstone, max length 125mm. From an 18th–19th-century foundation but probably residual. Made from Norwegian quartz schist.

<1462> [1361] **F.204**: two broken whetstones; max lengths 50mm and 110mm. From a 15th-century pit. Made from Norwegian quartz schist.

<1577> [1430] **F.223**: two broken whetstones; max lengths 105mm and 165mm. From a 16th–17th-century well. Made from Norwegian quartz schist.

<1642> [1458] **F.229**: a c. 20mm diameter and 11mm thick jet bead, from a 16th-century cesspit. The drilled central perforation has a slightly serrated edge to it indicating that the surface was excavated before drilling. The jet is probably from the Whitby area.

<1939> [1739] F.190: a roughly rectangular stone block c. 65mm thick and 0.45m by 0.75m in extent that was placed in the base of a 16th–17th-century cesspit. Presumably to provide firm footing/base, either to facilitate periodic emptying of cesspit or to provide firm footing during dismantling/robbing of upper portion of structure. The fact that the upper surface was smooth/worn suggests it is linked to periodic cleaning.

Worked Bone

Craig Cessford, with faunal identifications by Vida Rajkovača

The worked bone consists of all the items identified as such during excavation plus items identified whilst analysing and scanning the animal bone. There were six pins from Romano-British contexts, a point and a ring/hoop fragment that were unstratified but which must be 15th century or earlier and two implement handles from 17th–18th-century contexts. The Romano-British pins are all of relatively common types (Crummy 1979) and include three complete examples; one is headless, one is polygonal headed and one has a complete spherical head with incised lines.

Romano-British Worked Bone

<1755> [1569] F.410: two pins. One complete example is relatively short, overall length 60mm, with a spherical head tapering to a point that has eight lines incised into it and a pronounced swelling in the middle of the shaft. The cancellous bone is visible, suggesting it was probably fashioned from an axial splinter of a cattle-sized limb bone fragment. Probably 3rd–4th century. The other pin is just a shaft fragment with a 55mm long surviving length.

<1795> [1602] F.410: pin fragment with two incised lines near the well fashioned point. Could have been made from a sheep-sized limb bone fragment. Surviving length 41mm.

<2196> [1948] F.303: two bone pins, cannot be identified to animal species/element. One which is 69mm long is clearly a broken shaft fragment. The other which is 96mm long has a smooth end and is a complete headless pin. This type is thought to have been more common in the earlier Romano-British period, losing popularity during the first half of the 3rd century.

<2229> [2005] F.343: complete polygonal headed plain bone pin, probably made from a cattle-sized limb bone fragment. This type of pin probably dates to the mid-3rd century or later. It has a cuboid head with chamfered corners, 8mm by 7mm by 5mm, and the shaft has a pronounced swelling in its middle portion, overall length 90mm.

Post-Roman Worked Bone

<1906> [1708] F.418: plain double-ended implement point probably made from a cattle-sized metapodial fragment. This type of object is commonest in 11th–12th-century contexts in Cambridge and has a point at one end and a flat chisel like butt at the other. The function of these items is unknown. Unstratified.

<2289> sf.57 F.399: D-sectioned ring fragment, made from a cattle-sized element where the shaft was sawn into ring shaped off-cuts then polished. Internal diameter c. 19mm, cross section 6mm by 3mm. 15th-century or earlier unstratified context.

<10030> [1146] F.133: plain knife handle. 17th–18th-century context.

<10335> [1047] F.112: heavily abraded implement circular sectioned handle, probably from a knife or piece of cutlery. Apparently plain with flat and slightly tapering form. Late 18th-century context.

Clay Tobacco Pipe

Craig Cessford

A small assemblage of clay tobacco pipe was recovered (122 fragments, 475g), consisting of two mouthpieces, 98 stem fragments and 19 bowls or bowl fragments. This represents a minimum of 14 pipes. All the material is unexceptional and the only noteworthy element of the assemblage is the lack of definitely 19th-century material. The bowls that could be typologically identified using the Oswald General Typology (1975) consisted of: type 5 (1, c. 1640–60), type 6 (4, c. 1660–80), type 9 (1, c. 1680–1710), type 10 (1, c. 1700–40), type 12 (4, c. 1730–80), type 13 (1, c. 1780–1820). There was a single example with an eight rayed sunburst design on the base of the heel (type 12, c. 1730–80) and two examples with the initials P/W on the sides of the heel (both type 12, c. 1730–80). Similar P/W marked pipes are known from other excavations in Cambridge and they were probably produced in the town. No definite pipemaker of this period with these initials is known, however they may have been produced by Peter Wakelin of St Sepulchre's parish (mentioned in 1766), who was part of a pipemaking family based in that same parish (Francis Wakelin and his un-named father mentioned 1752). The clay tobacco pipe assemblage is of limited significance beyond providing dating evidence, no further analysis is warranted beyond documentary research to attempt to confirm that P/W were produced by Peter Wakelin and the only material that potentially requires illustration is one of the P/W pipes.

Vessel and Window Glass

Craig Cessford

A small quantity of window and green bottle glass recovered from 16th–18th-century contexts was discarded. A small quantity of glass was recovered from Romano-British contexts. There are three tiny fragments that are too small to be diagnostic and may be intrusive, plus two fragments of clear glass including one base with a bluish tinge that are from bottles and are probably of late 1st–2nd century date (<1979> [1769] F.302, 8g; <1975> [1765] F.302, 4g).

Slag

Craig Cessford

A small quantity of ironworking slag was recovered from 16th–18th-century contexts, which was not retained. Two pieces weighing 64g were recovered from Romano-British contexts (<1980> [1769] F.302: one piece 46g; <1984> [1770] F.302: one piece 18g).

Flint

Emma Beadsmoore

A total of 7 ($\geq 542\text{g}$) flints were recovered from the site; 4 ($\geq 473\text{g}$) were unburnt and worked, whilst 3 (69g) were just burnt. The flints are listed by type and feature in Table 11. All of the flint occurs residually in much later context and is dispersed across the investigated area with no concentrations of material. The assemblage recovered from the site comprises flint working waste and unworked burnt chunks. The material was irregularly manufactured, largely chronologically non-diagnostic and unlikely to be contemporary. For example one flake from **F.254** is broadly comparable to Bronze Age and later prehistoric assemblages, whilst a hammerstone from **F.71** is very worn and weathered and therefore potentially much earlier. The material therefore provides evidence, albeit very limited, of background prehistoric activity on site. No further work is required on the limited flint assemblage.

Feature	Date of context recovered from	Type					Totals
		Secondary flake	Tertiary flake	Irregular core	Hammerstone	Unworked burnt chunk	
115	Late 18th century			1			1
191	16th century		1				1
192	16th–17th century					1	1
223	17th century					1	1
254	11th–12th century	1					1
398	16th–18th century				1		1
411	3rd–4th century					1	1
Sub totals		1	1	1	1	3	7

Table 11: Flints listed by features and type

Ceramic Building Material

Grahame Appleby

A moderately sized assemblage of ceramic building material was recovered, with 878 pieces weighing nearly 138kg (Table 12). A significant proportion of the assemblage however derives from deposits that are too poorly defined or dated to be worth analysing. As a result only the material from Romano-British and 10th–12th-century deposits were analysed. The 13th–15th-century assemblage is too small to be meaningful. Much of this 16th-century and later material comes from relatively poor contexts in terms of definition and dating and does not warrant study. The only material of any interest are *in situ* bricks etc. sampled from structures.

Period	Count	Count per cent	Weight (kg)	Weight per cent	Mean weight (g)
Romano-British	79	9.0	7.359	5.3	93.2
10th–12th	6	0.7	0.282	0.2	47.0
13th–15th	73	8.3	4.458	3.2	61.1
16th–18th	672	76.5	115.562	83.8	172.0
19th–early 20th	48	5.5	10.167	7.4	211.8
Total	878		137.828		157.0

Table 12: Ceramic building material by period (of deposition)

A total of 84 fragments of tile (7574g) were recovered from 14 features and four test pits/layers/spreads of the Romano-British and 10th–12th periods. The assemblage includes fragments of roof (*tegulae* and *imbrex*) and floor or hypocaust tile (*pilae* or *pedales*) and at least one piece of probable box flue (*tubuli*). 21 pieces can be positively identified or assigned to a general type; the remaining fragments (19 pieces, weight 916g) are undiagnostic. 15 fragments are of probable 13th-century or later date recovered from feature **F.247** (**sf.82, sf.97, [2083]**; weight 1116g) and are therefore intrusive; these pieces are not considered further. Fabrics consist of fine, processed to sandy clay with occasional small to medium sized flint inclusions. Outer surfaces largely oxidised with several pieces displaying reduced interiors. One roof tile may have been refired in a reducing atmosphere, possibly following post-firing modification. Surface colour varies between dark grey to orange, with similar colours observed in cross-sections.

This is a small, but relatively important assemblage due to its location and contents. The presence of possibly sooted material, box flue and hypocaust tiles indicate a building of some pretension was located nearby, albeit one which was systematically demolished. One possibility given the site location is a bath house as a villa appears less likely. The recovery of the assemblage from disturbed contexts may also indicate that the tile was re-utilised in the 13th–15th centuries, although this argument is difficult to sustain on the current evidence. Despite its residual nature, the

assemblage does provide proxy evidence that the Romano-British settlement on this side of the river may have been more substantial and or wealthy than previously thought. One intriguing find is a fragment with an attempt to rectify its poor quality after initial firing by adding/adhering more clay to the flange and upper surface. This piece also has relatively small fingerprints, suggesting the possibility that it was produced by a young individual learning the trade.

Tegulae and Imbrices

<1748> [1565] F.257: fragment of the upper part of a roof tile with partially surviving square cross-section nail hole (6.2mm) and upper edge. The reverse surface is irregular and convex. The fragment has a reduced interior and oxidised exterior; weight 314g.

<2077> [1844] F.316: fragment of the lower right part of a tile, with a tapering flange (24.5–18.8mm; 26mm thick). Surviving thickness of the tile is relatively thin (17.15mm). The tile was manufactured from processed clay to a high standard, the upper surface smoothed flat. In interior is reduced with a dark grey colour and outer surfaces possess a deep orange/red brown oxidised colour. Weight 153g.

<2087> [1844] F.316: fragment of a large roof tile with a 28mm wide flange and 16mm thick base. The fragment has a dark grey reduced interior and dark orange to brown external surface. Weight 170g.

<2105> [1866] F.386: large fragment of tile with one surviving edge with projecting flange or shoulder (21.8mm thick). The tile has a dark to light grey reduced appearance, although oxidised clay and surfaces are also present and observable in cross-section. The presence of oxidised layers suggests the tile underwent an initial firing. Finger impressions are present of the external surface of the flange and on the opposite planar surface of the tile. 'Slabs' of applied clay are apparent on the upper, inner flat surface and in cross section. The back is very rough and in cross-section the oxidised middle layer is irregular and wavy in appearance. This evidence suggests that the original tile was crudely manufactured with an attempt to rectify its poor quality after initial firing by adding/adhering more clay to the flange and upper surface. Weight 603g.

<2184> [1932] F.412: fragment of roof tile with a relatively thin cross-section (21mm) to the short, thicker flange (31mm). The upper surfaces are orange with the back a purplish grey colour. Mould/tool impressions are present on the flange, created during the manufacturing process. Weight 154g.

<2205> [1953] F.341: fragment of a poorly manufactured *imbrex* with a partially surviving transverse edge. Due to the poor manufacturing quality it is unclear if the fragment preserves a longitudinal edge. The piece has been oxidised throughout its thickness (18mm) and a large rounded flint pebble inclusion is present. Weight 362g.

<2235> [2020] F.313: two fragments of *tegulae*: a) surviving lower right corner and cut away flange. The tile's thickness tapers towards the bottom edge (22.5mm to 14mm). The flange is relatively short/low and thin (21mm) and has had the lower 58mm removed to the corner when the clay was wet, either by using a knife or garrotte. The fragment may thus be from a tile attached to and overhanging the building's eaves, the space created by the removal of the flange used for the fixing of an *antifex*. The tile has been oxidised throughout and has a pale orange colour with small flint inclusions; weight 314g; b) fragment of split and fractured roof tile (23mm thick) with no surviving edges and only a small area of one outer surface surviving. The (presumed) upper surface has an impressed arc, which if complete would form a circle. The outer surfaces are oxidised and possess a pale to mid-orange colour; the interior is pale grey with some orange discolouration, indicative of further heat exposure; weight 141g.

Pilae/Pedales

- <1698> [1517] F.247: fragmentary corner of a probable *pila* (hypocaust stack) c. 58mm thick. The surface has a pale orange colour, indicating that it was either completely oxidised during firing, or has been exposed to further high temperatures after it was broken. Weight 186g.
- <1721> [1539] F.254: probable floor tile fragment (*pedales*) with surviving edge, 38mm. The interior is reduced, although exposed surfaces have an pale orange to pale brown oxidised colour indicating that the fragment was subjected to high temperatures post-breakage. Weight 218g.
- <2034> [1812] F.411: large fragment of possible floor tile, although this may also be a piece of *tegulae*. The fragment has an oxidised surface and reduced interior with a rough 'upper' surface, and smoother back; impressions or whipping or smoothing possibly achieved by applying finger pressure are present on this surface. Weight 249g.
- <2061> [1835] F.386: fragment from a probable *pila* 50mm thick with one surviving corner with two finger impressions. The fragment appears to have been broken in antiquity and further exposed to a high temperature environment; the cross-section shows both reduced and oxidised clay on different surfaces. The outer surfaces have possible mould impressions, with the lateral surfaces slighter rougher. Weight 1835g.
- <2104> [1866] F.386: fragment of probable *pila*, 46.3mm thick. No external lateral surfaces survive and only small segments of the planar surfaces. The interior is reduced and the outer surfaces have an orange to dull reddish brown oxidised appearance. Weight 156g.
- <2236> [2020] F.313: two fragments of *pilae* (one consisting of five refitting pieces): a) surviving corner of a large *pila*, 42.5mm thick. The interior is reduced and grey in colour. The outer surfaces are oxidised and pale orange. The outer surfaces have possible traces of sooting and mortar adhering to them, although this material may be a later concretion as it is present of broken surfaces, weight 699g; b) five refitting of a sandy fabric *pila* or floor tile, with a deep red/purple surface and dark red oxidised interior, 41mm thick, weight 578g. This piece may be 13th–15th century.

Tubuli

- <1699> [1517] F.247: small fragment of box flue with one scored surface for keying of plater. The surfaces are oxidised and the interior surface has no evidence sooting. Weight 72g.

Wood and Timber

Mike Bamforth

This document aims to assess the potential of the waterlogged wood assemblage in terms of woodworking technology, woodland reconstruction, decay analysis, species identification, dendrochronology, and conservation and retention. A total of 52 records have been assigned to three periods (Table 13). All the material was situated in waterlogged deposits which created the anaerobic conditions necessary for organic preservation. This document has been produced in accordance with Historic England guidelines for the treatment of waterlogged wood (Brunning 2010) and recommendations made by the Society of Museum Archaeologists (1993) for the retention of waterlogged wood. Each discrete item was recorded individually using a pro forma 'wood recording sheet', based on the sheet developed by Fenland Archaeological Trust for the post-excavation recording of waterlogged wood. Every effort was made to refit broken or fragmented items. However, due to the nature of the material, the possibility remains that some discrete yet broken items may have

been processed as their constituent parts as opposed to as a whole. The metric data were measured with hand tools including rulers and tapes. The tool marks were measured using a profile gauge. The system of categorisation and interrogation developed by Taylor (1998, 2001) has been adopted within this report. Joints and fixings are described in accordance with the Museum of London archaeological site manual (Spence 1994). Items identifiable to species by morphological traits visible with a hand lens – oak (*Quercus* sp.) and ash (*Fraxinus excelsior*) – were noted. Other items were sub-sampled to allow later identification to taxa via microscopic identification as necessary.

Period	Count
Middle/Late Bronze Age	27
Roman	12
Probably Romano-British	1
16th–18th century	12
Total	52

Table 13: Wood records by period

The condition scale developed by the Humber Wetlands Project (Van de Noort *et al.* 1995: table 15.1) will be used throughout this report (Table 14). The condition scale is based primarily on the clarity of surface data. Material is allocated a score dependent on the types of analyses that can be carried out, given the state of preservation. The condition score reflects the possibility of a given type of analysis but does not take into account the suitability of the item for a given process. If preservation varies within a discrete item, the section that is best preserved is considered when assigning the item a condition score. Items that were set vertically in the ground often display relatively better preservation lower down and relatively poorer preservation higher up. Using the condition scale the material all scores a 2, 3 or 4, describing an assemblage in poor to good condition (Table 15). There is some fragmentation of items within the assemblage, but the separate sections generally mechanically refit with a high degree of confidence. Material that scores 2 will be suitable for species identification. The form of the item will probably be visible, and it may be possible to see some woodworking evidence. The conversion may be apparent, but it is unlikely that clear tool faceting will be visible. Material that scores 3 will have a clearly visible primary conversion and some tool facets are likely to be visible. Material that scores 4 will have all the relevant surface data clearly visible. The primary conversion, tool facets and tool marks / signatures will all be visible if present.

Condition score	Museum conservation	Technology analysis	Woodland management	Dendrochronology	Species ID.
5 excellent	+	+	+	+	+
4 good		+	+	+	+
3 moderate		+/-	+	+	+
2 poor		+/-	+/-	+/-	+
1 very poor					+/-
0 non-viable					

Table 14: Condition scale

Condition score	Count	Per cent
5 excellent	0	0
4 good	17	33
3 moderate	15	29
2 poor	18	35
1 very poor	0	0
0 non-viable	0	0
Not scored	2	4
Total	52	

Table 15: Condition of material

Middle/Late Bronze Age

Twenty seven wood records are assigned to this period with a broad range of wood categories represented (Table 16). All the material derived from palaeochannel F.354. Ten small stakes were recovered from alongside a watercourse, driven through [1965] into the underlying blue-grey clay. Only the tips survive and all the stakes have degraded or broken tops (Table 17). The stakes form a vague alignment running along the edge of the palaeochannel and are believed to be broadly contemporary. The possibility must be considered that these stakes originally formed the support for a light fence or revetment. The stakes are formed of a variety of different material types and represent something of a mixed group. If they did originally form part of the same structure, it was certainly somewhat *ad hoc* in nature. A series of five small samples <014> [1965].01 were recovered from around stake <021> [1971].02. These consist of three fragments of bark, the largest of which measures 25x15x12mm, a fragment of roundwood debris measuring 80x28x15mm and two fragments of brushwood, each with a diameter of 18mm. These samples were recovered from an area highlighted as possible collapsed wattle work. Given the nature of the material, it is highly unlikely to be derived from wattle.

A series of 13 dendrochronological samples were recovered from substantial oak timbers encountered within the palaeochannel [2034] (Table 18: Figure 27.4). These

timbers were all extensively water worn and displayed various kinds of rot and decay. The samples are all derived from material that has naturally accumulated within the channel. The timbers were all lying horizontally and at broadly the same height. Given that this accumulation of material within the palaeochannel deposits was unique, this may represent a single event or a short period when conditions were suitable for the deposition of larger timbers. The material was recovered from the inner, slower moving side of the curve of the river, potentially a backwater where the material 'grounded'.

A single wood record, <053> [2035], was assigned to a series of sub-samples recovered from within the 'Gault Clay'. This consists of c. 30 pieces of roundwood and root in good condition, all with bark present and with diameters varying between 15–45mm. These are likely to represent naturally accumulated debris. A single item was recovered from within palaeochannel fill [1997]. Timber debris <052> [1997] is a length of radially aligned oak heartwood measuring 285x37x16mm. It is fragmented and broken at both ends. Although somewhat water worn, this item appears finished and may originally have been part of an artefact of unknown function, or possibly a broken length of baton.

Type	Count	Per cent
Bark	1	4
Roundwood	4	15
Roundwood debris	3	11
Timber	15	56
Timber debris	2	7
Samples	2	7
Total	27	

Table 16: Wood records assigned to the Middle/Late Bronze Age

Cat.	Context	Type	Notes	Bark/ sapwood/ heartwood	Condition	Woodworking	Dimensions (mm)
015	1971.19	RW	Branchwood, both ends broken	BSH	4	One side possibly trimmed	85x32x26
016	1971.01	TIM – oak	Growth c. 3mm, water worn	H	2	Rad 1/8 (mod). One end has a pencil point but too degraded to see any facets	435x69x46
017	1971.23	TIMDE B	Growth 3- 5mm, wavy grain, heavily water worn	BSH	2	Rad ¼ (mod). Amorphous water worn item	311x104x64
018	1971.13	RWDE B		SH	3	Tip possibly trimmed to a point	58x22x12
019	1971.17	BARK	From large timber	B	3		50x25x15
020	1971.16	RWDE B		H	3	?Rad ½. Faced	38x30x15
021	1971.02	RW	Brushwood	BSH	3		210x30x30
022	1971.21	RWDE B	Brushwood	BSH	3	Has a pointed end, but no visible facets	46x33x20
023	1971.22	RW	Brushwood	BSH	3	Pencil point, but no clear facets. Has possibly degraded into this shape	46x23x23
024	1971.24	RW	Brushwood	-	2	Seen in plan only	No length, diameter 120

Table 17: Stakes associated with palaeochannel F.354

Cat.	Context	Notes	Bark/ sapwood/ heartwood	Condition	Length (mm)	Widths (mm)	Original diameter (mm)
038	2034E	c. 80 years	H	2	490	140x73	>200
039	2034G	c. 70 years	H	3	1260	200x200	
040	2034J	c. 110 years (actually 163 years)	H	2	1300	251x134	
041	2034L	c. 60 years	H	3	1670	206x191	>300
042	2034M	c. 110 years (actually 298 years)	H	2	2000+	290x180	>400
043	2034K	c. 130 years (actually 191 years)	SH	2	1980	500x300	>500
044	2034I	c. 100 years but knotty	SH	2	2640	480x160	c. 500
045	2034H	c. 80 years	H	2	1830	327x161	
047	2034A	c. 35 years branch	H	2	660	119x119	
048	2034B	c. 40 years branch	SH	2	840	119x119	
049	2034C	c. 45 years branch	H	2	450	120x120	
050	2034D	c. 35 years branch	H	2	380	80x80	
051	2034F	c. 35 years branch	H	2	530	80x80	

Table 18: Oak dendrochronological samples from timber within palaeochannel F.354

Romano-British

Twelve wood records are assigned to the Romano-British period (Table 19). Only two types of material - roundwood and timber - are represented, plus also a single object that is probably Romano-British and may be part of a broken paddle. The basic splitting and trimming to a point is typical of the period, with a tendency towards square items. Where visible, the broad, flat tool facets are also typical of the broad iron axes of the period. The material used is of moderate quality, with some evidence for side branches having been trimmed away. Neither of the two horizontal items (<031>, <036>) show any sign of woodworking and are both likely to represent naturally occurring debris. The six stakes in the western group are characterised as moderate quality roundwood with trimmed ends. There is a degree of similarity between the stakes in terms of raw material and form. Several of the stakes follow the same alignment and may originally have formed part of a fence line. The three stakes in the eastern group are also somewhat similar to one another, generally having a squared up cross section and squared up pointed ends.

Possible Broken Paddle

Artefact <001> F.419 [2054] (Figure 27.1) was recovered during the watching brief phase, probably from the upper Romano-British alluvial deposits. This item is in good condition and fashioned from a

ring porous heartwood (possibly ash) with growth rings varying from 2–7mm where visible. A radial 1/8 has been trimmed and hewn into a well finished length of handle and and ?blade, 452mm of which has survived. The end of the handle has been cross cut with a slight chamfer and shows evidence of wear from use. The 215x51x49mm length of sub-rounded handle is slightly waisted, near the shoulder (51x40mm), possibly from use, before flaring out at the shoulders to a 75x61mm ?blade section. Beyond the handle, the artefact is sub-triangular in cross section and is badly damaged and broken at the end. The item may well be part of a broken paddle.

Western Group of Stakes

<032> **F.323 [1877]**: Oak roundwood stake, broken at top. Moderate condition. One end trimmed to tapered point from two directions. Item measures 225x65x50mm.

<030> **F.324 [1878]**: Oak brushwood, broken at top. Bark present, moderate condition. One end trimmed to tapered point from three directions. Three side branches trimmed from one direction. Item measures 405x65x55mm.

<033> **F.325 [1879]**: Roundwood, broken at top and tip. Bark present, good condition, trimmed at one end from two directions. One side branch trimmed from one direction. A partial, flat stop mark is visible. Item measures 260x46x46mm.

<028> **F.339 [1941]**: Roundwood, broken at top, good condition, trimmed at one end from two directions. One side branch trimmed from one direction. Item measures 335x43x43mm.

<029> **F.340, [1944]**: Roundwood, broken at top and tip. Moderate condition. Partially boxed half split, trimmed at one end from four directions to a tapered point. One side branch trimmed from one direction. A partial, flat stop mark is visible. Item measures 385x56x36mm. Original diameter c. 80mm.

Eastern Group of Stakes

<027>**F.368 [2091]**: Roundwood, fast grown with curved grain. Top broken, bark present at all corners. Good condition. Partially boxed heart trimmed at one end from four directions to a tapered point. Item measures 418x63x54mm. Original diameter 65mm.

<026> **F.369, [2092]**: Roundwood, fast grown with curved grain. Top and one face broken, good condition. Bark present on one corner. Partially boxed heart trimmed at one end from four directions. Facets are completely flat and one partial, flat stop mark is visible. Item measures 450x58x54mm. Original diameter 65mm.

<005> **F.370 [2093]**: Timber stake, fast grown. Top and tip broken, good condition. This is the worked tip only of a larger stake, trimmed from four directions to a point. The tool facets are completely flat. Item measures 163x62x48mm Original diameter >70mm.

Other Stakes

<002> **F.387 [2044]a**: Timber stake, fast grown, bark present. Top and tip broken, good condition. This boxed heart has been trimmed from four directions to a blunt point. The tool facets are broad and flat and faint tool signatures are visible. The item measures 212x62x60mm.

<003> **F.387, Bay 1, [2044]b**: Timber stake, fast grown, bark present. Top and tip broken, good condition. There is some slight ancient driving damage to the tip. This boxed heart has been trimmed from four directions to a point. The tool facets are broad and flat. The item measures 205x78x48mm.

Naturally Occurring Debris

Alluvial deposits **F.386 [1853]**: a single oak timber <031> [1853] was recovered from within this alluvial deposit. This gnarled, knotty, twisted timber is in poor condition, shows signs of water wear and is

broken at both ends. It measures 1300x135x135mm. It is assumed to be a naturally occurring piece of debris.

Ditch **F.313 [1830]**: a single small piece of roundwood, <036> [1830], was recovered from the fills of this drainage ditch. Bark is present and the item is in good condition. There is no evidence of woodworking. The piece measures 99x26x15mm. It is assumed to be a naturally occurring piece of debris.

Type	Count	Per cent
Roundwood	7	54
Timber	5	38
Artefact (dating uncertain)	1	7
Total	13	

Table 19: Wood records assigned to the Romano-British period

16th–18th century

A total of twelve wood records are assigned to this period (Table 20), consisting of three artefacts and nine timbers. They relate to the base plates of a well and cesspit, the lining of a soakaway and material from the fill of a shaft.

Base plate of Well F.142

Five timbers formed a square base plate supporting the sides of this round, brick lined feature (Figure 27.3). The four main timbers ([1930]A, B, D & E) abutted one another at the corners and a fifth timber – [1930]C formed a cross brace across the top of [1930]B and [1930]D. This is a particularly crude example in comparison to other examples from the local area. Timber <007> [1930]D formed part of the base plate and consists of oak sapwood and heartwood with occasional knots present. There is some evidence of wood worm attack to the sapwood but the timber is in good condition. This boxed radial quarter split is heavily worked. One end terminates in a partially shouldered tenon and the other end has been cross cut with a saw. A small fragment of light coloured wood, possibly oak sapwood is present adhering to one cheek of the tenon, with the grain of this fragment lying at right angles to the axis of the main timber. An off centre groove with a semi-circular cross section 16mm in diameter runs the length of one face. Within this groove, passing from face to face, are four evenly spaced circular holes with a diameter of 20mm. The remnant of a fifth evenly spaced hole has been truncated by the cross cut end. The 'ghost' of a timber this item was previously in contact with is visible on the obverse face to the groove. It is of interest to note that this timber refits <008> [1930]A at the cross cut end. The timber measures 865x90x75mm. This timber is split from parent timber with an original diameter >180mm.

Timber <008> [1930]A formed part of the base plate and consists of oak sapwood and heartwood. This item is in good condition with some water wear to the surfaces of the timber. This boxed radial quarter split is heavily worked. One end terminates in a partially shouldered tenon and the other end has been cross cut with a saw. Three iron nails are present around the tenon. An off-centre groove with a semi-circular cross section 16mm in diameter runs the length of one face. Within this groove, passing from face to face, are four evenly spaced circular holes with a diameter of 20mm. The remnant of a fifth evenly spaced hole has been truncated by the cross cut end. It is of interest to note that this timber refits <007> [1930]D at the cross cut end. The timber measures 835x106x77mm. This timber is split from parent timber with an original diameter >212mm. Timber <010> [1930]B formed part of the base plate is formed of oak sapwood and heartwood. It is in moderate condition, although

one end has degraded away. This tangentially split timber has been cross cut at one end and has a chamfer running along the edge of one face. The ghost of a timber this item was previously articulated with is visible on one face, as are two iron nails that originally secured this item in place. A further iron nail is visible on this face. The timber measures 830x150x24mm. Timber <012> [1930]C formed a cross brace adjoining base plate timbers [1930]B and [1930]D, is formed of ?pine heartwood and has occasional knots present.

One edge is broken and one end is broken and fragmented. Evidence of burrowing beetle attack is present on one face. This tangentially split item has been cross cut at one end. The broken off heads of two square headed iron nails are present on one face. The item measures 304x146x22mm and is split from a much larger parent timber. Timber <013> [1930]E formed part of the base plate. Consisting of oak sapwood and heartwood is in poor condition and is water worn with little surface detail remaining. This tangentially split item is a large piece of debris formed of a split away knot. There is the remnant of a possible halving lap at one end. This item measures 493x114x22mm. The timbers of this feature all appear to be re-used with none of the various joints and fixings utilised as part of this structure. The two most heavily worked items refit and originally formed a timber some 1700mm (five and a half foot) long, with an off centre groove running the length of one face containing nine evenly spaced circular holes. No traces of the original tooling, such as tool facets or saw marks, were visible.

Base plate of Cesspit F.190

Four timbers form a timber base plate supporting the walling [1336] of this feature (Figure 22, lower left). The timbers are noted on the site records as being generally degraded. As such, it was not possible to lift the items intact and the metric data recorded on site have been used herein. The site sheets note that the timbers seemed to be articulated at the northeast and southwest corners, but it was not possible to determine if this was via halving laps or tenons. Timber <004> [1939] formed the western side of the base plate. This relatively fast grown timber is formed of heartwood, has several knots and side branches present and is decayed and fragmented. It is in poor condition and the surfaces appear water worn. The primary conversion is unclear and it may be either a radial half split or a tangential outer split. There is a distinct curve that may well be a result of post-depositional forces. The timber measures 1120x150 x 40mm. Timber <006> [1937] formed the eastern side of the base plate. Formed of bark, sapwood and heartwood this timber has a curved grain and occasional knots. This timber is generally degraded, is in moderate condition and has water worn surfaces. The item is a boxed heart with a possible halving lap 100mm long and 40mm deep at one end.

One face at this end of the timber has a series of 'chop' marks created by a flat bladed tool with a maximum recorded width of 65mm – probably an axe. These seem to be the result of the item being used as a chopping block. The timber measures 1180x170x165mm. Timber <009> [1938] formed the southern side of the base plate. Formed of heartwood only with a twisted, curved, knotty grain, this item is in moderate condition, has suffered from heartwood rot and has water worn, degraded surfaces. This radially half split timber measures 900x120x90mm. Timber <011> [1936] formed the northern side of the base plate. Formed of slow grown heartwood, this item is in poor condition with generally degraded surfaces, surface rot and evidence of water wear. The timber is tangentially split and the tops of three iron nails are visible at one end – two inserted in an edge and one in a face. These fixtures have no function within this structure and as such are a strong indicator of re-use. The timber measures 760x110x60mm. The timbers used to construct this base plate are all formed of poor to moderate quality wood and have suffered from rot, water wear and decay. They are highly likely to represent re-used material. No traces of the original tooling, such as tool facets or saw marks, were visible.

Fill of Shaft F.310

Wooden artefact <025>/<046> was recovered from within [1928], one of the lower waterlogged fills of this feature (Figure 27.2). This partial artefact is in three fragments. This thin, flat, well finished item was originally rectangular. It is radially aligned and constructed from fast grown (c. 5–7m) heartwood. One end is smashed and the other end has broken on the grain in antiquity. Both edges are slightly chamfered and slightly worn. Faint, possibly 'checkerboard' score marks are visible on both faces. The remaining fragment measures 152x116x6mm. The chamfered, worn edges suggest this may originally have been the sliding lid of a box.

Lining of Soakaway F.323

Measuring 0.5x0.5x0.14m deep. Context [1859] appears to represent the degraded remains of a stave built wooden container. The remains were recovered from a shallow feature cut beneath the floor of a cellar, believed to have acted as a soakaway. Artefact <035> [1860] curved around the edge of around 1/3 of the feature and is thought to be the retaining hoop of a coopered, stave built vessel used to line the pit. Formed from the outer 1/3 of a tangentially cleft piece of roundwood, the item is slow grown and in good condition with bark present on the outer surface. The item is curved, with the split face innermost and has fragmented into seven pieces. The item is slightly worn from use and has there is corrugated concretion present on the inner split face that seems to describe the grain of a piece of wood aligned at 90 degrees to the hoop – presumably a stave of the original vessel. The item measures 455x25x11mm. Artefact <034> [1860] fashioned from slow grown heartwood this broken radially aligned fragment may well be a surviving section of stave derived from the vessel used to line the feature. It is well finished, has a rectangular hole measuring 2x6mm and is broken at both ends. A small lip at one end may be the remnants of a croze groove. The item measures 115x37x8mm.

Type	Count	Per cent
Artefact	3	25
Timber	9	75
Total	12	

Table 20: Wood records assigned to the 16th–18th century

Woodworking Technology

Middle/Late Bronze Age

The group of stakes aligned along the edge of palaeochannel F.354 are all basically worked with simple radial conversions and ends trimmed to tapered points. This woodworking is typical of the period and does not hold any further analytical potential. The nature of the material <014> recovered from around palaeochannel post <021>, hypothesised to be degraded wattle work, precludes this possibility. This material has no further analytical potential. A search of the literature should allow the function of possible broken artefact <052> recovered from palaeochannel F.354 to be defined. The dendrochronological samples recovered from palaeochannel F.354 show no evidence of woodworking and as such have no further analytical potential. The c. 30 pieces of roundwood and root <053> recovered from palaeochannel F.354 display no evidence of woodworking and are likely to represent naturally accumulated debris. As such, this material has no further analytical potential.

Romano-British

A search of the literature should allow the function of artefact <001> to be defined. The function of the item could be defined with greater confidence if the items could be assigned to a phase. Timber <031> recovered from the alluvial deposit [1853] is thought to be a naturally occurring piece of debris and as such has no further analytical potential. Roundwood, <036> recovered from the fills of ditch F.313

displays no evidence of woodworking and is thought to be a naturally occurring piece of debris. As such it has no further analytical potential. The stakes assigned to this period display the basic splitting and trimming to a point is typical of the Romano-British period. As would be expected with Romano-British material, there is a tendency towards square items. Where visible, the broad, flat tool facets are also typical of the broad iron axes of the period. The basic woodworking evidence recorded from this material holds no further analytical potential.

16th–18th Century

The five timbers forming the crude base plate of well **F.142** all appear to be re-used with none of the various joints and fixings utilised as part of this structure. The two most heavily worked items refit and originally formed a timber some 1700mm (five and a half foot) long, with an off centre groove running the length of one face containing nine evenly spaced circular holes. Given the longitudinal groove containing regularly spaced circular holes, it is likely that this timber originally supported a wattle wall, possibly as either a base plate or a wall plate. Further search of the literature should allow this structural element to be identified with some certainty.

Four timbers formed a timber base plate in cesspit **F.190**. The timbers are noted on the site records as being generally degraded. The timbers used to construct this base plate are all formed of poor to moderate quality wood and have suffered from rot, water wear and decay. They are highly likely to represent re-used structural material but do not display any features that allow their original function to be determined with any confidence. As such, this material has no further analytical potential.

Wooden artefact <025>/<046>, recovered from shaft **F.310**, is a thin, flat, well finished item the chamfered, worn edges of which suggest this may originally have been the sliding lid of a box. Faint, possibly 'checkerboard' score marks are visible on both faces. The use of RTI or other similar raking light photographic techniques would help to gain a clear record of these surface marks or decoration. Once this has been carried out, it is suggested that a search of the literature should be undertaken to search for parallels.

A section of hoop <035> and degraded stave <034> were recovered from **F.323**, a shallow soakaway lined with a wooden stave built vessel. Open topped, stave built (coopered) vessels are first recorded in western Europe in the 2nd Millennium BC (Ashbee, Bell & Proudfoot 1989). The techniques of cask production (vessels closed at both ends) were introduced during the Romano-British period (Earwood 1993). Despite the length of the tradition, the techniques employed in the construction of stave built vessels have a strong continuity from Romano-British to recent times (Earwood 1993). Coopered vessels are constructed from vertical staves, set edge to edge in a circle and held together with hoops of metal, wood or withies. Coopered vessels made in the wet, dry or white (open topped) traditions have been prevalent throughout the historic period and would be expected from an assemblage of this date if conditions for preservation allow. Although they have been produced in a huge variety of sizes and forms, the following terms provide useful categories (Comey 2007; Morris 2000):

Cask: Large, sealed container. Wet coopered examples generally more bellied than dry coopered examples.

Keg: Medium to large sealed container. Straight sided. Dry coopered.

Tub: Medium open topped container. Variety of forms. White coopered. Larger than a bucket. Opposed raised staves are used to lift, but are not joined by a handle

Bucket: Small to medium open topped container. Straight sided. White coopered. Handle joined to two opposed raised staves.

Little evidence remains to us to reconstruct the form of the vessel. Fragment <034> is of suitable size and form to be a fragment of stave and has a possible remnant of a croze groove at one end. The securing split wood hoop is typical of coopered vessels. This may originally have been pegged into a stave. The extremely fragmented nature of the vessel precludes any further analysis.

Woodland Reconstruction and Species Identification

26 non-oak items could potentially be identified to species; these are listed in Table 21.

Phase	Cat.	Feature	Context	Notes
Middle/Late Bronze Age	015	354	1971.19	Stake
Middle/Late Bronze Age	017	354	1971.23	Stake
Middle/Late Bronze Age	018	354	1971.13	Stake
Middle/Late Bronze Age	019	354	1971.17	Stake
Middle/Late Bronze Age	020	354	1971.16	Stake
Middle/Late Bronze Age	021	354	1971.02	Stake
Middle/Late Bronze Age	022	354	1971.21	Stake
Middle/Late Bronze Age	023	354	1971.22	Stake
Middle/Late Bronze Age	024	354	1971.24	Stake
Romano-British	002	387	2044a	Stake
Romano-British	003	387	2044b	Stake
Romano-British	005	370	2093	Stake
Romano-British	026	369	2092	Stake
Romano-British	027	368	2091	Stake
Romano-British	028	339	1941	Stake
Romano-British	029	340	1944	Stake
Romano-British	033	325	1879	Stake
Probably Romano-British	001	419	2054	Possible paddle
16th–18th century	004	190	1939	Cesspit base plate
16th–18th century	006	190	1937	Cesspit base plate
16th–18th century	009	190	1938	Cesspit base plate
16th–18th century	011	190	1936	Cesspit base plate
16th–18th century	012	142	1930c	Well base plate
16th–18th century	025/046	310	1928	Possible box lid
16th–18th century	034	323	1859	Vessel stave
16th–18th century	035	323	1859	Vessel hoop

Table 21: Items suggested for identification to taxa

Dendrochronology

With the exception of the dendrochronological samples from palaeochannel F.354, none of the material identified as oak displays sufficient growth rings to be suitable for dendrochronology (a minimum of 50 years growth is suggested). Dendrochronological samples should ideally have bark edge present to allow a felling date to be obtained. Failing this, the presence of sapwood allows a

felling date to be estimated. If material has too few rings or is too knotty, it is not considered suitable for dendrochronology. With these factors in mind, the available samples have been ranked in terms of their estimated potential to provide suitable dating information (Table 22). The three highest ranked samples were submitted for analysis and successfully dated.

Cat.	Context	Notes	Bark/ sapwood/heartwood	Potential
043	2034K	c. 130 years (actually 191 years)	SH	Successful
040	2034J	c. 110 years (actually 163 years)	H	Successful
042	2034M	c. 110 years (actually 298 years)	H	Successful
038	2034E	c. 80 years	H	Possible
039	2034G	c. 70 years	H	Possible
041	2034L	c. 60 years	H	Possible
045	2034H	c. 80 years	H	Possible
044	2034I	c. 100 years, but knotty	SH	Unsuitable
047	2034A	c. 35 years, branch	H	Unsuitable
048	2034B	c. 40 years, branch	SH	Unsuitable
049	2034C	c. 45 years, branch	H	Unsuitable
050	2034D	c. 35 years, branch	H	Unsuitable
051	2034F	c. 35 years, branch	H	Unsuitable

Table 22: Suggested suitability of material for dendrochronological dating

Dendrochronology

Ian Tyers

14 oak samples for potential dendrochronological analysis were taken from palaeochannel F.354 (Table 22). Based upon the subsequent advice of the wood/timber specialist seven samples collected on site were discarded, as they either contained too few rings or proved to be knotty. Four samples were retained but not submitted for analysis ([2034] E, G, H & L), these have fewer rings than the submitted samples and have no sapwood present and it is therefore relatively unlikely that these would improve the current results. Three samples for dendrochronological analysis were submitted ([2034] J, K & M). All three samples were suitable for analysis and were successfully dated to the Late Bronze Age.

Each dendrochronological sample was supplied as a complete cross section, it is assumed in the absence of other information that these were obtained from the optimum location for outermost rings or sapwood survival from these timbers. Each dendrochronological sample was assessed for the wood type, the number of rings it contained, and whether the sequence of ring widths could be reliably resolved. For dendrochronological analysis samples usually need to be oak (*Quercus* spp.), to contain

50 or more annual rings, and the sequence needs to be free of aberrant anatomical features such as those caused by physical damage to the tree whilst it was still alive. Standard dendrochronological analysis methods (see e.g. English Heritage 1998) were applied to each suitable sample. The sequence of ring widths in each sample were revealed by preparing a surface equivalent to the original horizontal plane of the parent tree with a variety of bladed tools. The width of each successive annual growth ring was revealed by this preparation method.

The complete sequence of the annual growth rings in the suitable samples were then measured to an accuracy of 0.01mm using a micro-computer based travelling stage. The sequence of ring widths were then plotted onto semi-log graph paper to enable visual comparisons to be made between the sequences and reference data. In addition cross-correlation algorithms (e.g. Baillie & Pilcher 1973) were employed to search for positions where the ring sequences were highly correlated. Highly correlated positions were checked using the graphs and where these were satisfactory, these locations were used to identify the calendar dates of the measured series. The t-values reported below were derived from the original CROS algorithm (Baillie & Pilcher 1973). A t-value of 3.5 or over is usually indicative of a good match, although this is with the proviso that high t-values at the same relative or absolute position needs to have been obtained from a range of independent sequences, and that these positions were supported by satisfactory visual matching. The tree-ring analysis initially dates the rings present in the timber. The interpretation of these dates relies upon the nature of the final rings in the sequence. Oak timber contains two types of wood, heartwood and sapwood, the latter is on the outside of the tree and thus contains the most recent growth rings, this material is softer and is not always preserved under archaeological conditions.

If the sample ends in the heartwood of the original tree, a *terminus post quem* (tpq) date for the felling of the tree is indicated by the date of the last ring plus the addition of the minimum expected number of sapwood rings which are missing. This tpq may be many decades prior to the actual date that a tree was felled, particularly where poor preservation or other loss of outer heartwood has occurred. Where some of the outer sapwood or the heartwood/sapwood boundary survives on the sample, a date range for the felling of a tree can be calculated by using the maximum and minimum number of sapwood rings likely to have been present. For this material the sapwood estimates used are a minimum of 10 and maximum of 55 annual rings, where these figures indicate the 95 per cent confidence limits of the range. If bark-edge survives then a felling date can be directly utilised from the date of the last surviving ring. The season of felling can also be determined by examining the completeness or otherwise of the terminal ring lying directly under the bark. Complete material can be divided into 3 major categories; 'early spring' where only the initial cells of the new growth have begun, this is equivalent to a period in March/April when the oaks begin leaf-bud formation, 'later spring/summer' where the early wood is complete but the late wood is evidently incomplete, is equivalent to May-through-September of a normal year, and 'winter' where the latewood is complete and this is roughly equivalent to September-to-March (of the following year) since the tree is dormant throughout this period and there is no additional growth put on the trunk.

The submitted material comprised three oak (*Quercus* spp.) samples ([2034] J, K & M), all of these samples contained measurable tree-ring sequences. They were each measured successfully (Table 23); with 3 unusually long tree-ring sequences being obtained. These 3 series cross-matched (Table 24) and a composite 298-year sequence was constructed from them. This composite was dated by reference to Bronze-Age tree-ring data (Table 25). The internal cross matching values, and the differing form of the individual samples, suggests that they are most likely to be derived from different trees. These timbers were unworked wood deposited in a palaeochannel of

the River Cam. Their tree-ring results are presented on the bar diagram (Figure 27.4). These three timbers give individual heartwood end dates spread just over a century (([2034] J 1052 BC, ([2034] K 1035 BC and ([2034] M 948 BC).

The presence of crushed sapwood on the outer edge of ([2034] K allows a felling date range to be applied to this timber. This sample has a semi-circular section, with its upper half, and centre, lost presumably by being only partially buried. Alternatively, perhaps the lost centre may have been due to heart-rot when it was alive. The other two samples both have curving outer surfaces which are likely to be heartwood/sapwood edge, but they could be erosion or rot surfaces. Neither of these also has an intact centre. All these trees were therefore of significantly greater lifespan than the recovered tree rings sequences as allowances for their missing centres and at least their missing sapwood, and possibly any additional eroded or lost outer heartwood must be made. Such allowances suggest that the remarkably slow growing and long lived sequence found in [2034] M is likely to have been part of an oak *c.* 400 years old at the time of its death, whether of natural causes or inundation, this is a quite uncommon age for an oak.

The 298-year dated series cross-matches particularly well to the composite data set from Flag Fen and Fengate, which is strongly internally replicated and from relatively nearby in tree-ring terms (*c.* 45km), this pair of parallel data sets may be of particular use for the currently ongoing Must Farm excavations. This material, derived from a Cam palaeochannel, has provided an interesting addition to the English Bronze Age tree-ring data sets. These are otherwise mostly archaeological in origin rather than naturally deposited timbers. Few, if any, bog oaks from the Fens are dated from this period, whilst there are broadly contemporaneous Trent palaeochannel and submerged forest oak assemblages. Bog-oaks and palaeochannel oaks are each the product of quite different taphonomic processes, that are probably driven by different macro-environmental conditions. This group suggests that further exposures of the Cam's palaeochannels may reveal other examples of such material. It is relatively unlikely that study of the remaining four samples from the same context ([2034] E, G, H & L) would significantly affect the dating of this channel. However, analysing them would potentially improve and strengthen the local dendrochronological sequence. This is of potential regional and national importance as tree-ring data of this period is rare.

Timber	Size (mm)	Rings	Sap	AGR mm/year	Date of measured sequence	Interpreted result
[2034] J	250 x 130	163	?H/S	0.73	1214–1052BC	1042–997BC?
[2034] K	500 x 300	191	H/S	1.01	1225–1035BC	1025–980BC
[2304] M	320 x 170	298	?H/S	0.59	1245–948BC	938–893BC?

Table 23: Results of the three oak (*Quercus* spp.) samples. Interpretations using a 10-55 ring sapwood estimate. AGR average growth rate, H/S heartwood-sapwood boundary, ?H/S possible heartwood-sapwood boundary

	[2034] K	[2034] M
[2034] J	7.74	4.44
[2034] K		9.04

Table 24: Showing *t* values (Baillie & Pilcher 1973) between the three oak samples. These were combined to form the composite sequence used in Table 14

Site	SCG15
	1245–948 BC
Cambridgeshire, Flag Fen & Fengate (Neve 1999)	11.37
Cambridgeshire, Flag Fen NTY99 (Tyers 1999)	5.79
Essex, Rook Hall Farm (Hillam pers. comm.)	6.39
Kent, Swalecliffe (Masefield <i>et al</i> 2003)	7.37
Nottinghamshire, Newington Quarry NQ02 (Tyers 2003)	6.31
Nottinghamshire, Newington Quarry NQ06 (Tyers in prep)	7.08

Table 25: Example *t* values (Baillie & Pilcher 1973) between the composite sequence constructed from the three samples and six independent oak reference series from other sites

Moulded Stone

Mark Samuel, with a note on the heraldic design incorporating comments by David Broomfield

The 42 items retained from the site that were deemed worthy of study derive from six features, nearly half (20) derived from a single feature (F.190) and three other closely related features (F.115, 142, 310) accounted for almost all the others. The architectural fragments were therefore exceptionally ‘well sealed’, coherent and for the most part well-preserved with little or no ‘re-use processing’. ‘Plus’ architectural fragments was virtually absent (which is very unusual). Burwell stone elements had in some cases fragmented due to saturation, leading to differential expansion. Of 42 items 31 are dressed from Burwell stone/Clunch. Eight of the remaining ten gradate

from what is probably Barnack Rag ('Hills-and-Holes') to ?Weldon stone (Lincolnshire Limestone) and Ketton stone. It is not possible at this stage to be more specific. There are single occurrences of 'pure' chalk and ?Purbeck marble. Several otherwise uninteresting fragments have been temporarily retained, subject to their possible use as petrological samples.

Cesspit F.190

This feature appears to have been constructed in the 16th century (possibly as a result of the Dissolution) and went out of use in the 17th century (Figure 22, left). Type stones 7, 8, 9 = c. 13 voussoirs and labels. These represent a large chamfered two-order arch, such as would be found in a church. It is probably Late Medieval. Type stone 6: A jamb stone deriving from a single elaborate two-order Perpendicular window. Type stone 10: Part of a ?tomb chest with blind panel tracery, probably dating after c. 1350 Type stone 1: weathered door jamb after c. 1375. A job lot of stone from a Late Medieval church. A single demolished arcade arch provided the bulk of the assemblage; the lack of abrasion illustrates a nearby source. The tomb chest fragment is likely to have derived from the same source. Other architectural features, though less specific, share this common derivation. Reconstruction of the complete arcade moulding(s) is feasible, as is the geometry of the arch.

Cellar (F.115) and related features (F.142, 310)

Moulded stone came from the main structure of a cellar (F.115), a deeper shaft in its base (F.310; Figure 21, upper and middle right) and a nearby well that appears to be contemporary (F.142) although the stones from this were from the fill rather than being construction related. These features were probably constructed in the 17th century and went out of use in the early 1790s. The only material in cellar F.115 were two undated hearth edge pieces (undated). One was unusually large and is probably Barnack Rag. The other is smaller and is cut from the prevalent Burwell stone. Well F.142 contained various hearth edging fragments and gutter block; all apparently re-used. Shaft F.310 contained several items. Type stones 3, 4, 5 are several parts of a rectilinear ?two light window is represented. The uncusped stilted archlets are unlikely to date before 1475. The window was unglazed, but has evidence for internal shutters and external hollow casements. A single high-status domestic window of Late Medieval (Tudor) date can be almost entirely reconstructed from the available evidence. A coat of arms 'trial piece' also derived from this feature. Type stone 1 = ?Weldon stone window sill with stooling for mullion. Type stone 2 = four large blocks, identical in nature, that formed the outer framing lintels of two or more windows with rectilinear window heads. The polygonal axial termination cannot date before c. 1340, but could be much later (Morris 1979, 10, fig.13.1). A large high-status domestic window that may have been built at any date between c. 1340–1580. This window cannot have existed for very long, as it only has slight weathering of its vulnerable building stone.

The design on a stone from F.310 is of a shield which has been divided into four equal parts or quartered (Figure 25.6). This is a method of joining several different coats of arms together in one shield by dividing the shield into equal parts and placing different coats of arms in each division. There appear to be two coats of arms quartered. The 1st and 4th quarters (upper left and lower right) have a chevron between three animal heads facing left (dexter) erased. These are probably boars heads but might be talbots (in heraldry a good-mannered hunting dog). The 2nd and 3rd quarters (upper right and lower left) have two bars. With no hatching to indicate colour or documentary evidence it is effectively impossible to identify the arms based upon the carving alone. Even assuming they are boars' heads this only narrows the possibilities down to approximately fifty potential families.

Post-Pads (F.220, 380)

The other material consists of blocks reused as two post-pads and is undated, although the blocks were probably reused in the 16th–17th centuries.

Stone Samples

Craig Cessford, with petrological identifications by Simon Timberlake

Three samples of stone were retained from 16th-century features; two pits with stone-rich fills (<1816> [1624] F.150, <1346> [1249] F.160: Figure 22, upper and middle right) and a well whose construction-related deposits also contained a significant quantity of stone (<1565> [1428] F.223). This material has only been very crudely shaped and is non-local, suggesting that it was ballast that was then expediently re-used in features located relatively close to the river. These were all identified as Upper Jurassic Corallian, a bioclastic limestone probably from a local Cambridgeshire source. The other stone sampled was a large slab in the base of a stone-lined cesspit (<1939> [1739] F.190). It is probably a Wealden *Paludinia* Limestone, a bioclastic limestone from the Weald/Dorset.

Animal Bone

Vida Rajkovača

A substantial assemblage with a raw count of 9838 fragments and a total weight of 127,303g. This is made up of the hand-recovered bone (9345 fragments, 127,018g) and that recovered as heavy residues following the processing of environmental bulk soil samples (493 fragments, 285g). The assessment aims to quantify and characterise the faunal material, with a focus on the earlier (Prehistoric and Romano-British) components of the assemblage.

Bone was abundant from almost all contexts from across the site, with later features generating much greater quantity of bone waste than those of Romano-British or earlier date. Material was largely made up of disarticulated remains of bone waste, without many deposits as a sign of site specialisation or craftsmanship. That said; it is worth to note remains of parts of some thirteen cattle skulls with horn cores attached came from a Romano-British ditch F.386. Typically, earlier material was scarce and Romano-British bone showed a greater degree of processing with a large number of cattle-sized bone splinters. The 11th–18th-century bone had more visible cut marks, mainly owing to better preservation of bone surface. Due to the presence of significant quantities of residual Romano-British pottery in later deposits it was decided that the overwhelming majority of bone from Post-Roman contexts should not be studied in detail, with fauna from Prehistoric and Romano-British contexts targeted for a detailed study. Following the zooarchaeological analyses, some 681 assessable specimens were recorded. Bronze Age and Iron Age contexts contained nine specimens, only four of which were identified to species. The remainder of the assemblage was made up of Romano-British bone: 672 specimens, of which 338 (50.3 per cent) were assigned to species or family. This is quite high, a testimony to a good state of preservation.

The zooarchaeological investigation followed the system implemented by Bournemouth University with all identifiable elements recorded (NISP: Number of Identifiable Specimens) and diagnostic

zoning (amended from Dobney & Reilly 1988) used to calculate MNE (Minimum Number of Elements) from which MNI (Minimum Number of Individuals) was derived. Identification of the assemblage was undertaken with the aid of Schmid (1972), and reference material from the CAU. Most, but not all, caprine bones are difficult to identify to species however, it was possible to identify a selective set of elements as sheep or goat from the assemblage, using the criteria of Boessneck (1969) and Halstead (Halstead *et al.* 2002). Age at death was estimated for the main species using epiphyseal fusion (Silver 1969) and mandibular tooth wear (Grant 1982, Payne 1973). Where possible, the measurements have been taken (Von den Driesch 1976). Sexing was only undertaken for pig canines, based on the bases of their size, shape and root morphology (Schmid 1972, 80). Withers height calculations follow the conversion factors published by Von den Driesch & Boessneck (1974). Taphonomic criteria including indications of butchery, pathology, gnawing activity and surface modifications as a result of weathering were also recorded when evident. Undiagnostic fragments were assigned to a size category.

The assemblage demonstrated overall quite good level of preservation with a small number of specimens showing signs of severe surface exfoliation, erosion and weathering. Romano-British material was especially affected by heavy processing with some 22 complete specimens being recorded for all species. A portion of the assemblage was recorded with gnawing marks (29 specimens, 4 per cent). All were canine marks and a small percentage implies quick deposition of the material. Butchery marks within the Romano-British sub-set were relatively common, recorded on 42 specimens or 5.8 per cent of the assemblage.

Prehistoric

Bone from Prehistoric contexts was rare, with a combined total of nine specimens from two Middle/Late Bronze Age and one Middle/Late Iron Age contexts (Table 26). Bronze Age bone came from F.354, which contained a single cow radius fragment and a number of cattle-sized unidentifiable elements. Although the bone did not have any cutmarks etc. its general appearance is suggestive of domestic waste rather than material naturally deposited in a palaeochannel. Iron Age bone was represented by cow mandible and scapula fragments, a horse pelvis fragment and one cattle-sized limb bone fragment.

Taxon	Bronze Age	Iron Age
Cow	1	2
Horse		1
Sub-total to species	1	3
Cattle-sized	4	1
Total	5	4

Table 26: Number of Identified Specimens for all species from Prehistoric contexts; breakdown by phase

Romano-British

Though three phases in two areas of settlement and the waterside were recorded, there was no clear difference in the faunal material between these to two warrant further sub-division into smaller sub-sets. Dated to the period from 2nd century onwards, the Romano-British material was thus considered in its entirety, as a single assemblage. Some mixing of the material was noted from a number of features with a Romano-British date. Bone came from some 27 different features, of which it was evident that at least seven contained material of possibly 16th–18th century date (F.255, 257, 263, 316, 410–12). These features are all late in the Romano-British sequence and in some cases also contain intrusive pottery. This is based on the appearance of bone in terms of preservation, the size of animals; the clarity of cut marks and the butchery style. This was especially clear from a number of cattle-sized thoracic vertebrae which were split axially down the sagittal plane, with the intention of splitting the carcass into left and right portions. This butchery action is sporadically present in prehistoric faunal records, it is absent from archaeological record until it becomes more common in the 15th century. Some contexts excavated within ditches F.254/412 were dated to the 12th century, while others were clearly of Romano-British date. The distinction in the bone between the two phases was well-defined and it will be discussed again below.

Romano-British bone was fragmentary, yet it was clear that the cattle and cattle-sized elements were the dominant component of the sub-set. Cow accounted for almost half of the sub-set within the NISP count (Table 27) while being as abundant as the ovicapra within the MNI count. Sheep/ goat were of secondary importance, followed by horse and pig, with a surprisingly low numbers (just over seven per cent of the NISP for the sub-set). Dog and cat complete the list of domestic species, as well as chicken. Red and roe deer, recovered from F.260, 307 and 386, were represented by meat-bearing elements, such as scapulae and radius, and an astragalus from F.386. Avian fauna is made up of four specimens assigned to the chicken and duck families, and a single possible raven coracoid. Raven was recorded from F.257, dated to the Romano-British period, though some later intrusive material was also recorded from the same feature. Reflecting the overall dominance of larger domesticates, the unidentified count was made up of cattle-sized limb bone fragments, largely axially split elements. Bone waste had a number of uses during the period, especially as hard-core for foundations and ditches.

The majority of cut marks were crude, in keeping with the period and consistent with gross disarticulation and meat removal, performed with the use of heavy blades and cleavers. A few specimens were clearly hung and skinned and others were split axially for marrow removal. A 'trademark' Romano-British butchery action was also recorded: cattle scapulae displaying perforations in the blade with a

trimming on the origin of spina, marks consistent with dry curing, or curing by immersing beef joints in (salt) brine.

Taxon	NISP	Per cent NISP	MNI
Cow	176	52	9
Sheep/ goat	76	22.5	9
Pig	24	7.1	3
Horse	45	13.3	3
Dog	7	2.1	1
Cat	2	0.6	1
Red deer	3	0.9	1
Roe deer	1	0.3	1
Chicken	1	0.3	1
<i>Galliformes</i>	1	0.3	1
<i>Anseriformes</i>	1	0.3	1
?Raven	1	0.3	1
Sub-total to species or family	338	100	
Cattle-sized	214		
Sheep-sized	113	.	.
Bird n.f.i.	6	.	.
Fish n.f.i.	1	.	.
Total	672	.	.

Table 27: Number of Identified Specimens and the Minimum Number of Individuals for all species from Romano-British contexts; the abbreviation n.f.i. denotes that the specimen was not further identified

With the exception of a single mandibular premolar missing on one of cattle scapulae, it was not possible to observe any pathologies or non-metrical traits. Mandibular tooth wear was only available for cow and sheep/ goat, based on four and two mandibles respectively. Cattle were represented by two young and two adult individuals, and sheep/ goat cohort produced two ageable mandibles giving the age at death of 6–12 months and 4–6 years. Fusion data was insufficient for kill-off profiles, but there was a clear presence of older individuals alongside neonate and juvenile animals.

10th–12th-Century Ditch

F.254/412, originally excavated as one feature, represents a Romano-British ditch (**F.412**) with a later cut on the same line, dated to the 11th–12th century (**F.254**). Based on the chronology of the pottery, contexts were split into two groups. It was evident that the Romano-British ditch had small amounts of later intrusive material and earlier bone was obviously mixed with the better preserved material of much later date. This was very clear from the general appearance of the bone, surface preservation, butchery patterns and level of bone processing, character of chops, as

well as the size of animals. With a raw count of 379 fragments and a weight of 4634g, the ditch represents, by weight, one of the larger bone deposits on site. Of this figure, only a small number was possible to identify to species (Table 28), with the majority of material being assigned to a size category. Though based on small numbers, the representation of species does reflect the expected ratio for the two periods. Prevalence of cattle during the Romano-British period is believed to reflect the preference for beef brought over from the Continent by Roman legions populating Britain at the time (e.g. King 1999), and the slight dominance here reflects this well. The high sheep component recorded in the later material is also somewhat typical for the later date, as sheep become more common from the Anglo-Saxon period onwards, reflecting the importance of wool as a commodity.

Taxon	F.412	F.254
Cow	12	8
Sheep/ goat	7	19
Sheep		1
Pig	1	4
Horse	1	
Cat		2
Sub-total to species	21	34
Cattle-sized	24	18
Sheep-sized	13	18
Total	58	70

Table 28: Number of Identified Species for all species from features **F.254** and **F.412**

13th–15th Century

Just over 20 features were scanned, giving us a glance at the range of species utilised on site during the 13th–15th centuries (Table 29). Similar to the later intrusive material recorded from the **F.254**, bone from 13th–15th-century contexts was characterised by a prevalence of sheep/goat, closely followed by the other two main food species. Though a sporadic find of wild fauna and the presence of poultry were recorded, these did not make a great contribution to the diet. A relatively large number of bird elements were noted, but these were too fragmentary to be further identified to species. Though fish were bagged up separately to be possibly sent for further specialist analyses, it was clear what looked like smaller cyprinids were represented alongside larger cod elements. Butchery marks were noted on a small number of elements, which include red deer pelvis fragment and a possible goose ulna fragment, with especially fine knife marks consistent with preparation for disarticulation.

Taxon	NISP
Cow	29
Sheep/ goat	55
Pig	16
Horse	3
Red deer	1
Rabbit	1
Dog/ fox	1
?Domestic goose	3
<i>Galliformes</i>	1
?Teal	1
<i>Sub-total to species</i>	111
Cattle-sized	35
Sheep-sized	73
Bird n.f.i.	25
Fish n.f.i.	19
Total	263

Table 29: Number of Identified Species for all species from a small number of 13th–15th-century features; the abbreviation n.f.i. denotes that the specimen could not be further identified

16th–18th Century

A small quantity of bone was scanned from 16th–18th-century contexts (Table 30) and the numbers are not included in the site’s quantitative analyses. The range of species is more varied and differs greatly from earlier periods. Remains of a partial dog skeleton came from **F.120**, made up of fragmented mandibles, teeth and vertebrae. Minor pathological changes were noted on a few tail vertebrae. Radius was complete, measuring 145mm and giving the shoulder height of 48cm. Cow and sheep/ goat first phalanges were also found alongside the skeleton.

Taxon	NISP
Cow	116
Sheep/ goat	410
Sheep	3
Pig	61
Horse	6
Rabbit	13
Dog	1
Cat	8
Chicken	7
<i>Galliformes</i>	2
Domestic goose	8
?Coot	5
Mallard	1
?Wood pigeon	1
?Rat	3
Frog/ toad	5
<i>Sub-total to species</i>	650
Cattle-sized	175
Sheep-sized	257
Bird n.f.i.	56
Fish n.f.i.	38
Total	1176

Table 30: Number of Identified Specimens for all species from 16th–18th-century contexts; the abbreviation n.f.i. denotes that the specimen could not be further identified

Heavy Residues

A small number of bones were retrieved from sieving of the environmental bulk soil samples (Table 31). Small taxa were almost absent, however, and the sieved bones did not provide a great deal of additional data on the main domestic species. A much greater quantity of fish remains was retrieved, compared to the hand-recovery, and the elements were not as fragmentary. A number of fish vertebrae showed signs of charring and calcination. Based on a small number of large, almost complete vertebrae from 16th–18th-century contexts are potentially flatfish like sole or plaice.

Taxon	Bronze Age	Iron Age	Romano-British	10th–12th century	13th–15th century	16th–18th century
Cow			3		.	
Sheep/ goat			.		3	
Pig			1			
Horse			1			
Vole sp.	1					
Frog/ toad		1				
Sub-total to species	1	1	5		3	
Cattle-sized			5	2	2	
Sheep-sized	3		21	4	4	
Rodent-sized				1		
Mammal n.f.i.			18	9	7	4
Bird n.f.i.			1			
Fish n.f.i.					29	47
Total	4	1	50	16	45	51

Table 31: Number of Identified Specimens for all species from heavy residues; the abbreviation n.f.i. denotes that the specimen could not be further identified

Discussion

Recovered from one of the largest investigated areas in this part of Cambridge, the site's faunal assemblage matches its significant location and importance. Whilst faunal material from earliest contexts is sparse, with only a small number of specimens identified as cow and horse; bone from later contexts was more abundant with a greater variety of species. The characteristic most commonly used in comparison between different assemblages is the ratio of three main food species, especially useful in studying Romano-British economy and animal use. The ratio between cattle, ovicapra and pigs, from the Romano-British material at the current site is suggestive of a nearby Romanised settlement (*vicus*; King 1999). Given the site's relatively late Romano-British date, this is not surprising. Almost all traits of the assemblage are typically Romano-British, leaving very little else to explore. The nearby Romano-British material from Castle Street excavations, for example, albeit somewhat earlier in date, had a dominant ovicaprid component (Rajkovača in Evans & Ten Harkel 2010), but all other characteristics were archetypally Romano-British – especially butchery style and bone processing (Maltby 1985; Seetah 2006). Though, similar to the Castle Street material, some aspects of crude butchery practices may hint at the site's potential military character, it is more likely that the faunal waste is a result of domestic activities with a potential of it showing a higher status. Similar results were gained from the pottery analyses.

The 13th–18th-century contexts, from what was gleaned from a brief overview of the data, produced the results similarly typical for the period, with the overreliance on

domestic sources of food and a more varied use of birds. Same stands for the latest material, with an evident presence of larger animals and use of saw as a multi-purpose tool. Though not especially rich in biometrical or ageing data, much needed for considerations of the economy, the assemblage does hold potential for future study. In conclusion, this now being one in the series of many investigations in the area, it is clear that a comparative detailed zooarchaeological study is much needed for our understanding of the Romano-British settlement, especially as all we have are piecemeal offerings of data from a few scattered locations.

Human Bone

Benjamin Neil

The human bone consisted of two *in situ* inhumations, plus some disarticulated material with no evidence of cremations (Figures 14–15). Based on the abundance of frontal bones, there are a minimum number (MNI) of five adult individuals and one neonate characterised by a left humerus. Locally, cremation is typically superseded by inhumation as the preferred burial rite from the later 2nd century onwards, becoming dominant by the mid-3rd century. Although only a relatively small number of burials and quantity of disarticulated human bone was recovered it appears that up to three different periods/types of Romano-British inhumation are represented. The analysis indicates a predominantly adult population exhibiting pathologies associated with heavy work and old age. The complete burial (**F.319**) is of an old middle adult male, who notably suffered two maxillary periapical abscesses. A second burial (**F.330**) of a young adult has been truncated at the pelvis, yet the entire cut is still evident in plan. Whether this is due to ground reworking or alluvial action is uncertain, although the presence of a calcareous concretion on the humerus (which was disturbed and not *in situ*) over the cortical bone and break margins may be due to alluvial action. These burials are broadly comparable to the later 3rd–4th-century cemetery at Jesus Lane/Park Street (Alexander *et al.* 2004), where most of the inhumations lay supine with their heads to the southwest. A coin, minted in AD 268–70, within the grave fill of **F.319** but probably not a deliberate grave good suggests that the burials at the current site are broadly contemporary with the Jesus Lane/Park Street cemetery. Some disarticulated human bone from 3rd–4th-century Roman-British alluvial deposits (**F.386**) to the north of the burials could derive from burial **F.330** or other similar burials that were entirely removed by alluvial action.

Two other fragments of human bone were recovered from Romano-British ditches; these are unlikely to relate to the phase of inhumations identified at the site and are also probably unrelated to each other. Both were discovered some distance to the south of the *in situ* burials, in locations that alluvial action or other natural processes are unlikely to have moved them to from the known burials. A tibia fragment from a

late 2nd–mid 3rd-century ditch fill (F.302) is rather too early in date to derive from the identified phase of inhumation burials; it is also of lighter colour than the rest of the assemblage and shows signs that may indicate repeated movement. This suggests that this bone derives from either an earlier Romano-British burial, or might even be Prehistoric. A heavily truncated inhumation in a pit at the Old Divinity School site, which must have been crouched as there was not space for the body to be extended (or be part of a more extensive cemetery), was radiocarbon dated to cal. AD85–236 (Cessford 2015) and there was also a burial in a pit in the Basement area of Jesus College West Court (Timberlake & Webb 2016). This suggests that there were some isolated inhumations within the settlement during the earlier Roman period and the tibia fragment may well derive from such an earlier burial. A neonate bone from a 4th-century ditch fill (F.316) is likely to be completely unrelated to the adult inhumations, as the burials of neonates/infants and adults are usually unrelated phenomena during the Romano-British period. At the Jesus Lane/Park Street cemetery most of the individuals were mature adults with only two juveniles aged c. 6–7 years, although a weathered disarticulated infant bone was recovered from a grave fill suggesting the burial of some infants nearby. The excavations on Castle Hill revealed a number of neonates/infants deposited in ‘ritual shafts’ rather than as parts of cemeteries (Alexander *et al.* 1999) and a neonate appears to have been buried in a Romano-British gully at the Cambridge and County Folk Museum (Dodwell in Cessford 2003).

The disarticulated bone from deposits dating to the 11th–12th to 17th centuries is likely to represent late Romano-British inhumations that have been subsequently disturbed. Some of this bone was apparently recognised as human when it was disturbed during the 11th–12th centuries and deliberately re-deposited as ‘charnel groups’, whilst other generally less distinctive material was simply incorporated into later deposits. This less distinctive material was not recognised in the field and was recovered during faunal analysis. Given that most deposits were only partially excavated it is probable that only c. 5–10 per cent of the less distinctive re-deposited human bone was recovered.

Sex estimation is accomplished using a multifactorial process of identifying the dimorphic dimensions of the os coxae and the skull (where available) using methods outlined by Buikstra *et al.* (1994), Bruzek (2002), Phenice (1969), Scheuer (2002), Singh & Potturi (1978) and White *et al.* (2011). The terms Male and Female indicate that the analyst has full confidence in the determination of sex for the remains, Probably Male and Probaly Female indicate that the analyst does not have full confidence in the determination but feels the remains are probably the stated sex and Indet. Means that the sex is indeterminate and the remains have been analysed, but are lacking sufficient diagnostic morphology for a determination of sex. Age at death estimation is principally based, where applicable on data sets derived from British populations using methods based on changes in the auricular surface (Buckberry & Chamberlain, 2002), changes of the pubic symphysis (Brooks & Suchey, 1990) illustrated in Buikstra *et al.* (1994) and White *et al.* (2011), the acetabulum (Calce 2012) and molar attrition (Brothwell 1981). The degree of cranial suture closure will complement the latter and follow methods outlined by Meindl & Lovejoy (1985). If sub-adult mandibles are found in the assemblage, estimation will use

criteria set out by Ubelaker (1999; in White *et al.* 2011). Where applicable, the degree of epiphyseal union will be used to estimate age and will be recorded following criteria outlined by Buikstra *et al.* (1994). For sub-adults, the appearance and fusion of secondary ossification centres for the major long bones will be assessed using methods outlined by Buikstra *et al.* (1994) Scheuer & Black, (2000) and White, 2011. Isolated fragmented bone will often have ambiguous or unobtainable morphological information thus age is indeterminate; however where these fragments exhibit developmental and dimensional characteristics that are clearly not neonate, infant or juvenile, the inference will be adult. The following age categories are used: neonate <6 months, infant: 0–4 years, juvenile: 5–12 years, sub-adult: 13–18 years, adult 18+ years, young adult: 19–25 years, middle adult: 26–44 years and mature adult 45+ years.

In situ Romano-British Burials

E.319 [1854] late 3rd–4th-century *in situ* burial: old middle adult male aged *c.* 38–48 years, stature 179.458 ± 3.27cm (*c.* 5'9")

A northeast to southwest aligned skeleton with the head in the southwest. In good preservation and full articulation, it lies extended and supine with the head turned to face southeast. The left hand lies palm down over the left pelvis; the right hand is in flexion beside the right proximal femur. Greenish white thread like accretions adhere to the bone surfaces, though noticeably absent over the vertebrae. This may indicate vegetative root action. Age assessment is tended towards the higher end of the range. A button osteoma is seen on the right squamous suture originating on the temporal bone and measuring 17.39mm superior-inferior and 10.25mm anterior-posterior. It is a benign tumour most commonly found in those aged over 40 years. There is post depositional damage to the frontal bone, left temporal bone and splanchnocranium; the pars orbitalis, zygomatic processes, vomer, palatine and sphenoid bones are either in a fragmented state or missing. Both left and right molars (M¹ and M²) of the maxilla exhibit advanced decay, with the right side having associated periapical abscesses. The mandible is complete but fragmented into four pieces; the left gonial flare is abraded.

Minor supra-gingival dental calculus and subgingival caries occur, particularly on the left side in lingual and buccal planes. A notable left double transverse foramen of the 5th and 6th cervical vertebrae exists, which may have manifested in physiological and/or neurological symptoms. There is noted asymmetry between the left and right clavicle: in contrast to the left clavicle, the right has a large, depressed rhomboid fossa, (for attachment of the costoclavicular ligament) showing exposed trabecular bone; there is also increased expression of the articular facet for the first costal cartilage. The function of this ligament is to limit elevation of the pectoral girdle and stabilize the sternoclavicular joint by resisting upward displacement of the clavicle at its medial end; it is likely to be an adaptation to sustained mechanical stimulation. The sacrum and coccyx are fused, with the coccyx apex pointing anteriorly and deviating slightly to the right. The aetiology requires further investigation but maybe symptomatic of coccydynia, (pain in the coccyx). There is slight asymmetry between left and right femoral head dimensions with the right being larger; conversely, the left femoral bicondylar width is greater than the right. The left tibia exhibits a possible pressure facet that manifests direct result of body weight being directed through the anterior tibial margin. Further investigation is required for confirmation.

E.330 [1904] *in situ* burial, probably 3rd–4th-century: young adult probably male aged *c.* 18–25 years, stature 171.84 ± 3.27cm (*c.* 5'6")

A north south aligned partially articulated and fragmented skeleton comprising the pelvis and lower appendicular elements. The surviving elements indicate the skeleton was extended and supine with the head in the south. The bone is in a good to moderate state of preservation with some minor cortical bone flaking and abrasion. The left humerus fragment comprises the whole mid and distal third of the shaft, with both proximal and distal articulations broken and missing. Significant calcareous concretion is observed over the cortical bone and break margins; the aetiology is unknown

but is taphonomic in nature, possibly a result of interaction with the alluvial deposits it was interred in that may have been periodically flooded. The right pelvis is fragmented to include parts of the ilium and ishium; the iliac tuberosity and preauricular sulcus are partially broken and missing medially. The acetabulum is complete. The pubis is missing, being broken midway through the iliopubic ramus and ischial body. The left pubis survives, though the symphyseal surface is abraded. Epiphyseal union of the femurs, tibias and fibulas are either open or fusing; the femoral heads are fusing, characterised by a diminishing open line. The distal epiphyses are open with evidence of slight bone bridge formation on the epiphyseal plates. The left proximal tibia epiphysis is fusing, seen to be commencing centrally. There is occasional brownish black mottling over both tibias and fibulas and the left talus. It is noted that the bone has a tacky feel with a slight satin sheen which is indicative of a higher surviving collagen content. No macroscopic pathology or trauma is observed.

Romano-British Alluvium

F.386 [1835]: age adult, sex indeterminate

Left fibula shaft fragment broken proximally at the posteromedial border and distally at the very superior part of the triangular subcutaneous area. The bone is noted for its gracile appearance.

F.386 [2083]: age adult, sex indeterminate

A proximal humerus fragment, broken at the apex of the anatomical neck with cortical bone missing on the anteriomedial surface to expose trabecular bone. It is broken distally approximately an inch below where the medial border starts. It is noted that there is a remnant of the epiphyseal plate, suggesting that the humeral head was in an unfused or fusing stage.

Romano-British Ditches

F.302 [1748] late 2nd–mid 3rd-century: age adult, sex indeterminate

A right, proximal third tibia shaft including the posterior nutrient foramen and inferior half of the popliteal surface. The entire proximal articulation is missing at and including the tibial tuberosity. The bone has been taphonomically altered with significant cortical bone flaking and abrasion around the break margins and trabecular bone. This may have been a result of repeated movement through the burial soils. It is also noted that the bone has a lighter colour than the rest of the assemblage, which may be indicative of groundwater action; further study is required to confirm this.

F.316 [1841] 4th-century: age neonate

A near complete perinatal left humerus that is missing the proximal head with significant cortical hyperostosis on the anteriomedial and posterior surfaces, which is indicative of Caffey's disease.

11th–12th-Century Charnel Groups

F.389 [1512]: age adult, sex indeterminate

A collection of disarticulated, fragmented adult bone that represents a single individual. The stage of dental eruption and epiphyseal union indicates the individual is an adult. The fragments are in a moderate state of preservation with some minor cortical bone flaking. The Frontal bone of the calvarium is near complete with an open metopic suture (a congenital condition that rarely persists into adulthood). Scattered, very fine foramina and labyrinthine bone is confined to the superciliary arches; this may be indicative of a physiological condition such as a dietary insufficiency. Non-destructive striations on left superio-lateral frontal bone run parallel to metopic suture. The Left parietal bone is near complete, fragmented in antiquity into eight pieces; upon refitting, it was seen that some fragment margins were abraded and rounded. Dark brown staining occurs parallel to the sagittal suture and over the parietal tuber. The Lambda suture point has significant closure. The right parietal is less complete than the left, but equally fragmented into eight pieces; upon refitting, some edges appear abraded. The occipital bone fragment includes the occipital planum, left nuchal planum and occipital protuberance. The Foramen magnum is absent as is all bone inferio-anteriorly. There is

significant calcareous concretion over the occipital bone and has moderately abraded broken edges. Generally, there is minimal suture closure along the coronal, sagittal and lambdoid sutures. The right femur is near complete but missing the distal articulation, (i.e. both lateral and medial condyles and the intercondylar fossa) and lesser/ greater trochanter. There is no indication of a fusion plate within the distal trabecular body. All determinable epiphyses are fused. There are non-pathological superior-inferior striations to the cortical bone on the shaft. There is an exaggerated anterior curvature to the shaft that may either be indicative of a biomechanical or racial expression. There is minimal linea aspera expression. An unremarkable true proximal rib fragment is also present.

F.295 [1701]: age adult, sex indeterminate

A collection of disarticulated cranium bones representing a single individual. This includes a complete frontal bone of the calvarium to include pars orbitalis, zygomatic processes and partial vomer. A fragment of the right sphenoid survives to include the body, foramen rotundum and wing; six further fragments of possible sphenoid are also identified. Both zygomatic bones are also present. Both left and right sides of the maxilla survive including alveoli for the premolars, canine and incisors, the palatine process but minus the frontal process and palatine bones. LM¹ LM² LPM¹ RM¹ RM² RPM¹ teeth survive and exhibit minor supra-gingival dental calculus. Both third molars are seen un-erupted within the maxilla. All other teeth are lost post mortem. Two identified fragments of possible occipital and temporal bones are present. Minor post depositional focal damage near the bregma suture is observed.

Miscellaneous 11th–17th-Century Material

F.189 [1318] 17th-century robber cut for cesspit: age and sex indeterminate. A fragment of frontal and right parietal bone in open union along the coronal suture.

F.202 [1358] 13th-century pit: age and sex indeterminate. The distal half of a metacarpal fragment, post-deposition abrasion/damage is seen over the distal articulation, with excavation damage anteriorly.

F.223 [1428] 17th-century backfilling of well: age mature adult, sex indeterminate. A fragment of right pelvis including the auricular surface and partial greater sciatic notch: the iliac crest and fossa and absent, as is the ischium and pubis.

F.223 [1431] 17th-century backfilling of well: age adult, sex indeterminate. A single proximal hand phalange and a fragment of the distal left humerus to include the lateral supracondylar crest and partial radial fossa.

F.223 [1434] 17th-century backfilling of well: age adult, sex indeterminate. A fragment of left pelvis including the whole acetabulum and ischial tuberosity; a near complete left, second metacarpal with the dorsal articulation broken.

F.225 [1449] 16th–17th-century pit: age adult, sex indeterminate. A left, proximal, tibia shaft fragment with the anterior crest and medial surface.

F.254 [1762] 11th–12th-century ditch: age adult, sex indeterminate. Partial fragment of the frontal bone including left frontal eminence, left coronal suture, the frontal crest and partial inferior frontal sinuses. The diploe is noticeably thick. Yellowy-green accretions occur over the surface of the cortical bone.

F.406 [1505] 11th–12th-century dump: age adult, sex indeterminate. A fragment from the right, lateral clavicle to partially include the diaphysis and acromial end, but is missing the acromial facet.

Shell

Chris Boulton

A moderately sized assemblage of shell was recovered, although material from Bronze Age and Iron Age contexts was only recovered from samples (Table 32). A significant proportion of the assemblage however derives from deposits that are too poorly defined or dated to be worth analysing. As a result only the shell from Prehistoric and Romano-British deposits has been studied. The assemblage was washed before examination, either through finds washing or during the floatation process and environmental sampling. The different shell types (European Flat Oyster family *Ostrea edulis* Linnaeus, common mussel *Mytilus edulis* and snail) were quantified and weighed by feature (Table 33). The shell was then examined by eye for any identifying markers, such as bore holes, signs of infestation or marks left by human consumption as well as quantifying the amount of oyster right and left valves. The identification of remains of infestation is useful because, in some cases and with further analysis, it could be possible to identify where the oysters were originally harvested (Claassen 1998).

The largest percentages of the individual fragments in the assemblage is comprised of Snail shell (55.0 per cent) and Oyster shell (42.7 per cent) with the remaining percentage of Mussel shell (2.4 per cent). Due to the differences in size and condition between Oyster and the other shell types, Oyster shell has the largest percentage by weight (99.1 per cent) followed by the Snail (0.6 per cent) and Mussel (0.3 per cent). The different shell types are in fairly good condition; the Mussel shell is generally the most fragmentary of the assemblage as the majority of the shell is comprised of small shattered pieces, with only a few examples of possibly young Mussels that are complete. The remaining Snail and Oyster shell are in the best condition, with the Snail showing the best preservation of the whole assemblage. Some of the oyster shell shows some signs of infestation with a number showing damage consistent with the small circular holes of the sponge *Cliona celata* (Red Boring Sponge).

The identification of the left and right valve is used to estimate the minimum number of individuals (MNI) in an assemblage by looking at the totals of left and right valves and taking the largest amount to indicate the MNI (Winder 2011). In the St. Clement's assemblage, there were 141 identifiable left valves and 108 right valves with the remaining 131 fragments being in a condition which does not allow for a definitive identification of the valve, meaning that an estimated MNI of 141 oysters. Two of the oyster shells from **F.260** have larger holes through the shell, one that has survived intact through the shell and one that appears to have broken the shell or caused a weak point where the shell has broken. Several oysters from **F.386** are a noticeably different colour than the majority of the other shell (blue compared to white/grey). **F.386** is an alluvial deposit and it is probable that rather than the oysters

being intentionally used in a process that stained them blue some property of the water or something being washed into the deposit has stained them blue.

All the oyster shells (380 fragments) were excavated from the Romano-British deposits, with the largest concentrations such as 161 fragments (F.303) and 30 fragments (F.341) from deposits that also contained large amounts of pottery and animal bone suggesting a connection with domestic use. The mussel shell was also found largely within Romano-British deposits with the largest amount coming from F.386 (11 fragments) with a single fragment discovered within the Iron Age deposit (F.385). The snails, however, were present in all three periods, with the largest concentrations coming from the Iron Age with 254 fragments (F.384) and the Romano-British with 119 fragments (F.385).

Period	Count	Count per cent (exc. Prehistoric)	Weight (kg)	Weight per cent (exc. Prehistoric)
Bronze Age	6		1	
Iron Age	405		25	
Romano-British	606	43.1	7525	37.2
10th–12th	289	20.5	4390	21.7
13th–15th	256	18.2	5711	28.3
16th–18th	252	17.9	2551	12.6
19th–early 20th	4	0.3	38	0.2
Total	1818		20241	

Table 32: Shell recovered by phase

Type	Count	Count per cent	Weight (g)	Weight per cent
Oyster	380	42.7	7406	99.1
Mussel	21	2.4	21	0.3
Snail	489	55.0	46	0.6
Total	890		7473	

Table 33: Shell types from Prehistoric and Romano-British deposits

Environmental Remains

Val Fryer

Bulk environmental samples were collected from the entire excavated sequence and a total of 72 recovered. Given the quantity of analysis that has already been done of environmental samples from 11th-century and later Cambridge plus the high degree of residuality and lack of temporal precision for most later features a decision was made to focus upon the samples from the Mid/Late Bronze Age palaeochannel and subsequent alluvial sequence (Figure 9), plus Romano-British features. A total of thirty two samples were submitted for assessment. The samples were largely bulk

floated by CAU, although sub-samples of the Mid/Late Bronze Age palaeochannel deposits were also processed by the author using manual water flotation/washover. All flots were collected in a 300 micron mesh sieve. Most flots were air dried prior to sorting, but flots from the sub-samples were stored in water (although subsequently dried to facilitate storage). Both dried flots and wet retents were scanned under a binocular microscope at magnifications up to $\times 16$ and the plant macrofossils and other remains noted are listed in Tables 34–37. Nomenclature within the tables follows Stace (2010) for the plant macrofossils and Kerney and Cameron (1979) and Macan (1977) for the mollusc shells. Most plant remains were preserved in a waterlogged/de-watered state (denoted within the table by a lower case 'w' suffix), but charred macrofossils were present within the upper fills of the ditch sequence and various of the Roman pits and ditches. The non-floating residues from the sub-samples were collected in a 1mm mesh sieve, but with the exception of occasional larger wood fragments, artefacts/ecofacts were not recorded. The abbreviations used in the tables are:

x = 1–10 specimens, xx = 11–50 specimens, xxx = 51–100 specimens, xxxx = 100+ specimens, w = waterlogged/de-watered, cf = compare, fg = fragment, b = burnt, U = upper, M = middle, L = lower

Waterlogged/de-watered seeds of dry land herbs, wetland/aquatic plants and tree/shrub species are present within most assemblages, although rarely at a high density. Preservation is very variable. The material within the Mid/Late Bronze Age palaeochannel is highly comminuted and it is noted that many of the surviving seeds are those with 'woody' pericarps. Preservation within the later alluvial sequence and pits/ditches is better, with a greater range of seeds (including some quite delicate specimens) surviving. The charred remains are mostly well preserved, although some grains are puffed and distorted, probably as a result of combustion at very high temperatures.

Charred cereals occur at a low to moderate density within only seven of the assemblages studied. Oat (*Avena* sp.), barley (*Hordeum* sp.), rye (*Secale cereale*) and wheat (*Triticum* sp.) grains are noted, with wheat occurring most frequently. Of the wheat grains, most appear to be of a rounded hexaploid type form, although some elongated 'drop form' grains of probable spelt (*T. spelta*) type are also recorded. Chaff is generally scarce, but individual spelt glume bases and bread wheat (*T. aestivum/compactum*) type rachis nodes are noted along with a small number of barley/rye type nodes. An entire floret of a possible cultivated oat (*Avena sativa*) is recorded within fill [1539] from ditch F.254 (sample 13).

Waterlogged/de-watered and charred seeds of common dry land herbs occur within all but four assemblages. Although most are present as single specimens, the assemblage from Roman waterside area ditch F.313 (sample 67) does include a

relatively rich and diverse flora. Ruderal weeds and grassland herbs occur most frequently, with taxa noted including musk thistle (*Carduus* sp.), thistle (*Cirsium* sp.), hemlock (*Conium maculatum*), hemp-nettle (*Galeopsis* sp.), dead nettle (*Lamium* sp.), mint (*Mentha* sp.), dock (*Rumex* sp.), sow-thistle (*Sonchus* sp.), chickweed (*Stellaria media*) and stinging nettle (*Urtica dioica*). The presence of seeds of henbane (*Hyoscyamus niger*), a plant commonly found on or near dung heaps, may suggest that either livestock were being kept nearby or that the ditches were being used for the deposition of animal or human ordure. Some segetal weeds are also recorded within the Romano-British features, although they are absent from the Mid/Late Bronze Age palaeochannel sequence. Taxa noted include orache (*Atriplex* sp.), brome (*Bromus* sp.), fat hen (*Chenopodium album*), goosegrass (*Galium aparine*), persicaria (*Persicaria maculosa/lapathifolia*), wild radish (*Raphanus raphanistrum*) and knotgrass (*Polygonum aviculare*). The occurrence of seeds of sainfoin (*Onobrychis viciifolia*) is of note, as they constitute another early record of a plant which was, until recently, thought to have been introduced to Britain during the later medieval period.

Wetland/aquatic plant macrofossils are present within all but two assemblages, occurring at high densities within the lower deposits of both river sequences. As noted above, the more 'woody' and hence more robust seeds occur most frequently, but taxa recorded overall include water plantain (*Alisma plantago-aquatica*), wild celery (*Apium graveolens*), club-rush (*Bolboschoenus/Schoenoplectus* sp.), sedge (*Carex* sp.), saw-sedge (*Cladium mariscus*), rush (*Juncus* sp.), duckweed (*Lemna* sp.), water dropwort (*Oenanthe aquatica*), pond-weed (*Potamogeton* sp.), water crowfoot (*Ranunculus* subg. *Batrachium*), celery-leaved crowfoot (*R. sceleratus*) and horned pondweed (*Zannichellia* sp.). Tree/shrub macrofossils, including birch (*Betula* sp.) fruits, hazel (*Corylus avellana*) nutshell fragments, bramble (*Rubus* sect. *Glandulosus*) 'pips' and elderberry (*Sambucus nigra*) seeds, are also recorded, but generally at a very low density.

A limited range of other plant macrofossils are also present within the assemblages. Charcoal/charred wood fragments are present within all but two samples, but it is noted that the material within the Mid/Late Bronze Age palaeochannel sequence is very highly comminuted, thereby constituting little more than charcoal flecks. In contrast, charcoal is common within the upper fills of the later alluvial sequence and is abundant within the fills of pit **F.335** (sample 42), ditch **F.313** (sample 67), ditch fill **F.381 [1999]** (sample 68) and 11th–12th century ditch fill **F.254 [1539]** (sample 13). The Mid/Late Bronze Age palaeochannel assemblages all contain a moderate to high density of waterlogged/de-watered root stem fragments, although again the material is very highly comminuted. Similar material is also present within the lower fills of the later ditch sequence and the two Romano-British riverside ditches (samples 67 and 68). Other plant remains occur less frequently, but do include indeterminate buds, cone fragments, leaf fragments, moss fronds, twigs and small pieces of wood. Stonewort (Characeae) oogonia are present within most the later river sequence

assemblages, possibly suggesting that the area immediately adjacent to the palaeochannel was little disturbed by either human or animal activity.

Other remains are scarce within the Mid/Late Bronze Age palaeochannel sequence, and anthropogenic remains are entirely absent. However, caddis larval cases, water flea egg cases (Cladoceran ephippia) and waterlogged arthropod remains are present. Similar materials are also recorded within the later deposits/features, with most assemblages also including small quantities of possible midden refuse including black porous and tarry residues (derived from the high temperature combustion of organic remains), bone, eggshell, fish bone and small vitreous globules.

Although specific sieving for molluscan remains was not undertaken, shells of terrestrial, marsh/freshwater slum and freshwater obligate snails are present within two of the Mid/Late Bronze Age palaeochannel sequence samples and all of the later deposits. All four of Evans (1972) ecological groups of land snails are represented with (not unsurprisingly) marsh/freshwater slum species occurring most frequently. However, most assemblages are dominated by shells of freshwater obligate snails, with taxa noted including *Armiger crista*, *Bathyomphalus contortus*, *Bithynia* sp., *Gyraulus albus*, *Pisidium* sp., *Planorbis planorbis* and *Valvata cristata*. All would appear to be generally indicative of smaller bodies of relatively low velocity water, often with plenty of mud and abundant marginal plant growth.

The Mid/Late Bronze Age Palaeochannel Sequence

All nine samples from this sequence (Table 34) consist of an homogenous, very fine and highly compacted organic mud with very few inclusions. The plant remains are generally highly comminuted and, in some instances, are also very poorly preserved. It would appear quite likely that the deposits accumulated over some considerable period during which, they were subjected to frequent episodes of post-depositional desiccation and re-wetting. It was noted during excavation that the basal deposits of the sequence were contaminated with hydro-carbons, thereby precluding any use of the material for C14 dating. Environmental indicators suggest that the habitat surrounding the river was predominantly marshy, although some areas of drier grassland (some of which may have been disturbed) are also suggested. Some colonisation by trees/woody shrubs is also indicated, although the evidence for this is minimal.

The Mid Iron Age/Late Iron Age to Post-Roman Alluvial Sequence

The twelve samples from the alluvial sequence sealing the palaeochannel (Table 35) sequence largely consist of a sandy clay matrix with numerous sharp grits and some larger stones. The plant macrofossils are reasonably well preserved, with both waterlogged/de-watered and charred remains being recorded. It would appear that the flow of water was quite slow, with plants indicative of both stagnant conditions and shallow, muddy water occurring most frequently. At least some adjacent land was probably being cultivated, although areas of open grassland/pasture are also indicated. The presence of anthropogenic detritus within the assemblages may also suggest that there was some limited settlement activity occurring within the near vicinity, most particularly during the Romano-British period.

Romano-British Features

The evidence from the assemblages from Romano-British features (Table 36) largely corroborates that the from the later alluvial sequence, although by the later Romano-British period, the abundance of ruderal weeds and colonising herbs may indicate that the area was gradually falling into disuse. The main Romano-British ditch (E.302, 303, 307, 342) appears to have been particularly stagnant, and again, there are indications that it may have been flanked by areas of grassland/meadow.

11th–12th Century Feature

A single sample of this date was processed (Table 37). An entire floret of a possible cultivated oat (*Avena sativa*) is recorded.

In summary, although the assemblages are mostly small and somewhat limited in composition, the few remains which are present do appear to indicate that there was a progression from a marshy fen edge habitat through to managed grassland/pasture, with some possible areas of agricultural intervention. By the later Romano-British period, it would appear that the area was falling into disuse, possibly being used for little more than the deposition of small quantities of refuse and/or animal waste. As anthropogenic remains are generally scarce, it would appear that the area was always peripheral to any particular focus of settlement activity, with the few remains which are recorded probably being derived from scattered or wind dispersed detritus. Although a number of the assemblages do contain a sufficient density of material for quantification (i.e. 100+ specimens), further analysis would add little to the data already contained within this assessment and, therefore, no further work is recommended. A summary of this report should be included within any publication of data from the site. Although it was hoped to retrieval material from the palaeochannel assemblages that could be suitable for radiocarbon dating, this has not proved possible. Hydrocarbon contamination of deposits within the early river channels completely precludes their use, and further to this, soluble carbon within the local ground water will have infiltrated the other de-watered remains, potentially seriously affecting the accuracy of any results. Therefore, it is suggested materials suitable for radiocarbon dating are not present within the assemblages.

Sample No.	66	77	78	79	80	81	82	83	84	86
Feature No.	354	354	354	354	354	354	354	354	354	354
Context No.	1997	2073 U	2073 L	2074 U	2074 L	2075 U	2075 M	2075 M	2075 L	2077
Dry land herbs										
Apiaceae indet.			xw		xw		xw	xw		
<i>Conium maculatum</i> L.	xw									
<i>Galeopsis</i> sp.							xw		xw	
<i>Potentilla</i> sp.							xcfw			
<i>Ranunculus</i> sp.								xw		
<i>Rumex</i> sp.	xw	xw							xw	
<i>Stellaria</i> sp.									xw	
<i>S. graminea</i> L.									xw	
<i>S. media</i> (L.) Vill							xw			
<i>Urtica dioica</i> L.			xw	xw		xw	xw	xw	xw	
Wetland/aquatic plants										
<i>Alisma plantago-aquatica</i> L.			xw					xw		
<i>Aphanes arvensis</i> L.									xw	
<i>Carex</i> sp.								xw	xw	
<i>Eleocharis</i> sp.						xw				
<i>Lemna</i> sp.				xw		xxw	xw	xw	xw	xw
<i>Lycopus europeus</i> L.								xw	xw	
<i>Oenanthe aquatica</i> (L.) Poiret				xw	xw	xw	xw	xw	xw	
<i>Persicaria hydropiper</i> (L.) Delabre								xcfw		
<i>Ranunculus</i> subg. <i>Batrachium</i> (DC) A.Gray		xw	xw	xw	xw	xxxxw	xxxxw	xxxw	xxxxw	
<i>R. sceleratus</i> L.	xw					xw				
<i>Sparganium erectum</i> L.									xw	
Tree/shrub macrofossils										
<i>Betula</i> sp.				xw		xcfw		xw	xw	
<i>Corylus avellana</i> L.							xw	xw	xw	
<i>Crateagus</i> sp.									xcfigw	
<i>Rubus</i> sp.								xw		
<i>R. sect. glandulosus</i> Wimmer & Grab						xw				
Other plant macrofossils										
Charcoal <2mm	x	x	x		x	x	x	x	xx	x
Charcoal >2mm								x	x	
Charcoal >5mm							x			
Charred root/stem							x	x	x	x
Waterlogged root/stem	xxxx	xxxx	xxxx	xxxx	xxx	xxx	xx	xxxx	xxxx	xxxx
Indet. fruit stone frag.	xw									
Indet. buds/scales					xw	xxw	xx xc	xxw	xxw	
Indet. catkin/cone						xw		xw		
Indet. leaf frags.						xw	xw	xw	xw	
Indet. moss									xw	
Indet. seeds		xw			xw	xw		xw	xw	
Indet. twigs		xw	xw			xw	xw	xxw	xxw	
Wood frags. >5mm	xx	xw	xw	xw			xxxw	xxw	xxw	x
Wood frags >10mm	x	xw		xw	xw	xw	xw	xw	xxw	
Other remains										
Caddis larval cases							xw			
Cleodoceran ephippia		xx	xw	xw	xw	xxw	xw		xw	
Waterlogged arthropods	x	x		x	x	x	xw	x	xx	x
Molluscs										
Marsh/freshwater slum species										
<i>Anisus leucostoma</i>									x	
<i>Lymnaea</i> sp.									x	
<i>Succinea</i> sp.	x									
Freshwater obligate species										
<i>Armiger crista</i>						x				
<i>Bithynia</i> sp.						xcf				
<i>Pisidium</i> sp.									x	
<i>Planorbis</i> sp.						x			xcf	
<i>Valvata cristata</i>						x			xcf	
Sample volume (litres)	12	10	10	10	12	10	10	10	8	6
Volume of flot (litres)	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	0.2	0.2	0.1
% flot sorted	100	100	100	100	100	100	100	50	50	100

Table 34: Environmental samples from the Mid/Late Bronze Age palaeochannel sequence

Sample No.	55	56	57	58	59	60	61	62	63	64	65
Feature No.	288	288	386	386	385	385	385	385	385	385	385
Context No.	1973 U	1973 L	1974	1978	1992 U	1992 M	1992 L	1993 U	1993 L	1994 U	1994 L
Period	5th-12th	5th-12th	Rom.	Rom.	MIA/LIA	MIA/LIA	MIA/LIA	MIA/LIA	MIA/LIA	MIA/LIA	MIA/LIA
Cereals											
<i>Avena</i> sp. (grains)	x		x								
<i>Hordeum</i> sp. (grains)			x								
<i>Hordeum/Secale cereale</i> type (rachis node)			x								
<i>Secale cereale</i> L.			xc f								
<i>Triticum</i> sp. (grains)	xx	x	xx								
Cereal indet. (grains)	x	x	x								
Dry land herbs											
<i>Agrostemma githago</i> L.			xc f								
Apiaceae indet.											xw
<i>Atriplex</i> sp.			xw								
<i>Bromus</i> sp.			xc f								
<i>Chenopodium album</i> L.										xw	x
<i>Conium maculatum</i> L.	xw						xw				
Fabaceae indet.	x		x								
<i>Galium aparine</i> L.		x									
<i>Hyoscyamus niger</i> L.		xw									
<i>Lepidium</i> sp.											xc fw
<i>Medicago/Trifolium/Lotus</i> sp.			xc f				x				
<i>Mentha</i> sp.									xw	xxw	xw
<i>Papaver somniferum</i> L.											xc fw
<i>Polygonum aviculare</i> L.											xw
<i>Potentilla</i> sp.				xc fw							
<i>Ranunculus</i> sp.											xc fw
<i>Reseda</i> sp.				xw							
<i>Rumex</i> sp.			x							xw	xw
<i>Sinapis</i> sp.	xw										
<i>S. nigrum</i> L.											xw
<i>Stellaria media</i> (L.)Vill											xw
<i>Urtica dioica</i> L.	xw			xw		xw	xw		xw	xw	xw
Wetland/aquatic plants											
<i>Alisma plantago-aquatica</i> L.										xw	xw
<i>Apium graveolens</i> L.									xw	xw	xw
<i>Bolboschoenus/Schoenoplectus</i> sp.										xw	xw
<i>Carex</i> sp.			x							xw	xw
<i>Cladium mariscus</i> (L.)Pohl	xw										
<i>Juncus</i> sp.				xw		xw			xw	xw	
<i>Lemna</i> sp.							xw	xw	xw	xw	xw
<i>Menyanthes trifoliata</i> L.											xw
<i>Oenanthe aquatica</i> (L.)Poiret											xw
<i>Potamogeton</i> sp.										xw	xw
<i>Ranunculus</i> subg. <i>Batrachium</i> (DC)A Gray		xw							xw	xw	xxw
<i>R. sceleratus</i> L.				xw					xw	xw	xxw
<i>Rorippa</i> sp.											xc fw
<i>Typha</i> sp.											xc fw
<i>Zannichellia</i> sp.										xw	xw
Tree/shrub macrofossils											
<i>Betula</i> sp.											xw
<i>Sambucus nigra</i> L.	xw	xw	xw								
Other plant macrofossils											
Charcoal <2mm	xxx	xx	x	xxx	xx	xx	xx	x	xx	x	x
Charcoal >2mm	xxx	x		x		x			x		
Charcoal >5mm				x							
Charred root/stem	x		x						x		
Waterlogged root/stem			x		x	x			xxxx	xxxx	xxxx
Indet. cone											xw
Indet. fruit stone frag.											
Indet. seeds	xw		x			x	xw			x	xw
Indet. twigs											xw
Wood frags. >5mm											xw
Wood frags. >10mm											
Characeae indet.			xw	xw	xw	xw	xw		xxx	xw	xw
Other remains											
Black porous 'cokey' material	x	x									
Black tarry material	x	x	x				xx				
Bone	x										
Burnt/fired clay	x										
Caddis larval cases									x	x	x
Eggshell	x										
Fish bone	x xb	x	x								
Ostracods									x	x	x
Small coal frags.	x	x		x			x				
Waterlogged arthropod remains			x	x		x			x	x	x
Sample volume (litres)	11	12	12	12	10	10	9	10	11	11	10
Volume of flot (litres)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.1	<0.1	0.1
% flot sorted	100	100	100	100	100	100	100	50	100	100	100

Table 35 part 1: Environmental samples from the post-palaeochannel alluvial sequence

Sample No.	55	56	57	58	59	60	61	62	63	64	65
Feature No.	288	288	386	386	385	385	385	385	385	385	385
Context No.	1973 U	1973 L	1974	1978	1992 U	1992 M	1992 L	1993 U	1993 L	1994 U	1994 L
Period	5th-12th	5th-12th	Rom.	Rom.	MIA/LIA	MIA/LIA	MIA/LIA	MIA/LIA	MIA/LIA	MIA/LIA	MIA/LIA
Mollusc shells											
Woodland/shade loving species											
<i>Ashfordia granulata</i>								xcf			
<i>Oxychilus</i> sp.							x				
<i>Punctum pygmaeum</i>				x							
Zonitidae indet.							x				x
Open country species											
<i>Pupilla muscorum</i>							x				
<i>Vallonia</i> sp.		x			x	x	x		x	x	x
<i>V. costata</i>					x		x		x		
<i>Vertigo pygmaea</i>			x								
Catholic species											
<i>Cochlicopa</i> sp.					x		x	x		x	
<i>Nesovitrea hammonis</i>				x					x	xcf	
<i>Trichia hispida</i> group	x	x		x	x	x	x xb	x		x	x
Marsh/freshwater slum species											
<i>Anisus leucostoma</i>	x	x	xx	x	x		x	xx	xx	x	x
<i>Carychium</i> sp.	x				x		x	x	x	x	
<i>Lymnaea</i> sp.	x		x	x	x	x		x	xx	x	x
<i>L. truncatula</i>			x					x	x		x
<i>Succinea</i> sp.		x		x				x	x		
Freshwater obligate species											
<i>Acroloxus lacustris</i>											x
<i>Armiger crista</i>		x	x				x	x	x		x
<i>Bathymphalus contortus</i>	x	x	x		x			x	x		
<i>Bithynia</i> sp. (operculi)	x	xx	xxx	x	x	x	x	xxxx	xxx	x	x
<i>B. leachii</i>	x	xcf	x			x		x	x		
<i>B. tentaculata</i>	x	x	x			x		xx	x	x	x
<i>Gyraulus albus</i>	x	x	x					x		x	x
<i>Hippeutis</i> sp.	x		x					x			
<i>H. complanata</i>			x					x			
<i>Lymnaea palustris</i>			x					x	x		
<i>L. peregra</i>			x	x				x	x		
<i>Pisidium</i> sp.	x	x	x	x					x	x	x
<i>Planorbis</i> sp.					x			xxx	x	xcf	x
<i>P. carinatus</i>			x					x			x
<i>P. planorbis</i>	xx	xx	xx	x				xx	xx	x	x
<i>Planorbis</i> <i>corneus</i>	x	x	x					x		x	
<i>Valvata cristata</i>	xx	xx	xx	x	x	xx	x	xxxx	x	x	x
<i>V. piscinalis</i>	x		x	x				x	xx	x	
<i>Viviparus fasciatus</i>			x								
Sample volume (litres)	11	12	12	12	10	10	9	10	11	11	10
Volume of flot (litres)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.1	<0.1	0.1
% flot sorted	100	100	100	100	100	100	100	50	100	100	100

Table 35 part 2: Environmental samples from the post-palaeochannel alluvial sequence

Sample No.	31	45	26	30	29	33	34	42	67	68
Feature No.	307	342	302	302	303	315	316	335	313	381
Context No.	1777	1958	1751	1770	1766	1839	1845	1917	1982	1999
Feature type	Ditch	Ditch	Ditch	Ditch	Ditch	Ditch	Ditch	Pit	Ditch	Ditch
Date	RB1	RB1	RB2	RB2	RB3	RB3	RB3	RB3	RB3	RB3
Location	Sett.	Sett.	Sett.	Sett.	Sett.	Sett.	Sett.	Sett.	Water.	Water.
Cereals										
<i>Triticum</i> sp. (grains)			x		x					
<i>T. spelta</i> L. (glume base)								x		
Cereal indet. (grains)			x					x		
Herbs										
Apiaceae indet.									xw	
Asteraceae indet.									xw	
<i>Carduus</i> sp.								xw		
<i>Chenopodium polyspermum</i> L.									xwcf	
<i>C. rubrum/glaucum</i>									xw	
Chenopodiaceae indet.		xw								xw
Cirsium sp.									xw	
<i>Conium maculatum</i> L.			xw	xw		xw	xw		xw	xw
<i>Euphrasia/Odontites</i> sp.									xw	
Fabaceae indet.										
<i>Hyoscyamus niger</i> L.		xw				xw			xw	xw
<i>Lamium</i> sp.		xw				xw			xw	
<i>Lepidium</i> sp.									xwcf	
<i>Linum perenne</i> L.									xwcf	
<i>Malva</i> sp.									xw	
<i>Mentha</i> sp.										xw
<i>Onobrychis vicifolia</i> Scop.									xw	xw
<i>Onopordum acanthium</i> L.	xw									
<i>Small Poaceae</i> indet.									xw	
<i>Ranunculus acris/repens/bulbosus</i>									xw	
<i>Rumex</i> sp.			x						xxw	
Sinapis sp.									xw	
<i>Solanum dulcamara</i> L.									xw	
<i>S. nigrum</i> L.									xw	
<i>Sonchus asper</i> (L.) Hill									xw	
<i>S. oleraceus</i> L.									xw	
<i>Stellaria media</i> (L.) Vill									xw	xw
<i>Torilis</i> sp.									xw	
<i>Urtica dioica</i> L.									xxw	xxw
<i>U. urens</i> L.									xw	
Wetland/aquatic plants										
<i>Apium graveolens</i> L.									xw	
<i>Carex</i> sp.					xw			xw		
<i>Cladium mariscus</i> (L.) Pohl			x				x			x
<i>Lemna</i> sp.	xxw	xw	xw					xw		
<i>Oenanthe aquatica</i> (L.) Poiret									xw	
<i>Ranunculus</i> subg. <i>Batrachium</i> (DC) A. Gray						xw	xw	xw		xw
<i>R. sceleratus</i> L.		xw				xw			xxw	xw
Tree/shrub macrofossils										
<i>Rubus</i> sect. <i>Glandulosus</i> Wimmer & Grab								xw		
<i>Sambucus nigra</i> L.			xw				x			xw
Other plant macrofossils										
Charcoal <2mm	x		xx	x	xx	xx	xx	xxx	xxxx	xxx
Charcoal >2mm				x	x	x			x	x
Charcoal >5mm										x
Charred root/stem			x							x
Waterlogged root/stem								x	xxxx	xx
Indet. bud									xw	
Indet. moss									xw	
Indet. seeds	x								xw	xw
Indet. twigs									xw	
Characeae indet.			x		x					
Other remains										
Black porous 'cokey' material			x				x			x
Bone		x								
Caddis larval cases										x
Cladoceran ephippia						xw			xw	
Eggshell							x			
Fish bone			x					x		
Ostracods		x							x	
Small mammal/amphibian bones					x		x			
Vitreous material					x					
Waterlogged arthropod remains	x					x			xx	x
Sample volume (litres)	6	8	10	10	10	10	10	12	10	10
Volume of flot (litres)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
% flot sorted	100	100	100	100	100	100	100	100	100	100

Table 36 part 1: Environmental samples from Romano-British features

Sample No.	31	45	26	30	29	33	34	42	67	68
Feature No.	307	342	302	302	303	315	316	335	313	381
Context No.	1777	1958	1751	1770	1766	1839	1845	1917	1982	1999
Feature type	Ditch	Ditch	Ditch	Ditch	Ditch	Ditch	Ditch	Pit	Ditch	Ditch
Date	RB1	RB1	RB2	RB2	RB3	RB3	RB3	RB3	RB3	RB3
Location	Sett.	Sett.	Sett.	Sett.	Sett.	Sett.	Sett.	Sett.	Water.	Water.
Molluscs										
Woodland/shade loving species										
<i>Aegopinella</i> sp.				x						
<i>Ashfordia granulata</i>				xcf						
<i>Oxychilus</i> sp.							x			
Open country species										
<i>Pupilla muscorum</i>	x	x			x		x			
<i>Vallonia</i> sp.			x	x	x	x	x	x		
<i>V. costata</i>	x	x		x	x xb		x			
<i>Vertigo pygmaea</i>							x			
Catholic species										
<i>Cepaea</i> sp.		x					x			
<i>Cochlicopa</i> sp.	x	x		x	x		x	x		x
<i>Nesovitreia hammonis</i>						x				
<i>Trichia hispida</i> group	xx	x	x	x	xx	x	xxx	x		
Marsh/freshwater slum species										
<i>Anisus leucostoma</i>	xx	x	x	x	x		x			
<i>Carychium</i> sp.	x	x	x	xx	x			x		
<i>Lymnaea</i> sp.	xx	x	x xb	xx	xx				x	
<i>L. truncatula</i>	x	x		x	x					
<i>Succinea</i> sp.	x	x		x				x	x	x
Freshwater obligate molluscs										
<i>Armiger crista</i>	x	x							x	x
<i>Bathyomphalus contortus</i>	xx	x		x						
<i>Bithynia</i> sp.		x		xx	x	x				x
(operculi)		x		x				x		
<i>B. leachii</i>							x			
<i>B. tentaculata</i>				x			x			
<i>Gyraulus albus</i>	x			x	x					
<i>Hippetis</i> sp.		x	x							
<i>Lymnaea palustris</i>				x						
<i>L. peregra</i>					x					x
<i>Pisidium</i> sp.										x
<i>Planorbis cornutus</i>		x			x					
<i>Planorbis</i> sp.	xx		xb	x	x					x
<i>P. carinatus</i>		x		x	x					
<i>P. planorbis</i>	xx	xx		x			x			x
<i>Valvata cristata</i>	x	x	x	x	x	x		x		x
Sample volume (litres)	6	8	10	10	10	10	10	12	10	10
Volume of flot (litres)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
% flot sorted	100	100	100	100	100	100	100	100	100	100

Table 36 part 2: Environmental samples from Romano-British features

Sample No.	13
Feature No.	254
Context No.	1539
Feature type	Ditch
Date	11th–12th
Cereals	
<i>Avena</i> sp. (grains)	x
<i>A. sativa</i> L. (flore)et	xcf
<i>Hordeum</i> sp. (grains)	x
<i>Triticum</i> sp. (grains)	xx
<i>T. aestivum/compactum</i> type (rachis node)	x
Cereal indet. (grains)	x
Herbs	
Brassicaceae indet.	x
<i>Bromus</i> sp.	x
Chenopodiaceae indet.	x
<i>Conium maculatum</i> L.	xw
Fabaceae indet.	x
<i>Lamium</i> sp.	xw
<i>Lapsana communis</i> L.	x
<i>Persicaria maculosa/lappathifolia</i>	x
<i>Raphanus raphanistrum</i> L. (siliqua frag.)	x
(stem frag.)	x
<i>Rumex</i> sp.	x
Wetland/aquatic plants	
<i>Carex</i> sp.	x
<i>Cladium mariscus</i> (L.)Pohl	x
<i>Lemna</i> sp.	xw
Tree/shrub macrofossils	
<i>Sambucus nigra</i> L.	xw
Other plant macrofossils	
Charcoal <2mm	xxx
Charcoal >2mm	xxx
Charcoal >5mm	x
Charred root/stem	x
Other remains	
Black porous 'cokey' material	x
Fish bone	x
Ostracods	x
Vitreous material	x
Sample No.	13
Feature No.	F254
Context No.	1539
Feature type	Ditch
Date	Late
Molluscs	
Catholic species	
<i>Trichia hispida</i> group	x
Marsh/freshwater slum species	
<i>Anisus leucostoma</i>	x
<i>Carychium</i> sp.	x
<i>Succinea</i> sp.	x
Freshwater obligate molluscs	
<i>Armiger crista</i>	x
<i>Bithynia</i> sp.	x
<i>B. tentaculata</i>	x
<i>P. carinatus</i>	x
<i>P. planorbis</i>	x
<i>Valva cristata</i>	x
<i>V. piscinalis</i>	x
Sample volume (litres)	6
Volume of flot (litres)	<0.1
% flot sorted	100

Table 37: Environmental samples from 11th–12th century features

Pollen

Steve Boreham

This study focuses on the palynology of sediments obtained from two adjacent sequences of river sediments, sampled from a palaeochannel (Figure 9). The lower part of the palaeochannel sequence of organic river silts was sampled with two overlapping 50cm monolith tins (samples 75–76). The upper part of the palaeochannel sequence of river silts was not accessible in this location, but was sampled with four overlapping 50cm monolith tins (samples 47–50) in an adjacent position.

The basal sample of the lower sequence sample 76 comprised stiff grey bedrock clay (0–4cm) overlain by a black-grey organic silt (4–11cm) [2078], which was sub-sampled for pollen at 8cm. Above this was a unit of grey-brown sandy silt (11–23cm) [2076], sub-sampled for pollen at 16cm, and a unit of black organic silt (23–50cm) [2075], which was sub-sampled for pollen at 30cm. Sample 75 overlapped with sample 76 by 15cm. The basal part of sample 75 also comprised of black organic silt (0–23cm) [2075], which was sub-sampled for pollen at 15cm. Overlying this was a unit of grey-black organic silt (23–40cm) [2074], sub-sampled at 32cm for pollen. The upper unit in this sequence was a black organic silt (40–50cm) [2073] that was sub-sampled for pollen at 48cm. From archaeological evidence it was presumed that these contexts probably represent Bronze Age fluvial deposition. The basal sample of the upper sequence sample 50 comprised stiff grey stiff silt (possibly reworked bedrock: 0–10cm) that was not sampled in this study, overlain by a grey-black organic and shelly silt (10–18cm) [1997], which was sub-sampled for pollen at 14cm. Above this was a unit of grey organic silt (18–38cm) [1994], sub-sampled for pollen at 28cm, and a unit of grey-brown silt (38–50cm) [1993], which was sub-sampled for pollen at 44cm. Sample 49 overlapped with sample 50 by 20cm.

The basal part of sample 49 also encompassed the silt of [1993] (8–37cm), and this was sub-sampled for pollen at 32cm. Overlying this was a unit of grey silt (37–50cm) [1992], which was sub-sampled at 46cm for pollen. Sample 48 overlapped with sample 49 by 10cm. Much of sample 48 also encompassed the grey silt of [1992] (0–36cm), and this was sub-sampled for pollen at 32cm. Overlying this was a unit of grey-brown organic silt (36–50cm) [1978], which was sub-sampled for pollen at 46cm. Sample 47 overlapped with sample 48 by 5cm. The basal part of sample 48 also encompassed the grey-brown silt of [1978] (0–12cm), which was not sub-sampled for pollen. Overlying this was a unit of brown organic silt (12–18cm) [1974], which was sub-sampled for pollen at 15cm. The upper part of the sequence comprised a unit of grey silt (18–50cm) [1973], which was sub-sampled for pollen at 24cm and 46cm. From archaeological evidence it was presumed that these contexts probably represent the transition from Bronze Age to Iron Age deposition at the

base, and a progression from Iron Age through Romano-British to 11th–12th century towards the upper parts of the sequence. The sixteen pollen samples were prepared using the standard hydrofluoric acid technique in the Geography Science Laboratories, University of Cambridge, and counted for pollen using a high-power stereo microscope at $\times 400$ magnification. The percentage pollen data from these 16 samples is presented in Table 38 and in Figures 28–29.

The lower and upper sequences provide two contrasting views of vegetation and landscape surrounding the palaeochannel of the River Cam. The earlier, probably Bronze Age lower sequence records reedswamp and mixed-oak woodland. There is little evidence for intensive human activity near the river at this time, and the main palaeochannel of the river seems to be distant from the site. In contrast, the upper sequence records a plainly post-clearance signal from the Iron Age and later, with abundant evidence for agriculture and land disturbance. Whilst it is possible to loosely fit the top of the lower pollen sequence (Figure 28) with the base of the upper pollen sequence (Figure 29); in general it seems that there may be a time slice missing between the two. However this may only amount to a few hundred years at the most, and is probably an inevitable consequence of comparing two adjacent sequences from the same palaeochannel.

Pollen analyses from the adjacent archaeological site at 24 Thompson's Lane (Boreham in Newman 2008a; Boreham 2009) can be compared with the new pollen data presented here, since the material investigated is presumed to come from the same palaeochannel sequence. In the basal parts of the sequence at 24 Thompson's Lane radiocarbon dating of river silts (equivalent to sample **212**) produced an age of 3823 \pm 30 BP or 2410–2140BC placing it in the late Neolithic/early Bronze Age. However, the pollen spectra of three sub-samples from sample **212** showed a herb-rich and generally post-clearance assemblage with cereal pollen. As noted at the time, this was in many ways a remarkable discovery, since vegetation at the Neolithic/Bronze Age boundary is usually considered to be mixed-oak woodland with lime and elm and with little or no evidence for arable activity. However, the pollen sub-samples from samples **75–76** in this study show that the Bronze Age river sediments of the palaeochannel do indeed have a mixed-oak woodland signal and no evidence for arable activity.

Clearly this throws the dating of the basal samples at 24 Thompson's Lane in to question. Assuming for the moment that we can rely on the pollen assemblages discovered at 24 Thompson's Lane and the current site, three main scenarios present themselves. Firstly, it is possible that the 24 Thompson's Lane radiocarbon date was affected by ancient carbon from the Chalk and so gave a date older than its true age. Secondly, it is possible that the radiocarbon sample was in fact not directly equivalent to sample **212** at 24 Thompson's Lane. Lastly, through special-pleading it might be possible to argue that the 24 Thompson's Lane pollen assemblage

represented a very local situation, which was not recorded by the St. Clement's Garden sequence. This last option seems fairly unlikely. It is of course possible to argue that the pollen assemblages themselves were somehow of mixed origin or became contaminated in the sampling process. Again, this seems fairly unlikely in this situation. In fact, the pollen assemblages from sample **212** at 24 Thompson's Lane seems to fit fairly well with those from samples **50–47** at the current site. As noted in the 24 Thompson's Lane report, there were similarities between the grass-dominated pollen assemblages of the basal sediments from sample **212** and the three medieval pollen sub-samples previously reported from 24 Thompson's Lane. Only the upper-most sample of silt-clay alluvium from 24 Thompson's Lane sample **215** had a rather different grass-alder-pine-sedge-herb pollen spectrum compared to the other samples, which were all dominated by >50 per cent grass (Boreham 2009). This appears to be a much later phase, possibly related to river-marginal establishment of alder and pine, and perhaps associated with the canalisation of the River Cam channel.

The organic-rich river silts and reedswamp deposits of the lower sequence are fairly typical of other Bronze Age fluvial sediments elsewhere in the Cam and other rivers of the Wash basin. Likewise the grey silt-rich alluvial sediment of the upper sequence approximates to the 'Romano-British Silt', which is widespread in the floodplains of river valleys in southern England, and is thought to date at the earliest from the mid-Iron Age. It is clear that the palaeochannel deposits represent an on-stepping sequence whereby each subsequent deposit extends further from the river as local water tables and flood events rise. Given that reedswamp appears to be a continuous feature of this sequence, it does seem that the Cam palaeochannel at this location must have been asymmetrical, with a deeper channel on the northern side and a shallow 'slip-off slope' of the southern margin in the vicinity of the site. This makes a lot of sense when the local geography of the Cam valley is taken into account. The River Cam makes an arc toward the east near Magdalene Bridge, from its south–north orientation along The Backs towards a west–east orientation at Jesus Green. It seems clear that the fastest and deepest water would be found on the outside of such a meander bend, leaving quieter conditions on the inner radius.

Finally, the usual disclaimers about the limitations of pollen assessment counts should be reconsidered here. Palynology is a powerful tool that can populate a landscape with forests and swamps, fields and hedgerows. However, it is limited by the preservation of the palynomorphs (pollen grains) and by the density of data collection. Some of the assessment counts produced here offer barely more than fifty pollen grains after 90 minutes of microscope time. The conversion of this data into percentages can give a false sense of security and robustness. Had statistically significant counts of 300 or more pollen grains been produced for each level it is unlikely that the main story depicted in this report would have changed very much. However, the chance of detecting the rarer taxa, for example some evidence of cereal

pollen in the lower sequence, would be much greater. Thus it is always important to realise the limitations of the technique, and treat any conclusions and interpretations with the proper amount of caution.

The Lower Sequence (samples 75–76)

Six sub-samples for pollen analysis were taken from the following points along the lower sequence; 8cm (sample 76 8cm), 16cm (sample 76 16cm), 30cm (76 30cm), 50cm (sample 75 15cm), 67cm (sample 75 32cm) and 83cm (sample 75 48cm). The results of the pollen analysis appear in Table 38 and are presented graphically as percentage pollen diagrams (Figure 28, upper, trees, shrubs and summary and Figure 28, lower, herbs, spores and aquatics). Unfortunately, the pollen sub-sample from 76 16cm was barren, with a pollen concentration less than 1052 grains per ml. This suggests that either the material was deposited very rapidly and so had a low pollen concentration, or that it had become oxidised *in situ* by sub-aerial exposure. The remaining five pollen sub-samples had pollen concentrations that ranged between 34,180 and 51,709 grains per ml. Pollen preservation was rather variable in these sub-samples and finely divided organic material hampered pollen counting to some degree. Assessment pollen counts were made from single slides for these sub-samples. The pollen sums achieved for these slides were all above 50 grains, and three were greater than 100 grains. However, none exceeded the statistically desirable total of 300 pollen grains main sum. As a consequence caution must be employed during the interpretation of these results.

It is immediately clear that the majority of these sub-samples are dominated by the pollen of grass (Poaceae: *c.* 18–32 per cent) and hazel (*Corylus*: *c.* 10–15 per cent), and by undifferentiated monolet Pteropsid fern spores (*c.* 8–17 per cent). In some circumstances elevated proportions of fern spores can indicate post-depositional oxidation, but here they seem to simply indicate a damp environment on the woodland floor. There is also a large proportion of oak (*Quercus*: 4–14 per cent) pollen throughout this part of the sequence, and the addition of elm (*Ulmus*) and lime (*Tilia*) pollen to this assemblage suggests that mixed-oak woodland grew close to the site. It is notable that lime (*Tilia*) declines towards the top of the sequence. The presence of wet woodland (carr) is indicated by alder (*Alnus*: *c.* 5–13 per cent) and willow (*Salix*: *c.* 2–4 per cent) pollen. The presence of mature trees is also confirmed by spores of the epiphytic polypody fern (*Polypodium*). Ivy (*Hedera*) is also often associated with mature trees. Pine (*Pinus*) and juniper (*Juniperus*) are also present, but they do not form major components of the woodland. Emergent wetland vegetation such as bur-reed (*Sparganium*), reed-mace (*Typha*) sedges (Cyperaceae) and grasses (Poaceae), in this case probably represented by common reed (*Phragmites*), suggest extensive reedswamp environments at the site. It is interesting that no pollen from obligate aquatic plants of deeper water, such as water-lilies or broad-leaved pondweed (*Potamogeton*) has been encountered in this sequence. The relatively sparse assemblage of herbs shows that both riparian (bank-side) and tall-herb (meadow) communities were present close by. The pollen of cereals was not encountered, and the disturbance indicator ribwort plantain (*Plantago lanceolata*) was present only at the top of the sequence.

Taken together, the pollen sequence and lithology appears to represent deposition in a reedswamp or fen environment surrounded by a mosaic of wet woodland and damp meadows with mature mixed-oak woodland on drier ground. There is no evidence for arable activity, and the only significant changes throughout the sequence seem to be the decline in lime and the presence of ribwort plantain towards the top. This pollen assemblage would fit comfortably within the Bronze Age.

The Upper Sequence (samples 47–50)

Ten sub-samples for pollen analysis were taken from the following points along the upper sequence; 14cm (sample 50 8cm), 28cm (sample 50 28cm), 44cm (sample 50 44cm), 62cm (sample 49 32cm), 76cm

(sample 49 46cm), 102cm (sample 48 32cm), 116cm (sample 48 46cm), 130cm (sample 47 15cm), 139cm (sample 47 24cm) and 161cm (sample 47 46cm). The results of the pollen analysis appear in Table 38 and are presented graphically as percentage pollen diagrams (Figure 29, upper, trees, shrubs and summary and Figure 29, lower, herbs, spores and aquatics). The ten pollen sub-samples had pollen concentrations that ranged between 29,097 and 76,248 grains per ml. Pollen preservation was quite good in some of these sub-samples, but rather variable in others, and the presence of finely divided organic material hampered pollen counting in some cases. Assessment pollen counts were made from single slides for these sub-samples. The pollen sums achieved for these slides were all above 50 grains, and five were greater than 100 grains. However, none exceeded the statistically desirable total of 300 pollen grains main sum. As a consequence caution must be employed during the interpretation of these results.

These sub-samples are dominated by pollen of grass (Poaceae: c. 25–44 per cent) and by undifferentiated monolet Pteropsid fern spores (c. 8–17 per cent). The fern spores here are probably related to damp environments rather than being indicative of post-depositional oxidative processes. Although hazel (*Corylus*: c. 5–9 per cent), alder (*Alnus*: c. 2–10 per cent) and willow (*Salix*: c. 1–4 per cent) are present throughout the sequence, the pollen of oak (*Quercus*) and pine (*Pinus*) and the spores of polypody fern (*Polypodium*) clearly decline towards the top, hinting at the progressive clearance of large mature trees. Birch (*Betula*), lime (*Tilia*), ash (*Fraxinus*), juniper (*Juniperus*), ivy (*Hedera*) and privet (*Ligustrum*) are also intermittently present, but do not form a major part of the woodland assemblage. In this sequence there is abundant evidence for reedswamp vegetation such as bur-reed (*Sparganium*), reed-mace (*Typha*) sedges (Cyperaceae) and grasses (Poaceae), probably the common reed (*Phragmites*). In addition, pollen of the broad-leaved pondweed (*Potamogeton*) was encountered in sample 50 at 28cm and sample 50 at 44cm towards the bottom of the sequence, suggesting deeper slow flowing open-water.

The assemblage of herbs from the sequence was relatively diverse and included indicators of eutrophication (*Urtica*) and soil disturbance (*Plantago lanceolata*), and weed species, plants of damp meadows, tall herbs of pasture and bank-side (riparian) herbs. Notably, cereal pollen (c. 2–5 per cent) was present throughout the sequence suggesting arable cultivation close to the site or in the hydrological catchment. At the top of the sequence herbs such as the fat-hen family (Chenopodiaceae), the cow-parsley family (Apiaceae), and thistles (*Cirsium*) become more abundant, perhaps in response to increasing soil disturbance and cultivation. Overall the pollen sequence of this alluvial silt appears to be post-clearance, with progressive removal of large mature trees such as oak. There is abundant evidence for a mosaic landscape of hazel scrub, alder and willow wet woodland (carr), arable and pastoral agriculture and large areas of reedswamp with an early period of deeper water. This pollen sequence would easily fit within an Iron Age, through Romano-British to 11th–12th century interval.

Sample	76	76	76	75	75	75	50	50	50	49	49	48	48	47	47	47
Context	2078	2076	2075	2075	2074	2073	1997	1994	1993	1993	1992	1992	1978	1974	1973	1973
Height from base	8cm	16cm	30cm	50cm	67cm	83cm	14cm	28cm	44cm	62cm	76cm	102cm	116cm	130cm	139cm	161cm
Pollen sub-sample	8cm	16cm	30cm	15cm	32cm	48cm	14cm	28cm	44cm	32cm	46cm	32cm	46cm	15cm	24cm	46cm
Trees & Shrubs																
<i>Betula</i>	0.0		0.0	0.0	0.0	0.0	1.9	0.8	0.8	1.1	0.0	0.0	0.0	1.0	0.0	0.0
<i>Pinus</i>	3.8		0.0	1.8	1.7	1.8	3.8	4.1	3.8	4.6	3.3	2.9	1.2	2.9	0.0	0.0
<i>Ulmus</i>	1.0		1.5	1.8	2.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Quercus</i>	3.8		13.8	9.1	12.7	8.1	8.5	6.6	3.8	3.4	3.3	1.9	0.0	0.0	0.0	0.0
<i>Tilia</i>	1.9		6.2	1.8	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Alnus</i>	6.7		12.3	5.5	13.6	8.1	6.6	4.9	2.3	2.3	4.9	10.6	3.7	2.9	1.2	2.6
<i>Fraxinus</i>	0.0		0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Corylus</i>	15.4		12.3	12.7	10.2	11.7	9.4	6.6	6.1	8.0	8.2	6.7	7.4	5.7	4.8	6.5
<i>Salix</i>	1.9		3.1	1.8	1.7	3.6	2.8	1.6	1.5	2.3	1.6	3.8	2.5	2.9	2.4	2.6
<i>Juniperus</i>	1.0		0.0	1.8	2.5	1.8	0.9	0.0	0.8	1.1	0.0	1.0	0.0	0.0	1.2	0.0
<i>Hedera</i>	0.0		1.5	1.8	3.4	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0
<i>Ligustrum</i>	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0
Herbs																
Poaceae	26.9		18.5	27.3	22.0	32.4	25.5	39.3	40.5	35.6	39.3	31.7	44.4	26.7	26.5	29.9
Cereals	0.0		0.0	0.0	0.0	0.0	1.9	3.3	5.3	4.6	3.3	2.9	2.5	2.9	3.6	3.9
Cyperaceae	4.8		6.2	5.5	5.9	4.5	7.5	4.1	4.6	5.7	1.6	5.8	3.7	3.8	7.2	3.9
Asteraceae (Asterioidea/Cardueae) undif.	1.0		1.5	0.0	0.0	0.9	2.8	0.8	0.0	0.0	1.6	1.9	1.2	1.0	2.4	1.3
Asteraceae (Lactuceae) undif.	1.9		0.0	1.8	1.7	1.8	0.9	3.3	2.3	4.6	6.6	5.8	3.7	2.9	1.2	6.5
<i>Artemisia</i> type	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.0	0.0	1.3
<i>Cirsium</i> type	0.0		1.5	0.0	0.8	0.0	0.9	0.8	0.8	1.1	1.6	0.0	1.2	1.9	2.4	2.6
<i>Centaurea nigra</i> type	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.2	1.3
Caryophyllaceae	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.9	1.2	0.0	1.2	1.3
Chenopodiaceae	1.9		1.5	3.6	0.8	0.0	1.9	0.8	0.8	1.1	0.0	1.0	3.7	11.4	6.0	5.2
Brassicaceae	0.0		0.0	0.0	0.8	1.8	0.9	0.0	3.8	2.3	3.3	5.8	3.7	5.7	4.8	3.9
Fabaceae	0.0		0.0	0.0	0.0	0.9	1.9	0.8	0.8	1.1	0.0	0.0	1.2	1.0	1.2	2.6
<i>Filipendula</i>	1.0		0.0	1.8	2.5	0.9	0.9	2.5	0.8	2.3	0.0	1.0	0.0	1.0	1.2	1.3
<i>Helianthemum</i>	0.0		1.5	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.2	0.0
Lamiaceae	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0
<i>Plantago lanceolata</i>	0.0	barren	0.0	0.0	0.8	0.9	1.9	1.6	2.3	1.1	1.6	1.0	1.2	1.9	1.2	0.0
<i>Ranunculus</i> type	1.0		1.5	1.8	1.7	0.9	1.9	0.0	1.5	0.0	1.6	1.9	1.2	1.9	2.4	1.3
<i>Rumex</i>	1.0		0.0	0.0	0.8	0.9	0.9	2.5	2.3	2.3	0.0	0.0	0.0	1.0	2.4	1.3
<i>Thalictrum</i>	0.0		0.0	0.0	0.0	0.0	0.0	2.5	0.8	1.1	0.0	0.0	0.0	1.9	1.2	0.0
<i>Urtica</i>	1.0		1.5	0.0	0.0	0.0	0.0	0.8	2.3	1.1	1.6	0.0	0.0	1.9	1.2	2.6
Aplacaeae	1.0		0.0	0.0	0.8	0.9	0.9	0.8	0.0	1.1	0.0	1.0	1.2	3.8	3.6	1.3
<i>Veronica</i> type	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0
<i>Scabiosa</i> type	0.0		0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lower plants																
<i>Polypodium</i>	1.9		1.5	1.8	0.0	0.0	0.9	0.0	0.8	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Pteropsida (monolete) undif.	17.3		10.8	14.5	8.5	13.5	11.3	8.2	7.6	9.2	14.8	7.7	12.3	11.4	15.7	16.9
Pteropsida (trilete) undif.	3.8		3.1	3.6	2.5	3.6	2.8	0.8	1.5	1.1	1.6	1.0	0.0	0.0	1.2	0.0
<i>Sphagnum</i>	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.0	0.0	0.0	0.0	2.6
Aquatics																
Potamogeton	0.0		0.0	0.0	0.0	0.0	0.0	4.9	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Sparganium</i> type	9.6		6.2	14.5	8.5	10.8	6.6	17.2	19.8	13.8	13.1	21.2	13.6	20.0	27.7	20.8
<i>Typha latifolia</i>	2.9		1.5	3.6	3.4	7.2	0.9	2.5	6.9	2.3	3.3	13.5	2.5	4.8	7.2	2.6
Sum trees	17.3		33.8	20.0	30.5	18.9	20.8	17.2	12.2	11.5	11.5	15.4	4.9	6.7	1.2	2.6
Sum shrubs	18.3		16.9	18.2	17.8	17.1	13.2	8.2	8.4	11.5	9.8	13.5	9.9	8.6	9.6	9.1
Sum herbs	41.3		33.8	41.8	40.7	46.8	50.9	65.6	69.5	66.7	62.3	61.5	72.8	73.3	72.3	71.4
Sum spores	23.1		15.4	20.0	11.0	17.1	15.1	9.0	9.9	10.3	16.4	9.6	12.3	11.4	16.9	16.9
Main Sum	104		65	55	118	111	106	122	131	87	61	104	81	105	83	77
Concentration (grains per ml)	37716	<1052	34180	32135	51709	50756	39814	55786	49205	76248	40096	47555	13522	61349	29097	31147

Table 38: Pollen samples

Geochemical Sediment Analyses

Simon Crowhurst & Simon Timberlake

Six 50cm serial monolith samples were taken from two consecutive sections cut through an alluvium sequence exposed within a palaeochannel of the River Cam and later deposits (Figure 9). The sections were 12mm apart and parallel to one another, and were also sampled using a duplicate set of monolith tins for pollen, and again by bulk sample for plant environmental remains. The sediment within each of the monolith tins was logged in detail and was found to consist of disturbed natural Gault Clay (present at the base of both the upper and lower palaeochannel sequences), along with organic clay silt, gritty sandy silt, peaty clay and peat over a stratigraphic range broadly dating to the Middle–Late Bronze Age (i.e. the lower palaeochannel peats), Middle–Late Iron Age, Romano-British and Early–Late Saxon periods. The monoliths were measured in their tins semi-quantitatively for the metals lead and copper (Figure 30) plus a range of other elements using the XRF (X-ray fluorescence) core scanner, and at the same time for their image data (spectrum

colour and 'lightness' indices) and spectrophotometry, the latter being a technique used to detect the presence of oxidised iron through looking at the relevant wavelength difference (570–560nm) and as an additional parameter for stratigraphic correlation. The primary aim of the exercise was to examine this sediment sequence in order to try to detect any underlying trend increase in the relative concentrations of anthropogenic lead and copper entering the sediments and watercourse of the River Cam, which may be linked to the rise of urbanization in Romano-British and medieval Cambridge.

The raw data and graph scan plots of lead (Pb) and copper (Cu) were singled out to look for these possible trends, and the results compared with other chalcophile but mobile metals such as zinc (Zn), with the ubiquitous iron (Fe) and manganese (Mn), both likely to concentrate diagenetically as iron oxidation horizons within the sediments in response to water table changes, and with the terrestrial elements linked to clastic (clay-silt-sand) input such as aluminium (Al; indicative of clay), silicon (Si; indicative of silt, sand and gravel), and zirconium (Zr; a good indication of heavy detrital mineral (i.e. geological) input – thus a useful baseline to compare with Cu/Pb/Zn as examples of anthropogenic pollution).

The exercise of sampling these monolith cores from this flood alluvium sequence of the River Cam was designed principally as an experiment in order to see whether any sort of anthropogenic metal pollution trend could be identified with the earliest Romano-British and medieval towns. Whilst the answer to this still remains a little ambiguous in terms of the possibilities still present for the post-depositional leaching and/or fixing of metals as a result of water table movement and pH/Eh groundwater-sediment change (such as iron/manganese panning), and the complexing of metals such as Cu/Pb/Zn within peat under minerotrophic groundwater conditions (Mighall *et al.* 2002; Mighall *et al.* 2006), the probability is that we are looking at some sort of small but real increase in metal input accompanying (or at least simultaneous with) the growth of the Romano-British and medieval towns of Cambridge. The record for lead is much more convincing than that for copper, but this is perhaps not that surprising given the greater insolubility of the former and also the prevalence of lead within the Romano-British urban environment. Lead thus may be a useful proxy for anthropogenic pollution, early industrial activity, and Romano-British/medieval urbanisation.

The apparent lead/copper anomaly encountered at the top of this alluvial sequence now needs to be checked and the data refined, alongside repeat analyses. The most useful way to present this data in the future may be as a log ratio of Pb/Al or Pb/Ti. If this holds up under further scrutiny and analysis then this should be published as being potential representative example of the use of lead as a proxy for urbanisation during the Romano-British–Post-Roman period. Indeed, it would be very useful to try and find other parallels for this, since examples of the sampling and analysis of

river alluvium/floodplain deposits of this period aren't at all common, as opposed to those involving the sampling of peat bogs and lake cores. One of the most useful comparisons to make would be between a small Romano-British town such as Cambridge and (the alluvial record for) Romano-British London.

The equipment used was an Avaatech XRF Core Scanner (CS XRF) housed within the Department of Earth Sciences, University of Cambridge and operated by Simon Crowhurst (Senior Technician). The Avaatech used an Oxford 100 Watt water cooled X-Ray source with a rhodium 125 μ anode and beryllium window over a voltage range 7–50kV and current range of 0–2mA. X-Ray detection was achieved using a Canberra Silicon Drift Detector, with motion control tracking along the long axis of the core at a position accuracy of +/- 0.005mm, capable of taking samples of cores (rock or soft sediment) up to a maximum length of 1.65m and a diameter of 30–150mm. Avaatech software was used for data acquisition along with Canberra WinAxil software to process the spectral data. Minimum detection limits for iron (Fe) using the CS XRF have been calculated at 50 mg/kg [ppm] (0.05 per cent) and for lead (Pb) at 10 mg/kg [ppm] (0.01 per cent; Poto *et al.* 2015). The six monolith cores were run at three X-ray wavelength bands: 50kV with a Cu filter, 30 second counting time with a 1.0mA current; 30kV with a thin Pb filter, 15 second counting time and 0.5mA current; 10kV with no filter, 15 second counting time, and 0.75 mA current. Certified Avaatech standards SARM-4, KGa-1, JGb-1 and JR-1 (as powders in flat disks covered with Ultralene) were used to check on the calibration of the XRF, and for consistency the highest energy range (10kV) was then tested in between each run (scan) of the cores.

The monoliths were scanned inside their steel monolith tins, all the plastic and cling film having first been removed. The sediment surface was scraped flat (horizontally, at right angles to the long axis of the monolith to avoid downcore or upcore displacement of material) in order to remove any traces of surface contamination or significant topographical irregularities (nb the presence of air gaps or bumps on the surface the sediment adds significant inaccuracy to the scanned data). The X-Ray source track followed a line down the mid-point of each core(s) approx. 5cm distant from the edge(s) of the monolith tin. Scan analyses were conducted every 5mm along the length of the core to analyse for a suite of 22 different elements (Al, Si, S, Cl, K, Ca, Ti, Cr, Mn, Fe, Rh, Cu, Zn, Br, Rb, Sr, Zr, Pb, Ni, Ag, Sn, Ba). The intensity of the various spectral wavelengths were recorded semi-quantitatively (in terms of relative composition) as 'area count' units rather than in parts per million (ppm). Full calibration of the results for this type of sediment would permit the readings to be interpreted as the latter, but for the present exercise the observation of 'trends' in terms of increases or decreases in element representation was considered sufficient to suggest the possibility or not of anthropogenic contribution.

Aluminium and Silicon

Both these elements show a relatively lower area count within the two lowest monoliths (samples 088–087) correlating with what is a largely peat-filled Bronze Age palaeochannel; the highest peaks matching the peaty clay [2077] and gritty soil [2076] horizons overlying the top of the Gault Clay, and also the silt inclusions in the peat above. Higher still is the count recorded just above the clay base of sample 054 within the upper palaeochannel sequence, yet the variation in this that we see within the overlying 1.8m section (samples 054–051) probably reflects an intermittent but generally higher percentage of aluminosilicate minerals resulting from the high clay and washed-in sand contents present within these organic silts, certainly greater than would appear from visual examination of these sediments. The amplitude of these peaks is much the same from about 0.8m depth to the top of the alluvial sequence. Therefore both Al and Si show no particular rising trend(s) across the Iron Age – Romano-British – Post-Roman boundaries.

Zirconium

The area count for this element (Zr) almost certainly relates to the presence of the heavy detrital mineral zircon within the sands and silts washed into the alluvium. The count plot reflects a moderately high but fluctuating record throughout the sequence which is not dissimilar to that for titanium (Ti); as expected this reflects the repeated input of detrital clastic material as fine laminations within the generally organic-rich sediments. There is no particular trend detectable in concentration upwards through the stratigraphic section; rather any differences apparently reflect changes in the lithology of the sediments.

Iron

Not unexpectedly much higher but also considerably fluctuating values of iron and manganese (typically between 1500 and 79000 area counts for Fe) were recorded across both sections of waterlogged sediments infilling the palaeochannel(s). The high incidence of iron probably reflects water table movement and the presence of iron/manganese oxidation fronts within the sediment rather than sediment geology. Thus we see similarly high values in the peat as in the more clay-rich horizons. The correspondence of high iron with detected colour change to red-brown within the light spectrum (as determined by the image data and spectrophotometry as well as visual sediment description) is fairly good, with peaks of 78900 area counts corresponding to the faint yellow-brown oxidised palaeo subsoil [2077] recorded above the Gault Clay top within the base of the Bronze Age palaeochannel (at 2.85m depth). Importantly the count plot for iron concentration within the section does not show any obvious change from the Iron Age to the Romano-British and Post-Roman. Relative iron concentration therefore does not match the trends shown by Zn, Cu and Pb. Hydrated iron and manganese oxide minerals can at times be elevated at the incipient iron-manganese pan boundaries. However, there is no particular evidence to show that this is taking place here.

Zinc

The plotted concentration trend for zinc in some respects mimics that for copper and lead, although the amplitude of the plotted peaks is much greater, suggesting more variability in its concentration, and also by inference more evidence of mobility and post-depositional movement. There is some suggestion of a rising trend from 0.5m depth up to the top of the upper palaeochannel section, thus from the Romano-British to the Post-Roman periods.

Copper

Copper is generally in low concentration throughout the sediment sequence; the highest values (of between 1500–2000 area counts) correspond to the peat-filled Bronze Age palaeochannel, and the lowest (of around 300 counts) with the Middle-Late Iron Age alluvium sequence between 1.85m and 0.5m depth. A very slight but steady rise (trend) can then be seen from 0.5m up to the top of the section. The change is very small, but at least it is a consistent rise over the Romano-British and Post-Roman section interval (from 389 to 690 area counts). The latter doesn't obviously relate to changes in sediment type, yet lower down in the core section(s) we can see a number of differences which clearly do. At 2.85m depth (within sample 088) the dark peat layer [2077] is associated with a large peak in copper, which then drops in the gritty palaeosoil [2076], rises in the overlying peat [2075], only to drop once again in the silt layer [2074] just below the top of sample 087. At the base of the upper section we also find high copper associated with the disturbed (natural) clay boundary, dropping in the sandy lens above this, and thereafter fluctuating slightly across the organic laminations in the silt. However, throughout the thick overlying sequence of Middle–Late Iron Age alluvium sediments the value of the copper concentration is low and in general remarkably constant (Figure 30).

Lead

Lead is by far the most interesting element in terms of revealing what is probably an anthropogenic trend of increase between 0.5m and the top of the section (Figure 30). The scale of this cannot really be

linked in any meaningful way to sedimentological (geological) differences occurring across the Romano-British [1978] and Post-Roman [1974]–[1973] stratigraphic intervals. Significantly the larger rise that we see for lead (i.e. from 560 to 1257 area counts) nevertheless shows greater variability than the copper, with high amplitude peaks of concentration interleaved with troughs. These troughs in the plot may correspond with increased clastic sediment flow into the organic silts; the higher levels of aluminosilicates present proportionately lowering the base metal concentration. At the base of the palaeochannel (sample 088) we likewise see high peaks of lead which clearly correspond to the lowest level of peat deposit [2077] above the truncation surface of the Gault Clay. Metals have concentrated at this point, yet the cause of this would appear to be entirely geological or at least post-depositional.

DISCUSSION

The archaeological investigations at the WYNG Gardens site are of some significance, as they represent the largest area excavated in this part of Cambridge to date. They therefore provide an 'anchor' project, which allows the results from smaller often keyhole scale investigations to be better contextualised. Although predominantly naturogenic in nature the investigation of the Middle/Late Bronze Age–Late Bronze Age/Early Iron Age palaeochannel of the river Cam and Mid–Late Iron Age alluvial deposits greatly improve our understanding of the area in Prehistory, particularly in light of the pollen evidence. In conjunction with other work it is now possible to tentatively reconstruct the nature of the Holocene river Cam at this point (Figure 31). Romano-British activity spanning the late 1st–late 4th centuries included the rear boundary of the lower town/suburban settlement fronting onto Bridge Street, waterside activity and inhumation burials. This modifies somewhat our understanding of the scale and nature of the overall settlement (Figure 32). After a hiatus in human activity and continued deposition of alluvium the area was reclaimed in the 11th–12th centuries, this was probably linked to the enclosure of the area by the King's Ditch in the mid-12th century. The significant proportion of Stamford ware from the ceramic assemblage of this phase is suggestive of riverine trade (Figure 25.3–4). During the 13th–15th centuries there is relatively sparse evidence for activity and the investigated area was probably part of the garden or curtilage meadow of a property with its main occupational focus to the west. Evidence that the occupation was nonetheless of high status is suggested by a 13th-century Saintonge ware pitcher (Figure 25.5).

Occupation increased markedly in the 16th century, when the area was sub-divided into nine plots, probably by St. John's College after it acquired the site in 1533. There is evidence for communal facilities shared between the plots, including a stone-lined cesspit and a well whilst some pits contained significant quantities of limestone that appears to represent ballast from vessels engaged in riverine trade. There was further investment in the early/mid-17th century, with the construction of a substantial cellar plus a communal well and privy with associated drain. In 1791/5 the area was converted into a garden and significant quantities of material were deposited, including some marked ceramics that derive from St. John's College

(Figure 26). Few features associated with the 19th-century garden were identified and then in the early 20th century a range of terraced structures were constructed.

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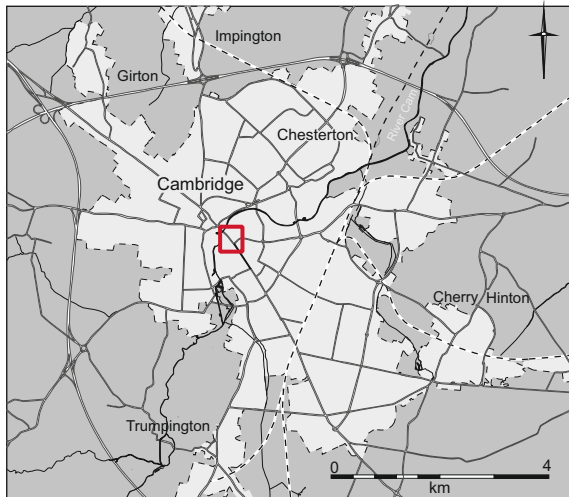
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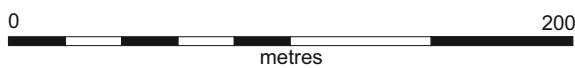
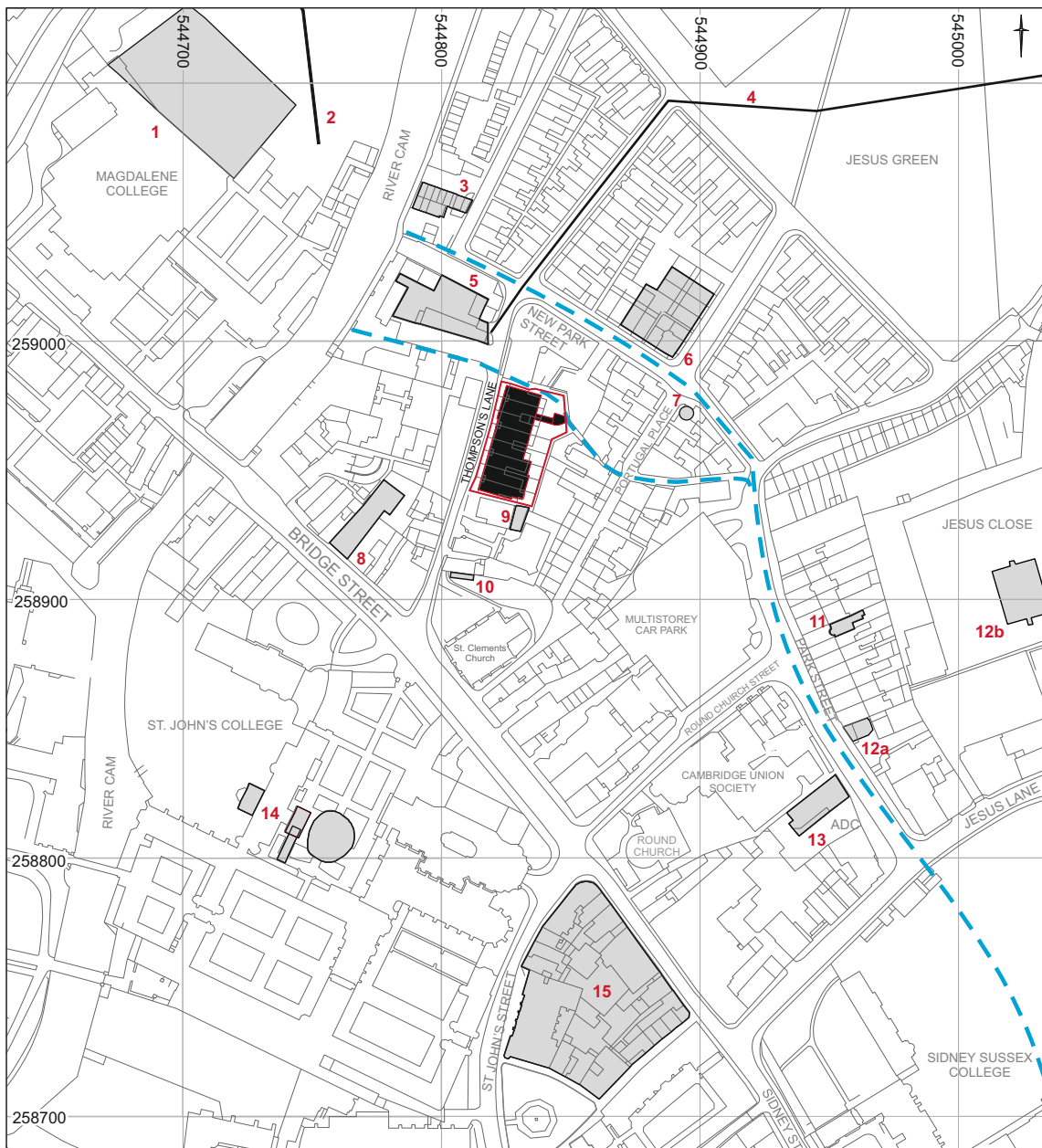
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1. Magdalene College New Library
2. Magdalene College 1910
3. Riverside, Thompson's Lane
4. 33kv Reinforcement Cable
5. 24 Thompson's Lane
6. Thompson's Lane Racquet Courts
7. New Park Street 1997
8. 28 Bridge Street
9. 5 Thompson's Lane
10. Old Vicarage, Thompson's Lane
11. 11 Park Street
12. Jesus College West Court
13. ADC Theatre
14. St. Johns College 1991-93
15. Corfield Court/Old Divinity School



--- Postulated line of King's Ditch

- St Clement's Gardens excavation area
- Selected other areas of archaeological investigation

Figure 1. Location map

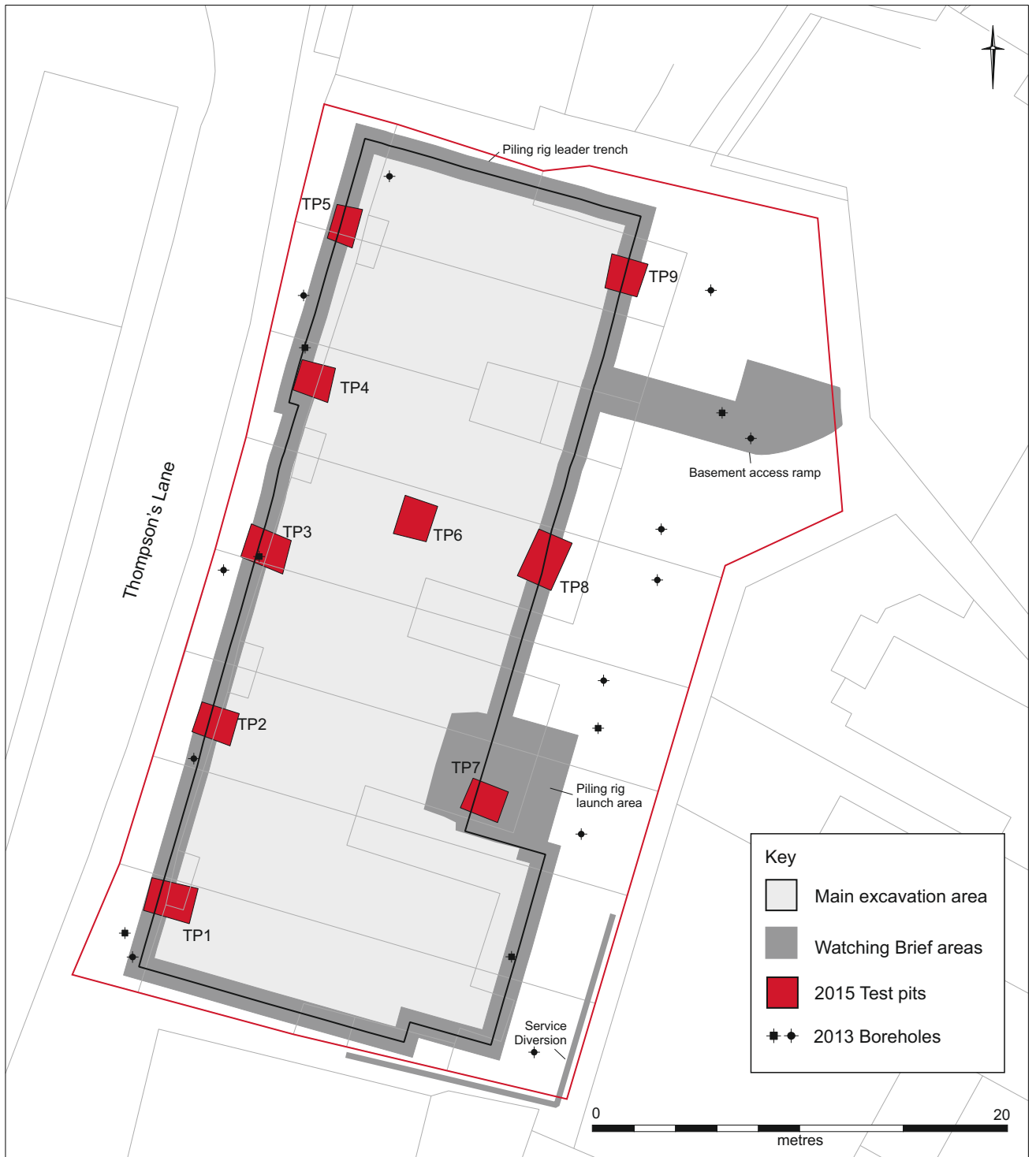


Figure 2. Site plan

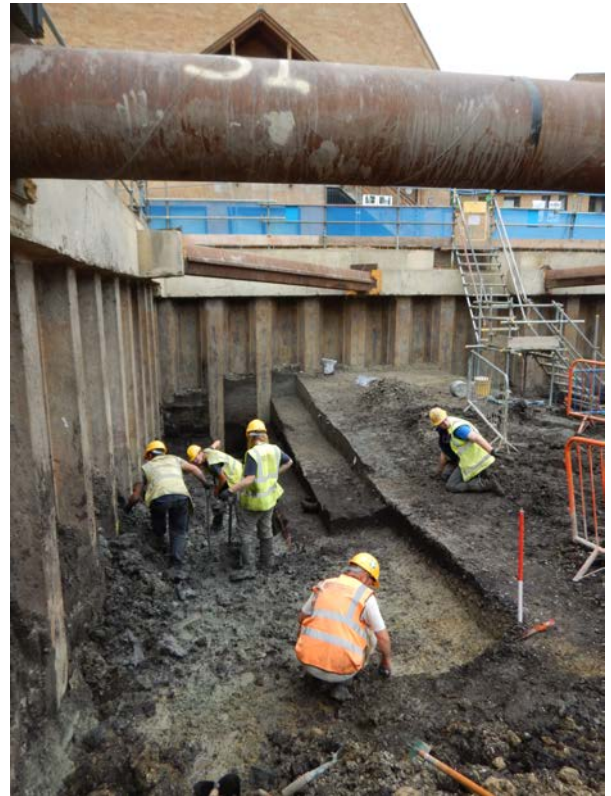


Figure 3. Views of the excavations: general working shots, open day and timber recording



Figure 4. Plan of all cut features and excavated slots



Figure 5. Plan of Prehistoric features

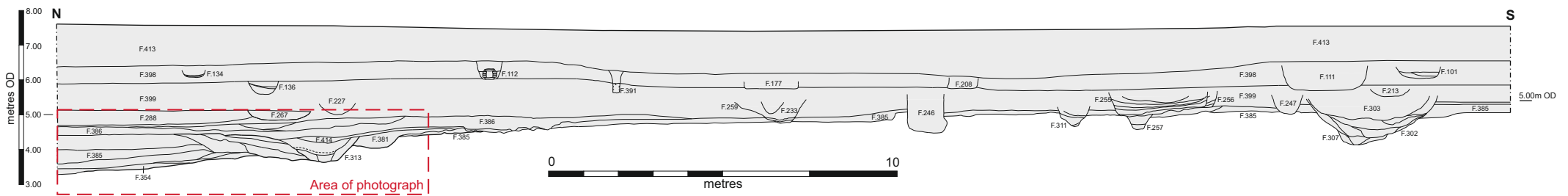
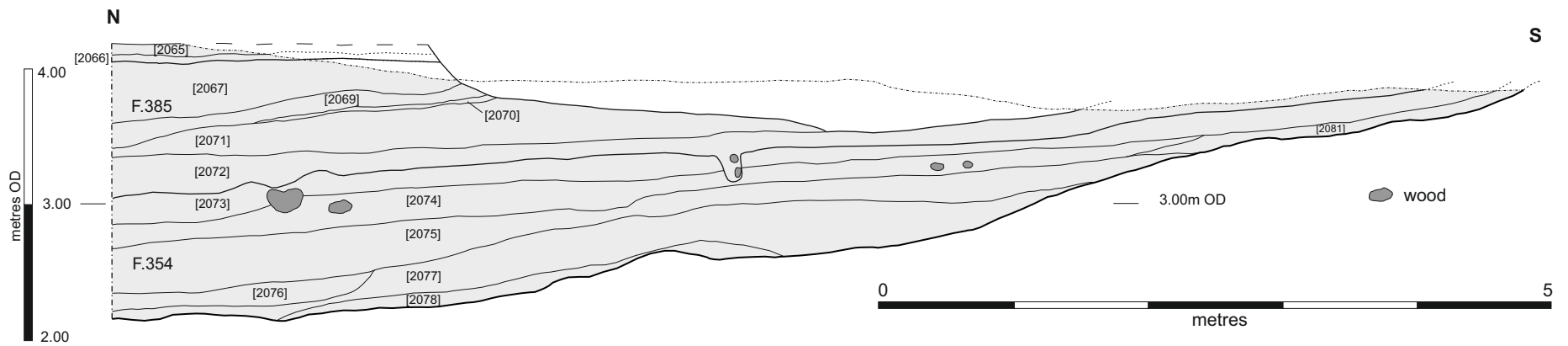


Figure 6. Principal section of site and general view of the lower portion (northern end) of section



Figure 7. Section through the deepest portion of the channel F.354 plus oblique view of section



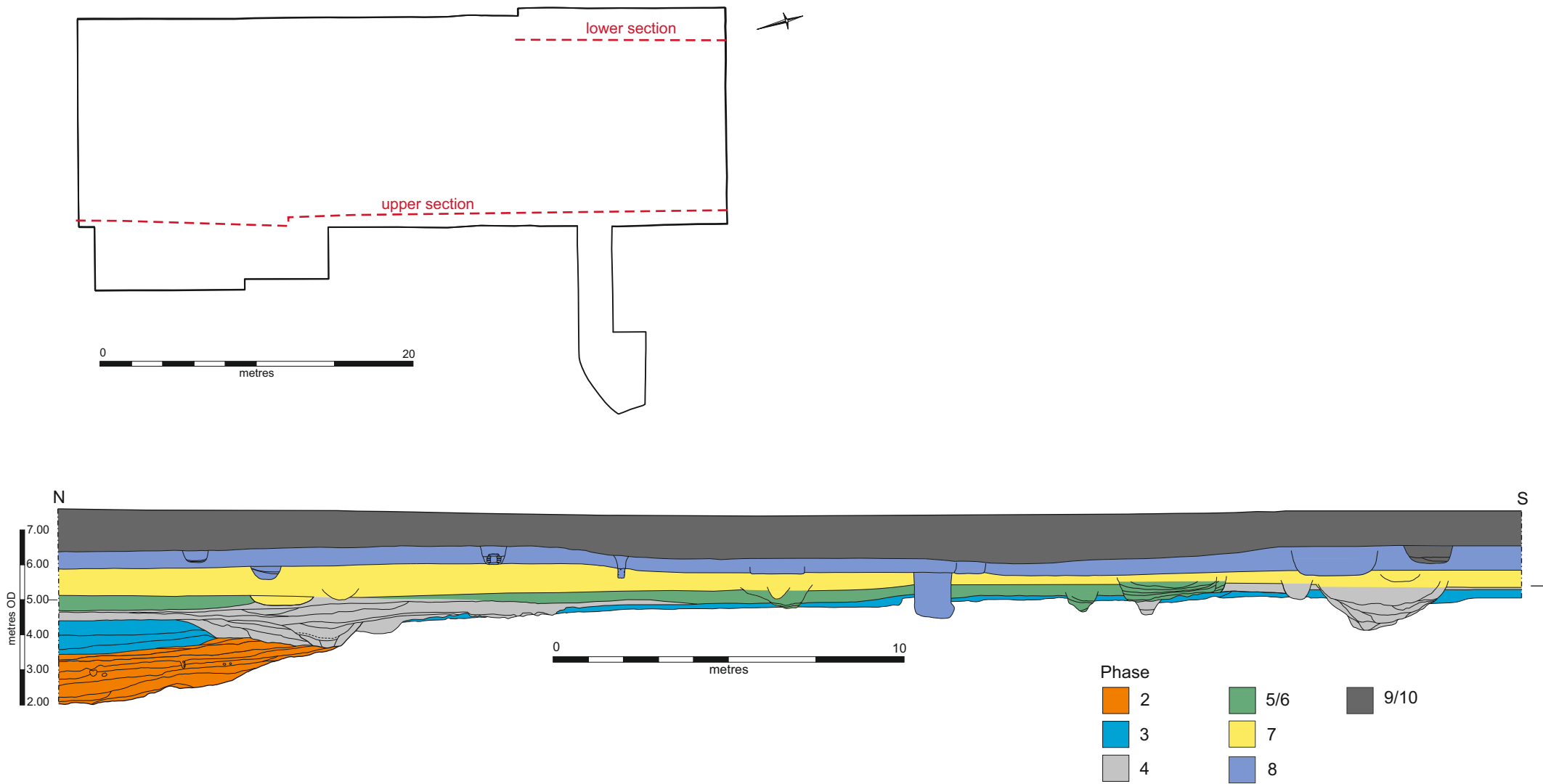


Figure 8. Combined and phased section

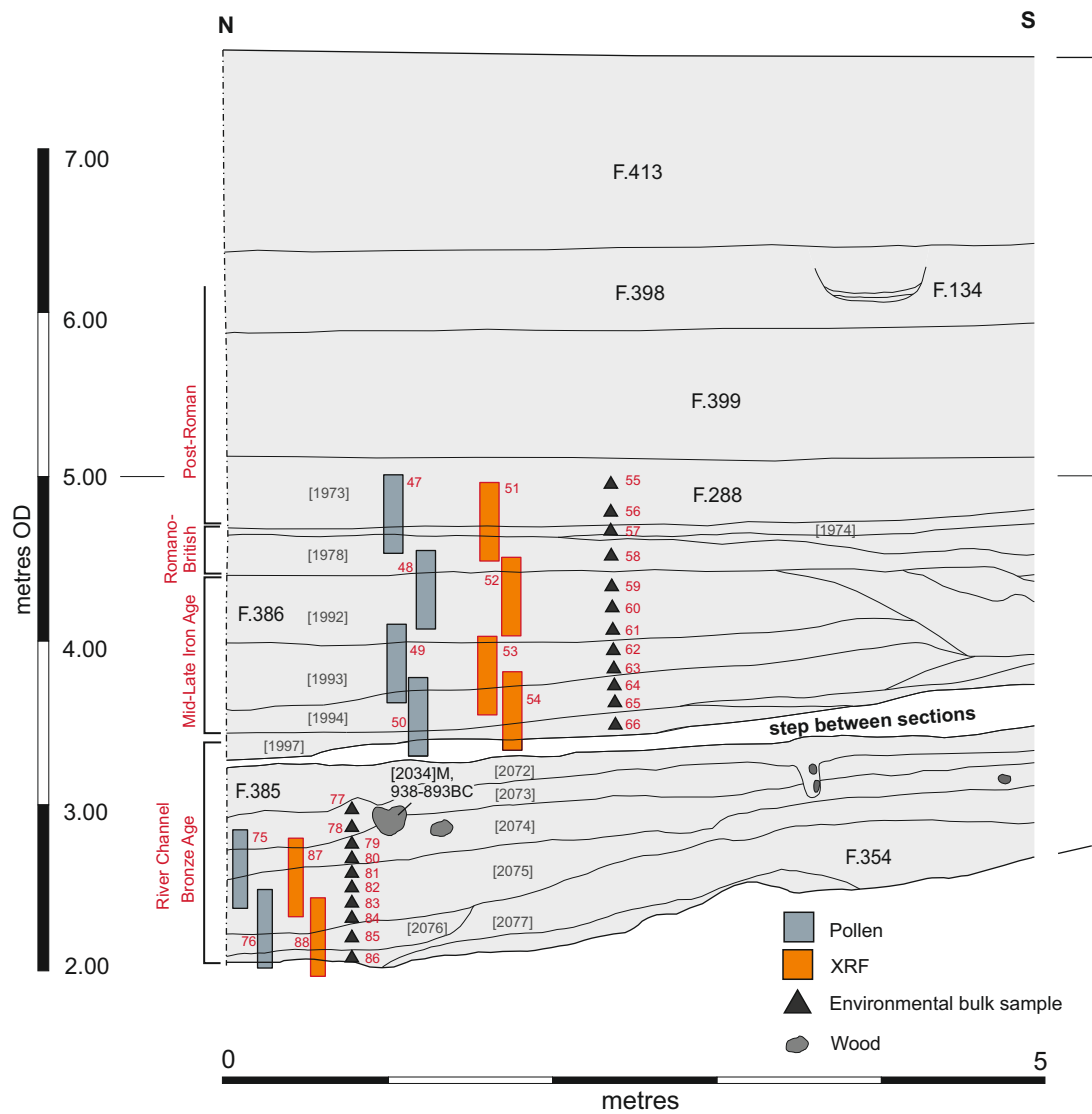


Figure 9. Sampling of channel F.354 and later alluvial sequence, plus view of sampling main section (facing north-east)

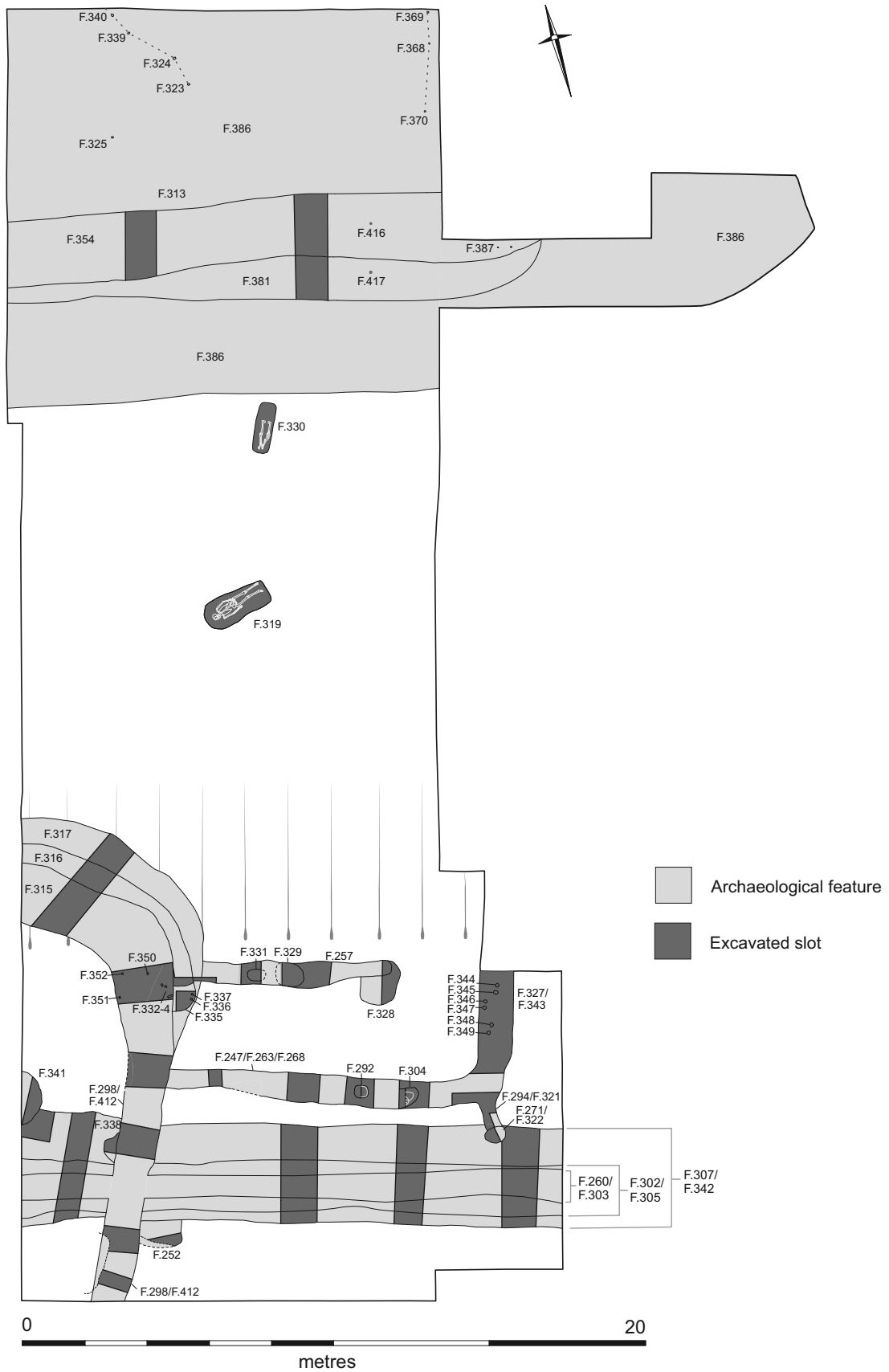
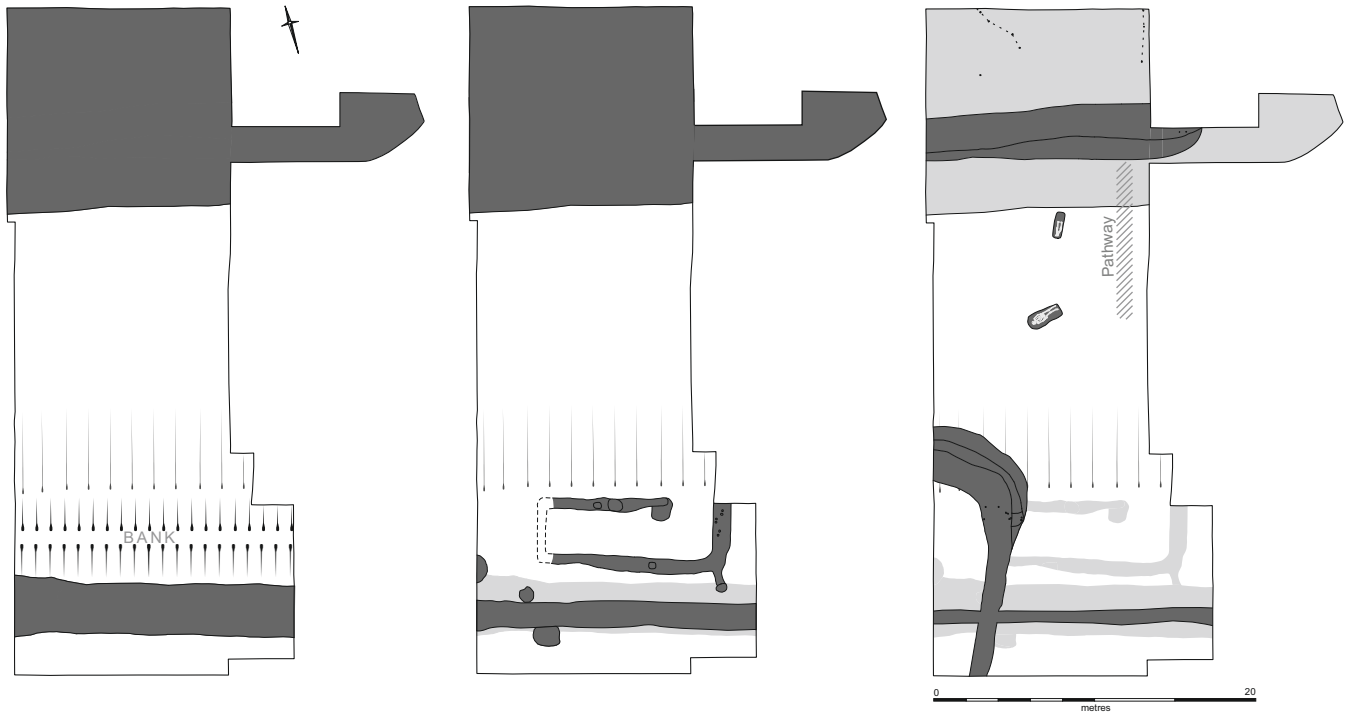


Figure 10. Plan of Romano-British features



Late 1st - mid 2nd century

Mid 2nd - mid 3rd century

Mid 3rd - mid / late 4th century



Figure 11. Phasing of Romano-British features (top) and view of Roman-British features within southern part of the excavation area facing southeast (below)



Figure 12. Views of main west-east aligned Romano-British ditch (F.307 etc.) and pottery deposits in the base (F.342), both facing east

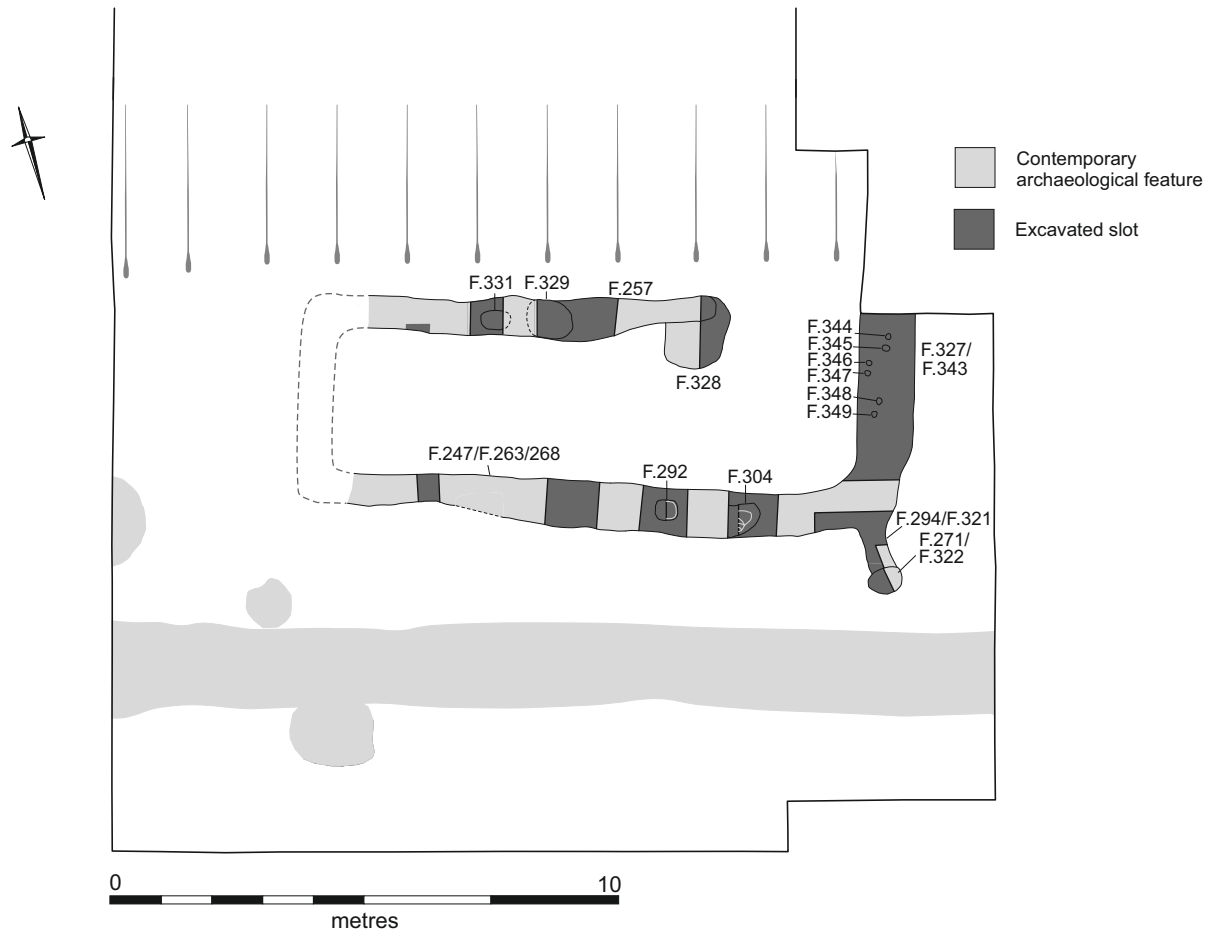


Figure 13. Plan of Romano-British structure, plus view of posthole F.331 in palisade trench F.257 facing east



F.319



F.330

Figure 14. Romano-British inhumations F.319 and F.330

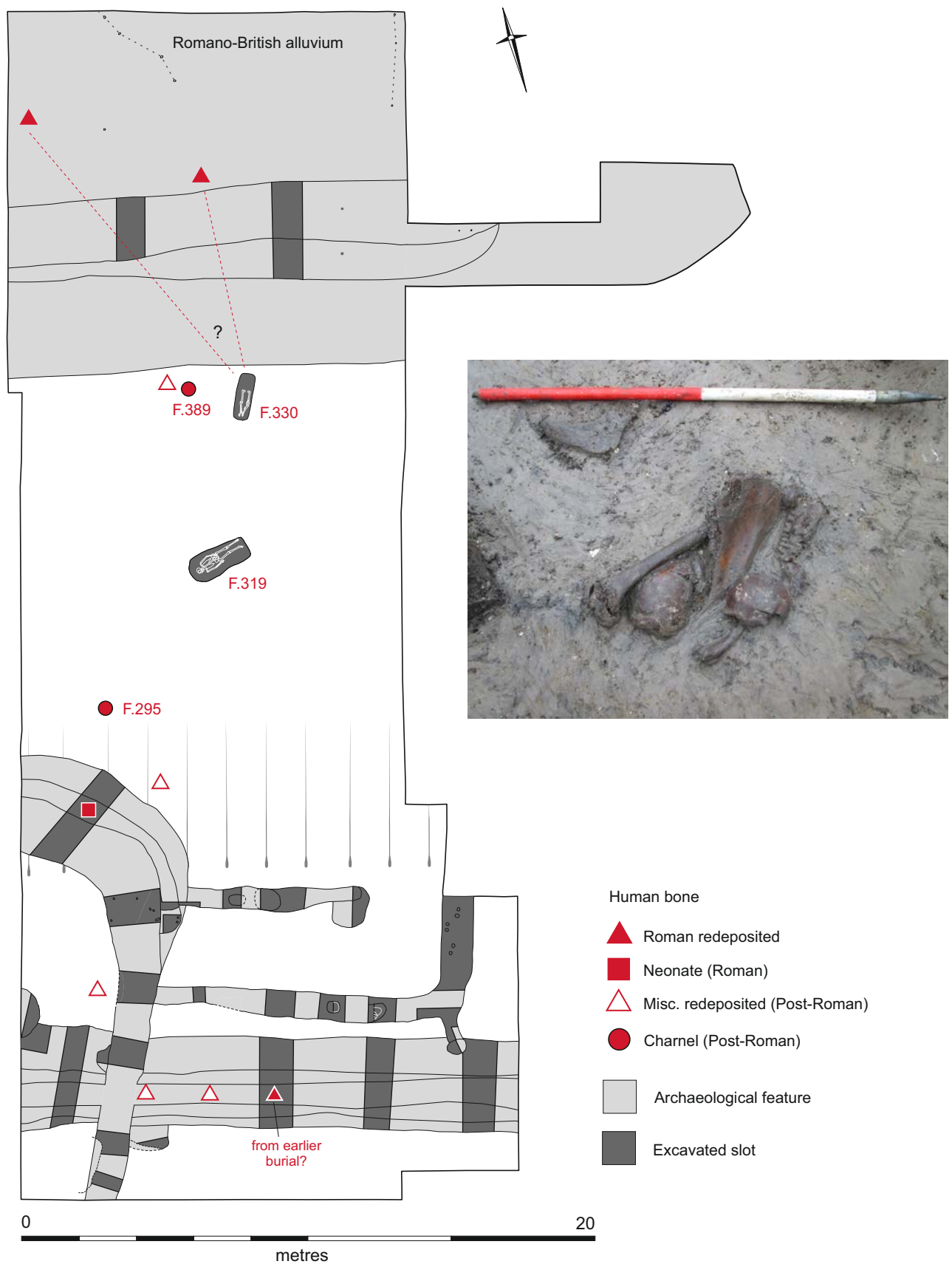


Figure 15. Plan of site showing Romano-British burials and other human bone, plus view of charnel group [1512] F.389

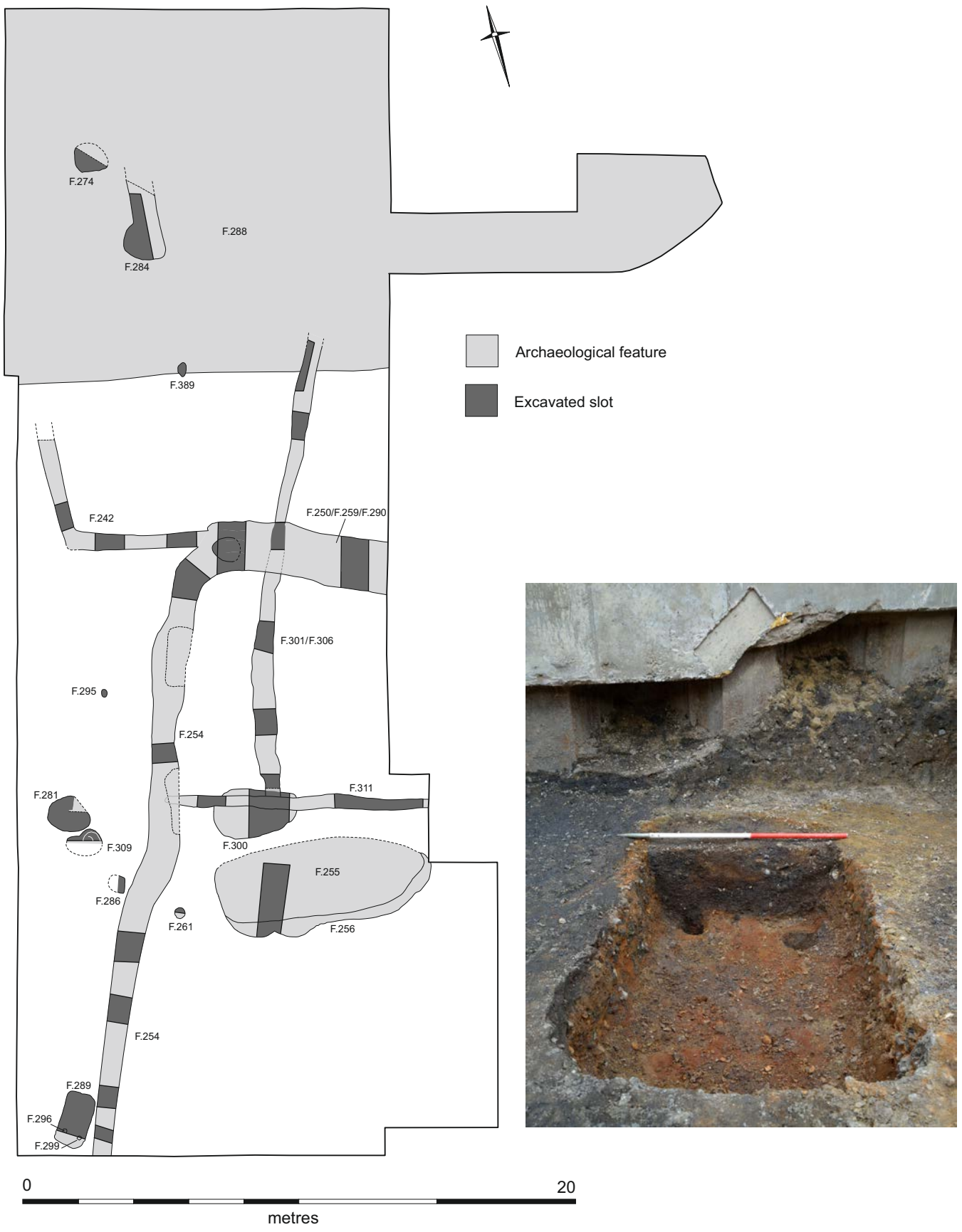


Figure 16. Plan of 10th -12th century features and view of cesspit F.289, facing south

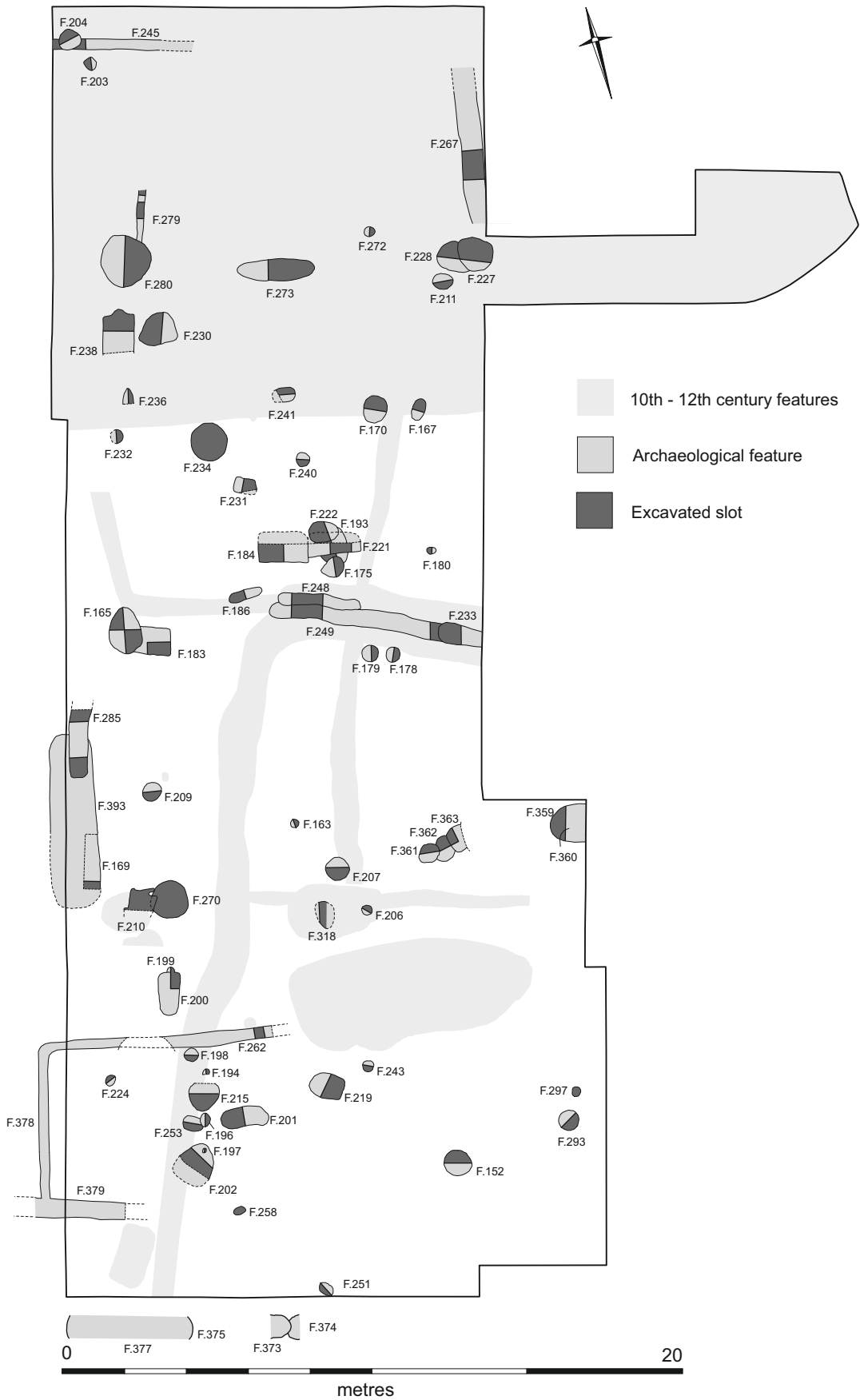


Figure 17. Plan of 13th -15th century features

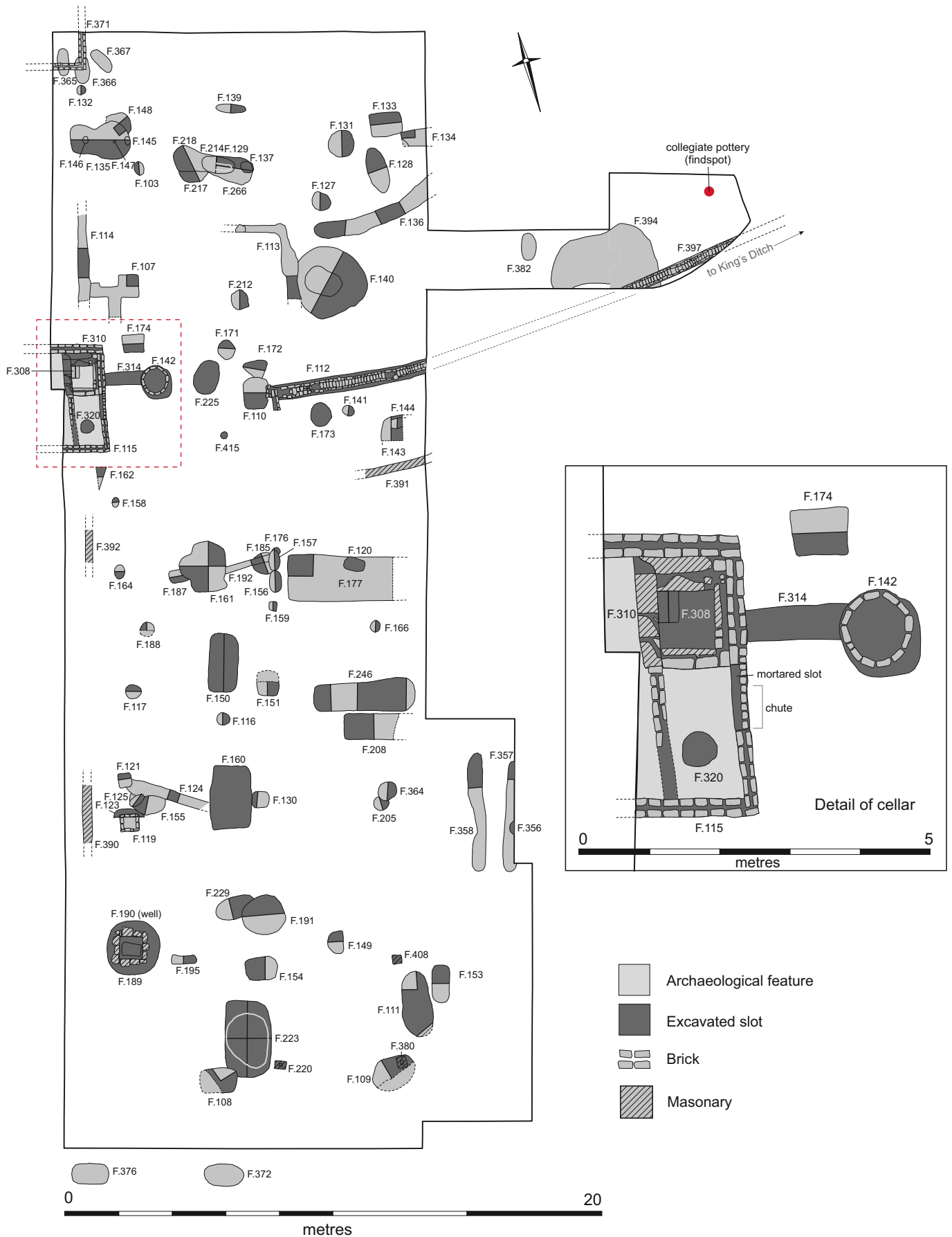
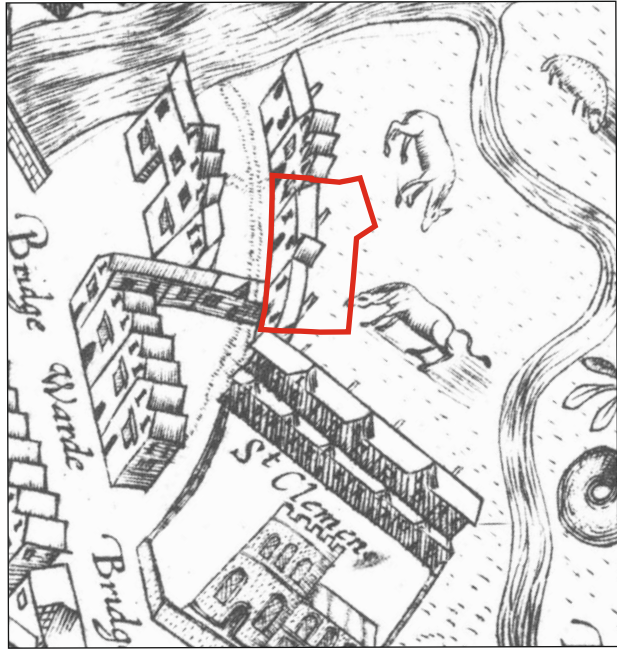
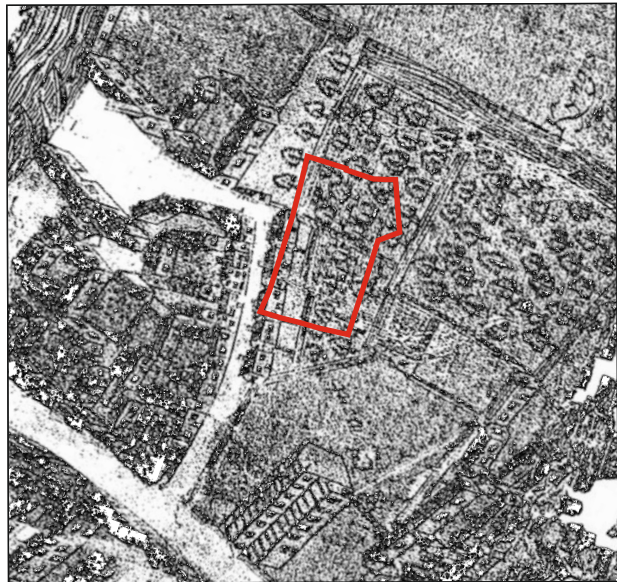


Figure 18. Plan of 16th - late 18th century features

Richard Lyne, 1574



John Hammond, 1592



David Loggan, 1688



Figure 19. 16th-17th century depictions of the site

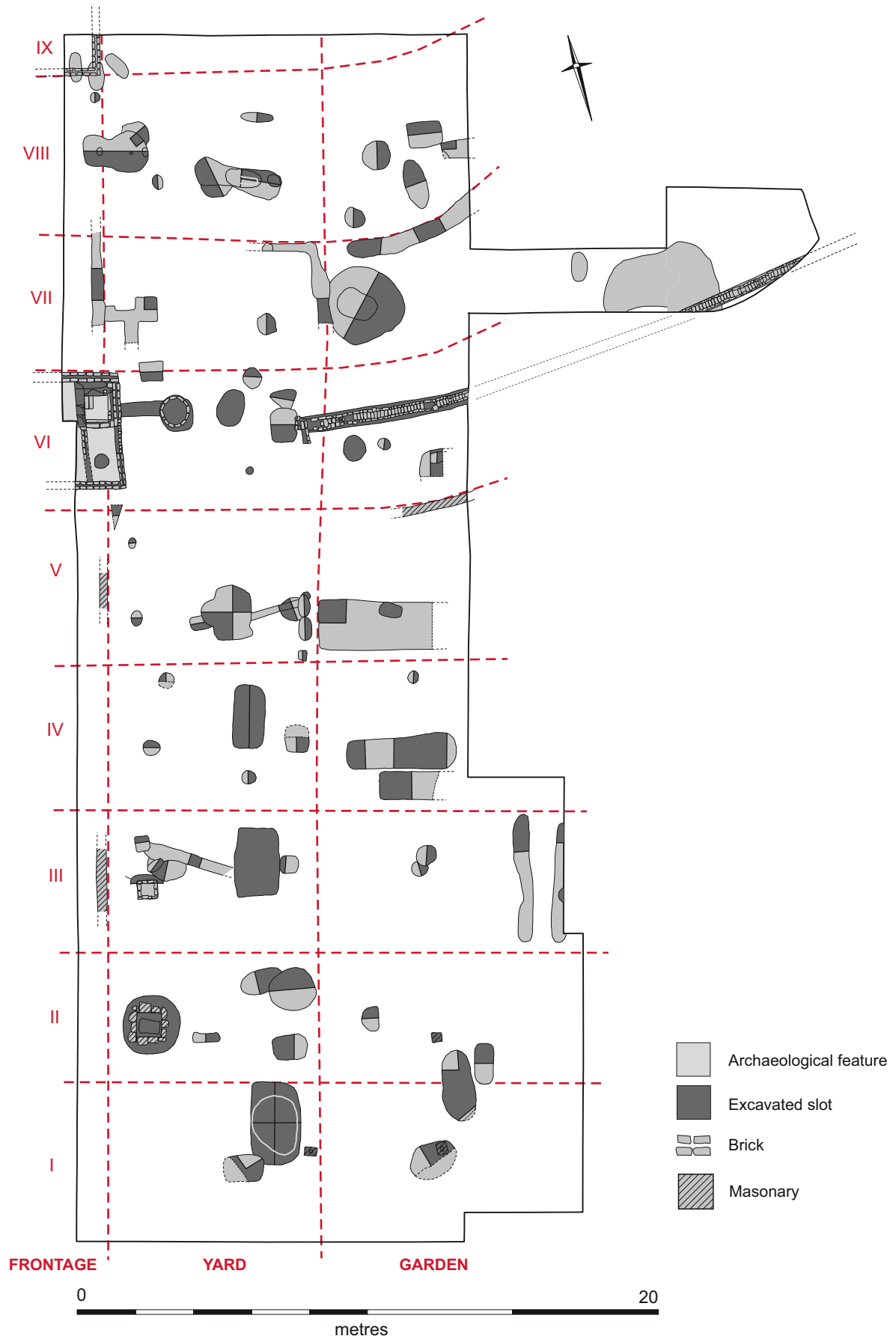


Figure 20. Putative 16th - late 18th century divisions of site



Figure 21. Views of cellar F.115 facing southeast (upper left), top of shaft F.310 facing north (upper right), bottom of shaft F.310 facing south (middle right), well F.142 etc facing east (lower left) and drain F.112 facing southeast (lower right)

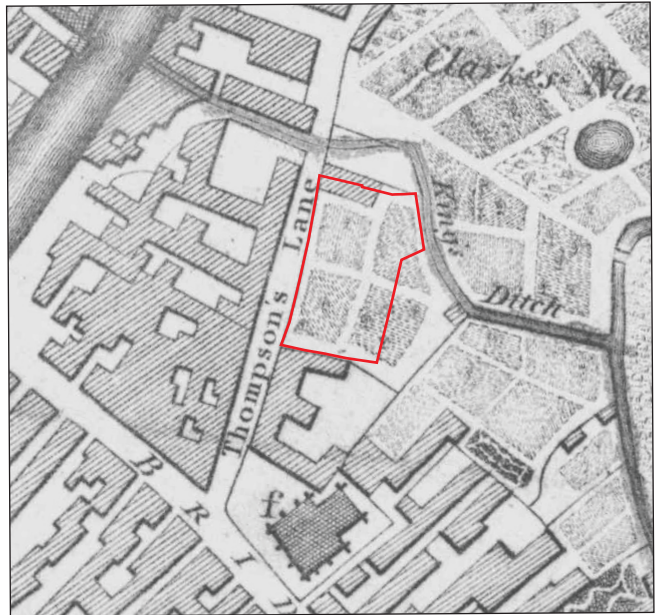


Figure 22. Views of cesspit F.190 throughout excavation facing east (left) and partially stone-filled pits F.150 facing southeast (upper right), F.160 facing east (middle right) and oven F.135 facing west (lower right)

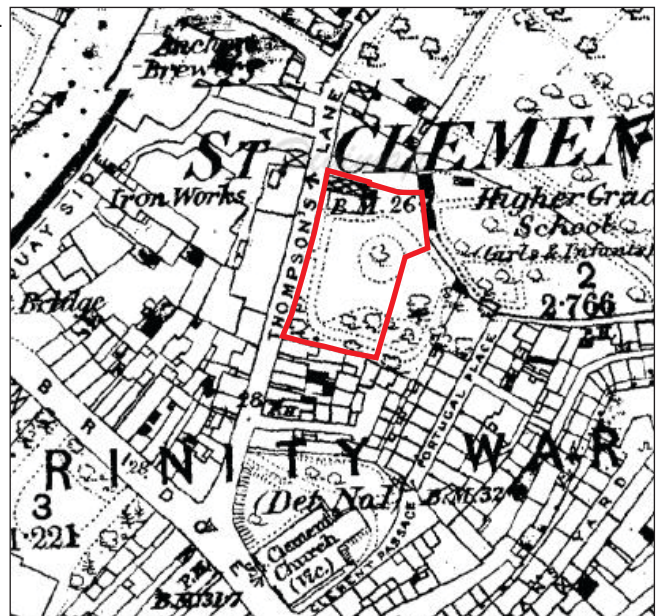


Figure 23. Plan of late 18th - early 20th century features

William Custance, 1798.



1886 1st Edition Ordnance Survey map.



1:2500 2nd Revision 1923 Ordnance Survey map.

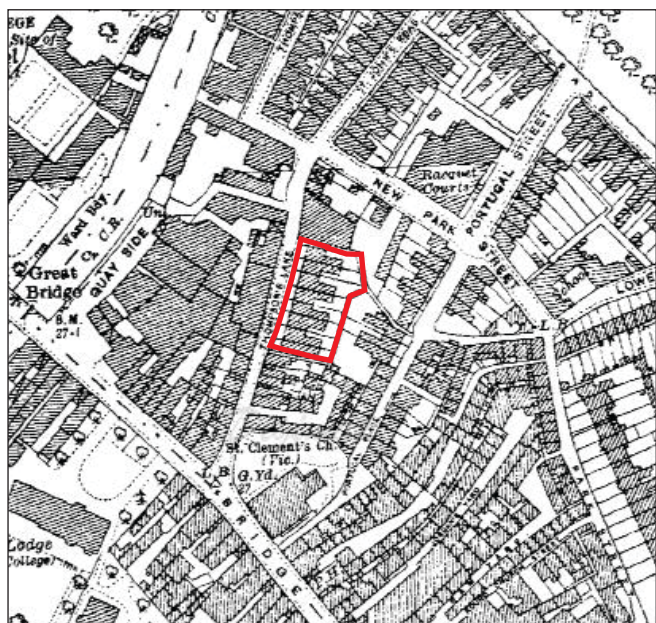


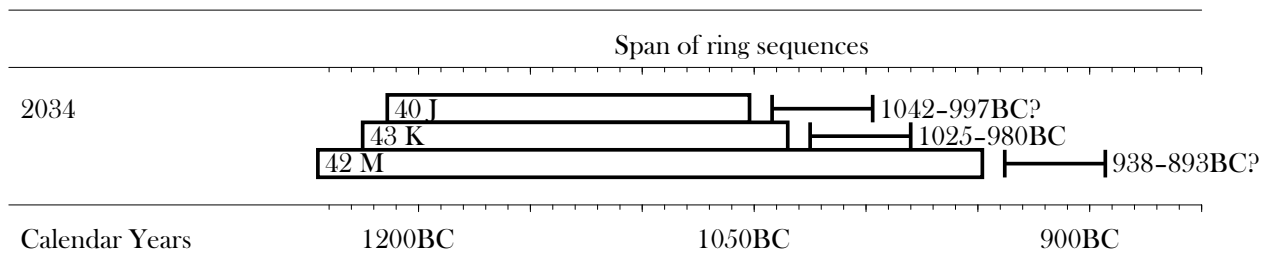
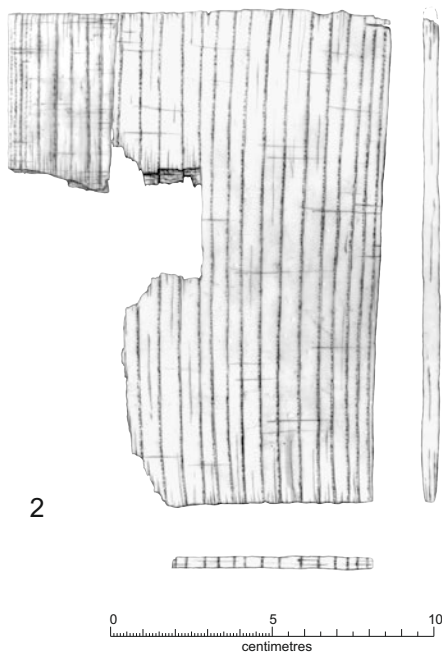
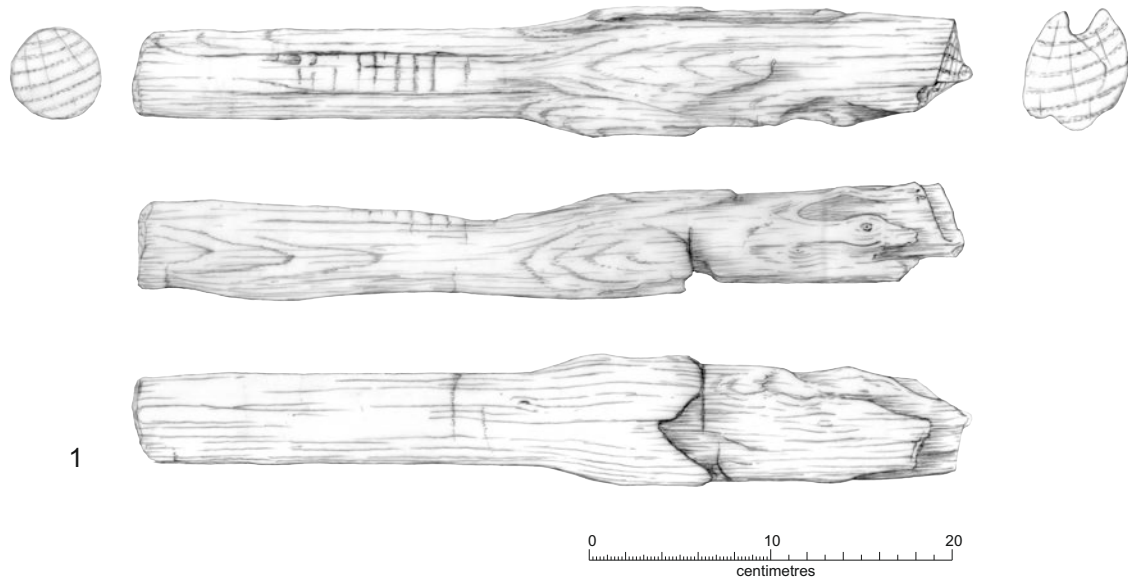
Figure 24. Late 18th - early 20th century depictions of the site



Figure 25. Selected finds: 1) Graffiti Pio(t)ri(x) on 2nd-century Samian beaker sherd F.400 [1601] <1789> 2) 12th-14th-century copper-alloy buckle F.398 sf.35 <10185> 3-4) Groups of sherds from semi-complete Stamford ware vessels: two-handled pitcher F.401 [1658] <1842> and jug F.288 [1727] <2275> 5) 13th-century Saintonge ware pitcher F.223 [1475] <2273> 6) Stone with coat of arms 'trial piece' F.310 [1811] <2029>



Figure 26. Pottery deposited in 1791-95: material from cellar F.115 [065] <1038> (upper) and plates associated with St. John's College F.398 [2096] <2290> (lower)



4

Figure 27. Wood 1) possible paddle <001> F.419 [2054] 2) possible box lid <025>/<046> [1928] F.310 3) View of well base plate F.142, facing east 4) Dendrochronology bar diagram

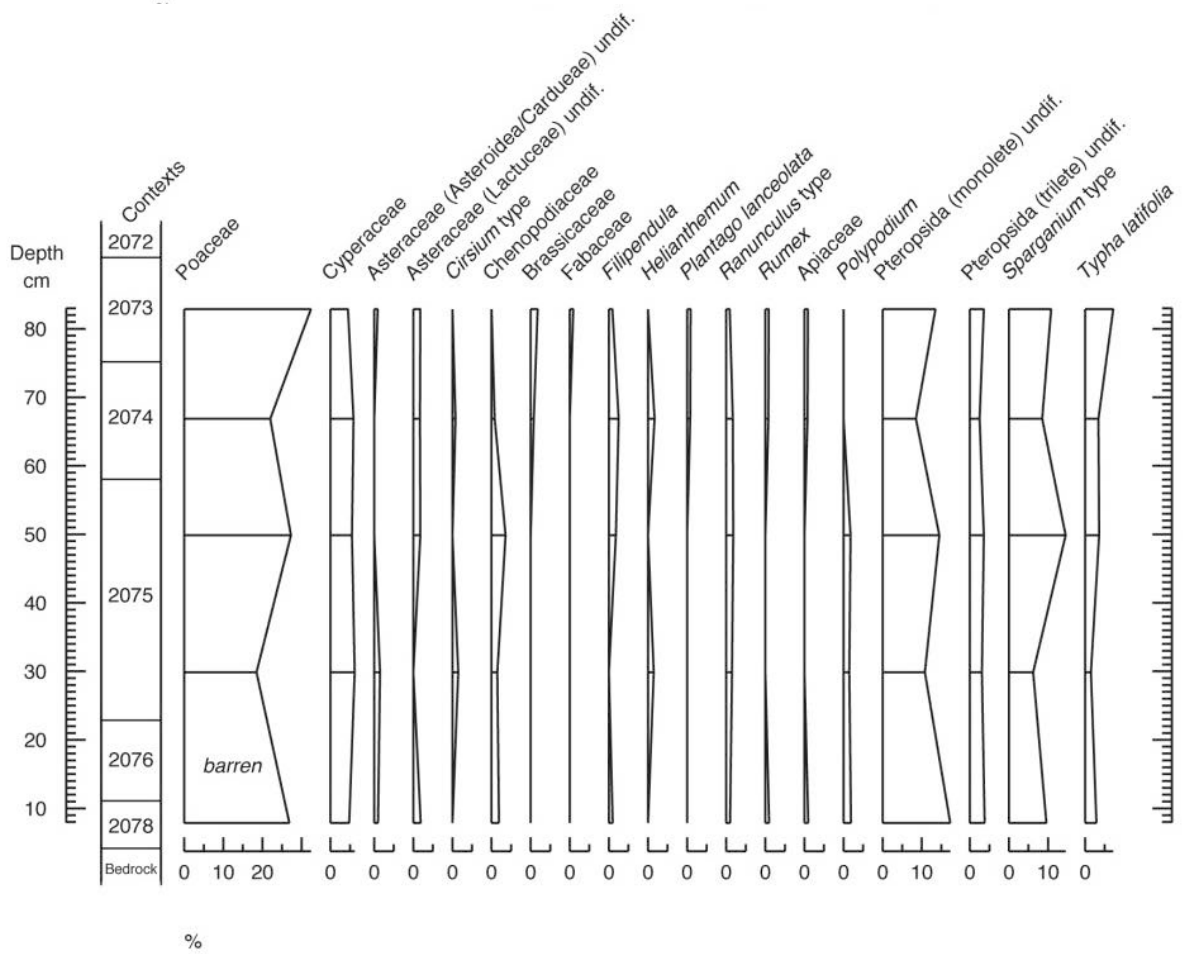
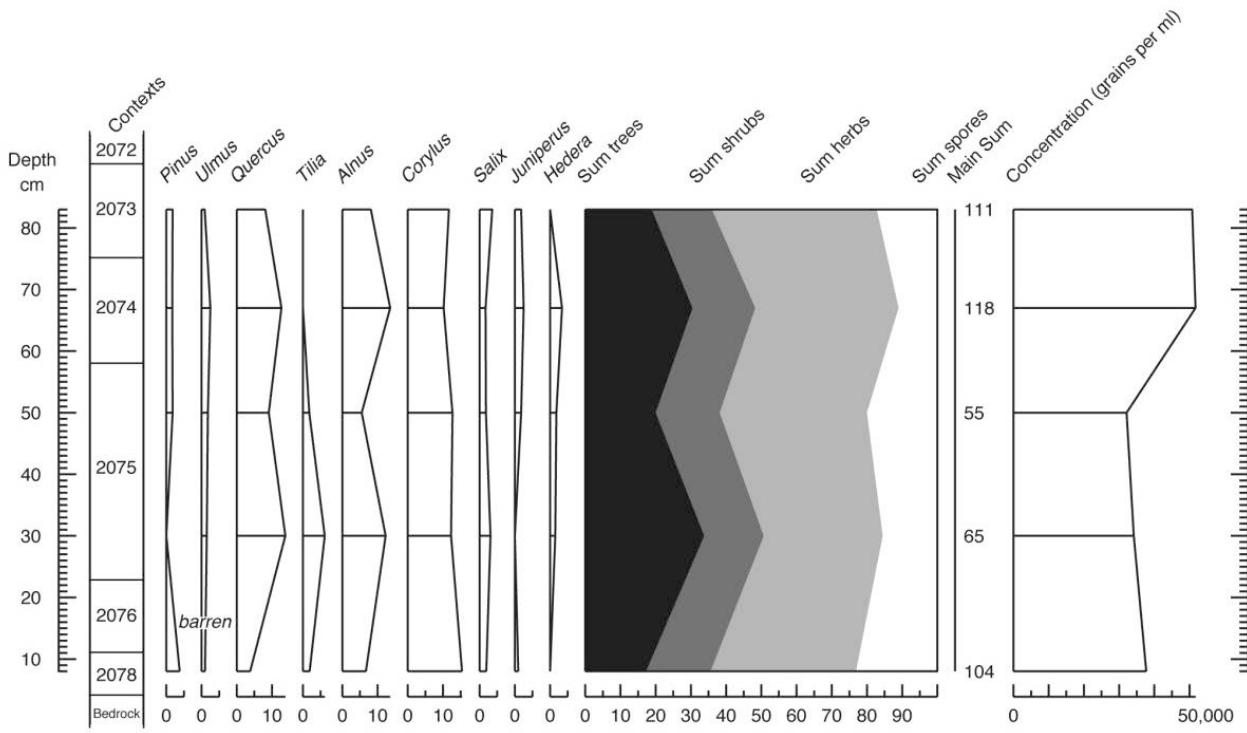


Figure 28. Percentage pollen diagram samples 75-76 shrubs and summary (upper) and herbs, spores and aquatics (lower)

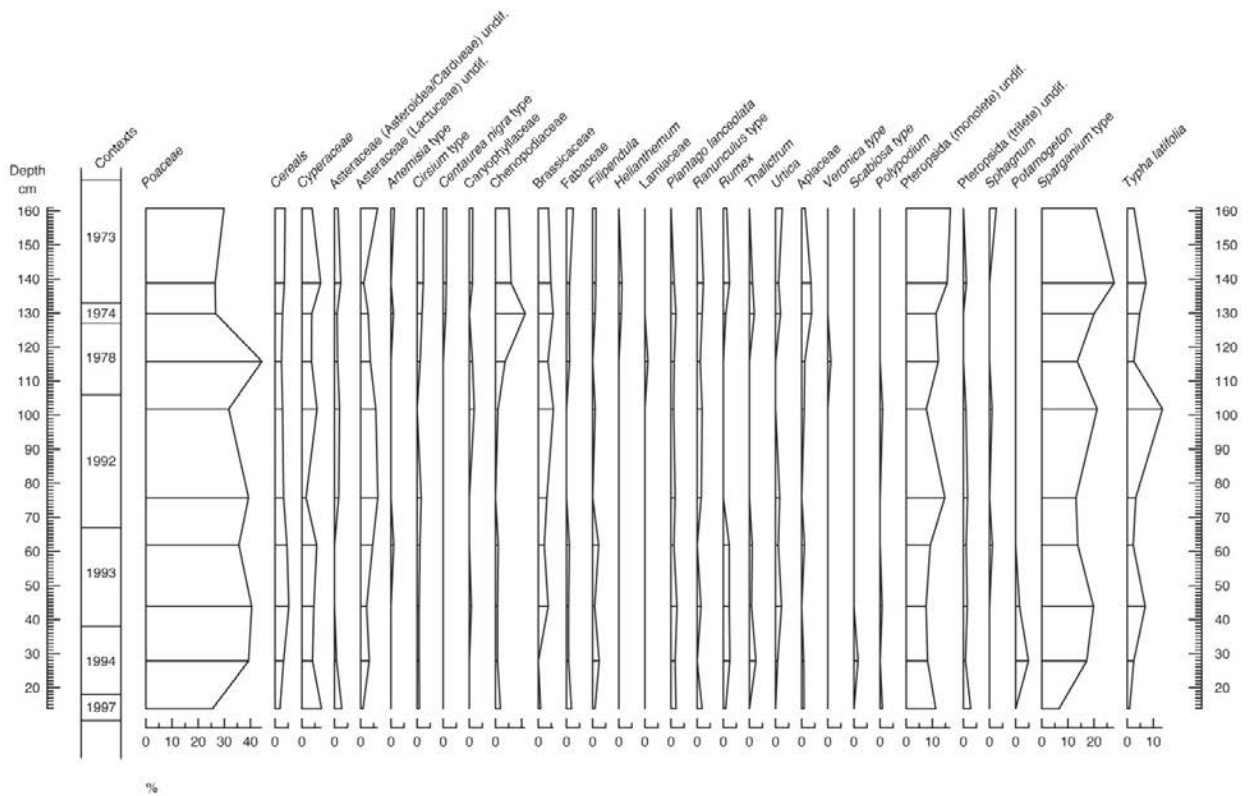
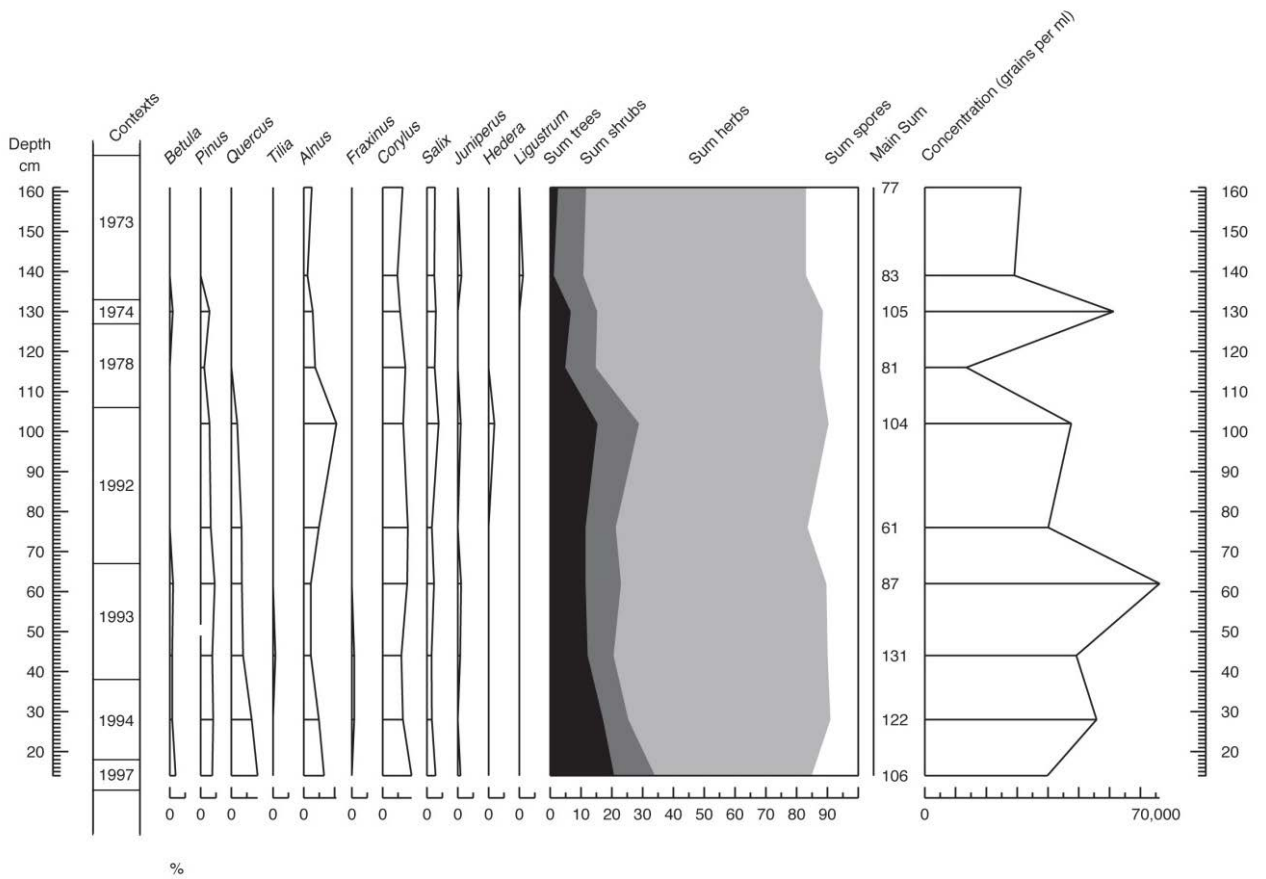


Figure 29. Percentage pollen diagram samples 47-50 shrubs and summary (upper) and herbs, spores and aquatics (lower)

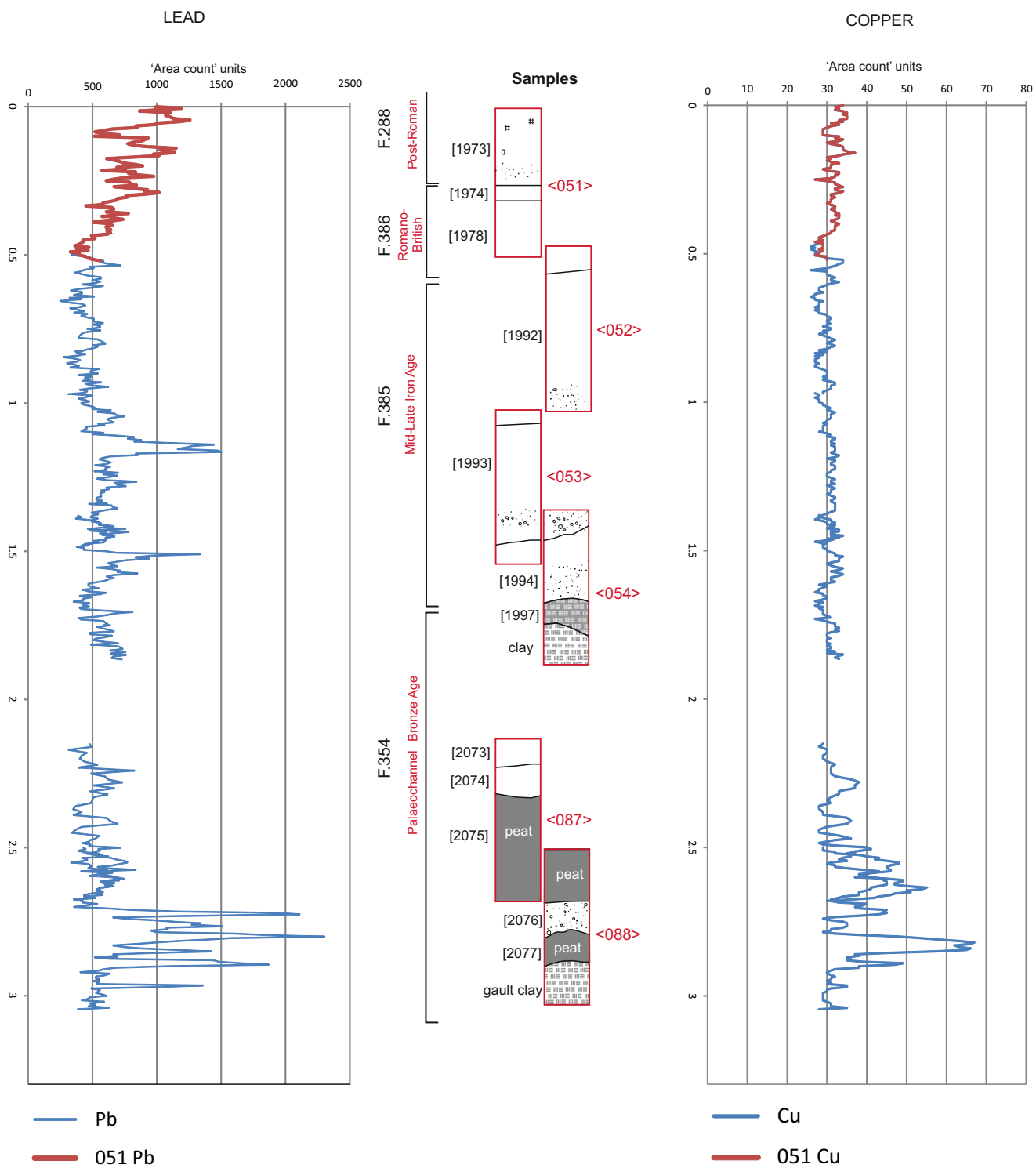


Figure 30. XRF results, recorded semi-quantitatively as 'area count' units

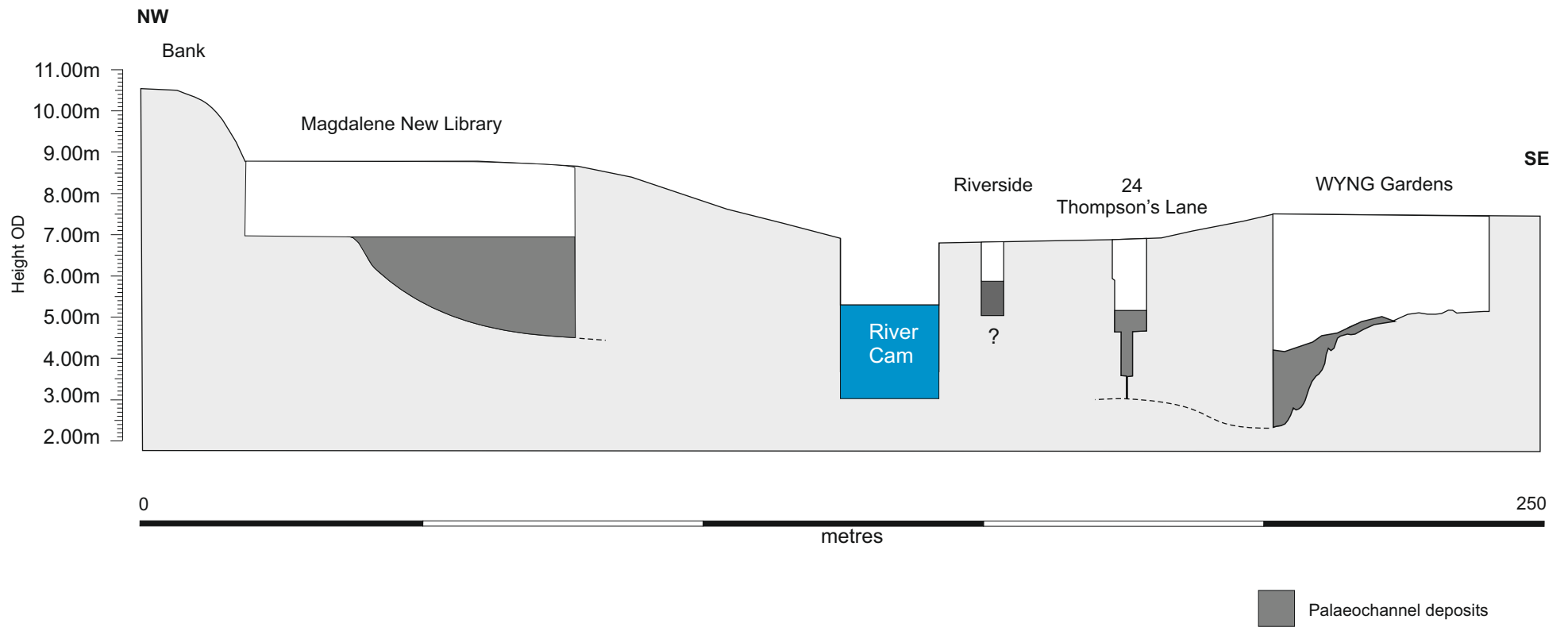


Figure 31. Schematic section across River Cam palaeochannel with exaggerated vertical scale

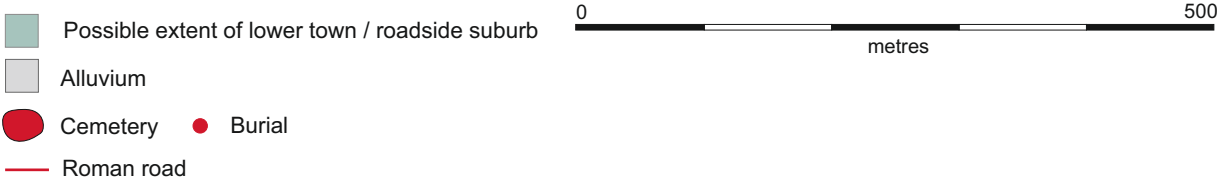
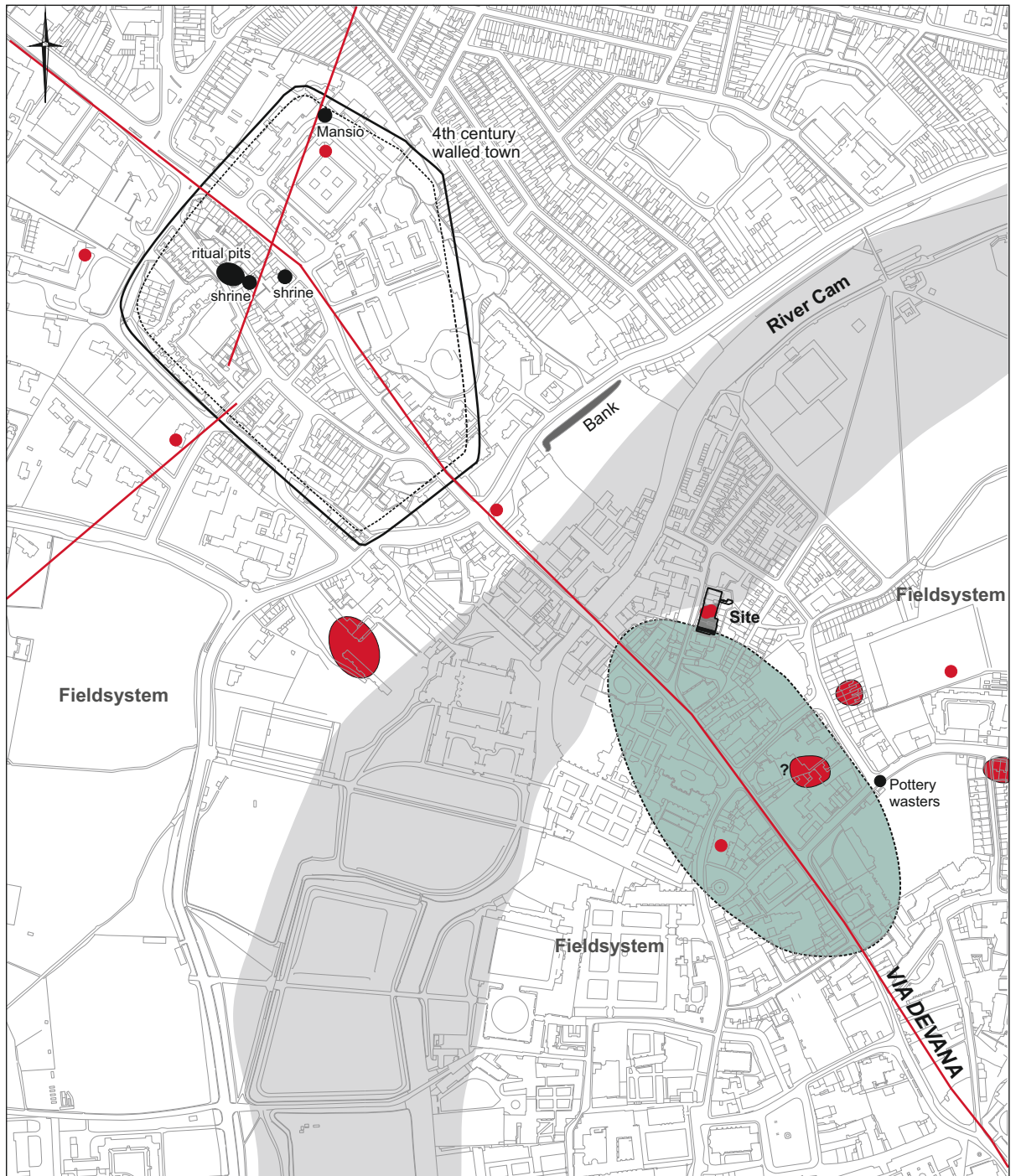


Figure 32. Romano-British lower town / suburban settlement

APPENDIX 1: FEATURE TABLE

Dating evidence: Pt – pottery, TP – tobacco pipe

F. no	Contexts	F. type	Phase	Sub-phasing /dating	Length (m)	Width (m)	Depth (m)	Dating evidence
100	1000-02	Cellar	9		1.15+	1.15+	0.2+	Brick type
101	1003-05	Soakaway	9		0.6	0.55	0.15+	Drain type
102	1006-08	Footing	9		7.6+	2.15+	0.26+	Pt, TP
103	1009-10	Posthole	8		0.57	0.38	0.09+	Strat. only
104	10017-20	Footing	9		2.0+	1.5+	0.4+	Pt
105	1022	Drain	9		2.15+	0.2	0.2+	Drain type
106	1023	Drain	9		7.6+	0.2	0.2+	Drain type
107	1024, 1050	Wall	8		1.5+	1.5+	0.5+	Brick type
108	1029-31	Pit	8		1.25+	0.85+	0.5+	Pt
109	1032-35	Pit	8		1.7+	0.7+	0.17+	Pt (residual)
110	1037-39	Robber cut	8	17th- late 18th	1.15	0.85	0.25+	Pt
111	133, 1041-42	Pit	8		2.25	1.05	0.55+	Pt
112	1045-49, 2094	Drain	8	17th- late 18th	18+	0.6	0.3+	Pt, TP
113	1027, 1051	Wall	8		3.1+	0.55	0.16+	Pt
114	1060-61	Wall	8		1.0+	0.42	0.1+	Pt (residual)
115	2, 61-69, 71-72, 80-81, 1068-76, 1709, 1863-64	Cellar	8	17th- late 18th	4.0	2.0+	3.0+	Brick type, Pt, TP, coin 1737
116	1077-80	Posthole	8		0.52	0.48	0.08+	Strat. Only
117	1081-82	Posthole	8		0.60	0.58	0.3+	Strat. Only
118	Void							
119	1094-97	Soakaway	8	17th- late 18th	0.69	0.26+	0.36+	Brick type
120	1084-86	Animal disposal pit	8	17th- late 18th	0.75	0.45	0.1+	Pt
121	1087-88	Soakaway	8	17th- late 18th	0.53	0.49	0.09+	Brick type
122	1089-93	Test pit	9		0.95+	0.85+	0.75+	Strat. Only
123	1098-1101	Pit	8		0.61	0.15+	0.31+	Strat. only
124	1114-15	Drain	8	17th- late 18th	3.1+	0.45	0.1+	Pt, TP
125	1116-17	Pit	8		0.6	0.4	0.1+	Strat. only
126	1129-30	Posthole	9		0.3	0.3	0.09+	Strat. only
127	1131-33, 1395-96	Pit	8	17th- late 18th	0.63+	0.65	0.4+	Pt, TP, jetton 1650-70
128	1134-35	Pit	8		1.76	0.76	0.16	Pt
129	1154-56	Footing	8		2.1	0.7	0.3+	Pt

130	1138-39	Posthole	8		0.66	0.55	0.1+	Strat. only
131	1140-41	Pit	8		1.0	1.0	0.33+	Pt
132	1144-45	Posthole	8		0.34	0.32	0.18	Strat. only
133	111, 1146-47	Pit	8	17th- late 18th	1.2	0.5	0.33+	Pt, TP
134	1148-51	Pit	8		0.95	0.65	0.2	Pt
135	1182-88	Oven	8		2.26	1.44	0.38+	Pt
136	1152-53,1166- 67	Ditch	8		4.2+	0.6	0.35+	Pt
137	1157-58	Pit	8		0.55+	0.55	0.3+	Pt
138	1159-60	Footing	9		3.3	0.6	0.07+	Strat. only
139	1161-63	Pit	8		1.11	0.35	0.16+	Strat. only
140	1164-65, 1408, 1471-72	Pit	8		1.4	0.94	1.5+	Pt
141	1168-69	Posthole	8		0.41	0.34	0.12+	Strat. only
142	1170-72, 1285, 1801, 1872, 1916, 1930, 1955	Well	8	17th- late 18th	1.16	0.94	3.2+	Brick type, Pt
143	1173-74	Pit	8		1.01	0.91	0.22+	Pt
144	1180-81	Posthole	8		0.35	0.26	0.12+	Pt
145	1189-91	Posthole	8		0.34	0.22	0.18	Pt
146	1192-93	Posthole	8		0.18	0.14	0.14+	Strat. only
147	1194-95	Stakehole	8		0.09	0.09	0.1+	Strat. only
148	1197-1202	Oven	8		0.96+	0.76+	0.31+	Strat. only
149	1206-07	Pit	8		0.84	0.58	0.12	Pt (residual)
150	1208-10, 1236, 1324-25, 1623- 26	Pit, stone- rich	8	16th- 17th	2.2	1.09	1.02+	Pt
151	1211-12, 1237- 38	Posthole	8		0.8+	0.51+	0.62+	Pt
152	1215-17	Pit	7	14th- 15th	0.90	0.82	0.17+	Pt
153	1218-19	Pit	8		0.7+	0.70	0.45+	Pt, jetton 1500- 1580s
154	1345-46	Pit, specialised	8		1.22	0.85	1.14+	Pt
155	1220-21	Pit	8		1.39	1.10	0.27	Pt
156	1222-23	Posthole	8		0.82	0.64	0.05+	Strat. only
157	1224-25	Posthole	8		0.67	0.34	0.08+	Strat. only
158	1226-27	Posthole	8		0.36	0.24	0.07+	Strat. only
159	1229-30	Posthole	8		0.34	0.33	0.06	Strat. only
160	1142-43, 1242- 50, 1289, 1607-12, 1622	Pit, stone- rich	8	16th- 17th	2.4+	1.5	0.75+	Pt

161	1231-34	Pit	8		2.05	1.74	0.20+	Pt
162	1239-40	Pit	8		0.81	0.40	0.21+	Pt
163	1251-52	Posthole	7		0.28	0.28	0.09+	Strat. only
164	1254-57, 1265-67	Posthole	8		0.46	0.42	0.34+	Pt (residual)
165	1258-61	Pit	7		1.40	1.02	0.31+	Pt
166	1262-64	Posthole	8		0.33	0.2+	0.43+	Strat. only
167	1268-69	Pit	7	15th	0.67	0.48	0.19+	Pt
168	Void							
169	1275-76	Pit	7		4.0+	0.68+	0.46+	Strat. only
170	1277-78	Pit	7	15th	0.82	0.80	0.16+	Pt
171	1279-80	Posthole	8		0.74	0.66	0.10+	Strat. only
172	1281-82	Pit	8		0.83	0.75	0.12+	Pt
173	1177-78, 1283-84	Pit	8		2.4	1.4	0.12+	Pt
174	1286-87	Footing	8		0.8	0.65	0.2+	Strat. only
175	1290-91	Pit	7	15th	0.84	0.68	0.11	Pt
176	1292-93	Posthole	8		0.37	0.36	0.06+	Strat. only
177	1294-95	Planting bed	8		4.0+	1.64	0.15+	Pt
178	1296-97	Pit	7		0.53	0.46	0.05+	Pt
179	1298-99	Pit	7	14th-15th	0.55	0.50	0.09+	Strat. only
180	1300-01	Posthole	7		0.29	0.23	0.09+	Strat. only
181	Void							
182	Void							
183	1334-35	Pit	7	14th	1.69+	1.12	0.19+	Pt
184	1305-06	Pit	7	15th	1.60	0.6	0.32+	Pt
185	1307-08	Gully	8		1.8+	0.15	0.09+	Strat. only
186	1309-10	Pit	7	15th	1.0	0.3	0.08+	Pt
187	1311-12	Gully	8		0.6+	0.46	0.08	Pt (residual)
188	1313-14	Posthole	8		0.39	0.26	0.17+	Pt
189	1054, 1318-19	Robber cut	8		1.4	1.25	0.95+	Pt
190	1320, 1366, 1369-71, 1398-1400, 1738-39, 1915, 1931, 1936-40	Cesspit	8	16th-17th	2.0	2.0	1.9+	Pt
191	1326-28, 2022	Well	8	16th	1.53	1.52	1.41+	Pt
192	1330-31	Pit	8		1.62	0.81	0.32+	Strat. only, Pt residual
193	1332-33	Pit	7		1.4+	1.2+	0.35+	Strat. Only
194	1336-37	Stakehole	7		0.20	0.18	0.05+	Strat. Only
195	1338-39	Pit	8		0.94	0.34	0.12+	Strat. Only
196	1340-42	Posthole	7	14th-	0.40	0.34	0.18+	Pt

				15th				
197	1343-44	Stakehole	7		0.18	0.12	0.16+	Strat. Only
198	1348-49	Pit	7	14th-15th	0.40	0.40	0.12+	Pt
199	1350-51, 1354	Posthole	7		0.25	0.22	0.12+	Strat. only
200	1352-53	Pit	7	14th-15th	1.26	0.64	0.14+	Pt
201	1355-56	Pit	7	15th	1.50	0.60-	0.30+	Pt
202	1357-58	Pit	7	13th	1.45	0.39	0.40+	Pt
203	1359-60	Posthole	7		0.42	0.42	0.10+	Strat. only
204	1361-63	Pit	7	15th	0.70	0.69	0.11+	Pt
205	1364-65	Pit	8		0.58	0.55	0.23+	Pt
206	1367-68	Posthole	7		0.35	0.34	0.10+	Strat. only
207	1374-75	Pit	7	14th-15th	0.72	0.70	0.29+	Pt
208	1376-77	Planting bed	8		2.0+	0.9	0.14+	Strat. only
209	1378-81	Pit	7	13th-14th	0.62	0.61	0.20+	Pt
210	1382-85	Footing	7		0.99+	0.74+	0.16+	Pt
211	1389-90	Pit	7	15th	0.70	0.54	0.07+	Pt
212	1391-92	Pit	8		0.70	0.55	0.37+	Pt
213	1393-94	Hollow	7	13th	2.0+	1.12	0.15+	Strat. only
214	1404-05	Pit	8		3.0	0.85	0.53+	Pt
215	1401-03	Pit	7	14th-15th	0.95	0.95	0.05+	Pt
216	1406, 1416-17, 1439-40, 1442-43	Hollow	7	13th	3.0+	0.8	0.72+	Pt
217	1409-12	Pit	8		0.59	0.50	0.31+	Pt
218	1413-15	Pit	8		0.92	0.60	0.47+	Pt
219	1418-19	Pit	7		1.10	0.80	0.65+	Strat. only
220	1421-22	Post-pad	8		0.45	0.35	0.24+	Strat. only
221	1423-24	Pit	7	14th-15th	0.95	0.69	0.06+	Pt
222	1425-27, 1438	Pit	7		0.90	0.80	0.15+	Pt
223	1428-35, 1463, 1710-15, 2003	Well	8	16th-17th	2.83	1.72	1.9+	Pt
224	1444-45	Posthole	7		0.37	0.32	0.06+	Strat. only
225	1448-50	Pit	8		1.26	0.93	0.65+	Pt
226	Void							
227	1453-54	Pit	7	13th-14th	1.2	1.2	0.23+	Pt
228	1455-57	Pit	7	15th	1.1+	0.9	0.25+	Pt
229	1458, 1460	Cesspit	8	16th	0.8	0.8	1.4+	Pt, jetton 1550-1580s

230	1466-67	Pit	7	15th	1.10	0.96	0.30+	Pt
231	1468-69	Pit	7		0.76	0.46	0.08+	Strat. only
232	1473-74	Posthole	7		0.40	0.24+	0.14+	Strat. only
233	1475	Hollow	7	13th	1.3+	0.62	0.08+	Pt
234	1470, 1477-79	Pit, clay-lined	7	15th	1.28	1.28	0.22+	Pt
235	1480	Dump	7		0.60	0.50	0.05+	Strat. only
236	1482-83	Pit	7		0.52	0.18+	0.17+	Strat. only
237	1485	Dump	7		1.0+	0.8	0.06+	Strat. only
238	1486-87	Pit	7		1.1+	1.0	0.20+	Pt
239	1489, 1496	Dump	7		1.0+	0.43	0.13+	Strat. only
240	1490-91	Posthole	7		0.62	0.62	0.10+	Strat. only
241	1492-93	Posthole	7		0.55	0.50	0.15+	Pt
242	1494-95, 1570-71	Ditch	6		8.5+	0.6	0.1-0.3+	Pt
243	1500-01	Posthole	7		0.40	0.40	0.13	Strat. only
244	1502-03	Pit	9		1.03	0.93	0.60+	Pt, TP
245	1506-07	Gully	7	13th	3.7+	0.38	0.17+	Strat. only
246	1513-14, 1519-20	Planting bed	8		2.5+	1.16	0.68+	Pt
247	1517-18, 1598-99, 1699-1700, 1790-91	Foundation trench	4	RB2	9.0+	0.9	0.2-0.4+	Pt, late 3rd-4th, coin 260-378
248	1524	Hollow	7	13th	1.0+	0.6	0.18+	Pt
249	1526	Hollow	7	13th	1.0+	0.35	0.14+	Strat. only
250	1521-22	Ditch	6		6+	1.0	0.18+	Pt
251	1533-34	Posthole	7		0.65	0.40	0.07+	Strat. only
252	1550-51	Pit	4	RB2	0.98	0.65	0.13+	Pt 2nd-4th
253	1536-38	Pit	7		0.64	0.45	0.05+	Strat. only
254	1539-41, 1663-64, 1761-64	Ditch	6		21+	1.2	0.2-0.3+	Pt, residual Romano-British coins
255	1552-58	Pit	6		7.7	3.1	0.52+	Pt
256	1559-64	Pit	6		7.7	0.45+	0.40+	Pt (residual)
257	1565-66, 1740-42, 1887-88, 1897-1900, 1906-07	Foundation trench	4	RB2	6.2+	0.8	0.3+	Pt 2nd (plus a little intrusive)
258	1567-68	Pit	7		0.88	0.29	0.24+	Pt (residual)
259	1498-99, 1528-32	Ditch	6		6+	1.5	0.47+	Pt
260	1572-74	Ditch	4	RB3	17.5+	0.6	0.3+	Pt, mid/late C4
261	1575-76	Pit	6		2.75	0.4+	0.38+	Pt
262	1577-78	Gully	7	13th	7.5+	0.52	0.11+	Pt (residual)

263	1581-83	Foundation trench	4	RB2	9.0+	0.9	0.2-0.4+	Pt, mid-3rd-4th
264	1584-85	Pit	4		0.5+	0.5+	0.1+	Strat. only
265	1586-87	Pit	4		0.5+	0.5+	0.1+	Strat. only
266	1588-89	Pit	8		1.25	0.6	0.07+	Tile
267	1590-91	Gully	7	13th	4.5+	0.75	0.10+	Pt
268	1592-93	Foundation trench	4	RB2	9.0+	0.9	0.2-0.4	Pt
269	1595	Alluvium	7	13th	Unk.	Unk.	0.40+	Strat. only
270	1596-97	Pit	7		1.3	1.3	0.1+	Pt
271	1603-04	Posthole	4	RB2	0.50	0.37	0.28+	Pt
272	1605-06	Posthole	7		0.33	0.30	0.10+	Strat. only
273	1613-14	Pit	7		2.56	0.7	0.25+	Pt (residual)
274	1616-17	Pit	6		1.35	0.61+	0.13+	Pt
275	Void							
276	Void							
277	Void							
278	1618	Alluvium	7	13th	Unk.	Unk.	0.15+	Pt (residual)
279	1620-21	Gully	7	13th	1.28+	0.27	0.05+	Strat. only
280	1627-28	Pit	7		1.70	1.65	0.30+	Strat. only
281	1630-34	Pit	6		1.5	1.2	0.22+	Pt
282	Void							
283	Void							
284	1639-40	Pit	6		1.40	0.40	0.22+	Pt
285	1641-42, 1681	Pit	7		0.56+	0.65	0.19+	Strat. only
286	1644-45	Pit	6		0.77	0.60	0.07+	Pt
287	1656-57	Garden soil	6		Unk.	Unk.	0.12+	Pt
288	1660-62, 1677-78, 1727, 1736-37, 1973	Alluvium	5-6		Unk.	Unk.	0.45+	Pt
289	1665-75, 1702	Pit, specialised	6		1.9	1.05	0.75+	Pt
290	1679-80	Ditch	6		6+	0.85	0.08+	Pt (residual)
291	1682-89	Garden soil	6		Unk.	Unk.	0.45+	Pt
292	1693-94	Posthole	4	RB2	0.45	0.35	0.9+	Pt
293	1695-96	Posthole	7		0.47	0.45	0.17+	Strat. only
294	1697-98	Ditch	4	RB2	2+	0.66	0.19+	PT, 3rd-4th
295	1653, 1690-91, 1701	Hollow	6		5.0	2.5	0.22+	Pt
296	1703-04	Stakehole	6		0.14	0.14	0.35+	Strat. only
297	1706-07	Posthole	7		0.35	0.35	0.21+	Strat. only
298	1716-17	Ditch	4	RB3	12+	1.4	0.5+	Strat. only
299	1720-21	Stakehole	6		0.12	0.12	0.35+	Strat. only
300	1722-24, 1755-	Pit	6		1.6	1.4	0.4+	Pt

	57							
301	1725–26, 1728–31	Ditch	6		17+	0.36+	0.21+	Pt (residual)
302	1732, 1747–51, 1767–92	Ditch	4	RB2	17.5+	3.0	0.8+	Pt, late 2nd–3rd
303	1733, 1743–44, 1765–66, 1945–52, 2023	Ditch	4	RB3	17.5+	0.6	0.3+	Pt late 3rd–4th, coin 330–41
304	1734–35	Posthole	4	RB2	0.56+	0.60	0.9+	Strat. only
305	1745–46	Ditch	4	RB2	17.5+	3.0	0.8+	Strat. only
306	1758–60, 1782–84, 1803–06, 1808–09	Ditch	6		17+	0.66	0.35+	Pt
307	1773–78	Ditch	4	RB1	17.5+	3.4	1.1+	Pt
308	1787–89	Robber cut	8	17th–late 18th	0.45	0.34	0.32+	Pt
309	1792–94	Pit	6		1.3	0.5+	0.2+	Pt
310	1810–11, 1927–29, 1959–63	Shaft	8	17th–late 18th	1.05	1.05	1.0	Strat. only, moulded stone
311	1820–22, 1851–52	Ditch	6		10+	0.5	0.2+	Pt
312	1826–27	Pit	2		0.68	0.68	0.12+	Strat., fill type
313	1830–34, 1889–92, 1980–86	Ditch	4	RB3	16+	1.7	0.52+	Pt 4th, coin 275–86
314	1836–37, 1857, 1865	Pipe trench	8	17th–late 18th	1.4	0.65	0.60+	Pt
315	1838–42	Ditch	4	RB3	3.0+	2.0	0.75+	Pt, 3rd–4th
316	1843–46	Ditch	4	RB3	4.0+	2.0+	0.72+	Pt, 4th
317	1847–48	Ditch	4	RB3	2.0+	1.0	0.3+	Pt, 3rd
318	1849–50	Pit	7		0.85	0.2+	0.3+	Pt (residual)
319	1854–56	Grave	4	RB3	2.20	0.95	0.20+	Coin 268–70
320	1858–61	Soakaway	8	17th–late 18th	0.5	0.5	0.14+	Strat. Only
321	1873–74	Gully	4	RB2	0.5+	0.45	0.15+	Pt
322	1875–76	Posthole	4	RB2	0.50	0.37	0.28+	Strat. only
323	1877	Stake	4	RB3	0.05	0.05	0.25+	Strat. only
324	1878	Stake	4	RB3	0.06	0.06	0.45+	Strat. only
325	1879	Stake	4	RB3	0.05	0.05	0.25+	Strat. only
326	Void							
327	1882–83	Foundation trench	4	RB2	4.6	1.1	0.15+	Coin 353–64
328	1884–86	Posthole	4	RB2	1.5	1.2	0.5+	Pt
329	1901–02	Posthole	4	RB2	0.7+	0.5	0.6+	Strat. only
330	1903–05	Grave	4	RB3	1.5+	0.52	0.09+	Strat., fill type
331	1910–11	Posthole	4	RB2	0.85	0.64	0.84+	Pt, 3rd
332	1912	Stake	4	RB3	0.10	0.10	0.4+	Strat. only

333	1913	Stake	4	RB3	0.06	0.06	0.4+	Strat. only
334	1914	Stake	4	RB3	0.06	0.06	0.25+	Strat. only
335	1917–18	Pit	4	RB3	0.66	0.58	0.50+	Pt, 4th
336	1919	Stake	4	RB3	0.05	0.05	0.25+	Strat. only
337	1920	Stake	4	RB3	0.05	0.05	0.3+	Strat. only
338	1925–26	Pit	4	RB3	0.5+	0.4+	0.30+	Strat. only
339	1941	Stake	4	RB3	0.14	0.14	0.32+	Strat. only
340	1944	Stake	4	RB3	0.05	0.05	0.4+	Strat. only
341	1953–54, 2030	Pit	4	RB2	1.40	0.45	0.59+	Pt, late 2nd–3rd
342	1956–58, 1966–69, 2033	Ditch	4	RB1	1.0	0.8	0.1	Pt, 2nd
343	2004–05, 2010–11	Foundation trench	4	RB2	4.6	1.1	0.15+	Pt, 3rd–4th
344	2008–09	Stakehole	4	RB2	0.12	0.12	0.20+	Strat. only
345	2006–07	Stakehole	4	RB2	0.13	0.13	0.16+	Strat. only
346	2012–13	Stakehole	4	RB2	0.11	0.11	0.08+	Strat. only
347	2014–15	Stakehole	4	RB2	0.12	0.12	0.09+	Strat. only
348	2016–17	Stakehole	4	RB2	0.12	0.12	0.08+	Strat. only
349	2018–19	Stakehole	4	RB2	0.12	0.12	0.05+	Strat. only
350	2027	Stake	4	RB3	0.10	0.10	0.35+	Strat. only
351	2028	Stake	4	RB3	0.10	0.10	0.4+	Strat. only
352	2029	Stake	4	RB3	0.08	0.08	0.5+	Strat. only
353	2031–32	Pit	2		1.4+	0.75+	0.22+	Strat., fill type
354	1965, 1971, 1995–97, 2034–43, 2073–78, 2081–82, 2088	River channel	2		Unk.	10+	1.0+	Strat. only
355	1797–1800, 1802, 2089–90	Palaeochannel	1		Unk.	4.0+	2.0+	Strat., fill type
356	13–14	Pit	8		1.00	0.30	0.30+	Pt
357	15–16	Gully	8		0.75+	0.25+	0.22+	Strat. only
358	17–18	Gully	8		1.3+	0.60	0.27+	Pt (residual)
359	24–26	Pit	7	14th	1.2+	1.20	0.26+	Pt
360	27–28	Pit	7		0.35+	0.2+	0.15+	Strat. only
361	29–31	Pit	7	14th–15th	0.59	0.54	0.13+	Pt
362	32–33	Pit	7	14th–15th	0.84	0.50	0.20+	Pt
363	34–35	Pit	7	14th–15th	0.86	0.20	0.28+	Pt
364	36–37	Pit	8		0.76	0.72	0.37+	Pt
365	58	Oven	8		0.8	0.5	0.2	Strat. only
366	59	Oven	8		0.8	0.5	0.2	Strat. only
367	60	Oven	8		0.8	0.5	0.2	Strat. only

368	2091	Stake	4	RB3	0.06	0.06	0.41+	Strat. only
369	2092	Stake	4	RB3	0.07	0.07	0.59+	Strat. only
370	2093	Stake	4	RB3	0.06	0.05	0.18+	Strat. only
371	56	Wall	8		2+	0.25	0.4+	Strat. only
372	92-94	Pit	8		1.6+	Unk.	0.8+	Strat. only
373	88, 91	Pit	7	14th	1.0+	Unk.	0.8+	Pt
374	89	Pit	7		0.3+	Unk.	0.8+	Strat. only
375	86-87, 90, 98-99	Pit	7	14th	1.4+	Unk.	0.4+	Pt
376	97	Oven	8		1.6	Unk.	0.2	Strat. only
377	85	Pit	7		3.6+	Unk.	0.4+	Pt
378	108-09	Gully	7	13th	6.6	0.6	0.2	Pt
379	106-07	Gully	7	13th	Unk.	0.6	0.2	Strat. only
380	1036	Post-pad	8		0.38	0.34	0.12	Strat. only
381	1999-2000	Ditch	4	RB3	16+	2.8+	0.48+	Coin 275-364
382	2046-47	Pit	8		0.2	Unk.	0.3	Strat. only
383	Void							
384	Void							
385	1779, 1781, 1823, 1970, 1992-94, 2001, 2067, 2069-72	Alluvium	3		Unk.	Unk.	0.15-0.6	Strat. and nature of deposit
386	1785-86, 1829, 1835, 1853, 1866-71, 1893- 96, 1974-79, 1987-91, 2053, 2064-66, 2068, 2083	Alluvium	4		Unk.	Unk.	0.3	Pt 4th, coins 330-35, 330- 38, 353-64, 367-75, 367- 75, 364-78, 364-78
387	2044	Stakes	4	RB3	0.21	0.21	0.06	Strat. only
388	Void							
389	1512	Hollow	6		0.4	0.4	0.2+	Strat. only
390	2097	Wall	8		3+	0.4	0.4+	Strat. only
391	2098	Wall	8		4+	0.4	0.4+	Strat. only
392	82, 2099	Wall	8		2+	0.4	0.4+	Strat. only
393	83	Pit	7		Unk.	Unk.	Unk.	Strat. only
394	2062-63, 2087	Pit	8		0.6	Unk.	0.3+	Strat. only
395	None	Wall	9		3.5+	0.8	2.0+	Brick type
396	None	Wall	9		2.7+	0.4	0.6+	Brick type
397	None	Drain	8		18+	0.6	0.8+	Brick type
398	1, 19, 55, 57, 1013-14, 1021, 1028, 1040, 1043-44, 1059, 1064, 1066, 1083,	Garden soil	8		Unk.	Unk.	0.5	Pt, TP, jettons late 15th century and 1500-1580s

	1106, 1108-10, 1118, 1120, 1124-25, 1127, 1175-76, 1228, 1235, 1270, 1302-03, 1321- 22, 1347, 1420, 1446-47, 1862, 2048, 2055-57, 2084-85, 2095- 96							
399	21, 38-41, 70, 1111, 1204, 1241, 1271-74, 1288, 1329, 1372-73, 1387- 88, 1397, 1436, 1461, 1464-65, 1523, 1579-80, 1719, 1753-54, 1824, 1998, 2049-52, 2058- 61, 2086	Garden soil	7		Unk.	Unk.	0.5	Pt
400	1510-11, 1601	Garden soil	6		Unk.	Unk.	0.75	Pt
401	1658	Hollow	6		Unk.	2.0+	0.1+	Pt
402	1648, 1651	Alluvium	6		Unk.	Unk.	0.3	Pt
403	22-23, 73-78, 95-96, 103, 105, 1012, 1015-16, 1025, 1052-53, 1056-57, 1062- 63, 1065, 1067, 1102-05, 1107, 1113, 1119, 1121-23, 1126, 1128, 1136-37	Dumps	8	17th- late 18th	N/A	N/A	N/A	Pt, TP
404	84, 100-02, 104, 110, 1112, 1203, 1213-14, 1253, 1386, 1437, 1451, 1535, 1548-49, 1825	Dumps	7	14th	N/A	N/A	N/A	Pt
405	1647	Hollow	6		0.50	0.30	0.03+	Strat. only
406	1504-05, 1508- 09	Dump	6		5.05	1.0	0.22+	Pt
407	2045	Object	4		N/A	N/A	N/A	Strat. only
408	1055	Post-pad	8		0.33	0.33	0.20	Strat. only
409	1026	Dump	9		2.0	2.0	0.1	Pt
410	1546-47, 1569, 1602, 1649-50,	Accumulati on	4		2.0+	1.0	0.05	Pt, 4th

	1692, 1880							
411	1542-45, 1652, 1795-96, 1807, 1812-18, 1964	Dumps	4	RB3	1.5	1.0	0.2	Pt, late 3rd-4th
412	1600, 1908-09, 1921-24, 1932- 35, 2024-26	Ditch	4	RB3	12+	1.4	0.5+	Pt, coin 330-48
413	N/A	Garden soil	9		Unk.	Unk.	1.2	Pt
414	1998	Hard standing	4	RB3	2.0+	Unk.	0.05	Strat. only
415	N/A	Posthole	8		0.20	0.20	Unk.	Strat. only
416	N/A	Stake	4	RB3	0.08	0.08	Unk.	Strat. only
417	N/A	Stake	4	RB3	0.08	0.08	Unk.	Strat. only
418	11-12, 42-54, 79, 1011, 1179, 1205, 1615, 1643, 1708, 1718, 1828, 1972	Unstrat. finds	N/A		N/A	N/A	N/A	N/A
419	2020-21, 2054	RB finds	4		N/A	N/A	N/A	N/A

APPENDIX 2: CONTEXT TABLE

Context	F.	Type	F. Type	Description
1	398	Finds	Garden soil	Finds
2	115	Finds	Cellar	Finds
3	Void			
4	Void			
5	Void			
6	Void			
7	Void			
8	Void			
9	Void			
10	Void			
11	418	Finds	Unstrat. finds	Finds
12	418	Finds	Unstrat. finds	Finds
13	356	Fill	Pit	Dark grey brown silt
14	356	Cut	Pit	Steep sided linear with rounded base
15	357	Fill	Gully	Mid grey brown silt
16	357	Cut	Gully	Steep sided linear with rounded base
17	358	Fill	Gully	Dark brown silty loam
18	358	Cut	Gully	Steep sided linear with rounded base
19	398	Layer	Garden soil	Dark brownish-grey humic silt
20	Void			
21	399	Layer	Garden soil	Dark brownish-grey humic silt
22	403	Layer	Dumps	Off-white marly clay
23	403	Layer	Dumps	Pale brownish yellow to faintly brownish orange silty sandy gravel
24	359	Fill	Pit	Mid greyish brown clayey silt
25	359	Fill	Pit	Mid greyish brown slightly clayey silt
26	359	Cut	Pit	Oval cut with variable sides and flattish base
27	360	Fill	Pit	Mid greyish brown slightly clayey silt
28	360	Cut	Pit	Steep sided oval/circular cut
29	361	Fill	Pit	Dark brown silty loam
30	361	Fill	Pit	Light brownish yellow clayey marl
31	361	Cut	Pit	Circular cut, steepish sides and rounded base
32	362	Fill	Pit	Yellow and light brown sandy chalky marl
33	362	Cut	Pit	Circular cut, steepish sides and rounded base
34	363	Fill	Pit	Mid grey silty clay
35	363	Cut	Pit	Circular cut, steepish sides and rounded base
36	364	Fill	Pit	Mid greyish brown clayey silt
37	364	Cut	Pit	Circular cut, steepish sides and rounded base
38	399	Layer	Garden soil	Dark brownish-grey humic silt
39	399	Layer	Garden soil	Dark brownish-grey humic silt

40	399	Layer	Garden soil	Dark brownish-grey humic silt
41	399	Layer	Garden soil	Dark brownish-grey humic silt
42	418	Finds	Unstrat. finds	Finds
43	418	Finds	Unstrat. finds	Finds
44	418	Finds	Unstrat. finds	Finds
45	418	Finds	Unstrat. finds	Finds
46	418	Finds	Unstrat. finds	Finds
47	418	Finds	Unstrat. finds	Finds
48	418	Finds	Unstrat. finds	Finds
49	418	Finds	Unstrat. finds	Finds
50	418	Finds	Unstrat. finds	Finds
51	418	Finds	Unstrat. finds	Finds
52	418	Finds	Unstrat. finds	Finds
53	418	Finds	Unstrat. finds	Finds
54	418	Finds	Unstrat. finds	Finds
55	398	Layer	Garden soil	Dark brownish-grey humic silt
56	371	Brickwork	Wall	Red brick in lime mortar
57	398	Layer	Garden soil	Dark brownish-grey humic silt
58	365	Fill	Oven	Off-white clay fired pink on top with mid-reddish brown silt above
59	366	Fill	Oven	Off-white clay fired pink on top with mid-reddish brown silt above
60	367	Fill	Oven	Off-white clay fired pink on top with mid-reddish brown silt above
61	115	Fill	Cellar	Mixed rubble in mid-dark grey silt
62	115	Fill	Cellar	Mixed rubble in mid-dark grey silt
63	115	Fill	Cellar	Clunch rubble
64	115	Fill	Cellar	Fine soft light coloured sand
65	115	Fill	Cellar	Charcoal and ash, with dark grey silt
66	115	Fill	Cellar	Fine light-mid grey sandy silt
67	115	Fill	Cellar	Charcoal and ash, occasional rubble
68	115	Fill	Cellar	Stiff blue and yellow clay
69	115	Fill	Cellar	Stiff yellow clay with clunch rubble, mid grey silt
70	399	Layer	Garden soil	Dark brownish-grey humic silt
71	115	Brickwork	Cellar	Red brick in lime mortar
72	115	Cut	Cellar	Vertical sided flat bottomed rectangular cut
73	403	Layer	Dumps	Mixed rubble and dark grey silt
74	403	Layer	Dumps	Mid-grey silt with marl and clunch
75	403	Layer	Dumps	Mixed deposit
76	403	Layer	Dumps	Mid-dark grey-brown silt
77	403	Layer	Dumps	Greenish-grey brown sandy silt
78	403	Layer	Dumps	Light grey-brown silt
79	418	Finds	Unstrat. finds	Finds

80	115	Finds	Cellar	Finds
81	115	Brickwork	Cellar	Red brick in lime mortar
82	392	Masonry	Wall	Red brick in lime mortar
83	393	Fill	Pit	Dark grey silt
84	404	Layer	Dumps	Dark grey silt
85	377	Fill	Pit	Dark grey silt
86	375	Fill	Pit	Mid greenish grey sandy silt
87	375	Fill	Pit	Mid-light grey silt
88	373	Fill	Pit	Dark grey silt
89	374	Fill	Pit	Dark grey silt
90	375	Fill	Pit	Dark grey silt
91	373	Fill	Pit	Light grey silt
92	372	Fill	Pit	Yellowish-brown clayey sandy gravel
93	372	Fill	Pit	Dark grey silt
94	372	Fill	Pit	Dark grey clayey gravelly silt
95	403	Layer	Dumps	Clunch and light yellowish clay
96	403	Layer	Dumps	Off-white/yellow clay
97	376	Fill	Oven	Off-white clay fired pink on top
98	375	Fill	Pit	Dark grey silt
99	375	Fill	Pit	Mid grey clayey silt
100	404	Layer	Dumps	Greenish-grey silty clay
101	404	Layer	Dumps	Mid grey clayey silt
102	404	Layer	Dumps	Dark grey silt
103	403	Layer	Dumps	Gravelly silty sand
104	404	Layer	Dumps	Mixed dark grey clay and off-white clay
105	403	Layer	Dumps	Dark grey silt
106	379	Fill	Gully	Mid-dark grey silt
107	379	Cut	Gully	Shallow linear with u-shaped profile
108	378	Fill	Gully	Mid-dark grey silt
109	378	Cut	Gully	Shallow linear with u-shaped profile
110	404	Layer	Dumps	Mid-dark grey silt
111	133	Finds	Pit	Finds
1000	100	Fill	Cellar	Rubble with sand, ceramic building material, mortar
1001	100	Brickwork	Cellar	Red brick in sandy mortar
1002	100	Cut	Cellar	Vertical sided flat bottomed rectangular cut
1003	101	Fill	Soakaway	Light orange brown silty clay
1004	101	Brickwork	Soakaway	Red brick in dark grey sandy mortar
1005	101	Cut	Soakaway	Vertical sided flat bottomed rectangular cut
1006	102	Fill	Footing	Mid-pale yellowish brown clayey silt
1007	102	Fill	Footing	Pale yellow brown-brownish yellow silty mortar
1008	102	Cut	Footing	Vertical sided flat bottomed rectangular cut
1009	103	Fill	Posthole	Mid grey brown sandy silt

1010	103	Cut	Posthole	Oval cut with gentle sides and concave base
1011	418	Finds	Unstrat. finds	Finds
1012	403	Layer	Dumps	Light brown-dark grey brown clayey silt
1013	398	Layer	Garden soil	Dark brownish-grey humic silt
1014	398	Layer	Garden soil	Dark brownish-grey humic silt
1015	403	Layer	Dumps	Pale yellow brown sandy silt
1016	403	Layer	Dumps	Pale yellow brown-brownish yellow mortar and silty mortar
1017	104	Fill	Footing	Very dark grey brown sandy silt
1018	104	Fill	Footing	Very dark grey brown sandy silt
1019	104	Fill	Footing	Dark grey brown clayey silt
1020	104	Cut	Footing	Vertical sided flat bottomed linear cut
1021	398	Layer	Garden soil	Dark brownish-grey humic silt
1022	105	Drainpipe	Drain	Cylindrical yellow ceramic pipe
1023	106	Drainpipe	Drain	Cylindrical yellow ceramic pipe
1024	107	Brickwork	Wall	Light off white mortar with some rubble
1025	403	Layer	Dumps	Dark orange red clayey silt
1026	409	Layer	Dump	Light grey sandy silt with frequent ceramic building material
1027	113	Masonry	Wall	Red brick fragments in sandy silt
1028	398	Layer	Garden soil	Dark brownish-grey humic silt
1029	108	Fill	Pit	Mid greyish brown silt
1030	108	Fill	Pit	Dark slightly greyish brown ashy silts
1031	108	Cut	Pit	Oval or sub-rectangular cut with near vertical sides and flattish base
1032	109	Cut	Pit	Light grey silt
1033	109	Fill	Pit	Light grey silt
1034	109	Fill	Pit	Dark orangey brown silty clay
1035	109	Fill	Pit	Dark grey silty clay
1036	380	Masonry	Post-pad	Clunch block
1037	110	Fill	Robber cut	Brownish grey sandy silt
1038	110	Fill	Robber cut	Dark grey sandy silt
1039	110	Cut	Robber cut	Oval cut with steep sides and flat base
1040	398	Layer	Garden soil	Dark brownish-grey humic silt
1041	111	Fill	Pit	Dark grey-brown clayey silt
1042	111	Cut	Pit	Linear with concave sides and flat base
1043	398	Layer	Garden soil	Dark brownish-grey humic silt
1044	398	Layer	Garden soil	Dark brownish-grey humic silt
1045	112	Fill	Drain	Mid grey clay
1046	112	Brickwork	Drain	Red bricks in lime mortar
1047	112	Fill	Drain	Dark brownish grey sandy silt
1048	112	Fill	Drain	Dark brownish grey sandy silt
1049	112	Cut	Drain	Vertical sided flat bottomed linear with slope
1050	107	Cut	Wall	Vertical sided flat bottomed linear cut
1051	113	Cut	Wall	Vertical sided flat bottomed linear cut

1052	403	Layer	Dumps	Unworked stones etc.
1053	403	Layer	Dumps	Brick fragments
1054	189	Fill	Robber cut	Pale yellow sand and gravel
1055	408	Masonry	Post-pad	Clunch block
1056	403	Layer	Dumps	Mixed marly and gravelly material
1057	403	Layer	Dumps	Brick fragments
1058	Void			
1059	398	Layer	Garden soil	Dark brownish-grey humic silt
1060	114	Cut	Wall	Vertical sided flat bottomed linear cut
1061	114	Masonry	Wall	Mortar and gravel
1062	403	Layer	Dumps	Mixed rubble
1063	403	Layer	Dumps	Ashy charcoal
1064	398	Layer	Garden soil	Dark brownish-grey humic silt
1065	403	Layer	Dumps	Pale brown/yellow silty sand with gravel
1066	398	Layer	Garden soil	Dark brownish-grey humic silt
1067	403	Layer	Dumps	Dark brownish grey silt
1068	115	Brickwork	Cellar	Red brick in lime mortar
1069	115	Brickwork	Cellar	Red brick in lime mortar
1070	115	Cut	Cellar	Vertical sided square cut
1071	115	Masonry	Cellar	Red brick in lime mortar
1072	115	Mortar	Cellar	Brown sandy mortar
1073	115	Fill	Cellar	Light brownish grey clayey silt
1074	115	Fill	Cellar	Dark greyish-black silt
1075	115	Fill	Cellar	Mid blueish-grey clay
1076	115	Cut	Cellar	Vertical sided flat bottomed rectangular cut
1077	116	Fill	Posthole	Light grey silt with rubble
1078	116	Fill	Posthole	Dark grey brown silty clay
1079	116	Fill	Posthole	Very dark brown sandy silt
1080	116	Cut	Posthole	Circular cut with moderate side and rounded base
1081	117	Fill	Posthole	Dark grey silt
1082	117	Cut	Posthole	Sub-circular cut with step sides and rounded bas
1083	398	Layer	Garden soil	Dark brownish-grey humic silt
1084	120	Cut	Animal disposal pit	Irregular sub-oval cut with flattish base
1085	120	Fill	Animal disposal pit	Dark brownish-grey humic silt
1086	120	Skeleton	Animal disposal pit	Dog skeleton
1087	121	Fill	Soakaway	Peg tile rubble
1088	121	Cut	Soakaway	Vertical sided flat bottomed rectangular cut
1089	122	Fill	Test pit	Mixed re-deposited material
1090	122	Fill	Test pit	Mixed re-deposited material
1091	122	Fill	Test pit	Mixed re-deposited material

1092	122	Fill	Test pit	Mixed re-deposited material
1093	122	Fill	Test pit	Mixed re-deposited material
1094	119	Brickwork	Soakaway	Yellow frogged bricks
1095	119	Fill	Soakaway	Greyish brown silt
1096	119	Fill	Soakaway	Light grey brown silt
1097	119	Cut	Soakaway	Vertical sided flat bottomed square or rectangular cut
1098	123	Fill	Pit	Dark grey brown silt
1099	123	Fill	Pit	Dark grey silt
1100	123	Fill	Pit	Ashy deposit
1101	123	Cut	Pit	Vertical sided flat bottomed square or rectangular cut
1102	403	Layer	Dumps	Gravel and stones with mid brown to reddish orange silt
1103	403	Layer	Dumps	Clunch fragments
1104	403	Layer	Dumps	Mid grey-light grey marly clunch
1105	403	Layer	Dumps	Brownish grey silt
1106	398	Layer	Garden soil	Dark brownish-grey humic silt
1107	403	Layer	Dumps	Orangey brow sand and gravel
1108	398	Layer	Garden soil	Dark brownish-grey humic silt
1109	398	Layer	Garden soil	Dark brownish-grey humic silt
1110	398	Layer	Garden soil	Dark brownish-grey humic silt
1111	399	Layer	Garden soil	Dark brownish-grey humic silt
1112	404	Layer	Dumps	Off-white clay
1113	403	Layer	Dumps	Dark charcoal rich grey sandy silt
1114	124	Fill	Drain	Dark grey brown silt with mortar
1115	124	Cut	Drain	Linear cut with variable sides and flattish base
1116	125	Fill	Pit	Brownish orange to near back ashy silt
1117	125	Cut	Pit	Oval cut with variable sides and rounded base
1118	398	Layer	Garden soil	Dark brownish-grey humic silt
1119	403	Layer	Dumps	Off-white clay marl
1120	398	Layer	Garden soil	Dark brownish-grey humic silt
1121	403	Layer	Dumps	Mid grey silt
1122	403	Layer	Dumps	Dark grey silt
1123	403	Layer	Dumps	Mid grey sandy silt
1124	398	Layer	Garden soil	Dark brownish-grey humic silt
1125	398	Layer	Garden soil	Dark brownish-grey humic silt
1126	403	Layer	Dumps	Yellow sandy gravel
1127	398	Layer	Garden soil	Dark brownish-grey humic silt
1128	403	Layer	Dumps	brownish grey sandy silt with gravel
1129	126	Fill	Posthole	Dark grey silt
1130	126	Cut	Posthole	Circular cut with variable sides and flat base
1131	127	Fill	Pit	Mid greyish brown sandy silt
1132	127	Fill	Pit	Dark brownish grey silt
1133	127	Cut	Pit	Oval cut with vertical sides and flat base

1134	128	Fill	Pit	Mid-dark grey clay silt
1135	128	Cut	Pit	Oval cut with variable sides and rounded base
1136	403	Layer	Dumps	Off-white clay marl
1137	403	Layer	Dumps	Pale yellow sand and gravel
1138	130	Fill	Posthole	Dark grey brown silt
1139	130	Cut	Posthole	Oval cut with variable sides and flattish base
1140	131	Fill	Pit	Very dark brownish grey silt
1141	131	Cut	Pit	Oval cut with steep sides and rounded base
1142	160	Fill	Pit, stone-rich	Limestone fragments
1143	160	Fill	Pit, stone-rich	Dark brownish-grey humic silt
1144	132	Masonry	Posthole	Clunch block
1145	132	Cut	Posthole	circular cut with steep sides and rounded base
1146	133	Fill	Pit	Grey brown silty ash
1147	133	Cut	Pit	Sub-rectangular cut with variable sides and rounded base
1148	134	Fill	Pit	Grey brown silty clay
1149	134	Fill	Pit	Orangey brown silty ash
1150	134	Fill	Pit	Brown silty ash
1151	134	Cut	Pit	Sub-rectangular cut with near vertical sides and rounded base
1152	136	Fill	Ditch	Dark grey clay-silt
1153	136	Cut	Ditch	Linear with steep sides and rounded base
1154	129	Fill	Footing	Dark brownish grey silt
1155	129	Fill	Footing	Mixed rubble
1156	129	Cut	Footing	Rectangular cut with rounded ends, near vertical sides and rounded base
1157	137	Fill	Pit	Dark brownish grey silt
1158	137	Cut	Pit	Rectangular cut with rounded ends, moderate sides and rounded base
1159	138	Fill	Footing	Pale yellow sand and gravel
1160	138	Cut	Footing	Linear with gentle sides and flat base
1161	139	Fill	Pit	Dark brown silty sand
1162	139	Fill	Pit	Dark brown silty sand
1163	139	Cut	Pit	Linear with steep sides and flat base
1164	140	Cut	Pit	Sub-oval cut with under cutting sides and rounded base
1165	140	Fill	Pit	Dark grey-black silty clay
1166	136	Fill	Ditch	Mid brown clay-silt
1167	136	Fill	Ditch	Mid grey clay
1168	141	Cut	Posthole	Circular cut with gentle sides and flat base
1169	141	Fill	Posthole	Greyish silt
1170	142	Fill	Well	Light yellowish grey silty mortar
1171	142	Brickwork	Well	Red brick, including fragments, in lime mortar
1172	142	Cut	Well	Sub-circular vertical sided cut with rounded base
1173	143	Fill	Pit	Greyish brown silt

1174	143	Cut	Pit	Circular cut with moderate sides and flat base
1175	398	Layer	Garden soil	Dark brownish-grey humic silt
1176	398	Layer	Garden soil	Dark brownish-grey humic silt
1177	173	Fill	Pit	Dark grey-brown silty sand
1178	173	Fill	Pit	Irregular cut with variable sides and uneven base
1179	418	Finds	Unstrat. finds	Finds
1180	144	Fill	Posthole	Mid greyish brown silt
1181	144	Cut	Posthole	Oval cut with steep sides and rounded base
1182	135	Fill	Oven	Light-dark grey clay
1183	135	Fill	Oven	Light grey clay fired pink in places
1184	135	Fill	Oven	Dark grey ash
1185	135	Fill	Oven	Mid grey ash
1186	135	Fill	Oven	Off-white clay fired pink on top
1187	135	Fill	Oven	Greenish grey clay
1188	135	Cut	Oven	Figure of eight cut, gentle sides and rounded base
1189	145	Fill	Posthole	Mid grey silt
1190	145	Fill	Posthole	Off-white marly clunch
1191	145	Cut	Posthole	Oval cut with vertical sides and rounded base
1192	146	Fill	Posthole	Dark grey silt
1193	146	Cut	Posthole	Circular cut with vertical sides and rounded base
1194	147	Fill	Stakehole	Light grey ash
1195	147	Cut	Stakehole	Circular cut with vertical sides and rounded base
1196	Void			
1197	148	Fill	Oven	Light grey clay
1198	148	Fill	Oven	Greenish grey clay
1199	148	Fill	Oven	Off-white clay fired pink on top
1200	148	Fill	Oven	Clay fired orangey red
1201	148	Fill	Oven	Greenish grey clay
1202	148	Cut	Oven	probably figure of eight cut, gentle sides and rounded base
1203	404	Layer	Dumps	Off-white marly clay
1204	399	Layer	Garden soil	Dark brownish-grey humic silt
1205	418	Finds	Unstrat. finds	Finds
1206	149	Fill	Pit	Grey brown ashy silt
1207	149	Cut	Pit	Sub-rectangular cut with variable sides and irregular base
1208	150	Cut	Pit, stone-rich	Rectangular cut with rounded corners, vertical sides and flat base
1209	150	Fill	Pit, stone-rich	Mid-dark greyish brown silt
1210	150	Fill	Pit, stone-rich	Mid brown sandy silt
1211	151	Cut	Posthole	Oval cut with vertical sides and a flat base
1212	151	Fill	Posthole	Pale sandy silt
1213	404	Layer	Dumps	Greyish white clay
1214	404	Layer	Dumps	Grey green silt
1215	152	Fill	Pit	Mid-dark grey-brown silt

1216	152	Fill	Pit	Light yellow-brown silty clay
1217	162	Cut	Pit	Circular cut with gentle sides and rounded base
1218	153	Fill	Pit	dark grey silt
1219	153	Cut	Pit	Oval cut with steep sides and rounded base
1220	155	Cut	Pit	Oval cut with moderate sides and flat base
1221	155	Fill	Pit	Light grey-brown silt
1222	156	Fill	Posthole	Black clay
1223	156	Cut	Posthole	Oval cut with gentle sides and flat base
1224	157	Fill	Posthole	Dark greyish brown clay
1225	157	Cut	Posthole	Oval cut with gentle sides and flat base
1226	158	Fill	Posthole	Mid brown silty clay
1227	158	Cut	Posthole	Oval cut with gentle sides and flat base
1228	398	Layer	Garden soil	Dark brownish-grey humic silt
1229	159	Fill	Posthole	Dark greyish brown clay
1230	159	Cut	Posthole	Circular cut with steep sides and flat base
1231	161	Cut	Pit	Sub-circular cut with vertical sides and rounded base
1232	161	Fill	Pit	Dark grey and brownish orange silt
1233	161	Cut	Pit	Sub-circular pit with vertical sides and rounded base
1234	161	Fill	Pit	Dark grey and brownish orange silt
1235	398	Layer	Garden soil	Dark brownish-grey humic silt
1236	150	Fill	Pit, stone-rich	Pale brown clay
1237	151	Fill	Posthole	Pale brownish yellow sandy silt
1238	151	Fill	Posthole	Mid brownish grey clay
1239	162	Fill	Pit	Mid brownish grey silt
1240	162	Cut	Pit	Cut of unknown shape with vertical sides and rounded base
1241	399	Layer	Garden soil	Dark brownish-grey humic silt
1242	160	Fill	Pit, stone-rich	Dark brownish grey silt
1243	160	Fill	Pit, stone-rich	Brown silty sand
1244	160	Fill	Pit, stone-rich	Dark grey clayish silt
1245	160	Fill	Pit, stone-rich	Brown sandy silt
1246	160	Fill	Pit, stone-rich	Limestone rubble
1247	160	Fill	Pit, stone-rich	Greyish brown silty sand
1248	160	Fill	Pit, stone-rich	Dark greyish brown gravelly sandy silt
1249	160	Fill	Pit, stone-rich	Limestone rubble
1250	160	Cut	Pit, stone-rich	Rectangular cut with rounded corners, vertical sides and flat base
1251	163	Fill	Posthole	Light brown silty clay
1252	163	Cut	Posthole	Circular cut with steep sides and rounded base
1253	404	Layer	Dumps	Light yellowish brown silty clay
1254	164	Fill	Posthole	Dark brown grey clayey silt
1255	164	Fill	Posthole	Charcoal rich dark grey silt
1256	164	Fill	Posthole	Mid grey silt
1257	164	Cut	Posthole	Sub-circular cut with vertical sides and flattish base

1258	165	Fill	Pit	Mid grey silt
1259	165	Fill	Pit	Brownish yellow gravel
1260	165	Fill	Pit	Mid grey silt
1261	165	Cut	Pit	Oval cut with moderate sides and flattish base
1262	166	Fill	Posthole	Off-white marly clay
1263	166	Fill	Posthole	Sandstone
1264	166	Cut	Posthole	Irregular shaped cut with vertical sides and flat base
1265	164	Fill	Posthole	Dark brown grey clayey silt
1266	164	Fill	Posthole	Charcoal rich dark grey silt
1267	164	Fill	Posthole	Mid grey silt
1268	167	Fill	Pit	Dark red and mid-grey silt
1269	167	Cut	Pit	Circular cut with variable sides and rounded base
1270	398	Layer	Garden soil	Dark brownish-grey humic silt
1271	399	Layer	Garden soil	Dark brownish-grey humic silt
1272	399	Layer	Garden soil	Dark brownish-grey humic silt
1273	399	Layer	Garden soil	Dark brownish-grey humic silt
1274	399	Layer	Garden soil	Dark brownish-grey humic silt
1275	169	Fill	Pit	Banded with dark grey brown clay and greenish grey clay and orange brown sandy silt
1276	169	Cut	Pit	Probably linear with steep sides and flattish base
1277	170	Fill	Pit	Brownish grey silt
1278	170	Cut	Pit	Circular cut with variable sides and rounded base
1279	171	Fill	Posthole	Dark brown clayey silt
1280	171	Cut	Posthole	Circular cut with gentle sides and rounded base
1281	172	Fill	Pit	Mid brown sandy silt
1282	172	Cut	Pit	Oval cut with moderate sides and flat base
1283	173	Cut	Pit	Circular cut with gentle sides and rounded base
1284	173	Fill	Pit	Orangey brown ashy silt
1285	142	Fill	Well	Blueish grey clay
1286	174	Fill	Footing	Mortared clunch and brick fragments
1287	174	Cut	Footing	Rectangular cut with steep sides and flat base
1288	399	Layer	Garden soil	Dark brownish-grey humic silt
1289	160	Fill	Pit, stone-rich	Mid-pale yellowish brown silty sandy gravel
1290	175	Fill	Pit	Mid brownish grey clay
1291	175	Cut	Pit	Circular cut with gentle sides and rounded base
1292	176	Fill	Posthole	Orangey silt
1293	176	Cut	Posthole	Oval cut with gentle sides and rounded base
1294	177	Fill	Planting bed	Mid orangey grey silt
1295	177	Cut	Planting bed	Rectangular cut with moderate sides and flattish base
1296	178	Fill	Pit	Dark grey silt
1297	178	Cut	Pit	Sub-circular cut with gentle sides and rounded base
1298	179	Fill	Pit	Mid grey silt
1299	179	Cut	Pit	Sub-circular cut with gentle sides and rounded base

1300	180	Fill	Posthole	Pale grey silt
1301	180	Cut	Posthole	Sub-circular cut with variable sides and rounded base
1302	398	Layer	Garden soil	Dark brownish-grey humic silt
1303	398	Layer	Garden soil	Dark brownish-grey humic silt
1304	Void			
1305	184	Fill	Pit	Dark brownish grey silt
1306	185	Cut	Gully	Linear with steep sides and flat base
1307	185	Fill	Gully	Dark brownish grey silt
1308	185	Cut	Gully	Oval cut with gentle sides and rounded base
1309	186	Fill	Pit	Light grey brown clayey silt
1310	186	Cut	Pit	Rectangular cut with rounded ends, steep sides and rounded base
1311	187	Fill	Gully	Light grey brown clayey silt
1312	187	Cut	Gully	Linear with steep sides and flat base
1313	188	Fill	Posthole	Dark brownish grey silt
1314	188	Cut	Posthole	Oval cut with steep sided and rounded base
1315	Void			
1316	Void			
1317	Void			
1318	189	Fill	Robber cut	Mid-dark grey brown slightly ashy silt
1319	189	Cut	Robber cut	Squareish cut with vertical sides and flat base
1320	190	Fill	Cesspit	Mid-dark grey brown slightly ashy silt
1321	398	Layer	Garden soil	Dark brownish-grey humic silt
1322	398	Layer	Garden soil	Dark brownish-grey humic silt
1323	Void			
1324	150	Fill	Pit, stone-rich	Light grey brown silty clay
1325	150	Cut	Pit, stone-rich	Rectangular cut with rounded corners, vertical sides and flat base
1326	191	Fill	Well	Mid-dark brown-grey clay-silt
1327	191	Fill	Well	Mid-dark brown-grey clay-silt
1328	191	Cut	Well	Circular cut with vertical sides and flat base
1329	399	Layer	Garden soil	Dark brownish-grey humic silt
1330	192	Fill	Pit	Dark greyish brown silty clay
1331	192	Cut	Pit	Circular cut with moderate sides and rounded base
1332	193	Fill	Pit	Mid brownish grey silt
1333	193	Cut	Pit	Rectangular cut with vertical sides and flat base
1334	183	Fill	Pit	Dark brownish grey clayey silt with pat ash
1335	183	Cut	Pit	Rectangular cut with moderate sides and flattish base
1336	194	Fill	Stakehole	Yellowish grey marly clay
1337	194	Cut	Stakehole	Circular cut with vertical sides and rounded base
1338	195	Fill	Pit	Light grey brown silty clay
1339	195	Cut	Pit	Sub-rectangular cut with near vertical sides and rounded base

1340	196	Fill	Posthole	Off-white marly clay
1341	196	Fill	Posthole	Light grey brown silty clay
1342	196	Cut	Posthole	Oval cut with near vertical sides and rounded base
1343	197	Fill	Stakehole	Yellowish grey marly clay
1344	197	Cut	Stakehole	Oval cut with undercutting sides and rounded base
1345	154	Fill	Pit, specialised	Mid grey-brown sandy silt
1346	154	Cut	Pit, specialised	Square cut with near vertical sides and flat base
1347	398	Layer	Garden soil	Dark brownish-grey humic silt
1348	198	Fill	Pit	Dark brownish grey silt
1349	198	Cut	Pit	Circular cut with moderate sides and flattish base
1350	199	Fill	Posthole	Light yellow-grey clay
1351	199	Cut	Posthole	Circular cut with moderate sides and rounded base
1352	200	Fill	Pit	Dark brown-grey silty clay
1353	200	Cut	Pit	Rectangular cut with gentle sides and rounded base
1354	199	Fill	Posthole	Light yellow-grey clay
1355	201	Fill	Pit	Brown clayey silt
1356	201	Cut	Pit	Oval cut with irregular sides and rounded base
1357	202	Cut	Pit	Oval cut with vertical sides and flattish base
1358	202	Fill	Pit	Dark grey clayey silt
1359	203	Fill	Posthole	Grey-white silty clay
1360	203	Cut	Posthole	Circular cut with moderate sides and rounded base
1361	204	Fill	Pit	Dark grey silty clay
1362	204	Fill	Pit	Dark grey-black silty clay
1363	204	Cut	Pit	Circular cut with vertical sides and rounded base
1364	205	Fill	Pit	Orange silty clay
1365	205	Cut	Pit	Circular cut with vertical sides and rounded base
1366	190	Masonry	Cesspit	Reused clunch blocks and red bricks set in off-white lime mortar
1367	206	Fill	Posthole	Mid-light grey silty clay
1368	206	Cut	Posthole	Circular cut with moderate sides and rounded base
1369	190	Fill	Cesspit	Dark grey brown silt
1370	190	Fill	Cesspit	Mid grey brown silt
1371	190	Cut	Cesspit	Oval/sub-circular cut with vertical sides and flattish base
1372	399	Layer	Garden soil	Dark brownish-grey humic silt
1373	399	Layer	Garden soil	Dark brownish-grey humic silt
1374	207	Fill	Pit	Mid brownish grey silt
1375	207	Cut	Pit	Circular cut with moderate sides and rounded base
1376	208	Fill	Planting bed	dark grey-brown sandy silt
1377	208	Cut	Planting bed	Rectangular cut with rounded corners, vertical sides, flattish base
1378	209	Fill	Pit	Light grey clay
1379	209	Fill	Pit	Mid-dark brownish grey clayey silt

1380	209	Cut	Pit	Circular cut with moderate sides and rounded base
1381	209	Fill	Pit	Light off-white clay silt
1382	210	Cut	Footing	Square cut with vertical; sides and flat base
1383	210	Fill	Footing	Dark brownish silt
1384	210	Fill	Footing	Light grey clayey silt
1385	210	Fill	Footing	Dark brownish silt
1386	404	Layer	Dumps	Off-white marly clay
1387	399	Layer	Garden soil	Dark brownish-grey humic silt
1388	399	Layer	Garden soil	Dark brownish-grey humic silt
1389	211	Fill	Pit	Brownish grey silt
1390	211	Cut	Pit	Oval cut with gentle sides and rounded base
1391	212	Fill	Pit	Dark brownish grey silt
1392	212	Cut	Pit	Oval cut with vertical sides and flat base
1393	213	Layer	Hollow	Dark grey-brown silty sand
1394	213	Layer	Hollow	Dark grey-brown silty sand
1395	127	Cut	Pit	Sub-circular cut with steep sides and rounded base
1396	127	Fill	Pit	Light grey-orange silty sand
1397	399	Layer	Garden soil	Dark brownish-grey humic silt
1398	190	Fill	Cesspit	Dark grey brown ashy silt
1399	190	Fill	Cesspit	Mid-pale greyish brown sandy silt
1400	190	Fill	Cesspit	Mid orangeish brown to grey brown sandy silt
1401	215	Fill	Pit	Dark brown sandy silt
1402	215	Fill	Pit	Yellow sand
1403	215	Cut	Pit	Circular cut with moderate sides and flat base
1404	214	Fill	Pit	Dark grey silty clay
1405	214	Cut	Pit	Sub-rectangular cut with steep sides and rounded base
1406	216	Layer	Hollow	Dark grey silt
1407	Void			
1408	140	Fill	Pit	Dark grey-black silty clay
1409	217	Fill	Pit	Mid brown silt
1410	217	Fill	Pit	Dark orange silt
1411	217	Fill	Pit	Mid brown silt
1412	217	Cut	Pit	Sub-circular cut with vertical sides and flat base
1413	218	Fill	Pit	Dark brown silt
1414	218	Fill	Pit	Dark brown silt
1415	218	Cut	Pit	Circular cut with variable sides and rounded base
1416	216	Layer	Hollow	Dark brownish-green sandy silt
1417	216	Layer	Hollow	Very dark brownish grey sandy silt
1418	219	Fill	Pit	Dark brownish grey silt
1419	219	Cut	Pit	Sub-oval steep stepped side with flattish base
1420	398	Layer	Garden soil	Dark brownish-grey humic silt
1421	220	Masonry	Post-pad	Clunch block

1422	220	Cut	Post-pad	Squareish cut with vertical sides and flat base
1423	221	Fill	Pit	dark grey-brown silty clay
1424	221	Cut	Pit	Oval cut with steep sides and flattish base
1425	222	Fill	Pit	Dark brown-black charcoal
1426	222	Fill	Pit	dark grey-brown silty clay
1427	222	Cut	Pit	Sub-circular cut with vertical sides and uneven base
1428	223	Fill	Well	Dark brownish grey silt
1429	223	Fill	Well	Dark brownish grey silt
1430	223	Fill	Well	Mid grey silt
1431	223	Fill	Well	Mid-light grey silty clay
1432	223	Fill	Well	Mid grey silt
1433	223	Fill	Well	Clunch and brick rubble
1434	223	Fill	Well	Mid grey silt
1435	223	Cut	Well	Sub-rectangular cut with rounded corners, vertical stepped sides and flattish base
1436	399	Layer	Garden soil	Dark brownish-grey humic silt
1437	404	Layer	Dumps	Mid grey silty clay
1438	222	Fill	Pit	Dark grey-brown silty clay
1439	216	Layer	Hollow	Very dark grey silt
1440	216	Layer	Hollow	Dark brownish-green sandy silt
1441	Void			
1442	216	Layer	Hollow	Dark grey silt
1443	216	Layer	Hollow	Dark grey silt
1444	224	Fill	Posthole	Very dark grey brown ashy silt
1445	224	Cut	Posthole	Sub-circular cut with moderate sides and flattish base
1446	398	Layer	Garden soil	Dark brownish-grey humic silt
1447	398	Layer	Garden soil	Dark brownish-grey humic silt
1448	225	Fill	Pit	Mid-dark brownish grey silt
1449	225	Fill	Pit	Dark grey clay
1450	225	Cut	Pit	Oval cut with steep sides and flattish base
1451	404	Layer	Dumps	Light grey-brown clay
1452	Void			
1453	227	Cut	Pit	Sub-circular cut with moderate sides and rounded base
1454	227	Fill	Pit	Mid-dark olive brown silt
1455	228	Cut	Pit	Oval cut with moderate sides and rounded base
1456	228	Fill	Pit	Mid greyish brown silt
1457	228	Fill	Pit	Dark greyish brown clayey silt
1458	229	Fill	Cesspit	Mid-dark brown sandy silt
1459	Void			
1460	229	Cut	Cesspit	Square cut with vertical sides and flat base
1461	399	Layer	Garden soil	Dark brownish-grey humic silt
1462	Void			
1463	223	Fill	Well	Mid brown clay

1464	399	Layer	Garden soil	Dark brownish-grey humic silt
1465	399	Layer	Garden soil	Dark brownish-grey humic silt
1466	230	Fill	Pit	Mid greyish brown clayey silt
1467	230	Cut	Pit	Oval cut with vertical sides and flattish base
1468	231	Cut	Pit	Sub-rectangular cut with steep sides and flattish base
1469	231	Fill	Pit	Dark brown sandy silt
1470	234	Fill	Pit, clay-lined	Mid orange-brown silty clay
1471	140	Fill	Pit	Mid brown clayey silt
1472	140	Fill	Pit	Mid brown clayey silt
1473	232	Fill	Posthole	dark greyish brown clayey silt
1474	232	Cut	Posthole	Circular cut with steep sides and flat base
1475	233	Layer	Hollow	Mid greyish brown silt
1476	Void			
1477	234	Fill	Pit, clay-lined	Mid brownish grey silty clay
1478	234	Fill	Pit, clay-lined	Off-white clay
1479	234	Cut	Pit, clay-lined	Circular cut with undercutting sides and flat base
1480	235	Layer	Dump	Dark greyish brown silty clay
1481	Void			
1482	236	Fill	Pit	Dark greyish brown clayey silt
1483	236	Cut	Pit	Possibly linear cut with variable sides and uneven base
1484	Void			
1485	237	Layer	Dump	Dark grey-brown clay
1486	238	Fill	Pit	Dark brownish grey silty clay
1487	238	Cut	Pit	Sub-rectangular cut with vertical sides and flat base
1488	Void			
1489	239	Layer	Dump	Dark grey silty clay
1490	240	Cut	Posthole	Oval cut with steep sides and rounded base
1491	240	Fill	Posthole	Dark grey clayey silt
1492	241	Fill	Posthole	Mid greyish brown clayey silt
1493	241	Cut	Posthole	Oval cut with gentle sides and irregular base
1494	242	Fill	Ditch	Mid-dark grey-brown silty-clay
1495	242	Cut	Ditch	Linear with steep sides and variable base
1496	239	Layer	Dump	Mid greyish brown clayey silt
1497	Void			
1498	259	Fill	Ditch	Dark grey brown silty clay
1499	259	Cut	Ditch	Linear with steep sides and rounded base
1500	243	Fill	Posthole	Dark brownish grey silt
1501	243	Cut	Posthole	Circular cut with moderate side and rounded base
1502	244	Fill	Pit	Dark brownish grey sandy silt
1503	244	Cut	Pit	Rectangular cut with moderate sides and rounded base
1504	406	Layer	Dump	Mid greyish greenish brown clay
1505	406	Layer	Dump	Mid greenish brown grey clay

1506	245	Fill	Gully	Dark grey clay silt
1507	245	Cut	Gully	Linear cut with moderate sides and rounded base
1508	406	Layer	Dump	Black charcoal rich silt
1509	406	Layer	Dump	Mid brown grey clay
1510	400	Layer	Garden soil	Dark brownish-grey humic silt
1511	400	Layer	Garden soil	Dark brownish-grey humic silt
1512	389	Bone	hollow	Redeposited bone
1513	246	Fill	Planting bed	dark greyish brown clayey silt
1514	246	Cut	Planting bed	Rectangular cut with rounded corners, vertical sides and flat base
1515	Void			
1516	Void			
1517	247	Fill	Foundation trench	Dark grey silt
1518	247	Cut	Foundation trench	Linear cut with moderate sides and rounded base
1519	246	Cut	Planting bed	Rectangular cut with rounded corners, undercutting sides and flat base
1520	246	Fill	Planting bed	Dark greyish brown clayey silt
1521	250	Fill	Ditch	Mid brownish grey silty clay
1522	250	Cut	Ditch	Linear with moderate sides and rounded base
1523	399	Layer	Garden soil	Dark brownish-grey humic silt
1524	248	Layer	Hollow	Dark grey clayey silt
1525	Void			
1526	249	Layer	Hollow	Dark grey clayey silt
1527	Void			
1528	259	Fill	Ditch	Reddish orange peaty silt
1529	259	Fill	Ditch	Mid grey clay
1530	259	Fill	Ditch	Bright greyish green clayey silt
1531	259	Fill	Ditch	Greyish green sandy silt
1532	259	Cut	Ditch	Linear with moderate sides and rounded base
1533	251	Cut	Posthole	Sub-circular cut with steep sides and flat base
1534	251	Fill	Posthole	Dark greyish brown silty clay
1535	404	Layer	Dumps	Dark grey-black sandy clay
1536	253	Fill	Pit	Yellowish brown silt
1537	253	Fill	Pit	Mid-dark grey brown ashy silt
1538	253	Cut	Pit	Sub-rectangular cut with moderate sides and flat base
1539	254	Fill	Ditch	Mid grey brown silt
1540	254	Fill	Ditch	Mid orange brown silt
1541	254	Cut	Ditch	Linear with steep sides and flattish base
1542	411	Layer	Dumps	Mid-dark grey brown silt
1543	411	Layer	Dumps	Pale brightish brownish yellow sandy clayey silt
1544	411	Layer	Dumps	Pale yellowish brown silty sand
1545	411	Layer	Dumps	Mid-dark grey brown silt

1546	410	Layer	Accumulation	Dark grey brown silty clay
1547	410	Layer	Accumulation	Dark grey brown to grey green silty clay
1548	404	Layer	Dumps	Light grey brown clay
1549	404	Layer	Dumps	Dark grey silty clay
1550	252	Cut	Pit	Sub-circular cut with irregular sides and irregular base
1551	252	Fill	Pit	Olive brown to dark greyish brown sandy clay
1552	255	Fill	Pit	Dark brownish grey silt
1553	255	Fill	Pit	Dark grey silt
1554	255	Fill	Pit	Dark grey silt
1555	255	Fill	Pit	Black charcoal
1556	255	Fill	Pit	Dark grey silt
1557	255	Fill	Pit	Dark greenish grey to brown silty gravel
1558	255	Cut	Pit	Sub-circular cut with gentle sides and flattish base
1559	256	Fill	Pit	Dark brownish grey sandy silt
1560	256	Fill	Pit	Dark grey silt
1561	256	Fill	Pit	Yellow sand
1562	256	Fill	Pit	Dark greenish grey silt
1563	256	Fill	Pit	Dark greenish grey silt
1564	256	Cut	Pit	Circular cut with moderate sides and flat base
1565	257	Fill	Foundation trench	Grey clayey silt
1566	257	Cut	Foundation trench	Sub-oval cut with variable sides and rounded base
1567	258	Fill	Pit	Dark brown silt
1568	258	Cut	Pit	Circular cut with near vertical sides and rounded base
1569	410	Layer	Accumulation	Dark brown-grey silt
1570	242	Fill	Ditch	Mid grey clay
1571	242	Cut	Ditch	Linear with gentle sides and flattish base
1572	260	Fill	Ditch	Dark brownish grey silt
1573	260	Fill	Ditch	Mid-dark greenish brown silt
1574	260	Cut	Ditch	Linear with gentle sides and rounded base
1575	261	Fill	Pit	Dark grey-brown clayey silt
1576	261	Cut	Pit	Circular cut with moderate sides and flat base
1577	262	Fill	Gully	Dark grey-brown clay-silt
1578	262	Cut	Gully	Linear with gentle sides and rounded base
1579	399	Layer	Garden soil	Dark brownish-grey humic silt
1580	399	Layer	Garden soil	Dark brownish-grey humic silt
1581	263	Fill	Foundation trench	dark grey-brown silty clay
1582	263	Fill	Foundation trench	Light brown-dark grey silt
1583	263	Cut	Foundation trench	Linear cut with steep sides and rounded base
1584	264	Fill	Pit	Mid-dark brown-grey clayey silt

1585	264	Cut	Pit	Rectangular cut with moderate sides and rounded base
1586	265	Fill	Pit	Mid-dark grey-brown clayey silt
1587	265	Cut	Pit	Cut of unknown shape with moderate sides, base unknown
1588	266	Fill	Pit	Dark purplish black silty clay
1589	266	Cut	Pit	Oval cut with gentle sides and rounded base
1590	267	Fill	Gully	Dark greyish brown clayey silt
1591	267	Cut	Gully	Linear with moderate sides and rounded base
1592	268	Fill	Foundation trench	Dark grey-brown silty clay
1593	268	Cut	Foundation trench	Linear with steep sides and flattish base
1594	Void			
1595	269	Layer	Alluvium	Mid-light grey clay silt
1596	270	Cut	Pit	Very dark greyish brown silty clay
1597	270	Fill	Pit	Circular cut with steep sides and flat base
1598	247	Fill	Foundation trench	Very dark grey brown silt
1599	247	Cut	Foundation trench	Linear with steep sides and flattish base
1600	412	Finds	Ditch	Finds
1601	400	Layer	Garden soil	Dark brownish-grey humic silt
1602	410	Layer	Accumulation	Dark grey brown silty clay
1603	271	Fill	Posthole	Dark grey brown silty clay
1604	271	Cut	Posthole	Sub-circular cut with steep sides and flattish base
1605	272	Fill	Posthole	Mid brownish grey clayey silt
1606	272	Cut	Posthole	Oval cut with irregular sides and rounded base
1607	160	Fill	Pit, stone-rich	Light greyish-brown sandy silt and gravel
1608	160	Fill	Pit, stone-rich	Mid-dark greyish brown sandy silt
1609	160	Fill	Pit, stone-rich	Light-mid greyish brown sandy silt
1610	160	Fill	Pit, stone-rich	Light greyish-brown sandy silt and gravel
1611	160	Fill	Pit, stone-rich	Limestone fragments
1612	160	Fill	Pit, stone-rich	Limestone fragments
1613	273	Fill	Pit	Dark grey clay-silt
1614	273	Cut	Pit	Oval cut with moderate sides and flat base
1615	418	Finds	Unstrat. finds	Finds
1616	274	Cut	Pit	Dark grey clayey silt
1617	274	Fill	Pit	Oval cut with moderate sides and rounded base
1618	278	Layer	Alluvium	Greyish brown clayey silt
1619	Void			
1620	279	Fill	Gully	Black-brownish clay
1621	279	Cut	Gully	Linear with moderate sides and rounded base
1622	160	Fill	Pit, stone-rich	Mid-dark greyish brown sandy silt
1623	150	Fill	Pit, stone-rich	Brownish grey sandy silt
1624	150	Fill	Pit, stone-rich	Dark grey sandy silt

1625	150	Fill	Pit, stone-rich	Reddish orange to grey brown sandy silt
1626	150	Fill	Pit, stone-rich	Mid grey sandy silt
1627	280	Fill	Pit	Dark brownish grey clayey silt
1628	280	Cut	Pit	Circular cut with moderate sides and rounded base
1629	Void			
1630	281	Cut	Pit	Circular cut with steep sides and flat base
1631	281	Fill	Pit	Dark greyish brown silty clay
1632	281	Fill	Pit	Dark brown silty clay
1633	281	Fill	Pit	Dark greyish brown silty clay
1634	281	Fill	Pit	Dark grey silty clay
1635	Void			
1636	Void			
1637	Void			
1638	Void			
1639	284	Fill	Pit	Black silt
1640	284	Cut	Pit	Sub-oval cut with moderate sides and rounded base
1641	285	Fill	Pit	Mid grey brown sandy silt
1642	285	Cut	Pit	Sub-rectangular pit with steep sides and rounded base
1643	418	Finds	Unstrat. finds	Finds
1644	286	Fill	Pit	Light grey-yellow clay
1645	286	Cut	Pit	Sub-rectangular cut with vertical sides and flat base
1646	405	Layer	Hollow	Orange-brown silt
1647	Void			
1648	402	Layer	Alluvium	Dark grey clayey silt
1649	410	Layer	Accumulation	Mid grey brown silt
1650	410	Layer	Accumulation	Mid grey brown silt
1651	402	Layer	Alluvium	Grey-blue clay
1652	411	Layer	Dumps	Mid grey brown clayey silt
1653	295	Layer	Hollow	Very dark grey brown charcoal rich clay
1654	Void			
1655	Void			
1656	287	Layer	Garden soil	Dark brownish-grey humic silt
1657	287	Layer	Garden soil	Dark brownish-grey humic silt
1658	401	Layer	Hollow	Dark grey brown silty clay
1659	Void			
1660	288	Layer	Alluvium	Mid brown clayey silt
1661	288	Layer	Alluvium	Mid grey clayey silt
1662	288	Layer	Alluvium	Light brown silty sand
1663	254	Fill	Ditch	Brown grey clayey silt
1664	254	Cut	Ditch	Linear cut with steep sides and rounded base
1665	289	Fill	Pit, specialised	Dark grey brown silt
1666	289	Fill	Pit,	Mid-pale brownish grey clayey marly silt

			specialised	
1667	289	Fill	Pit, specialised	Mid brownish orange ashy silt
1668	289	Fill	Pit, specialised	Mid-dark grey brown sandy silt
1669	289	Fill	Pit, specialised	Mid-dark brownish orange and dark reddish ashy silt
1670	289	Fill	Pit, specialised	Dark greyish brown silt
1671	289	Fill	Pit, specialised	Bright orange ashy silt
1672	289	Fill	Pit, specialised	Dark reddish brown panning
1673	289	Fill	Pit, specialised	Dark greyish brown silt
1674	289	Fill	Pit, specialised	Mid brown silty clay
1675	289	Fill	Pit, specialised	Very dark grey brown sandy silt
1676	Void			
1677	288	Layer	Alluvium	Yellowish brown sandy silty clay
1678	288	Layer	Alluvium	Greyish brown clayey silt
1679	290	Fill	Ditch	Dark yellowish black silty clay
1680	290	Cut	Ditch	Linear with moderate sides and rounded base
1681	285	Fill	Pit	Mid greyish brown silty clay
1682	291	Layer	Garden soil	Dark brownish-grey humic silt
1683	291	Layer	Garden soil	Dark brownish-grey humic silt
1684	291	Layer	Garden soil	Dark brownish-grey humic silt
1685	291	Layer	Garden soil	Dark brownish-grey humic silt
1686	291	Layer	Garden soil	Dark brownish-grey humic silt
1687	291	Layer	Garden soil	Dark brownish-grey humic silt
1688	291	Layer	Garden soil	Dark brownish-grey humic silt
1689	291	Layer	Garden soil	Dark brownish-grey humic silt
1690	295	Layer	Hollow	Light brown grey clayey silt
1691	295	Layer	Hollow	Light brown grey clay
1692	410	Layer	Accumulation	Dark yellow/greenish brown silty clay
1693	292	Fill	Posthole	Mid-light grey sandy clay
1694	292	Cut	Posthole	Oval cut with vertical sides and rounded base
1695	293	Fill	Posthole	Mid grey silty clay
1696	293	Cut	Posthole	Oval cut with steep sides and rounded base
1697	294	Fill	Ditch	Mid grey silty clay
1698	294	Cut	Ditch	Linear with steep sides and flat base
1699	247	Fill	Foundation trench	Mid grey-brown silty clay
1700	247	Cut	Foundation trench	Linear with steep sides and flattish base

1701	295	Bone	Hollow	Redeposited bone
1702	289	Cut	Pit, specialised	Rectangular cut with rounded corners, vertical sides and flat base
1703	296	Fill	Stakehole	Mid brown silty clay
1704	296	Cut	Stakehole	Square cut with near vertical sides and pointed base
1705	Void			
1706	297	Cut	Posthole	Dark brownish grey silty clay
1707	297	Fill	Posthole	Circular cut with moderate sides and rounded base
1708	418	Finds	Unstrat. finds	Finds
1709	115	Finds	Cellar	Finds
1710	223	Fill	Well	Dark brownish grey clayey silt
1711	223	Fill	Well	Brick and stone rubble
1712	223	Fill	Well	Mid grey silt
1713	223	Fill	Well	Mid grey silt and yellowish brown sandy silt
1714	223	Fill	Well	Dark grey silt
1715	223	Fill	Well	Mid grey silt
1716	298	Cut	Ditch	Linear cut with steep sides and flattish base
1717	298	Fill	Ditch	Dark brown silt
1718	418	Finds	Unstrat. finds	Finds
1719	399	Layer	Garden soil	Dark brownish-grey humic silt
1720	299	Fill	Stakehole	Mid brown silty clay
1721	299	Cut	Stakehole	Square cut with vertical sides and pointed base
1722	300	Fill	Pit	Dark grey silt
1723	300	Fill	Pit	Mid grey silt
1724	300	Cut	Pit	Oval cut with moderate sides and rounded base
1725	301	Fill	Ditch	Mid grey silt
1726	301	Cut	Ditch	Linear cut with moderate sides and rounded base
1727	288	Finds	Alluvium	Finds
1728	301	Fill	Ditch	Mid grey silt
1729	301	Cut	Ditch	Linear with moderate sides and flattish base
1730	301	Fill	Ditch	Dark grey brown silty clay
1731	301	Cut	Ditch	Linear with steep sides and rounded base
1732	302	Cut	Ditch	Linear with moderate sides and rounded base
1733	303	Cut	Ditch	Linear with moderate sides and rounded base
1734	304	Fill	Posthole	Yellow and light grey clayey silt
1735	304	Cut	Posthole	Oval cut with steep sides and flattish base
1736	288	Layer	Alluvium	Mid grey silty clay
1737	288	Layer	Alluvium	Dark grey sandy clay
1738	190	Fill	Cesspit	Mid grey silt
1739	190	Masonry	Cesspit	Stone slab
1740	257	Fill	Foundation trench	Mid greyish brown silty clay
1741	257	Fill	Foundation	Light orangey brown gravelly clay

			trench	
1742	257	Fill	Foundation trench	Dark greyish brown gravelly clay
1743	303	Fill	Ditch	Dark greyish olive brown silt
1744	303	Fill	Ditch	Mid greyish-brown silt
1745	305	Cut	Ditch	Linear with moderate sides and rounded base
1746	305	Fill	Ditch	Yellowish olive brown silty clay
1747	302	Fill	Ditch	Light yellowish brown clay
1748	302	Fill	Ditch	Light greyish brown clay
1749	302	Fill	Ditch	Light yellowish brown clay
1750	302	Fill	Ditch	Mid greyish brown clay
1751	302	Fill	Ditch	Dark grey clayey silt
1752	Void			
1753	399	Layer	Garden soil	Dark brownish-grey humic silt
1754	399	Layer	Garden soil	Dark brownish-grey humic silt
1755	300	Fill	Pit	Mid-dark greyish brown silty clay
1756	300	Fill	Pit	Mid-dark blueish grey clay
1757	300	Cut	Pit	Sub-rectangular cut with steep sides and rounded base
1758	306	Fill	Ditch	Dark grey silty clay
1759	306	Fill	Ditch	Mid grey clay
1760	306	Cut	Ditch	Linear with steep sides and rounded base
1761	254	Cut	Ditch	Linear with variable sides and irregular base
1762	254	Fill	Ditch	Dark greyish brown silty clay
1763	254	Bone	Ditch	Redeposited bone
1764	254	Fill	Ditch	Dark greyish brown silty clay
1765	303	Fill	Ditch	Dark grey-brown silt
1766	303	Cut	Ditch	Linear with moderate sides and rounded irregular base
1767	301	Fill	Ditch	Dark grey/orangey grey sandy silt
1768	301	Fill	Ditch	Dark grey and orangey brown clayey silt
1769	302	Fill	Ditch	Mid greyish orange silt
1770	302	Fill	Ditch	Mid grey silt
1771	301	Fill	Ditch	Blueish grey clay, mid grey silt and orangey red sand
1772	301	Cut	Ditch	Linear cut with variable sides and irregular base
1773	307	Fill	Ditch	Greenish grey clayey silt
1774	307	Fill	Ditch	Mid silvery grey silt
1775	307	Fill	Ditch	Greenish grey-light grey gravelly sandy silt
1776	307	Fill	Ditch	Greenish grey-light grey gravelly sandy silt
1777	307	Fill	Ditch	Dark brownish grey silt
1778	307	Cut	Ditch	Linear with moderate sides and rounded base
1779	385	Layer	Alluvium	Yellowish grey silt
1780	Void			
1781	385	Layer	Alluvium	Yellowish grey silt
1782	306	Fill	Ditch	Dark grey-brown silty clay

1783	306	Fill	Ditch	Mid grey clay
1784	306	Cut	Ditch	Linear with steep sides and rounded base
1785	386	Layer	Alluvium	Dark grey-brown silty clay
1786	386	Layer	Alluvium	Very dark grey-brown sandy clay
1787	308	Fill	Robber cut	Mid-dark grey-brown silty clay
1788	308	Fill	Robber cut	Dark blueish brown clay
1789	308	Cut	Robber cut	Square cut with vertical sided and flat base
1790	247	Fill	Foundation trench	Dark grey silt
1791	247	Cut	Foundation trench	Linear cut with moderate to steep sides and rounded base
1792	309	Cut	Pit	Circular cut with moderate sides and rounded base
1793	309	Fill	Pit	Dark olive brown silty clay
1794	309	Fill	Pit	Dark greyish brown silty clay
1795	411	Layer	Dumps	Very dark greyish brown olive silt
1796	411	Layer	Dumps	Mid-pale olive brown sandy gravelly silt
1797	355	Fill	Palaeochannel	Pale greyish brown silt
1798	355	Fill	Palaeochannel	Pale olive grey brown clayey silt
1799	355	Fill	Palaeochannel	Pale brown silty sand
1800	355	Fill	Palaeochannel	Mid-pale brownish orange silty sand/gravel
1801	142	Fill	Well	Dark greenish brown silty clay
1802	355	Finds	Palaeochannel	Finds
1803	306	Fill	Ditch	Dark greyish brown silty clay
1804	306	Fill	Ditch	Mid brownish grey silty clay
1805	306	Fill	Ditch	Light yellowish grey silty sand
1806	306	Cut	Ditch	Linear with moderate to steep sides and rounded base
1807	411	Layer	Dumps	Very dark greyish brown olive silt
1808	306	Fill	Ditch	Mid grey clay
1809	306	Cut	Ditch	Linear with moderate sides and rounded base
1810	310	Fill	Shaft	Pale blueish grey clay plus rubble and mortar
1811	310	Masonry	Shaft	Reused stone and red brick lining in white lime mortar
1812	411	Layer	Dumps	Dark greenish grey silt
1813	411	Layer	Dumps	Dark brownish grey sandy silt
1814	411	Layer	Dumps	Very dark grey silt
1815	411	Layer	Dumps	Mixed off-white to grey ashy silt
1816	411	Layer	Dumps	Mid-light grey silt
1817	411	Layer	Dumps	Greenish yellow sand
1818	411	Layer	Dumps	Rounded stones
1819	Void			
1820	311	Cut	Ditch	Linear with moderate sides and rounded base
1821	311	Fill	Ditch	Light greyish brown sandy clay
1822	311	Fill	Ditch	Light grey clayey sand
1823	385	Layer	Alluvium	Mid grey-brown silty clay

1824	399	Layer	Garden soil	Dark brownish-grey humic silt
1825	404	Layer	Dumps	very dark greyish brown silty clay
1826	312	Fill	Pit	Light grey-brown sandy clay
1827	312	Cut	Pit	Square cut with steep sides and rounded base
1828	418	Finds	Unstrat. finds	Finds
1829	386	Layer	Alluvium	Dark grey silt
1830	313	Fill	Ditch	Mid brown silt
1831	313	Fill	Ditch	Dark grey silt
1832	313	Fill	Ditch	Mid grey silt
1833	313	Fill	Ditch	Dark brown silt
1834	313	Cut	Ditch	Linear with moderate sides and rounded base
1835	386	Finds	Alluvium	Finds
1836	314	Fill	Pipe trench	Mid brownish grey silty clay
1837	314	Cut	Pipe trench	Linear with vertical sides and flat base
1838	315	Fill	Ditch	Very dark greyish brown silty clay
1839	315	Fill	Ditch	Dark greyish brown silty clay
1840	315	Fill	Ditch	Mid greyish brown silty clay
1841	315	Fill	Ditch	Light greyish brown gravelly silt
1842	315	Cut	Ditch	Linear with steep to moderate sides and rounded base
1843	316	Fill	Ditch	Dark olive brown silty clay
1844	316	Fill	Ditch	Dark greyish brown silty clay
1845	316	Fill	Ditch	Dark greyish brown silty clay
1846	316	Cut	Ditch	Linear with variable sides and rounded irregular base
1847	317	Fill	Ditch	Dark olive brown silty clay
1848	317	Cut	Ditch	Linear with moderate sides and rounded base
1849	318	Fill	Pit	Dark greyish brown silty clay
1850	318	Cut	Pit	Sub-rectangular cut with steep sides and rounded base
1851	311	Fill	Ditch	Mid grey-brown sandy clay
1852	311	Cut	Ditch	Linear with moderate sides and rounded base
1853	386	Wood	Alluvium	Unworked branch
1854	319	Skeleton	Grave	Human skeleton
1855	319	Fill	Grave	Mid grey clayey silt
1856	319	Cut	Grave	Sub-rectangular cut with moderate sides and flat base
1857	314	Wood	Pipe trench	Timber base plate
1858	320	Fill	Soakaway	Dark greyish brown silty clay
1859	320	Fill	Soakaway	Yellowish green silty clay
1860	320	Wood	Soakaway	Timber lining
1861	320	Cut	Soakaway	Circular cut with vertical sides and rounded base
1862	398	Layer	Garden soil	Dark brownish-grey humic silt
1863	115	Masonry	Cellar	Red brick and clunch
1864	115	Masonry	Cellar	Red brick
1865	314	Masonry	Pipe trench	Archway of red brick and white lime mortar

1866	386	Layer	Alluvium	Mid silvery grey silt
1867	386	Layer	Alluvium	Mid grey silt
1868	386	Layer	Alluvium	Dark greyish brown silt
1869	386	Layer	Alluvium	Mid grey silt
1870	386	Layer	Alluvium	Dark grey silt
1871	386	Layer	Alluvium	Greenish grey silt
1872	142	Finds	Well	Finds
1873	321	Cut	Gully	Linear cut with moderate sides and flat base
1874	321	Fill	Gully	Dark greyish brown silty clay
1875	322	Cut	Posthole	Circular cut with vertical sides and flat base
1876	322	Fill	Posthole	Dark grey silty clay
1877	323	Wood	Stake	Wooden stake
1878	324	Wood	Stake	Wooden stake
1879	325	Wood	Stake	Wooden stake
1880	410	Layer	Accumulation	Dark greenish brown silty clay
1881	Void			
1882	327	Fill	Foundation trench	Dark greenish brown silty clay
1883	327	Cut	Foundation trench	Linear with moderate sides and flat base
1884	328	Fill	Posthole	Mid-pale brownish grey silty clay
1885	328	Fill	Posthole	Pale brownish grey silty clay
1886	328	Cut	Posthole	Sub-rectangular cut with steep sides and rounded base
1887	257	Fill	Foundation trench	Mid brownish blueish grey silty clay
1888	257	Cut	Foundation trench	Linear with steep sides and rounded base
1889	313	Fill	Ditch	Dark greyish brown silty clay
1890	313	Fill	Ditch	Light grey silty clay
1891	313	Fill	Ditch	Dark brownish grey silty clay
1892	313	Cut	Ditch	Linear with steep to moderate sides and flattish base
1893	386	Layer	Alluvium	Dark greyish brown silty clay
1894	386	Layer	Alluvium	Dark brownish grey silty clay
1895	386	Layer	Alluvium	dark brownish grey silty clay
1896	386	Layer	Alluvium	Mid brownish grey silty clay
1897	257	Fill	Foundation trench	dark yellowish brown silty clay
1898	257	Fill	Foundation trench	Light brownish yellow silty gravelly clay
1899	257	Fill	Foundation trench	Dark yellowish brown silty clay
1900	257	Cut	Foundation trench	Linear with steep sides and flat base
1901	329	Fill	Posthole	Light brownish yellow silty gravel
1902	329	Cut	Posthole	Oval cut with vertical sides and flat base

1903	330	Fill	Grave	Mid grey-brown clayey silt
1904	330	Skeleton	Grave	Partial human skeleton
1905	330	Cut	Grave	Sub-rectangular cut, sides unknown, base flat
1906	257	Fill	Foundation trench	Mid brownish grey silty clay
1907	257	Cut	Foundation trench	Linear cut with moderate sides and rounded base
1908	412	Fill	Ditch	Mid-dark brownish blueish grey silty clay
1909	412	Cut	Ditch	Linear with moderate sides and rounded base
1910	331	Cut	Posthole	Oval cut with vertical sides and flat base
1911	331	Fill	Posthole	Dark grey clayey silt
1912	332	Wood	Stake	Wooden stake
1913	333	Wood	Stake	Wooden stake
1914	334	Wood	Stake	Wooden stake
1915	190	Fill	Cesspit	Pale brownish grey silt
1916	142	Fill	Well	dark blackish brown silty clay
1917	335	Fill	Pit	Mid brownish grey silty clay
1918	335	Cut	Pit	Oval cut with steep sides and rounded base
1919	336	Wood	Stake	Wooden stake
1920	337	Wood	Stake	Wooden stake
1921	412	Fill	Ditch	Black silt
1922	412	Fill	Ditch	Dark grey silt
1923	412	Fill	Ditch	Dark-mid grey clayey silt
1924	412	Cut	Ditch	Linear with steep sides and flat base
1925	338	Fill	Pit	Dark grey clayey silt
1926	338	Cut	Pit	Oval cut with steep sides and rounded base
1927	310	Fill	Shaft	Greenish grey clay
1928	310	Fill	Shaft	Dark greyish brown silty clay
1929	310	Fill	Shaft	Light yellowish brown silty clay with rubble
1930	142	Wood	Well	Timber base plate
1931	190	Fill	Cesspit	Pale-mid yellow brown silty sand
1932	412	Fill	Ditch	Black silt
1933	412	Fill	Ditch	Dark-mid grey silt
1934	412	Fill	Ditch	Dark-mid grey clayey silt
1935	412	Cut	Ditch	Linear with moderate sides and flat base
1936	190	Wood	Cesspit	Timber base plate
1937	190	Wood	Cesspit	Timber base plate
1938	190	Wood	Cesspit	Timber base plate
1939	190	Wood	Cesspit	Timber base plate
1940	190	masonry	Cesspit	Clunch and tile packing
1941	339	Wood	Stakehole	Wooden stake
1942	Void			
1943	Void			

1944	340	Wood	Stake	Wooden stake
1945	303	Fill	Ditch	Light brown sandy silt
1946	303	Fill	Ditch	Dark grey clayey silt
1947	303	Fill	Ditch	Mid grey clayey silt
1948	303	Fill	Ditch	Dark grey clayey silt
1949	303	Fill	Ditch	Light greenish brown silty clay
1950	303	Fill	Ditch	Light brown sandy clay
1951	303	Fill	Ditch	Dark grey sandy clay
1952	303	Cut	Ditch	Linear with steep sides and rounded base
1953	341	Fill	Pit	dark brown silt
1954	341	Cut	Pit	Oval cut with steep sides and rounded base
1955	142	Fill	Well	Orangeish brown silty gravel
1956	342	Cut	Ditch	Linear with steep sides and rounded base
1957	342	Fill	Ditch	Mid-light brownish grey clay
1958	342	Fill	Ditch	Mid-light grey-brown silty clay
1959	310	Masonry	Shaft	Mortaed clunch blocks
1960	310	Masonry	Shaft	Clunch packing
1961	310	Masonry	Shaft	Clunch blocks
1962	310	Masonry	Shaft	Clunch blocks
1963	310	Cut	Shaft	Square cut with vertical sides and flat base
1964	411	Layer	Dumps	Dark yellowish brown clay
1965	354	Fill	River channel	Dark reddish brown silty gravel
1966	342	Fill	Ditch	Dark greenish brownish grey silty clay
1967	342	Fill	Ditch	Light greenish brown clay
1968	342	Fill	Ditch	Light brown silty clay
1969	342	Fill	Ditch	Mid orangey brownish grey silty clay
1970	385	Layer	Alluvium	Mid brown-grey clay
1971	354	Wood	River channel	Stray wood
1972	418	Finds	Unstrat. finds	Finds
1973	288	Layer	Alluvium	Mid-pale brown silty clay
1974	386	Layer	Alluvium	Mid-dark grey brown clayey silt
1975	386	Layer	Alluvium	Mid-dark grey brown clay silt
1976	386	Layer	Alluvium	Mid brownish grey silt
1977	386	Layer	Alluvium	Mid brownish grey silt
1978	386	Layer	Alluvium	Mid-dark grey brown clayey silt
1979	386	Layer	Alluvium	Dark brown silt
1980	313	Fill	Ditch	Dark grey brown clay silt
1981	313	Fill	Ditch	Dark brownish grey clay silty
1982	313	Fill	Ditch	Dark greyish brown silt clay
1983	313	Fill	Ditch	Dark greyish brown sandy silt
1984	313	Fill	Ditch	Mid-dark grey brown sandy gritty silt
1985	313	Cut	Ditch	Linear cut with variable sides and flattish base

1986	313	Cut	Ditch	Linear cut with variable sides and flattish base
1987	386	Layer	Alluvium	Dark grey brown silt
1988	386	Layer	Alluvium	Dark greyish brown sandy silt
1989	386	Layer	Alluvium	Mid greyish brown clay silt
1990	386	Layer	Alluvium	Mid greyish brown sandy clay silt
1991	386	Layer	Alluvium	Mid greyish brown silty clay
1992	385	Layer	Alluvium	Grey silt
1993	385	Layer	Alluvium	Grey-brown silt
1994	385	Layer	Alluvium	Grey organic silt
1995	354	Fill	River channel	Mid-dark brown sandy silt
1996	354	Fill	River channel	Dark reddish brown silty gravel
1997	354	Fill	River channel	Grey-black organic and shelly silt
1998	414	Layer	Hard standing	Rounded stones and grits in mid-dark brown clayey sandy silt
1999	381	Fill	Ditch	Dark brownish grey clayey silt
2000	381	Cut	Ditch	Linear with moderate sides and rounded base
2001	385	Layer	Alluvium	Pale brownish grey silt
2002	Void			
2003	223	Finds	Well	Finds
2004	343	Cut	Foundation trench	Linear cut with vertical sides and flattish base
2005	343	Fill	Foundation trench	Greyish brown silty clay
2006	345	Cut	Stakehole	Circular cut with vertical sides and rounded base
2007	345	Fill	Stakehole	Dark greyish brown gritty silt
2008	344	Cut	Stakehole	Circular cut with vertical sides and pointed base
2009	344	Fill	Stakehole	Dark greyish brown gritty silt
2010	343	Fill	Foundation trench	Dark grey silt
2011	343	Cut	Foundation trench	Linear with moderate sides and flattish base
2012	346	Fill	Stakehole	Dark greyish brown silty clay
2013	346	Cut	Stakehole	Circular cut with vertical sides and rounded base
2014	347	Fill	Stakehole	Mid-dark greyish brown silty clay
2015	347	Cut	Stakehole	Circular cut with vertical sides and rounded base
2016	348	Fill	Stakehole	Mid-dark greyish brown silty clay
2017	348	Cut	Stakehole	Circular cut with vertical sides and rounded base
2018	349	Fill	Stakehole	Mid olive greyish brown silty clay
2019	349	Cut	Stakehole	Sub-circular cut with steep sides and rounded base
2020	419	Finds	Romano-British finds	Finds
2021	419	Finds	Romano-British finds	Finds
2022	191	Finds	Well	Finds
2023	303	Fill	Ditch	Very pale brownish orange and brownish yellow silty sands

2024	412	Cut	Ditch	Linear with steep sides and rounded base
2025	412	Fill	Ditch	Very dark greyish brown silty clay
2026	412	Fill	Ditch	Mid greyish brown silty clay
2027	350	Wood	Stake	Wooden stake
2028	351	Wood	Stake	Wooden stake
2029	352	Wood	Stake	Wooden stake
2030	341	Fill	Pit	Mid yellowish brown sandy silt
2031	353	Fill	Pit	Pale-mid yellowish brown silty sand
2032	353	Cut	Pit	Oval cut with moderate sides and flattish base
2033	342	Finds	Ditch	Finds
2034	354	Wood	River channel	Unworked tree trunks and branches
2035	354	Wood	River channel	Unworked wooden tree trunks/branches
2036	354	Fill	River channel	Dark reddish brown peat like silt
2037	354	Fill	River channel	Dark greyish black silt
2038	354	Fill	River channel	Dark greyish brown silt
2039	354	Fill	River channel	Dark grey silt
2040	354	Fill	River channel	Mid brownish grey silt and organics
2041	354	Cut	River channel	Linear with gentle sides, base variable
2042	354	Fill	River channel	Grey-black organic and shelly silt
2043	354	Cut	River channel	Linear with gentle sides, base variable
2044	387	Wood	Stakes	Wooden stake
2045	407	Finds	Object	Finds
2046	382	Fill	Pit	Mid grey brown silty clay
2047	382	Cut	Pit	Circular or oval cut with steep sides and flat base
2048	398	Layer	Garden soil	Dark brownish-grey humic silt
2049	399	Layer	Garden soil	Dark brownish-grey humic silt
2050	399	Layer	Garden soil	Dark brownish-grey humic silt
2051	399	Layer	Garden soil	Dark brownish-grey humic silt
2052	399	Layer	Garden soil	Dark brownish-grey humic silt
2053	386	Layer	Alluvium	Mid brownish grey silty clay
2054	419	Wood	Romano-British finds	Finds
2055	398	Layer	Garden soil	Dark brownish-grey humic silt
2056	398	Layer	Garden soil	Dark brownish-grey humic silt
2057	398	Layer	Garden soil	Dark brownish-grey humic silt
2058	399	Layer	Garden soil	Dark brownish-grey humic silt
2059	399	Layer	Garden soil	Dark brownish-grey humic silt
2060	399	Layer	Garden soil	Dark brownish-grey humic silt
2061	399	Layer	Garden soil	Dark brownish-grey humic silt
2062	394	Fill	Pit	Mid brown silt
2063	394	Fill	Pit	Mid grey brown silt
2064	386	Layer	Alluvium	Mid grey sandy silt
2065	386	Layer	Alluvium	Dark brown silty clay

2066	386	Layer	Alluvium	Light brown sandy silt
2067	385	Layer	Alluvium	Light grey silty clay
2068	386	Layer	Alluvium	Dark grey brown silty clay
2069	385	Layer	Alluvium	Light brown silty clay
2070	385	Layer	Alluvium	Light grey silty sand
2071	385	Layer	Alluvium	Dark grey brown silty clay
2072	385	Layer	Alluvium	Light grey silty sand
2073	354	Fill	River channel	Black organic silt
2074	354	Fill	River channel	Grey-black organic silt
2075	354	Fill	River channel	Black organic silt
2076	354	Fill	River channel	Grey-brown sandy silt
2077	354	Fill	River channel	Very dark grey silty sand
2078	354	Fill	River channel	Black-grey organic silt
2079	Void			
2080	Void			
2081	354	Fill	River channel	Paly yellowish brown sandy clay with gravel
2082	354	Fill	River channel	Off-white sandy clay with gravel
2083	386	Finds	Alluvium	Finds
2084	398	Layer	Garden soil	Dark brownish-grey humic silt
2085	398	Layer	Garden soil	Dark brownish-grey humic silt
2086	399	Layer	Garden soil	Dark brownish-grey humic silt
2087	394	Fill	Pit	Dark grey silty clay
2088	354	Wood	River channel	Unworked wooden tree trunks/branches
2089	355	Fill	Palaeochannel	Gravels
2090	355	Cut	Palaeochannel	Linear cut with steep sides and flattish base
2091	368	Wood	Stake	Wooden stake
2092	369	Wood	Stake	Wooden stake
2093	370	Wood	Stake	Wooden stake
2094	112	Finds	Drain	Finds
2095	398	Layer	Garden soil	Dark brownish-grey humic silt
2096	398	Layer	Garden soil	Dark brownish-grey humic silt
2097	390	Masonry	Wall	Mortared clunch blocks
2098	391	Masonry	Wall	Mortared clunch blocks
2099	392	Brickwork	Wall	Red bricks in pale mortar

OASIS FORM

OASIS ID: cambridg3-246293	
Project details	
Project name	WYNG Gardens, Thompson's Lane, Cambridge
Short description of the project	Archaeological excavations revealed a Middle/Late Bronze Age-Late Bronze Age/Early Iron Age palaeochannel of the river Cam dated by dendrochronology had good waterlogged preservation, but negligible evidence of human activity. This was followed by alluvial flood deposits dated to the Middle-Late Iron Age, again with relatively little evidence for a human presence in the immediate vicinity. Three phases of Romano-British activity, spanning the late 1st to mid/late 4th centuries, included the rear boundary of the lower town/suburban settlement fronting onto Bridge Street, waterside activity and an area of inhumation burials. After a further period marked by natural alluviation the area was reclaimed in the 11th-12th centuries, probably linked to the enclosure of the area by the King's Ditch in the mid-12th century. During the 13th-15th centuries there is relatively sparse evidence for activity, the area was probably part of the garden or curtilage meadow of a property with its main occupational focus to the west. Occupation increased markedly in the 16th century, when the area was subdivided into nine plots, probably after St. John's College acquired the site in 1533. There is evidence for communal facilities shared between the plots, including a stone-lined cesspit and a well. Later there was further investment in the early/mid-17th century, with the construction of a new communal well and privy, plus an associated drain. In the 1791-95 the area was converted into a garden and later in 1911 a terrace of buildings was constructed.
Project dates	Start: 16-02-2016 End: 15-09-2016
Previous/future work	Yes / Not known
Any associated project reference codes	ECB4294 - HER event no.
Any associated project reference codes	SCG15 - Sitecode
Type of project	Recording project
Site status	Conservation Area
Current Land use	Residential 2 - Institutional and communal accommodation
Monument type	PALAEOCHANNEL Late Bronze Age
Monument type	SETTLEMENT Roman
Monument type	SETTLEMENT Medieval
Monument type	SETTLEMENT Post Medieval
Significant Finds	POTTERY Roman
Significant Finds	ANIMAL BONE Roman
Significant Finds	WORKED BONE Roman
Significant Finds	COINS Roman
Significant Finds	HUMAN BONE Roman
Significant Finds	POTTERY Medieval
Significant Finds	MOULDED STONE Medieval
Significant Finds	ANIMAL BONE Medieval

Significant Finds	METALWORK Medieval
Significant Finds	POTTERY Post Medieval
Significant Finds	METALWORK Post Medieval
Investigation type	"Full excavation"
Prompt	Direction from Local Planning Authority - PPS
Project location	
Country	England
Site location	CAMBRIDGESHIRE CAMBRIDGE CAMBRIDGE WYNG Gardens, Thompson's Lane
Postcode	CB5 8AB
Study area	1117 Square metres
Site coordinates	TL 44823 58965 52.209422909428 0.119798495073 52 12 33 N 000 07 11 E Point
Height OD / Depth	Min: 2m Max: 7.4m
Project creators	
Name of Organisation	Cambridge Archaeological Unit
Project brief originator	Local Authority Archaeologist and/or Planning Authority/advisory body
Project design originator	Alison Dickens
Project director/manager	Alison Dickens
Project supervisor	Craig Cessford
Type of sponsor/funding body	Developer
Name of sponsor/funding body	Trinity Hall, Cambridge
Project archives	
Physical Archive ID	SCG15
Physical Contents	"Ceramics","Environmental","Glass","Human Bones","Metal","Wood","Worked bone","Worked stone/lithics","Animal Bones"
Digital Archive recipient	Cambridgeshire County Archaeology Store
Digital Archive ID	SCG15
Digital Contents	"Animal Bones","Ceramics","Environmental","Glass","Human Bones","Metal","Stratigraphic","Survey","Wood","Worked bone","Worked stone/lithics"
Digital Media available	"Database","GIS","Spreadsheets","Survey","Text"
Paper Archive recipient	Cambridgeshire County Archaeology Store
Paper Contents	"Animal Bones","Ceramics","Environmental","Glass","Human Bones","Metal","Stratigraphic","Survey","Wood","Worked bone","Worked stone/lithics"
Paper Media available	"Context sheet","Drawing","Matrices","Photograph","Plan","Report","Section"

Project bibliography	
Publication type	Grey literature (unpublished document/manuscript)
Title	WYNG Gardens, Thompson's Lane, Cambridge: An Archaeological Excavation
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