

No.'s 4-5 Castle Street, Cambridge

An Archaeological Excavation



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University of Cambridge

December 2011

Report No. 1064

Event Number: **ECB 3695**

Non-technical summary

An archaeological excavation was undertaken by the Cambridge Archaeological Unit at No's. 4–5 Castle Street, Cambridge, between the 14th and the 25th of November 2011. Despite extensive 19th–20th-century disturbance 1st–4th-century Roman deposits and features, including a well constructed cobbled surface, survived under the basements. In the rear yard a 3.3m deep stratigraphic sequence spanning the 12th/13th–20th centuries was present with features including a large 12th–13th-century quarry pit, a 14th–15th-century oven and a 16th–17th-century garden/horticultural soil, all features typical of the rear yard area of an urban plot. In the 17th century a building with a substantial cellar was constructed, this remained in place until the current standing buildings were erected in the mid 19th century.

Introduction

An archaeological excavation was undertaken by the Cambridge Archaeological Unit (CAU) in the basements of No.'s 4–5 Castle Street and the rear yard of No. 5 Castle Street, Cambridge, (TL 446 591) in November 2011 (Figures 1–2). The work was undertaken on behalf of the University of Cambridge Estate Management in advance of expansion by the Kettle's Yard art gallery.

Location, Topography and Geology

The geology of Castle Hill, Cambridge, comprises a promontory of Gault clay overlain by lower chalk marl and capped by Pleistocene sands and gravels of variable thickness (Alexander and Pullinger 1999, 11–12). No.'s 4–5 Castle Street lie at the mid point of the raised topography forming Castle Hill, at an elevation of between 8.1m OD (basement level), 10.1m OD (street level) and 10.6m OD (yard level). The site is located 45m to the north of the junction of Castle Street and Northampton Street/Chesterton Lane and the River Cam lies to the southeast at the base of the hill.

Methodology

The work was undertaken following a written scheme of investigation (Evans 2011), with deviations from this agreed on site by the development control archaeologist. Three test pits (Test Pits 2–4) were excavated in the basements of No.'s 4–5 Castle Street, complimenting a previous test pit (Test Pit 1) that had been excavated in the basement of No. 5 Castle Street in 2010 (Slater 2010). The brick and tile floors plus underlying concrete of the basements of No.'s 4–5 Castle Street in Test Pits 2–4 were removed using a mechanical breaker. These test pits were initially 1.6m by 1.5m in extent. Based upon initial results and in consultation with the structural engineer and development control archaeologist, it was decided to leave the extent of Test Pit 4 unaltered, but to expand the other test pits as much as was practical given the state of the standing building. Test Pit 2 was expanded to 2.6m by 1.5m (plus two 0.3m wide extensions, which were 1.4m and 0.4m long) and Test Pit 3 was expanded to 2.7m by 1.5m long. In the rear yard of No. 5 Castle Street the uppermost *c.* 0.5m deposits were cleared from the entire available area, excluding structures and other hard surfaces, which constituted a *c.* 3.5m by 2.7m area. Based upon this a *c.* 2.2m by 2.0m area was excavated, although the effective area of surviving pre-19th-century deposits was *c.* 1.1m by 0.9m (Area 1). In total, an area measuring 17.5m² was investigated in 2010–11; this represents *c.* 10% of the overall development area of *c.* 170m².

All archaeological features and deposits encountered that pre-dated the current mid 19th-century standing buildings were hand excavated. Plans were drawn at a scale of 1:20 and sections recorded at a scale of 1:10. The photographic record consists of digital photo's. The recording followed the CAU-modified MoLAS system (Spence 1994), whereby numbers were assigned to individual contexts (e.g. **[001]**) and stratigraphic events (e.g. **F.01**). The spoil and, where possible, *in situ* deposits were metal detected. All work was carried out in strict accordance with statutory health and safety legislation and recommendations of the Federation of Archaeological Managers & Employers (Allen and Holt 2010). The site code is **KYE 11** and the HER event number is **ECB 3695**.

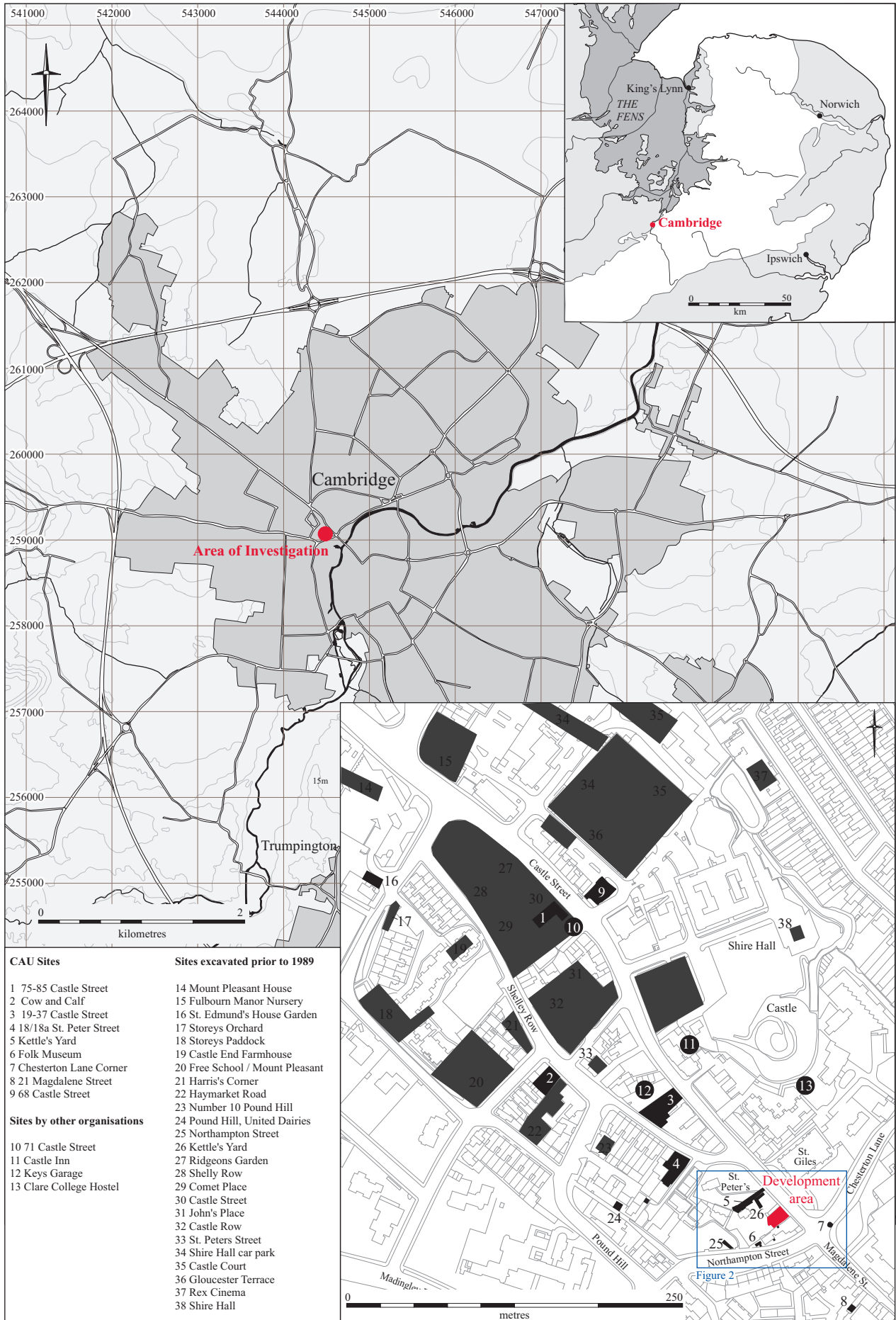


Figure 1. Location map

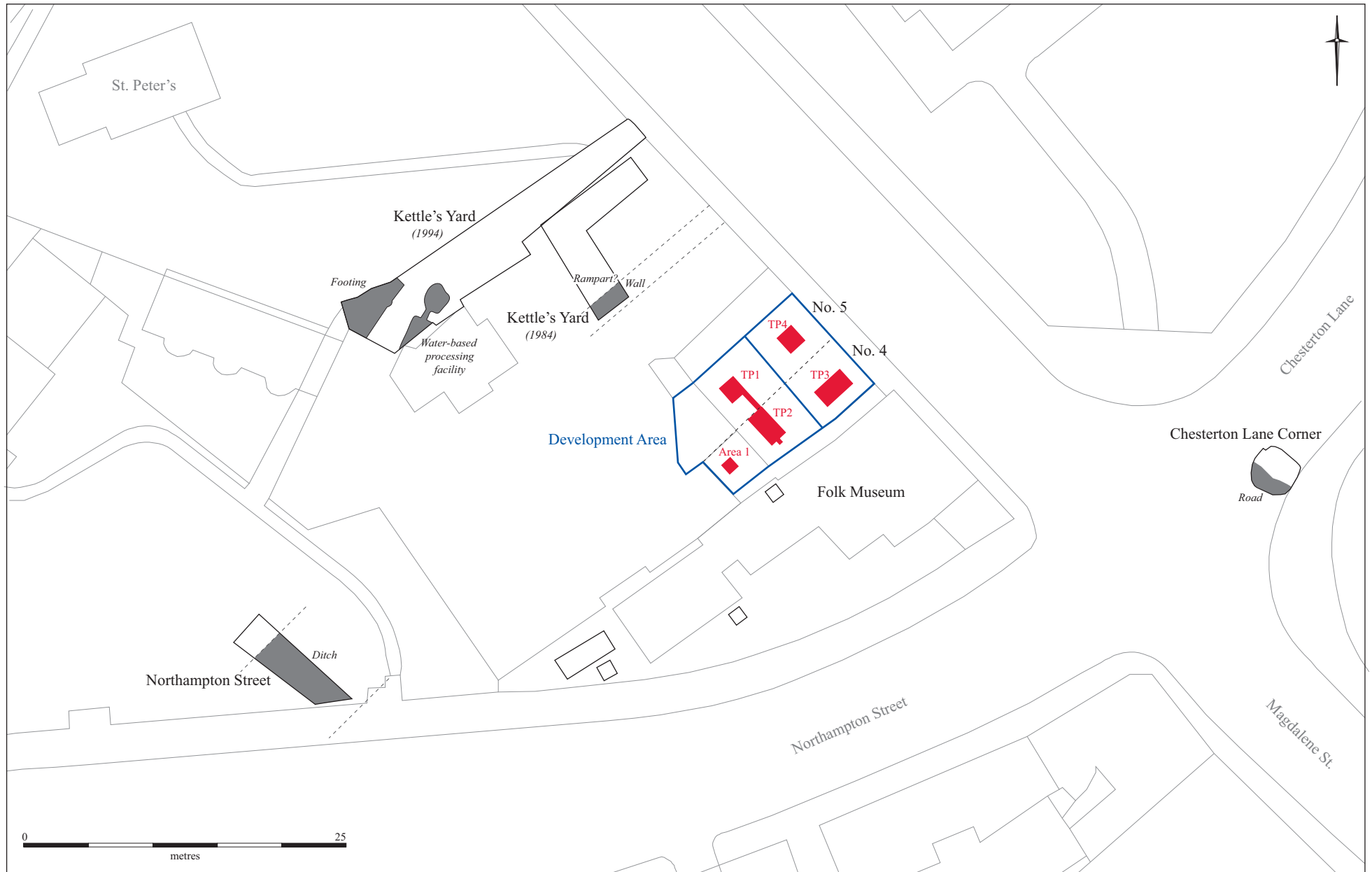


Figure 2. Development area with location of investigations

Archaeological, Historical and Cartographic Background

The background to the site was outlined in the evaluation report (Slater 2010) and will not be re-iterated here, although it should be noted that it requires some modification in the light of other publications (Cessford with Dickens 2005; Evans and Ten Harkel 2010). There is evidence for a significant Late Iron Age centre and Early Roman cross-roads settlement with a 2nd-century shrine complex on Castle Hill. In the 4th century the settlement was enclosed, creating a walled hilltop settlement. Although usually described as a Roman 'small town' this term is in reality more of a label than a meaningful interpretation and the extent to which any phase of the Roman occupation on Castle Hill can meaningfully be thought of as 'urban' is debateable.

The development area is located on the southeast flank of Castle Hill leading to the River Cam. Although limited work was undertaken here prior to 1990 (notably Northampton Street 1949, Pound Hill 1983 and Kettles Yard 1984) the main focus was on the summit of the hilltop (Alexander and Pullinger 1999). In contrast since 1990 this area has proved to be one of the main foci for developer-funded investigation. As the Roman period results of these developer-funded excavations are largely unpublished, a summary specific to the southeast flank of Castle Hill during the Roman period is given below.

The evidence of the Post-Roman period has been published more thoroughly (Cessford with Dickens 2005). The Castle Hill area appears to have been an important locale in the Middle Saxon period (Cessford *et al.* 2007) and was again the focus of significant occupation from the Late Saxon period onwards. The earlier evaluation (Slater 2010) revealed a high level of truncation of earlier archaeological features associated with the construction of the present buildings in the mid 19th century; locally in Test Pit 1 this was compounded by the presence of a contemporary brick-lined well. The evaluation suggested that cut features, probably of Roman date, might survive elsewhere in the basement area and that in the rear yards there was likely to be a considerable depth of stratified archaeological deposits, spanning the Roman to Modern periods.

No.'s 4–5 Castle Street are a pair a three storey gault brick buildings with basements and attics. As such they are typical of those built in the Castle Hill area constructed between the inclosure of the parish of St. Giles in 1805 and *c.* 1850, where what was 'predominantly a humble residential district' was covered by piecemeal development consisting largely of single houses, pairs and small groups (RCHM(E) 1959, 346). On architectural grounds No.'s 4–5 Castle Street probably date to *c.* 1830–50 and are Grade II listed (British Listed Buildings 2011).

Summary of Developer-Funded Investigations on the Southeast Flank of Castle Hill

The recent archaeological investigations have mainly been undertaken by the CAU, including work at 19–37 Castle Street (Alexander 1996), 75–85 Castle Street (Butler 1994), adjacent to 68 Castle Street (Evans and Ten Harkel 2010), the Cambridge and County Folk Museum (Cessford 2003; Dickens and Armour 2002), Chesterton Lane Corner (Mortimer and Regan 2001), the Cow and Calf Public House (Anon 2003; Mortimer 2000a), 18/18a St. Peter Street (Dickens 2002), Kettle's Yard (Evans 1994), Sunnyside House (Regan 2001; Wills 2003) and 21 Magdalene Street (Dickens 1991). Work by other organisations has taken place at 68 Castle Street (Crank and Murray 2001), 71 Castle Street (Heawood 1997), The Castle Inn (Roberts 1996), Keys Garage (Murray 2000; Smith 1999) and Clare College Hostel (Malim and Taylor 1992).

Iron Age: There is no evidence that the hilltop occupation extended for any distance down the slope towards the river.

1st century: earlier excavations suggested that the 1st-century settlement and possible fort was mainly confined to the summit of Castle Hill (Alexander and Pullinger 1999, 27–24). On the southwest side of the hill iron smelting furnaces, pits and ditches were found at Pound Hill (Alexander and Pullinger 1999, 29–30) and it was presumed that the *Via Devana* linking the settlement to a river crossing was in use, although it was not located (Alexander and Pullinger 1999, 33–34). Above the palaeo-channel at Chesterton Lane Corner were a series of thin soil layers that were cut through by a c. 0.3m deep southeast to northwest aligned linear feature. This appears to be an early Roman hollow road or levelling cut for a road, creating a flat level surface over which there were the patchy remains of a metallised surface. Use of the hollow road was indicated by the build-up of silty soil, suggestive of increasingly mucky and disturbed soil layers. Some aquatic snails in this build-up indicate that it was occasionally damp or flooded. Running parallel to this was a roadside ditch c. 1.0m wide and 0.4m deep with a U-shaped profile with a slight bank of upcast material between the ditch and the road. The ditch was recut or cleaned at least once. The ditch butt-ended against a steep and slightly stepped pit, approximately 2.2m long, 1.5m wide and 0.9m deep. Slight traces of timber planking lay immediately above the base and down the pit sides; these appear to be collapsed timbers, probably from a wooden cover. Above and around the planking was some clay, perhaps used to seal or fix the planks in place. This road lacks an *agger* or solid gravelled surface and it appears a hasty affair. It may mark the earliest Post-Conquest route into Roman Cambridge running from a bridge or ford across the Cam to the main settlement and possible fort on the summit of Castle Hill. A precise alignment for the road is impossible to determine given the small area revealed, especially as it may turn slightly.

The first event at the Folk Museum was its deliberate levelling by dumping sand; this was for the construction of a timber building indicated by a steep sided, flat-bottomed linear cut c. 0.8m wide and 0.5m deep filled by a series of silty sand and compacted gravels, presumably to provide a firm foundation for the sill beam of a timber building. Lying to the rear of the building was a gully or pit with steep sides and a flat base, 0.82m by 0.64m in extent. This gully or pit was eventually backfilled and cut by a gully running parallel to the building with curved sides and a flat base c. 0.15m deep and 0.8m wide, this sloped slightly downwards from north-northeast to south-southwest and ran into a larger circular pit c. 1.0m in diameter and 0.6m deep. The backfilled pit or gully was then used for the burial of a neonate.

At 75–85 Castle Street there was a buried soil consisting of both a subsoil and topsoil cut through by a shallow pit and stakehole. One or two pits at the Cow and Calf are probably 1st century in date and the pottery evidence suggests that there is also activity at 19–37 Castle Street, although no features survive. There is no evidence for 1st-century activity at 18/18a St. Peter Street and Kettle's Yard, while the small amount of badly abraded and fragmented pottery at Sunnyside House probably relates to agricultural activities, which continued throughout the Roman period.

2nd century: early in the 2nd century the settlement was reorganised, but it still appears to be largely limited to the summit of Castle Hill (Alexander and Pullinger 1999, 35–47). Pits and gullies were found at Pound Hill and it was presumed that the *Via Devana* continued to run through the area (Alexander and Pullinger 1999, 35–47). At Chesterton Lane Corner a series of fine washed deposits almost completely infilled the roadside ditch, half filled the large pit and extended over the rest of the area apart from the road. These are composed of black, laminated, compressed organic material, interspersed with fine grey silt bands and appear to represent waste from cereal processing. Following this quite mixed and dirty greenish-grey mucky clays were dumped. A series of dumps of mainly clean

redeposited natural yellow and orange gravels were then deposited, creating a compact level surface of high quality sorted gravels. It is likely that they are part of a levelling or foundation deposit for an adjacent building. Layers of soil build-up then cover the site. Over the road was a mucky clay silt with a rough clay and gravel surface above it, whilst over the rest of the area there was a similar, but slightly cleaner, less disturbed, soil layer. Above this was a thin burnt spread of oven cleanings. Above the entire area lay a relatively clean and homogenous dark brown layer of dumped soil. Following this the whole site was covered in a thick layer of fine yellow sandy mortar, providing a firm and solid foundation level. Above this an agger was built up to create a road, a second thick sandy mortar layer was capped by a dense gravel surface. Parallel to the road was a funnel or bottle shaped gully, 1.2–0.6m wide and 0.3m deep. Beside the gully was a low raised wall, 0.4m wide and 0.25m high, and a floor of trodden gravel covered by a thin layer of silt. A hollowed out area with a flat base suggests the presence of a stone doorsill that was subsequently removed, beside this was a posthole for a door 0.23m in diameter and 0.2m deep.

There is evidence for a substantial laying out of gravelled streets parallel to Akeman Street in the early 2nd century (Alexander and Pullinger 1999, 35–36) and it is possible that the replacement of the hollow road with a more impressive gravelled surface is part of the same activity. The building probably went out of use in the later part of the 2nd century, but it is likely that the road continued in use throughout the Roman period, and may even have been a feature of the Post-Roman landscape.

The 1st-century building at the Folk Museum probably continued in use into the 2nd century, but the associated gully and pit were filled in and a levelling deposit dumped forming a rough yard surface. A sub-circular pit with gently curved sides and a flat base around 1.5m in diameter and 0.22m deep was cut through this surface. At 75–85 Castle Street there is evidence for a timber building, in the form of an internal sill beam *c.* 0.4m wide and 0.1m deep, a stakehole and an associated rammed earthen floor *c.* 0.1m thick. There was a well *c.* 1.8m in diameter to the rear of the building, a *c.* 1.0m wide and 0.25m deep pit and a steep sided 0.6m wide east-west aligned ditch may also be associated with the structure. The building probably went out of use before the end of the 2nd century. At the Cow and Calf there are a few pits and there is evidence of intercutting Roman pits and gullies at 18/18a St. Peter Street, but the amount of activity at 19–37 Castle Street declines.

3rd century: Alexander and Pullinger found no evidence for 3rd-century activity in this area, except for the presumed continued existence of the *Via Devana* (Alexander and Pullinger 1999, 49–58). Little evidence for 3rd-century activity was found in the recent excavations suggesting a possible decline (*cf.* Taylor 1999, 80). The road at Chesterton Lane Corner presumably continued to be used and maintained, as there is no evidence for any 3rd-century build-up of deposits, and at the Folk Museum it is possible that the yard surface continued in use. There appears to be some activity at the other sites, but at a low level and largely related to dumping of material and gardening or horticultural activities. At Kettle's Yard there is evidence of some form of industrial process involving water (Evans 1999, 255–56). A 'working terrace' to create a flat area was created with a water-based processing facility consisting of a deep well or water storage feature, a tank and a feeder channel. It is unclear when exactly this was created but it went out of use in the 3rd century and was probably also constructed in the 3rd century.

4th century: In the 4th century an area of 8.6ha on Castle Hill was enclosed. The precise nature and location of the defences has given rise to some debate, but most probably they consisted of a *c.* 12m wide enclosure ditch, a stone wall and an internal rampart and ditch (Alexander and Pullinger 1999, 59–74). It has been suggested that the primary motive for the construction of these defences was to protect the various taxes, in particular corn, that were collected in the area in order to supply the Roman army with food (Alexander and Pullinger 2000, 82–83). The enclosed area included part of the southeastern flank of Castle Hill and it is assumed that the *Via Devana* continued on its previous alignment, exiting the wall through a gate. Also during the 4th century an earthen bank over 3m high was constructed parallel to the line of Chesterton Road (Walker 1911). There is evidence of gravel quarrying on the south side of the river, with an associated gravel surface that may have been a landing place for boats (Dickens 1996).

There is little evidence for 4th-century activity from the recent excavations. The road at Chesterton Lane Corner presumably continued to be used and maintained, although it is possible that material began to accumulate over it. Cut through the road was the burial of a supine middle adult male, aligned WSW to ENE, with their skull placed between their legs. Some stones appear to have been deliberately

placed over the kneecaps of the body, 'weighing' it down, and a roughly circular green stain *c.* 35mm in diameter was observed on the right parietal bone, just anterior to the occipital border. The only closely dateable pottery found in the grave fill was some 2nd–3rd-century Colchester Samian and radiocarbon dating indicates that it is Late Roman and probably 4th century in date. Although unexpected, as it was anticipated that the burial belonged to the same phase as the later cemetery, a Late Roman date is not problematic given the lack of stratigraphic evidence to the contrary. Its location just outside the 4th-century town defences and along a road is typical of Roman burial practices and decapitation is a common Late Roman phenomenon (Philpott 1991, 77–89; Price *et al.* 1981). Given the scale of the excavations it is impossible to tell if the Chesterton Lane Corner inhumation represents a single isolated burial or is part of a larger cemetery.

While it is possible that the earlier yard surface at the Folk Museum continued in use, the lack of obvious wear or repair makes this unlikely. Some activity is possible at 18/18a St. Peter Street and the Cow and Calf, whilst the pottery suggests increased levels of activity at 19–37 Castle Street. At Kettle's Yard a large rammed marl and limestone footing with stonework laid edge up in a herring bone pattern over 4.0m by 2.3m in extent and 0.35m thick was found (Evans 1999, 255–56). These were interpreted as the footings 'of an impressive building' or possibly a 'gateway and/or bastion' associated with the town's defences (Evans 1999, 256). The dating of this structure is not entirely certain, it was later than a feature containing some 3rd-century Nene Valley colour coated indented beaker with barbotine scales, but only a small amount of pottery was associated with the structure itself and this could not be closely dated. Overall a 4th-century date appears likely, but no pottery definitely of this date was recovered. The other recent work has emphasised how atypical these stone footings are, additionally the discovery of the *Via Devana* at Chesterton Lane Corner demonstrates that the structure cannot be associated with a gateway. Whilst it cannot be disproved that it is not simply an impressive building this seems unlikely as no other 4th-century stone buildings are known from Roman Cambridge, the earlier possible *mansio* having gone out of use (Alexander and Pullinger 1999, 39–40). Additionally all the significant Roman buildings throughout the town's history were located on the summit of the hill, whereas this structure is much lower down the slope and close to the line of the 4th defences. The southeastern defences of Roman Cambridge are the most poorly investigated of the town, with only recording of a section through the ditch at Northampton Street in 1949 (RCHM(E) 1959, no.15) and small-scale observations of the wall and rampart at Kettle's Yard in 1984 (Alexander and Pullinger 1999, 65). The area observed in 1984 was only slightly larger than 1m² and had been truncated by later features, suggesting that the results should be treated with caution. These appeared to be on a different alignment to the more recent discoveries, but overall it seems likely that stone footing from the more recent work at Kettle's Yard does relate to the town's defences.

Results

The results of the two sets of investigations compliment each other, with Area 1 providing a vertical sequence and Test Pits 2–4 providing horizontal exposures of Roman activity. The discussion will therefore initially consider the Roman features, plus underlying natural deposits. The focus will then shift to the vertical sequence.

Roman Features and Underlying Natural (Figure 3)

The Roman features and underlying natural will be discussed together, as the nature of the Roman activity is apparently closely linked to the underlying natural deposits. Given the extremely restricted overall area of the site the investigations revealed a wide range of types of natural, most of which probably originally had a pronounced northwest to southeast slope. These different types of natural would have had a considerable impact on the pattern of Roman activity as it affected how firm a foundation they could provide, how wet an area would be and how useful a source of raw material such as sand and gravel they provided. Later truncation means that no Roman features survived in either Area 1 or Test Pit 1. Although the degree of truncation makes it impossible to generalise it appears that the wet conditions in Test

Pit 3, and to a lesser extent Test Pit 2, may have severely inhibited activity in this localised area as the groundwater created an extremely boggy area. There was therefore activity, but nothing that can be identified as specific occupation, during the mid 1st–2nd centuries. Notable by their absence is any evidence from any of the investigations for the sand and gravel quarrying typical of other areas of this slope of Castle Hill. This was presumably due to recognition of the inherent risks of such activity, as exemplified by the necessity to ‘plug’ an area where a band of extremely loose sand containing perched groundwater had been exposed (F.20 [306]). The presence of probably articulated sheep or goat vertebrae and *in situ* breakage of a sandy ware jar suggests rapid deposition of material as a single event. This pattern only changed when a concerted effort was made to improve the area with a cobbled surface (F.19). The dating of this is problematic but it must have occurred between the mid 2nd–mid 4th centuries. It is probable that it dates to the late 3rd–early 4th century, and that the creation of the cobbled surface removed a considerable quantity of earlier deposits. One possibility is that the creation of the cobbled surface relates to much wider transformations of Castle Hill linked to the creation of the defences in the early 4th century. After the creation of the cobbled surface there was activity, but again nothing that can be identified as specific occupation, continuing until at least the mid 4th century.

Although the truncation makes certainty difficult it appears that the topography and geology of this area of Castle Hill combined to make this area relatively unfavourable for occupation in the Roman period, leading to a relatively sparse archaeological record. One major issue relates to the issue of what was the nature of the overall pre-Roman topography of this slope of Castle Hill and to what extent it has been altered either consciously, perhaps by terracing, or incidentally through time. Although locally there appears to have been a slope of between 1:3.5 and 1:6.7 this issue must be addressed on a larger scale and is discussed below.

Feature Descriptions

Test Pit 1

In Test Pit 1 the natural consisted of a light to mid brown, laminated deposit of fine, medium and coarse grained sand with no inclusions and a thick band of light grey/white marly clay. The natural was entirely truncated but its upper surviving surface lay at 7.89m OD (Slater 2010). No Roman features or deposits were present (Slater 2010).

Test Pit 2 (Figure 4)

In Test Pit 2 the natural consisted of relatively loose greyish yellow gravelly sand [205] whose untruncated upper surface sloped downwards from northwest to southeast and lay at between 7.20–7.05m OD. The upper surface of this deposit fell *c.* 0.15m over a distance of *c.* 3.6m with a slope of 1:24. [205] contained significant quantities of perched groundwater, as a result it was only revealed at the base of two small slots. Above this was a deposit of mottled light grey clay with patches of orange sand that was 0.25–0.7m thick (F.17 [204]). This deposit contained no cultural material of any kind and is interpreted as a naturally formed pre-Roman hillwash or colluvial deposit. The upper surface of [204] sloped downwards from northwest to southeast and lay at between 7.90–7.25m OD. The untruncated upper surface of [204] fell *c.* 0.65m over *c.* 2.3m with a slope of 1:3.5.

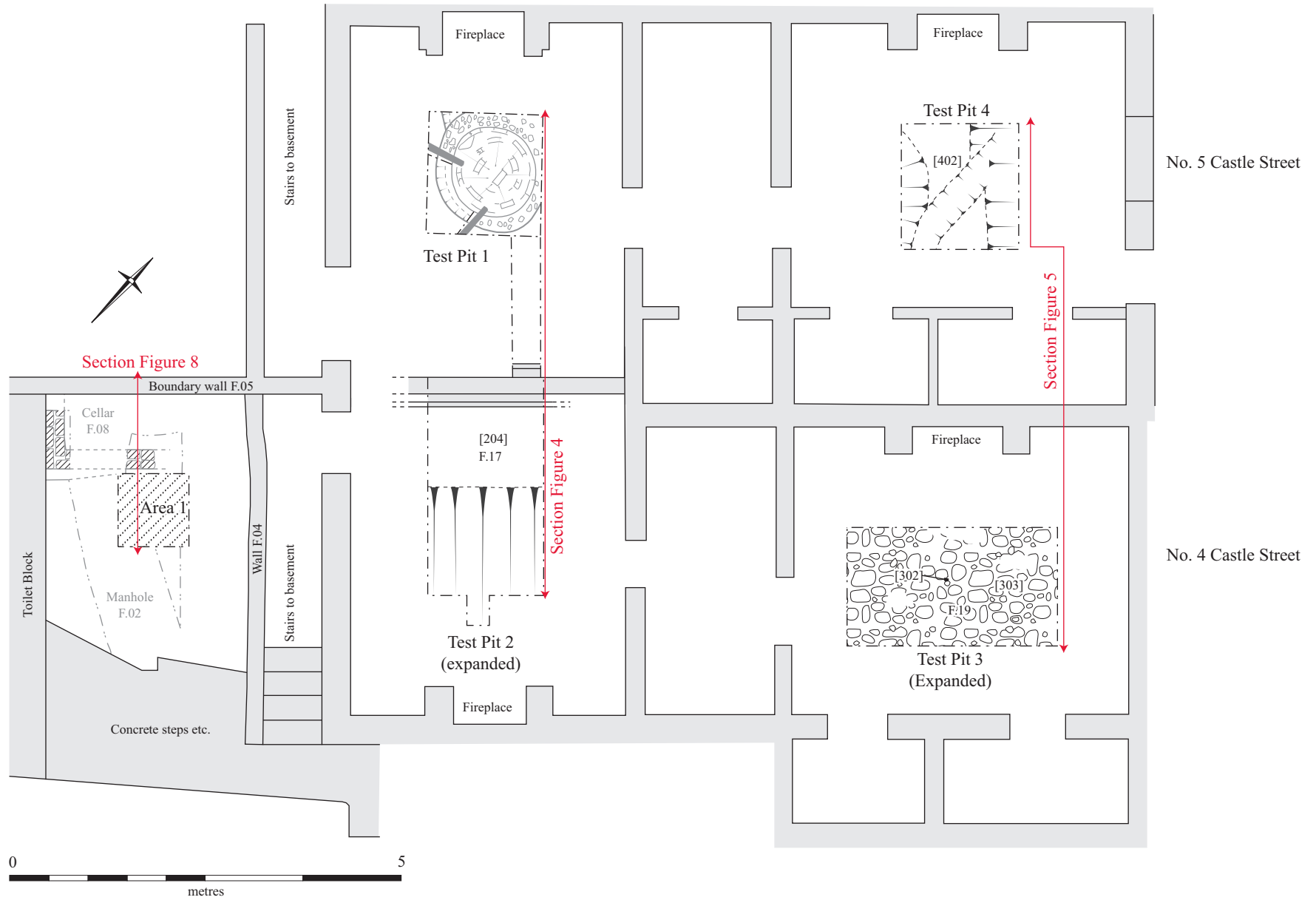


Figure 3. Plan of investigations

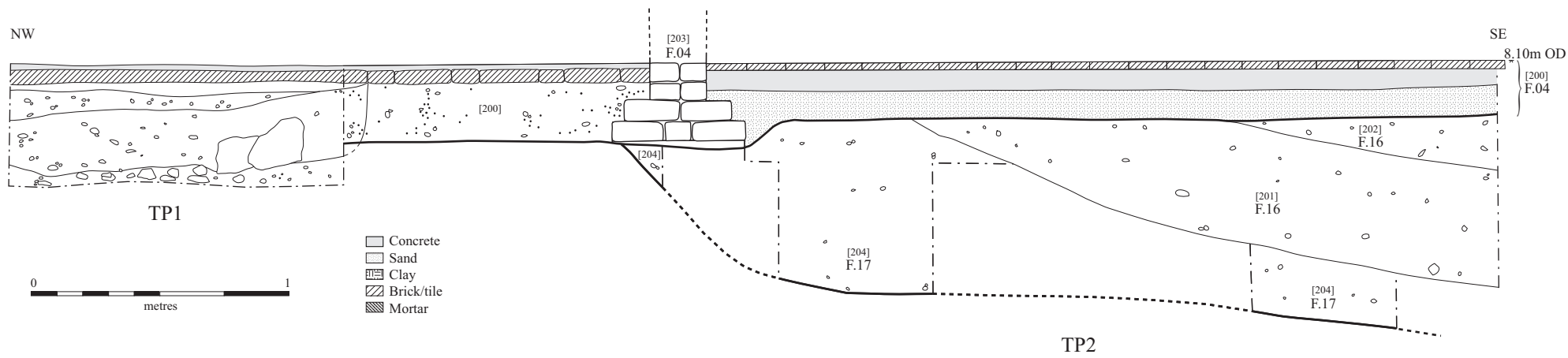


Figure 4. Section of Test Pits 1 and 2 and photograph of Test Pit 2

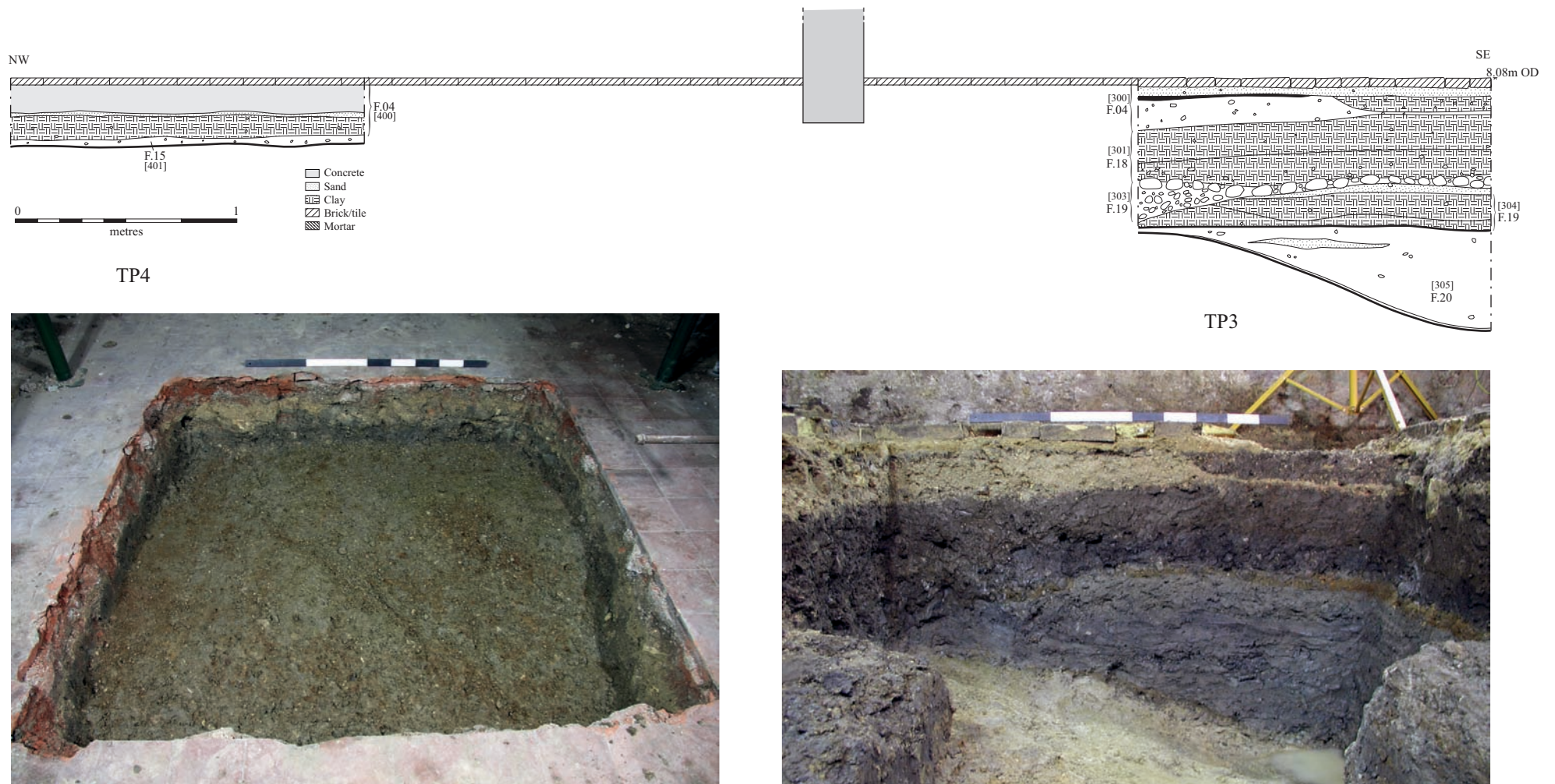


Figure 5. Section and photographs of Test Pits 3 and 4



Figure 6. Views of Test Pit 3. Top: general view of Test Pit 3 facing northeast. Bottom: section of Test Pit 3 facing southeast

Lying over this was **F.16 [201]** a mid greyish brown silty clay with occasional stones, charcoal flecks and fragments of pottery and bone which was *c.* 0.45m thick. The pottery in this deposit dated to the mid 1st-2nd centuries. The untruncated upper surface of **[201]** sloped downwards from northwest to southeast and lay at 7.80–7.65m OD; it fell 0.15m over a distance of *c.* 1.0m with a slope of 1:6.7. Overlying **[201]** was **F.16 [202]** a mid to dark greenish grey silty clay containing occasional stones, charcoal flecks and fragments of pottery and animal bone. This deposit was over 0.2m thick, but its entire upper surface was truncated. **F.16 [201]/[202]** appear to both be general layers that follow the slope of the hill, with no evidence for the presence of any cut features.

Test Pit 3 (Figures 5–6)

In Test Pit 3 the natural consisted of a moderately loose banded light yellowish grey gravelly sand. **[307]**. Within this there were bands of extremely loose sand containing perched groundwater that rapidly filled the test pit to a depth of *c.* 0.2m within less than twenty minutes. The untruncated upper surface of **[307]** sloped downwards from northwest to southeast and lay at 7.34–6.94m OD. The upper surface of this deposit fell 0.4m over a distance of 1.5m with a slope of 1:3.8. The earliest deposit lying over **[307]** was a mid to light grey sticky clay, **F.20 [306]** containing occasional flecks of charcoal and fragments of pottery and animal bone. **[306]** was up to 0.25m thick and occurred in a localised area that was over 0.4m by 0.4m in extent. **[306]** directly overlay an area where one of the bands of extremely loose sand containing perched groundwater within **[307]** had been exposed; it therefore appears that clay **[306]** was a deliberate attempt to ‘plug’ this exposure.

Overlying **[306]** was a more general layer **F.20 [305]**, which covered the entire extent of Test Pit 3. **[305]** consisted of mid grey silty sandy clay with occasional darker sandy lenses containing occasional stones, charcoal flecks and fragments of animal bone, pottery and wood. **[305]** was up to 0.45m thick, although this probably represents a truncated thickness. The pottery from **F.20** dated to the mid 1st-2nd century and included a considerable number of large sherds of a mid 1st-2nd-century reduced sandy ware narrow mouthed beaded jar with a thin cordon on the neck (22 sherds, 952g). Several of these appeared to have broken *in situ* at the base of the deposit where it overlay the natural **[307]**. The animal bone included five probably articulated vertebrae from the spine of a sheep or goat. It appears that **[305]** represents a general layer, which probably accumulated under localised waterlogged conditions. It is possible that some discrete cut features were initially present, but that the wet nature of the area led to any distinctions being obscured over time.

Overlying **[305]** was cobbled surface **F.19** (makeup **[304]**, surface **[303]**), whose creation almost certainly included the truncation of **[305]** to level the area. Makeup **[304]** consisted of a thin layer of dark grey clay 0.02–0.10m thick, a layer of light grey clayey sand up to 0.12m thick and a mineralised orangey sand 0.02–0.03m thick. These deposits contained pottery dating to the mid 2nd-4th century. The cobbled surface **[303]** was an extremely firm rammed surface of rounded and sub-rounded typically oval stones 0.05–0.15m long and 0.05–0.10m thick. There were some areas where stones were absent, these appear to be areas where stones have been lost accidentally over time rather than cut features. There was also a single vertically set chisel-pointed squared wooden stake set into the surface (**F.19 [302]**). The cobbled surface **F.19** appears to be a deliberate attempt to create a relatively dry and stable level surface in what must previously have been a wet and muddy area. Although it does not appear to have been entirely successful in this aim it would have represented a marked improvement in local conditions. The surface of **[303]** lay at 7.50–7.63m OD, although there was marked variation in height this appears to simply represent irregularities rather than any overall trend or slope. The extent of Test Pit 3 means that it is impossible to determine whether the surface relates to a yard area, laneway or other entity. There is no evidence that the surface was ever repaired or replaced, but given the solidity of its construction it could have remained in use for several decades. There was no evidence for any specific build up or accumulation over the cobbles.

Overlying **[302]/[303]** was **F.18 [301]**, a sticky wet sandy silty clay containing occasional stones, charcoal flecks, wood, pottery and bone. **[301]** covered the entire extent of Test Pit 3, its upper surface was entirely truncated but it was over 0.25m thick. This was a thick homogenous deposit with no sign of discrete features or banding; however, given the nature of the deposit it is possible that banding and features may originally have been present but that the sogginess of the deposit led to them being transformed into a ‘soup-like’ deposit. **[301]** contained pottery dating to the mid 1st-3rd century and animal bone with canine gnawing and extensive weathering with the rounded edges suggesting a prolonged time period between the accumulation and deposition of the material. There was also a small

mid 4th-century copper-alloy coin, which suggests that the pottery, like the animal bone, is older than the deposit in which it was found.

The chronology for the sequence in Test Pit 3 is hindered by the fact that its relatively long duration but lack of complexity could be explained either by a considerable degree of truncation related to the construction of the cobbled surface or the high quality of the surface itself, meaning that it could have continued in use for a considerable period with little evidence for this (especially if it was well-maintained and occasionally scraped clean of any occupational build up). On balance, truncation appears to offer the better solution.

Test Pit 4 (Figure 5)

The natural in Test Pit 4 consisted of extremely firm reddish orange gravel [402], which appears to be heavily mineralised and iron-panned through percolation of liquids. Its upper surface lay at 7.78–7.88m OD; however, it seems likely that this was entirely truncated. Lying over [402] was 0.04–0.11m of sticky mid to dark greyish brown clay (F.15 [401]). As far as can be determined, [401] represents the *in situ* fills(s) of one or more features, the clearest of these appears to be a *c.* 0.4m wide flat-bottomed south-north aligned linear and there are also possibly two pits. [401] contained pottery that could only be broadly dated as Romano-British and it is likely that all the feature(s) in Test Pit 4 are Roman.

Area 1

The natural in Area 1 consisted of firm orange sandy gravel lying at 7.28m OD, [048]. Lying above this were some banded deposits of mid grey clayey sand, light grey clay and light grey sand. These also appear to be natural, and survived to a height of 8.04m OD. A large 12th–13th-century feature had removed all Roman features and deposits in Area 1.

Roman Finds and Environmental Evidence

Pottery Assessment Katie Anderson

An assemblage totalling 136 sherds, weighing 3850g, was recovered from ten features across the site (see Table 1). Although the material from earlier excavations has not been published in a manner that allows comparison (Alexander and Pullinger 1999) this pottery can be compared to material from nearby CAU excavations (6279 sherds, 82086g; Anderson 2004) and work on the summit of Castle Hill (1163 sherds, 20236g; Anderson with Brudenell in Evans and Ten Harkel 2010). All of the pottery was analysed and details of fabric, form, decoration, use wear and date were recorded along with any other information deemed important.

Feature	Roman Feature?	No.	Wt (g)	MSW (g)	Date
04	No	1	100	100.0	?Romano-British
06	No	2	138	69.0	2 nd –4 th
10	No	5	44	8.8	2 nd –4 th
13	No	6	227	37.8	Mid 1 st –3 rd
14	No	3	90	30.0	Mid 1 st –3 rd
15	Yes	1	26	26.0	Romano-British
16	Yes	47	985	21.0	Mid 1 st –2 nd
18	Yes	30	869	29.0	Mid 1 st –3 rd
19	Yes	9	133	14.8	Mid 2 nd –4 th
20	Yes	32	1238	38.7	Mid 1 st –2 nd
Total		136	3850		

Table 1: Roman pottery by feature.

The assemblage comprised primarily medium to large sized sherds and had a relatively high mean weight of 28.3g and included some large, unabraded sherds. Pottery spanned the Roman period, with a likely peak in the mid 1st–2nd century. Several of the sherds were residual, occurring in later dating

features (F.04, 06, 10, 13, 14). However, the larger quantities of Roman pottery were recovered from Roman contexts (F.15, 16, 18–20).

The majority of the assemblage comprised coarse sandy wares, which are likely to have been produced locally (Table 2). Three Nene Valley colour-coated sherds were recorded, comprising two body sherds and pedestal base from a beaker (all broadly dating to the mid 2nd–4th centuries). A single imported Central Gaulish Samian sherds plate/dish (Dragendorff 15/17, F.16). Jars were the most commonly occurring vessel form, representing 62% of the total assemblage, ranging in sizes from small vessels to large storage jars (Table 3). Other vessels forms were less well represented with two dishes represented along with single examples of a bowl, platter and beaker. A relatively high percentage of the assemblage was decorated (56%); although most of these sherds were combed coarseware jars (62% of the decorated wares).

Fabric	No.	Wt (g)
Buff sandy ware	6	119
Central Gaulish Samian	1	4
Coarse sandy greyware	42	925
Fine sandy greyware	6	69
Grog-tempered	2	63
Nene Valley colour-coat	3	48
Oxidised sandy ware	14	579
Reduced sandy ware	58	1973
Shell-tempered ware	1	41
Whiteware (unsourced)	3	29
Total	136	3850

Table 2: All Roman pottery by fabric.

Form	No.	Wt (g)
Beaker	1	36
Bowl	1	7
Dish	2	10
Jar	84	3138
Platter	1	20
Unknown	47	639
Total	136	3850

Table 3: All Roman pottery by form.

Tile Assessment Craig Cessford

A small assemblage of Roman tile was recovered (5 pieces, 847g); none of the pieces are particularly noteworthy.

Metalwork Assessment Grahame Appleby

Two pieces of metalwork were recovered from Roman features, a coin and an iron bar.

[301] F.18: small mid 4th-century copper-alloy coin, 14.4mm in diameter. Coins from this period are classified by the reverse, here represented by a military standard flanked on either side by two soldiers.

[301] F.18: large square-sectioned iron bar *c.* 240mm long weighing 142g. The piece is corroded and concreted, but appears to widen from *c.* 9.5mm wide towards the top to *c.* 14mm at the mid point; the end is bent. Identification of a function for this piece is problematic due to its length and relative thinness.

Wood Assessment Craig Cessford

A number of preserved waterlogged wood fragments were recovered by hand from contexts **[301] F.18** (27 pieces) and **[305] F.20** (2 pieces), plus the point of a stake **[302] F.19**. These largely consist of small twigs or larger but heavily degraded fragments whose original form can not be determined. From **[301]** there were also a single piece of 11mm diameter roundwood with a 35mm long chisel point and a small fragment of the heavily worked end of a 24mm diameter roughly circular object that is too small to be identifiable. The stake **[302]** was roughly squared and 25mm by 22mm, with a surviving length of 75mm and a 35mm long chisel point. Although relatively unimpressive the wood fragments indicate the potential for survival of waterlogged material in this part of Cambridge. No waterlogged Roman wood has previously been recovered from Cambridge, although some is known from nearby (Newman in Evans and Newman 2010, 56–57).

Animal Bone Assessment Vida Rajkovača

A small faunal assemblage was recovered. For the purpose of this assessment, it was decided only to analyse faunal material recovered from Roman contexts (87 assessable specimens weighing 2068g). The assemblage was identified with the aid of Schmid (1972), Hillson (1999) and reference material from the CAU. Unidentifiable fragments were assigned to general size categories where possible. This information is presented in order to provide a complete fragment count. Although most of the ovicaprid bones are difficult to identify to species, it was possible to identify a selective set of elements as sheep from the assemblage, using the criteria of Boessneck (1969) and Halstead *et al.* (2002). Ageing of the assemblage employed both mandibular tooth wear (Grant 1982; Payne 1973) and fusion of proximal and distal epiphyses (Silver 1969). Where possible, the measurements have been taken (von den Driesch 1976). Withers height calculations follow the conversion factors of Fock for cattle (see von den Driesch and Boessneck 1974). Taphonomic criteria including indications of butchery, pathology, gnawing activity and surface modifications as a result of weathering were also recorded when evident.

The preservation was in general quite good, with minimal or no surface erosion. A number of contexts, **[301] F.18** in particular, showed extensive weathering with the rounded edges suggesting the prolonged time period between the accumulation and deposition of the material. Within the same context, a number of bones exhibited canine gnawing marks. Butchery was recorded on 30 specimens (*c.* 34.5% of the assemblage) and this is quite high. Techniques were crude (mainly dismemberment) and implements large and heavy, with only a few fine knife marks consistent with meat removal. A number of bone splinters were also recorded, as is typical for the period. Overall good preservation is reflected in the high percentage of specimens identified to species level (70.1%). Only one complete specimen was recorded: a cow metatarsus giving the shoulder height estimate of 112cm.

The assemblage is dominated by the remains of sheep/goat, both within the NISP and MNI count (Table 4). This is followed by two other 'food species', cattle and pig. Horse and roe deer are the only other species, represented by one specimen each. The prevalence of sheep is also visible in the unidentifiable mammal count. A fragment of a bird tarso-metatarsus is weathered and impossible to further identify.

Taxon	[401] F.15	[201] F.16	[305]/[306] F.20	[301] F.18	[304] F.19	Total NISP	Total MNI
Cow	1	1	2	13	-		
Sheep/goat	1	6	1	19	1		
Sheep	-	1	1	2	-	4	1
Pig	-	-	1	9	-	10	1
Horse	-	-	1	-	-	1	1
Roe deer	-	-	-	1	-	1	1
Sub-total to species	2	8	6	44	1	61	.
Cattle-sized	1	1	-	7	1	10	.
Sheep-sized	-	1	1	12	1	15	.
Bird n.f.i.	-	-	-	1	-	1	.
Total	3 (283g)	10 (131g)	7 (484g)	64 (1142g)	3 (28g)	87	.

Table 4: Number of Identified Specimens (NISP) and Minimum Number of Individuals (MNI) for all species from Roman features. The abbreviation n.f.i. denotes that the specimen could not be further identified.

High levels of sheep consumption in the Early Roman period are considered to be an indication of a continuation of Iron Age foodways. It remains a question whether the predominance of sheep within Roman assemblages from the area was brought about by environmental factors particular for the locale or by a cultural preference. The faunal assemblage is most likely the result of domestic activities as there is nothing to suggest site specialisation. This assemblage is similar to the findings from Castle Street (Rajkovača in Evans and Ten Harkel 2010, 46–49).

Environmental Remains Assessment, Anne de Vareilles

Three samples of Romano-British date were processed using an Ankara-type flotation machine. The flots were collected in 300µm aperture meshes and the remaining heavy residues washed over a 1mm mesh. Both the flots and heavy residues were dried indoors prior to analysis. Sorting of the flots and identification of macro remains were carried out under a low power binocular microscope (6x-40x magnification). Identifications were made using the reference collection of the G. Pitt-Rivers Laboratory, university of Cambridge. Nomenclature follows Zohary and Hopf (2000) for cereals and Stace (1997) for all other flora. All environmental remains are listed in Tables 5.

Both charred and waterlogged remains were found. **F.18 [305]** appeared to be waterlogged so a sub-sample was first wet-sieved to establish its condition. Since charred grains and only very few waterlogged seeds were recovered, 15L were then floated and dried. A greater number of charred plant remains were found as well as a range of untransformed seeds that had survived in a clay-rich, anoxic environment. Sample 2 from **F.16** was practically sterile and sample 1 from **F.20** contained a small range of charred grains and wild plant seeds. Intrusive rootlets and snails were not present.

Sample 1 **F.20 [301]**: Only carbonised plant remains were found from sample 3. Four spelt grains and six spelt glume bases (*Triticum spelta*) make up the cereal component. The 13 wild plant seeds are likely arable weeds, and include at least three species not seen in sample 3.

Sample 2 **F.16 [201]**: A small quantity of fine charcoal was the only archaeobotanical presence.

Sample 3 **F.18 [305]**: A few Rye (*Secale cereale*) and possible spelt wheat grains were found charred, along with a little rye chaff (two rachis nodes charred and three waterlogged). 17 charred wild plant seeds were recovered, 13 of which are grass seeds. Many more waterlogged seeds were present, also representing arable weeds as well as potential herbs used in cooking; such as watercress (*Apium* sp.), linseed (*Linum usitatissimum*) and opium poppy (*Papaver somniferum*). Interestingly, obvious, large arable weeds like corncockle (*Agrostemma githago*) were only found waterlogged. Stinking chamomile (*Anthemis cotula*) was found both charred but predominantly waterlogged.

The samples contain evidence for the growth, harvest and processing of spelt and rye. Wild seeds from samples 1 and 3 indicate that damp, fertile, clay-rich soils were cultivated. Differences in preservation

in sample 1 have enabled one to distinguish various stages in the treatment of crops. The large waterlogged corncockle and thistle (*Carduus/Cirsium* sp.) seeds suggest that waste from the final stages of crop cleaning (hand sorting) was not burnt. However, the burnt grains, grass seeds (which may in fact have been intentionally used to bulk up the harvest) and occasional small seeds were presumably accidentally charred during cooking preparations. The waterlogged assemblage also included seeds from surrounding plants, such as cotton thistle (*Onopordum acanthium*) and black nightshade (*Solanum nigrum*), and plants which may have been collected for other specific purposes, such as sedges (*Carex* spp.), black mustard (*Brassica nigra*) and linseed.

Sample number		1	2	3
Context		301	201	305
Feature		20	16	18
Sample volume processed - litres		15	15	15
Flot fraction examined -%		100	100	100
large charcoal (>4mm)		-		-
med. charcoal (2-4mm)		+		+
small charcoal (<2mm)		+++	++	+++
Cereal grains and chaff				
<i>Triticum</i> cf. <i>spelta</i>	possible Spelt wheat grain	4		
<i>Secale cereale</i> L.	Rye grain			1
<i>Triticum/Secale</i> sp.	Wheat or Rye grain			2
Indeterminate cereal grain				5
<i>T. spelta</i> L. glume base	Spelt chaff	6		
<i>S. cereale</i> L. rachis node	Rye chaff			2, 3WL
<i>Secale/Hordeum</i> sp. rachis node	Rye or Barley chaff			1
Indet. Poaceae culm node	grass straw node	1		1
Wild plant seeds and other finds				
<i>Ranunculus acris/repens/bulbosus</i> L.	Meadow / Creeping / Bulbous Buttercup			1, ++
<i>Papaver</i> cf. <i>somniferum</i> L.	Opium poppy			+
<i>Urtica dioica</i> L.	Common Nettle			+
<i>Chenopodium album</i> L.	Fat-hen			++
<i>Chenopodium</i> sp.	Goosefoots			1, ++
<i>Atriplex patula</i> L./ <i>prostrata</i> Boucher ex DC	Oraches			+
<i>Cerastium</i> sp.	Mouse-ears			-
<i>Agrostemma githago</i> L.	Corncockle seed (frags)			++
<i>Silene nutans</i> L.	Nottingham catchfly			+
<i>Silene latifolia</i> Poir.	White Campion			+
<i>Polygonum aviculare</i> L.	Knotgrass			+
<i>Fallopia convolvulus</i> (L.) A' Löve	Black bindweed			-
small <i>Rumex</i> sp.	Dock	1		+
<i>Thlaspi arvense</i> L.	Field penny-cress			+
<i>Brassica nigra</i> type (coarse textured form)	Black mustard			++
<i>Vicia / Lathyrus</i> sp. >2mm across	Vetches / Wild Pea	1		
<i>Medicago / Trifolium</i> sp.	Medics or Clover	1		
<i>Linum usitatissimum</i> L.	Flax			-
<i>Aethusa cynapium</i> L.	Fool's Parsley			-

Table 5: Environmental samples. All qualitative measurements are of waterlogged specimens. '-' 1 or 2, '+' <10, '++' 11-50, '+++' >51. WL = waterlogged.

Sample number		1	2	3
Wild plant seeds and other finds (cont)				
<i>Apium</i> sp.	Water-cress			+
<i>Torilis nodosa</i> (L.) Gaertner	Knotted Hedge-parsley			+
<i>Hyoscyamus niger</i> L.	Henbane			++
<i>Solanum nigrum</i> L.	Black nightshade			+
<i>Prunella vulgaris</i> L.	Selfheal			+
<i>Carduus/Cirsium</i> sp.	Thistles			+
<i>Onopordum acanthium</i> L.	Cotton Thistle			-
<i>Centaurea nigra</i> L.	Common Knapweed			1
<i>Lapsana communis</i> L.	Nipplewort			+
<i>Anthemis cotula</i> L.	Stinking Chamomile			1, ++
<i>Tripleurospermum inodorum</i> (L.) Schultz-Bip.	Scentless Mayweed	2		
trigonous <i>Carex</i> sp. type1	trilete Sedge seed			++
trigonous <i>Carex</i> sp. type2	trilete Sedge seed			+
small lenticular <i>Carex</i> sp.	flat Sedge seed			-
large Poaceae	large wild grass	6		2
medium Poaceae	medium wild grass			-
small Poaceae	small wild grass	1		2
Indet Poaceae	Wild or cultivated grass	1		9
Thorn				-
fish scales				++

Table 5 (continued)

The Later Sequence

Deposits post-dating the Roman period and pre-dating the mid 19th-century construction of No.'s 4–5 Castle Street only survived in the rear yard (Area 1; Figures 7–8). This sequence included a large 12th–13th-century quarry pit (F.14), a 14th–15th-century clay-lined oven (F.11) and a 16th–17th-century garden/horticultural soil (F.10), all features typical of the rear yard area of an urban plot. The lack of cut features between the Roman period and the 19th century in Test Pits 1–4 indicates that this area constituted the frontage of the plot where buildings were located and deep features are generally absent from urban plots. In the 17th century Area 1 was deliberately raised (F.09) and a substantial cellared building (F.08) constructed, reflecting the increasing density of Post-Medieval occupation of Castle Hill. This cellar continued in use until the current standing buildings were constructed in the mid 19th century.

Feature Descriptions

The earliest archaeological feature in Area 1 was a substantial pit whose overall form and size are unknown but which is most probably a quarry pit dug for sand or gravel (F.14, cut [046] fills [043]–[045]). Pit F.14 was over 0.9m by 0.74m in extent and at least 1.27m deep with steep angular sides and a flat base. The primary fill was a heterogeneous deposit predominantly composed of greenish grey clay with patches of light grey sand and brownish grey silty clay that was 0.42m deep [045]. This deposit consists largely of redeposited natural and it seems likely that this represents the unwanted residue of quarrying for sand and/or gravel. There was relatively little cultural material in [045], just some flecks of charcoal and one sherd of Roman pottery. The next fill [044] was a deposit of mid brownish grey slightly sandy silty clay with occasional pebbles, charcoal flecks and fragments of

pottery and bone. [044] was up to 0.4m thick and probably represents a collapse or erosion event in the side of the pit. The next fill [043] consisted predominantly orangey grey sandy clay up to 0.5m thick which probably represents a deliberate backfilling event. This contained both Roman and Saxo-Norman (10th–12th century) pottery. The upper surface of pit F.14 lay at around 8.65m OD, although it is possible that it was originally rather higher.

A degree of ambiguity surrounds the next two features, F.13–12, as these probably simply represent the upper fills of F.14 rather than true independent features. If potential pit F.13 (cut [042], fills [040]–[041]) is a genuine feature its overall form and size are unknown, but it was over 1.1m by 0.85m in extent and at least 0.61m deep with steep and angular sides. The initial fill [041] consisted of a mid to light brownish grey gritty sandy clay up to 0.23m thick, the second fill [040] consisted of a mid to dark brownish grey silty clay containing occasional stones, charcoal flecks and pottery and bone fragments and was up to 0.25m deep. The pottery from F.13 included Roman, Saxo-Norman (10th–12th century) and 13th-century material, the latter was however only one sherd weighing 1g. If potential pit F.12 (cut [039], fill [038]) is a genuine feature its overall form and size are unknown, but it was over 0.60m by 0.56m in extent and at least 0.56m deep with steep and angular sides. Fill [038] consisted of mid greyish brown clayey silt containing occasional stones, charcoal flecks and pottery and bone fragments. The pottery from F.12 included both Saxo-Norman (10th–12th centuries) and 13th-century material.

Sealing pit(s) F.14–12 was the remnant of the base of a clay-lined oven (F.11 cut [037], lining [036]). It is unclear if oven F.11 lay within a genuine cut scoop, or if this simply represents later slumping into F.12 and when constructed it was flat-bottomed. The base [035] was over 0.60m by 0.28m in extent and consisted of a 25mm thick layer of soft pale off-white clay with reddish orange scorching. Such clay-lined ovens are relatively common features of the 13th–15th centuries in Cambridge and are usually found in yard areas towards the rear of plots.

Lying over oven F.11 was a sequence of mid greyish brown clayey silt layers containing occasional stones, charcoal flecks and fragments of brick, tile, pottery and animal bone (F.10 layers [032]–[035]). These deposits appear to represent a phase of gardening or horticultural activity, in total they are *c.* 0.7m thick with an upper surface at *c.* 9.35m OD. The pottery from F.11 includes some material dating to the 16th–17th centuries, there were also a Late Medieval or Early Post-Medieval copper-alloy *aiglet* and fragments of clay tobacco pipe were also present. This indicates that the phase of gardening or horticultural activity spans the 15th–17th centuries.

Sealing F.10 were a sequence of layers that appear to represent the deliberate dumping of material, including some rubble, to raise the height of the area and an overlying gravel surface (F.09 layers [015], [016], [025], [028]). These deposits were *c.* 0.65m thick in total and the gravel surface lay at *c.* 10.05m OD. Although stratigraphic certainty is impossible it appears that F.11 was directly related to the construction of a cellar (F.08 cut [024]/[031], clunch/brickwork [023]/[030], fills [022]/[029]/[047]) lined with a double thickness of unfrosted red handmade bricks and roughly shaped clunch blocks that are 8½in long, 4in wide and 2in thick set in a pale creamish yellow lime mortar. This cellar was over 1.3m by 0.9m in extent and *c.* 1.55m deep. The depth of the cellar suggests that it was only partly sunken, extending *c.* 0.5–1.0m above the contemporary ground height, probably to allow for windows to provide light. The quality of the construction of the cellar walls suggests that the structure also had at least one overlying floor. This is probably the building depicted on Loggan's plan of Cambridge of 1688 (Figure 9), which is also shown on Custance's plan on 1798. It is possible that the cellar originally extended into the area of Test Pits 1 and 4 as it would not have been deep enough to leave any traces when the 19th-century basements were constructed. Cellar F.08 was backfilled and the upper parts of the walls robbed in the 19th century (F.07 cut [014], fill [013]) in all probability when No.'s 4–5 Castle Street were constructed. Associated with the construction of No.'s 4–5 Castle Street were various features (F.04 cuts [012], [021], brickwork [011], fills [010], [020]; F.05 cut [009], brickwork [008], fill [007]; F.06 cut [027], fill [026]). The construction of No.'s 4–5 Castle Street has not been dated precisely, but on architectural grounds a date of *c.* 1830–50 appears likely and the buildings are clearly shown on the Ordnance Survey map of 1885 (Figure 9). Later features associated with the use of the current standing buildings include a manhole and pipe (F.02 cut [019], structure [018], fill [017]) and an iron pipe (F.03 cut [006], pipe [005] fill [004]). During the 20th century material appears to have been deliberately imported to transform part of the yard of No. 5 Castle Street into a garden raising the height of the area by *c.* 0.55m to *c.* 10.6m OD (F.01 layers [002], [003]).



Figure 7. General views of Area 1. Top: vertical shot of area after initial excavation, facing northwest. Bottom: shot after excavation completed, facing southeast

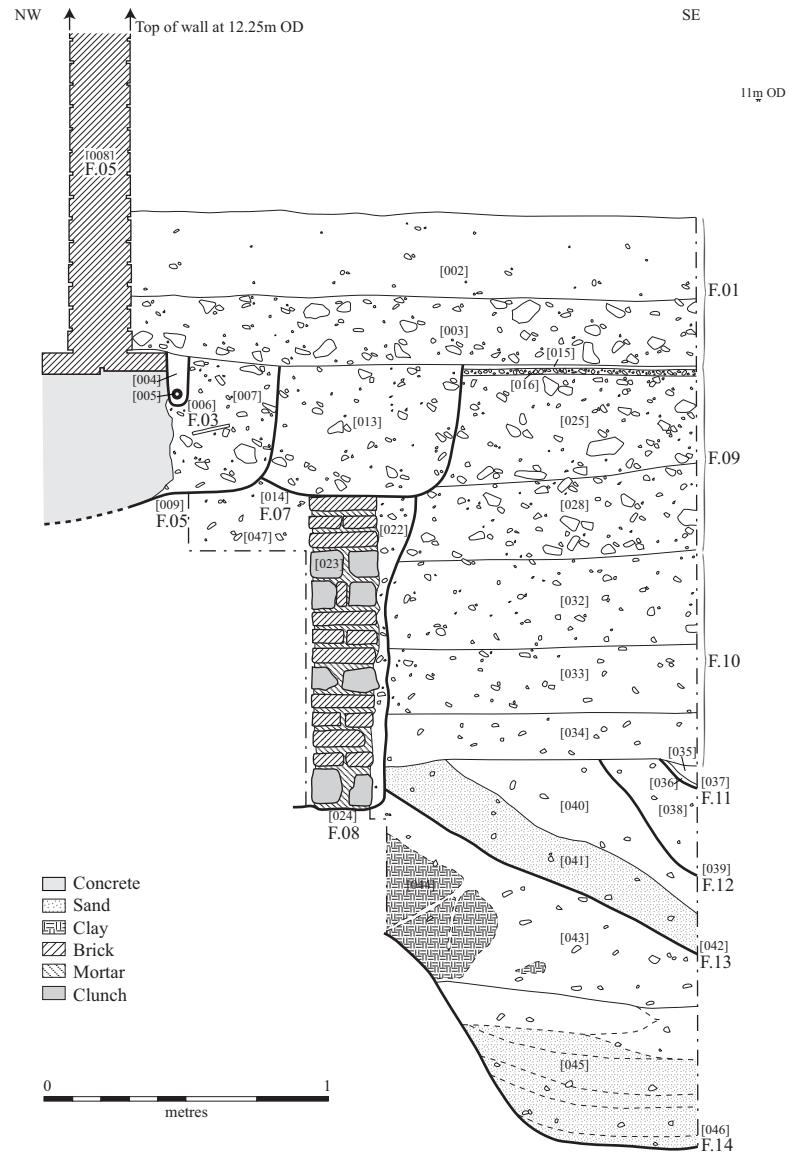


Figure 8. Section of Area 1 and photographs of cellar F.08 facing southwest (upper), and lower portion of excavation facing southwest (lower)

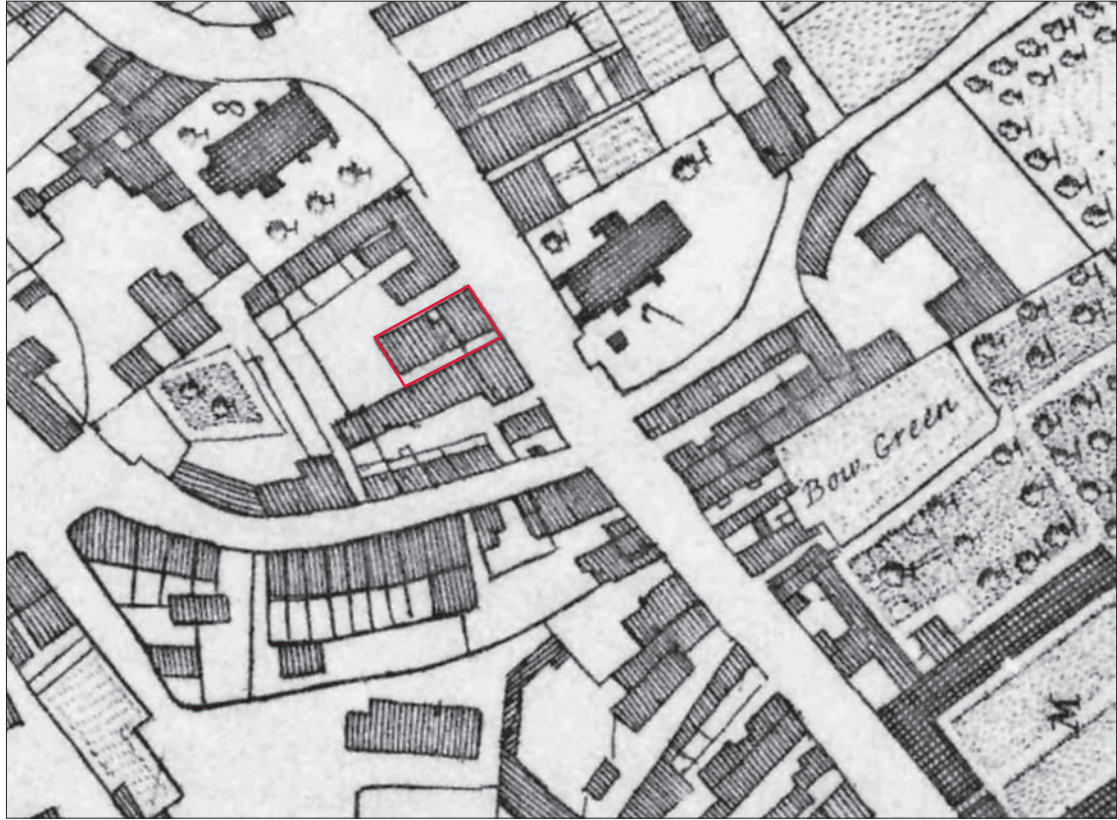


Figure 9. Historic maps of the area. Top: Loggan's map of 1688, Bottom: 1885 Ordnance Survey map

Post-Roman Finds and Environmental Evidence

Pottery Assessment David Hall and Craig Cessford

A small quantity of Saxo-Norman to Modern pottery was recovered (Table 6); Post-Medieval and Modern sherds from disturbed 19th–20th-century contexts were quantified and discarded. The material represents typical fabrics recovered from Cambridge and is of limited interest except as dating evidence. A creamware sherd from **F.06 [026]** bore the hand painted letters ...in. In Cambridge such marked vessels are usually linked to college cooks, in this instance given the likely date of the vessel the most probable association is with Stephen Gurkin who probably became active as a cook *c.* 1775, was the cook at Jesus College in 1802 (Pickles 2007) and died in 1811.

Fabric	No.	Wt (g)
<i>Roman (1st–4th century)</i>	136	3850
St. Neots-type	25	221
Thetford-type	56	853
<i>Saxo-Norman (10th–12th century)</i>	81	1074
Misc. coarsewares	21	184
Ely ware	5	152
Grimston	1	15
Hedingham	1	3
Lyveden	1	4
Scarborough	2	25
<i>Medieval (13th–15th century)</i>	31	383
Misc. coarsewares	9	101
Glazed Red Earthenware	78	1475
Ely Bichrome	2	15
Babylon-type	7	72
Frechen	6	127
Tin-glazed earthenware	15	193
<i>Post-Medieval (16th–17th century)</i>	117	1983
Late unglazed earthenware	16	211
Staffordshire-type slipware	6	88
Creamware	1	7
Iron glazed earthenware/blackware	4	169
Whiteware	40	553
London-type stoneware	1	38
Nottinghamshire/Derbyshire-type stoneware	5	65
Staffordshire white salt glazed stoneware	3	58
Utilitarian English stoneware	31	1207
Westerwald	1	40
Chinese export porcelain	1	1
<i>Modern (18th–20th century)</i>	109	2437
Overall total	474	9727

Table 6: Post-Roman Pottery by Fabric.

Animal Bone Assessment Craig Cessford

Animal bone from disturbed 17th–20th-century contexts was not retained. A small assemblage spanning the 12th/13th–16th centuries was recovered (112 pieces, 1679g), but has not been studied as based on the evidence of the pottery all the deposits are likely to include substantial proportions of residual material.

Metalwork Assessment Craig Cessford

The only Post-Roman metalwork came from **[033] F.10** and consisted of a copper-alloy aiglet weighing less than 1g and a heavily corroded iron item weighing 226g, which could not be conclusively identified but that might be a rove-plate or similar item. Lace-tags or aiglets were used on

the end of laces to aid threading and prevent fraying. They are found in large numbers on Late Medieval and Early Post-Medieval sites and are generally 15th–17th century in date (Egan and Pritchard 2002, 281–90)

Clay Tobacco Pipe Assessment Craig Cessford

A small clay tobacco pipe assemblage was recovered. The presence of stems fragments in features was noted but only more diagnostic elements were retained and classified according to Oswald's simplified general typology (1975, 37–41). These included:

[001] two heels of *c.* 1660+, a type 8 bowl of *c.* 1660–1710 and a partial bowl of type 9–12 *c.* 1680–1780 with the initials WP on the heel. This can be linked to a local maker William Phipos, in a registered administration and associated documents dated the 31st of October 1740 which describe him as a tobacco pipe maker his widow Sarah Phipos renounced the administration of his will in favour of his son John Phipos, also a tobacco pipe maker. The apprenticeship indenture of another son William Phipos on 29th of May 1744 describes William Phipos as a deceased pipe maker.

[013] F.07 a type 6 bowl of *c.* 1660–80.

[020] F.04 a type 9 bowl of *c.* 1680–1710.

[026] F.06 an un-dateable heel.

Discussion

The archaeological excavations at No.'s 4–5 Castle Street provided a limited exposure into the development of this part of Cambridge, albeit one severely affected by the 19th-century standing buildings (Figure 10). The investigations do however supplement earlier work on the southeastern flank of Castle Hill, all of which has been equally small-scale. The vertical sequence revealed in Area 1 is of extremely restricted interest, providing a generic narrative of medieval backyard activities and Post-Medieval building expansion. This supplements previous investigations, but is less revealing and nuanced than the better preserved stratigraphic sequences from Chesterton Lane Corner and the Folk Museum sites, where 19th–20th-century truncation had been less severe. The deposits and features in the basement area serve largely to confirm the generally underwhelming nature of the archaeology of Roman Cambridge. Four more general inter-related themes that arise from the work are topography, terracing, the 4th-century defences and water supply.

The degree of later 'overburden', which serves to obscure the natural and Roman period topography of the southeastern slope of Castle Hill, makes determining its original topography problematic. Locally the original slope appears to have varied between 1:3.5 and 1:6.7. Additionally sufficient fieldwork has been undertaken to a modern standard to allow a limited reconstruction by 'joining-the-dots' of the various small-scale investigations that have taken place (Figure 11; Table 7). The current topography of the area can be divided into two zones; a relatively flat area with a gradual rise between the river Cam and the line of Chesterton Lane, and the steeper incline of Castle Hill itself. In terms of excavated sites there is a contrast between sites in the two zones. The area between the river and Chesterton Lane has seen an almost continuous incremental increase in height since the Roman period, particularly at Chesterton Lane Corner, the Folk Museum and No.'s 4–5 Castle Street where full stratigraphic sequences have been revealed. In contrast, on Castle Hill proper the ground surface has been raised much less and in some cases may have decreased. This

means that in terms of past topography the contrast between the two zones would have been much greater, as the area between the river and Chesterton Lane has increased in height by 2.3 to 3.3m while Castle Hill proper has only increased by only 0.45 to 0.85m. The area between the river Cam and Chesterton Lane would have been flatter and more low lying, probably marshy and subject to flooding at least during the earlier periods, while Castle Hill would have had a much steeper incline.

Location on Figure 11	Site	Natural subsoil	End of Roman	End of Saxo-Norman	End of Medieval	End of Post-Medieval	20 th century
9	75–85 Castle Street	19.85	19.85	19.85	20.55	20.55	20.7
8	Cow and Calf	16.0	16.0	16.0	16.0	16.0	16.45
7	19–37 Castle Street	14.45	14.45	14.45	14.45	14.5	15.0
6	18/18a St. Peter Street	12.5	12.65	12.65	12.95	13.8	14.25
5	Kettle’s Yard 1994	11.5	11.5	11.5	11.5	11.6	12.1
4	No.’s 4–5 Castle Street	7.1	7.9	8.65	9.0	10.05	10.6
3	Folk Museum	7.6	8.25	8.55	9.25	9.6	10.05
2	Chesterton Lane Corner	6.0	6.85	7.75	8.6	9.1	9.3
1	21 Magdalene Street	4.5				6.9	7.4

Table 7: Heights in metres O.D. for different periods on the southeast flank of Castle Hill.

Some form of terracing to create flat areas on the southeastern slope of Castle Hill clearly took place in the Roman period. However, the limited scale of the archaeological investigations, combined with the degree of later ‘overburden’ which serves to obscure the natural and Roman period topography, makes determining its nature problematic. Terracing can be envisaged on three scales: small-scale, limited to the footprint and immediate vicinity of a particular building or group of features; medium-scale, relating to a complete property complex of some kind, and; large-scale, communal/civic terracing. Small-scale terracing must have occurred and is demonstrated by the timber building at the Folk Museum and the ‘working terrace’ to create a flat area for a water-based processing facility observed at Kettle’s Yard in 1994. Medium-scale terracing also appears inherently likely, although definite examples are elusive given the scale of investigation. Large-scale communal/civic terracing must have occurred to a degree when the settlement was enclosed in the 4th century.

The cobbled surface in Test Pit 3 clearly illustrates the limitations surrounding small-scale archaeological investigations. It is quite feasible that this cobbling relates to the large-scale communal/civic terracing associated with the enclosing of the settlement, yet there is also nothing to preclude it relating to a much more localised small or medium scale terracing event.

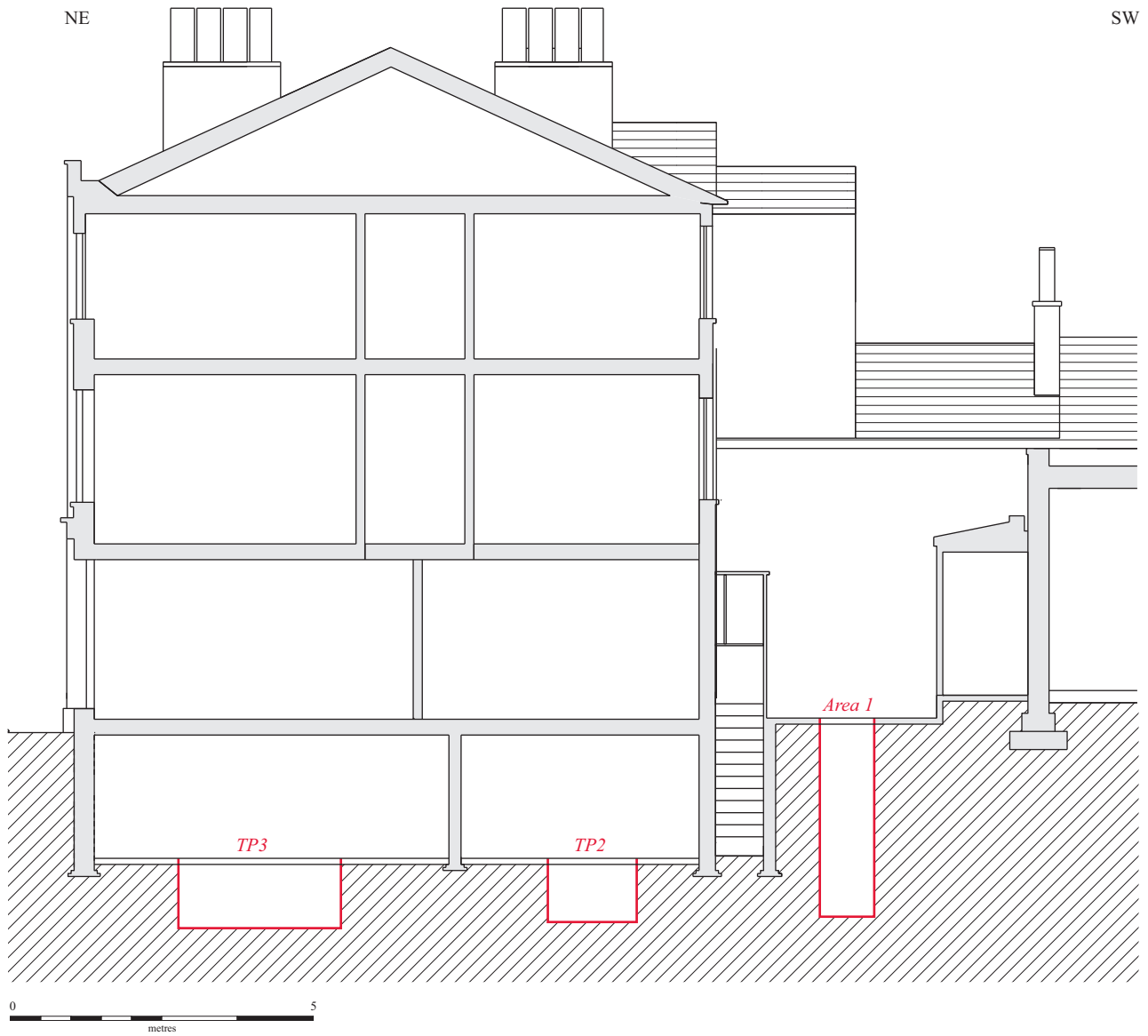
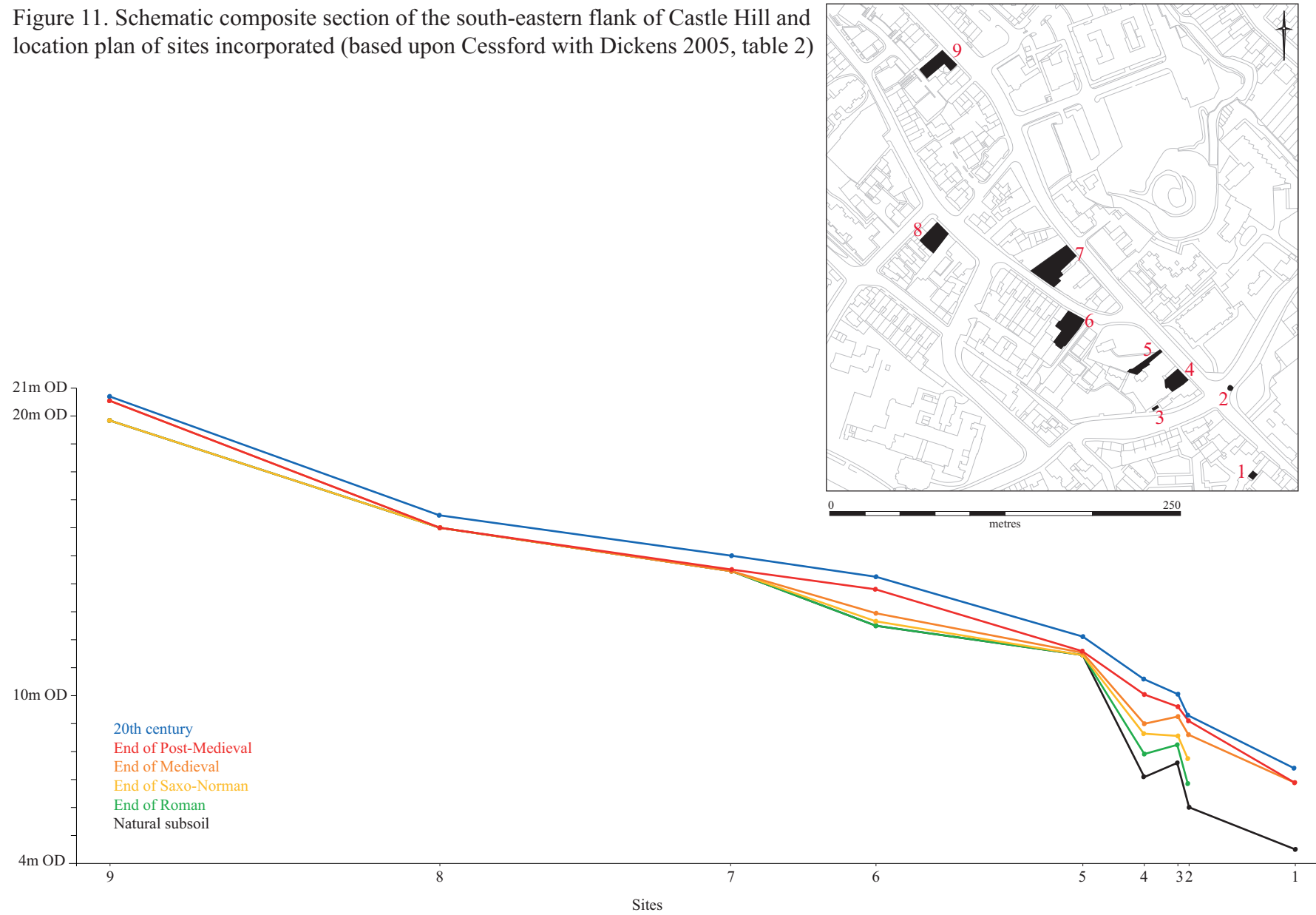


Figure 10. Surviving archaeology in relation to the standing buildings

Figure 11. Schematic composite section of the south-eastern flank of Castle Hill and location plan of sites incorporated (based upon Cessford with Dickens 2005, table 2)



Based upon current interpretations the area of No.'s 4–5 Castle Street lies just outside the southeastern side of the 4th-century defences, observed at Northampton Street in 1949, Kettle's Yard in 1984 and possible Kettles' Yard in 1994. In this context the sharp rise in heights of *c.* 3.6m at this time between No.'s 4–5 Castle Street and the 1994 investigations at Kettle's Yard is noteworthy (Figure 11). It is also worth noting that St. Peter's church to the northwest of Kettle's Yard lies on a distinctly raised local 'prominence'. Whilst this may in part be attributable to the use of the churchyard for burial the standing remains indicate that by the 12th–14th centuries the ground height already lay at *c.* 14.0m OD. The 1949 investigations at Northampton Street indicated that there was a flat-bottomed ditch 8ft (*c.* 2.4m) deep and 35ft (*c.* 10.7m) wide with an 11ft (*c.* 3.4m) wide base that had deliberately been dug to the 'top of stratum of water-bearing gravel' (RCHM(E) 1959, no. 15). These investigations indicated that the outer slope of the ditch was at least 1ft (*c.* 0.3m) high, but the presence of an air raid shelter meant that the full extent of the outer face of the ditch and what lay beyond it were not available for investigation. The extent of the 1984 investigations at Kettle's Yard meant that the ditch was not revealed at all, these investigations lay only *c.* 9.8m to the northwest of the area of the recent fieldwork. This poses something of a challenge in 'squeezing' the ditch into the intervening gap. One possibility is that the extent of the ditch varied according to the local topography and the depth at which water-bearing gravel was encountered. It is even possible that no ditch existed in this area and the defences consisted solely of a wall and a scarp that followed the natural slope. What appears possible from Test Pits 3–4 is that lying outside the defences was a substantial relatively flat area, with a surface consisting of exposed firm natural gravels (Test Pit 4) and a well constructed cobbled surface (Test Pit 3).

Geologically, it is unlikely that there was any readily accessible and reliable water on the summit of Castle Hill. Earlier excavations have revealed a number of features interpreted as circular or square/rectangular well shafts, often with partial timber linings (Alexander and Pullinger 1999, 29, 32, 44–45, 52–53). These are, however, relatively few in number given the scale of area investigated on the hilltop (four 1st century, three 2nd century, four 3rd century, one 4th century). It is not clear how these wells were identified, and many were cut only a relatively short depth into the chalk marl. These would not have been capable of supplying large quantities of water and are equivalent to 11th–15th-century wells from elsewhere in Cambridge, which appear to have only supplied the needs of one or two domestic properties. Some other wells were of considerable depth (3.05m, 3.8m+, 5.0m+, 6.4m+) and could have supplied more water; however, there is a concern with the interpretation of these features. They are extremely similar to a group of thirteen 'ritual shafts' (Alexander and Pullinger 1999, 53–56) and many of the 'wells' were either not bottomed or did contain intriguing material that could broadly be thought of as 'ritual', such as an articulated horse skeleton plus three almost complete pottery vessels and a human femur from one, a human neonate skeleton from another and a collection of part-worked bone pin shafts from a third (Alexander and Pullinger 1999, 44–45, 52–53). The 'ritual shafts' were identified as a group because they form a relatively tight spatial and chronological group, raising the possibility that many of the 'wells' were spatially and temporally isolated 'ritual shafts', or that the two groups may well not have been exclusive and could have acted both as water sources and as 'ritual' features .

Whatever the situation regarding the ‘wells’ on the hilltop, it seems unlikely that these supplied all or even most of the water requirements of the settlement. The work at No.’s 4–5 Castle Street, particularly in Test Pit 3, demonstrated that on the southeastern flank of Castle Hill there are naturally water-bearing bands in the natural that closely approach or even reach the ground surface. These would effectively create localised spring lines that could have easily been exploited and that were located much closer to the summit of the hill than the other obvious source, the river Cam. In this context it is worth noting that just such an approach appears to have been adopted in the mid 19th century as a brick-lined ‘well’ tapping into the local water supply was constructed when No.’s 4–5 Castle Street were built (Slater 2010). The nearby 1994 investigations at Kettle’s Yard revealed a 3rd-century water-based processing facility consisting of a deep well or water storage feature, a tank and a feeder channel. This facility may well have been located there precisely because groundwater was readily available. It should be noted that plentiful groundwater was not present at the Folk Museum and Chesterton Lane Corner. This is probably due to the presence of a palaeo-channel observed at Chesterton Lane Corner, would have acted as a form of large soakaway. It therefore seems likely that there was a relatively restricted strip or zone on the southeastern slope of Castle Hill where groundwater was readily available. If this is the case activity in this area may have been largely restricted to features related to obtaining or utilising this water, in part because conditions would have rendered it relatively unattractive for other purposes.

Acknowledgements

The excavations were commissioned by the University of Cambridge Estate Management, and particular thanks are due to Ron Kay. Thanks are also due to Phil Doherty of SDC. The fieldwork was monitored by Andy Thomas, Senior Archaeologist of the Cambridgeshire County Council Historic Environment Team and the CAU project manager was Chris Evans. The site was directed in the field by Richard Newman and later Craig Cessford, with the excavation assistance of Lawrence Morgan Shelbourne. The graphics were produced by Vicki Herring and Richard Newman kindly commented upon a draft of the text

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Oasis Form

<i>OASIS ID: cambridg3-115878</i>	
Project Details	
Project name	No.'s 4-5 Castle Street, Cambridge: An Archaeological Excavation
Short description of the project	An archaeological excavation was undertaken by the Cambridge Archaeological Unit at No.'s 4-5 Castle Street, Cambridge, between the 14 th and the 25 th of November 2011. Despite extensive 19 th -20 th -century disturbance, 1 st -4 th -century Roman deposits and features - including a well constructed cobbled surface - survived under the basements. In the rear yard a 3.3m deep stratigraphic sequence spanning the 12 th /13 th -20 th centuries was present with features including a large 12 th -13 th -century quarry pit, a 14 th -15 th -century oven and a 16 th -17 th -century garden/horticultural soil, all features typical of the rear yard area of an urban plot. In the 17 th -century a building with a substantial cellar was constructed; this remained in place until the current standing buildings were erected in the mid 19 th -century.
Project dates	Start: 14-11-2011 End: 25-11-2011
Previous/future work	Yes / Not known
Any associated project reference codes	ECB 3695 - HER event no.
Any associated project reference codes	KYE 11 - Sitecode
Type of project	Field evaluation
Site status	Listed Building
Current Land use	Other 2 - In use as a building
Monument type	METALLED SURFACE Roman
Monument type	QUARRY PIT Medieval
Monument type	OVEN Medieval
Significant Finds	WORKED WOOD Roman
Significant Finds	COIN Roman
Significant Finds	POTTERY Roman
Significant Finds	POTTERY Medieval
Significant Finds	POTTERY Post Medieval
Methods & techniques	'Targeted Trenches'
Development type	Building refurbishment/repairs/restoration
Prompt	Direction from Local Planning Authority - PPS
Position in the planning process	After full determination (eg. As a condition)
Project Location	
Country	England
Site location	CAMBRIDGESHIRE CAMBRIDGE CAMBRIDGE No.'s 4-5 Castle Street,

	Cambridge
Postcode	CB3 0AQ
Study area	170.00 Square metres
Site coordinates	TL 446 591 52.2106946342 0.116594490083 52 12 38 N 000 06 59 E Point
Height OD / Depth	Min: 6.94m Max: 7.90m
Project Creators	
Name of Organisation	Cambridge Archaeological Unit
Project originator brief	Local Authority Archaeologist and/or Planning Authority/advisory body
Project originator design	Christopher Evans
Project director/manager	Christopher Evans
Project supervisor	Craig Cessford
Type of sponsor/funding body	Developer
Name of sponsor/funding body	University of Cambridge Estates Management and Building Service
Project Archives	
Physical Archive recipient	Cambridge Archaeological Unit
Physical Archive ID	KYE 11
Physical Contents	'Animal Bones','Ceramics','Environmental','Metal','Wood'
Digital Archive recipient	Cambridge Archaeological Unit
Digital Archive ID	KYE 11
Digital Contents	'Animal Bones','Ceramics','Environmental','Metal','Wood'
Digital Media available	'Images raster / digital photography','Spreadsheets','Text'
Paper Archive recipient	Cambridge Archaeological Unit
Paper Archive ID	KYE 11
Paper Contents	'other'
Paper Media available	'Context sheet','Matrices','Plan','Section'
Project Bibliography	
Publication type	Grey literature (unpublished document/manuscript)
Title	No.'s 4-5 Castle Street, Cambridge: An Archaeological Evaluation
Author(s)/Editor(s)	Cessford, C.

Other bibliographic details	Cambridge Archaeological Unit Report No. 1064
Date	2011
Issuer or publisher	Cambridge Archaeological Unit
Place of issue or publication	Cambridge
Description	An A4 wire bound document with plastic laminate cover. It is 33 pages long, and has 11 illustrations.
URL	http://www.oasis.ac.uk
Entered by	Richard Newman (rn276@cam.ac.uk)
Entered on	15 December 2011