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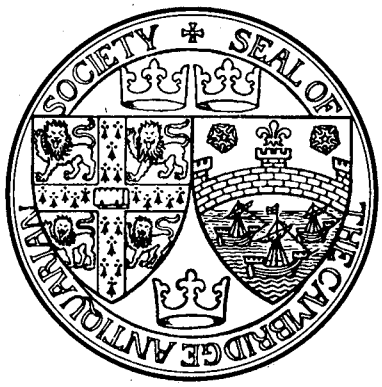
Roman Cambridge

Excavations on Castle Hill 1956–1988

John Alexander and Joyce Pullinger



This volume is dedicated to more than 400 volunteers who worked in their free time on the excavations and post excavation work, and to those contributors to the final work who did not live to see the results: Don Allen, Bernard Denston, Ray Farrar, Chris Godfrey, Rex Hull, Joan Liversidge and John Scott.

Roman Cambridge: Excavations on Castle Hill 1956–1988

John Alexander and Joyce Pullinger

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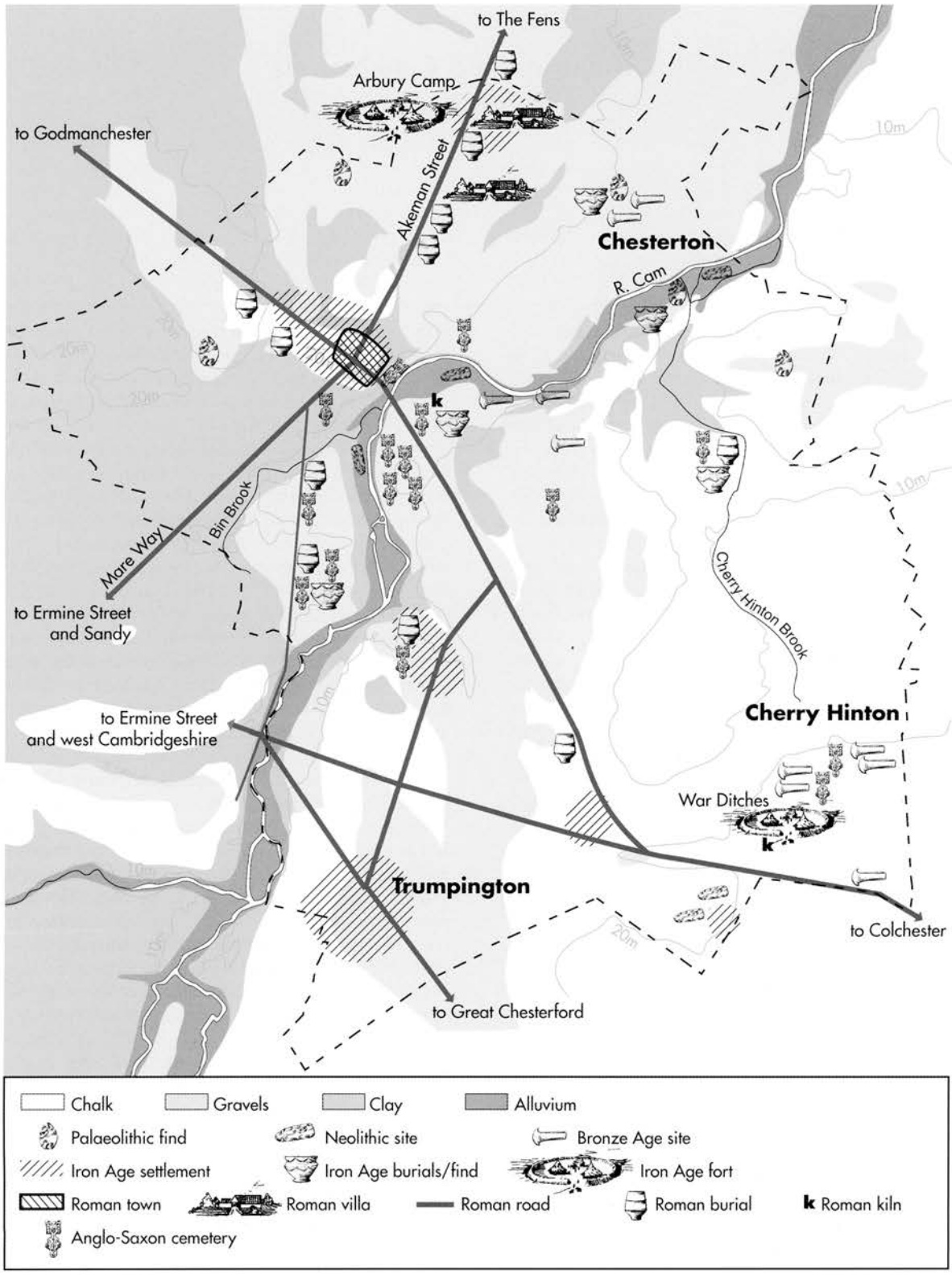
Alison Taylor

Cambridge as a Roman small town: the context

There is continuing debate over what constitutes a small town in Roman Britain, a topic thoroughly discussed on a national scale by Burnham and Wacher (1990) and within Eastern England by the various authors edited in Brown (1995). They were very different to major towns, which had visible and functional unity due to their legally recognised position within the Roman administrative system, but there is no agreement at this lower end on what they should contain or how they might function. Instead we are faced with several negatives. Evidence for ordered town planning for example is virtually unknown, even at Water Newton, which is the largest and best equipped with urban features. Most, in fact, were first ribbon developments at route centres, and development of other streets is a significant mark of urban growth. Few had public amenities such as a temple, forum or basilica, although many, perhaps most, had the *mansiones* required for the *cursus publicus* (Black 1995). Substantial private houses, too, are usually lacking within the urban area, though there are often examples close by. Burials, apart from infants, are also of course not found within the towns but are common on the roads leading out. Trade and related crafts are only occasionally visible archaeologically as shops or workshops, though smithing, single pottery kilns and the minor craft of bone-working are apparent (eg, in Braughing, Great Chesterford and Godmanchester in this area, as well as Cambridge). If there were fortunes to be made there are few signs they were spent on luxurious living within such towns, the rich preferring villas a mile or so outside and some wealth probably being taken away to the *civitas* centres.

Features that *are* usually found in small towns include good communications by road and river, the rivers being far more important than roads for settlements involved in long-distance and even some local trade (eg from the Fens). Fortifications, both early forts and later defensive walls and ramparts, are quite often found but are far from universal and were in no way essential to urban life. Religious functions are a more common constituent and in a surprising number seem to be the dominant function. All, it appears, would also have had agricultural functions, with much land within the town used for horticulture and penned stock as well as housing labourers and smallholders who could work the fields around, a pattern that was normal in the Middle Ages.

Origins of towns in the 1st century are seen as combinations of direct continuity from appropriate Iron Age sites, especially in the coin-using areas of the South East and East Anglia, attraction to forts (less convincing in areas of short-lived military activity), natural development of road side sites (also unconvincing without other incentives), provincial administrative needs, and *mansiones* or government services for travellers on official business. This last factor is the one which Ernest Black (1995) persuasively argues was most commonly the spur to growth. In the 1st century these *mansiones* were usually linked to forts but in the early 2nd century, under Hadrian (AD 117–138), a time which saw reorganisation and intensified urbanisation in many areas, much development was due to a building programme to provide services for official travellers in Britain, financed by general taxation as has been recognised in other provinces at this time, and as it was in Italy in the Republican period. Travelling soldiers and officials of all ranks should now have safe and pleasant accommodation, with bath houses, stabling and horse changing facilities provided approximately every fifteen miles along major roads. This would have augmented or replaced billets in private houses. As many of the roads were originally Iron Age routeways linking settlements, these *mansiones* could often be grafted onto existing villages as well as to forts. If it is reasonable to extrapolate back from later written evidence it would seem that where settlements had these official buildings they became local administrative/tax collection centres, for the 4th century Theodosian Code specifically orders measures to be placed in *mansiones* and cities so that each tax-payer could see the commodities in which he was paying tax weighed out before his eyes. This Code also proscribes illegal use of government facilities by unauthorised people and demands for animals in excess of legal entitlement. From this it seems horses *were* available for all who were eligible, borne out by abundant horse bones on sites of this nature



7.1 Roman Cambridge: the regional setting. (First published in Cambridge: the hidden history. *1999)*

(eg Horton *et al* 1994, Ellis *et al* 1998, and this volume). At times of stress it was these government centres which had to be protected, for tax collection purposes.

The fort

In Cambridge we see many of these factors in play. The Iron Age settlement already had its communication networks by road and river, coins were in use and there were defensive-scale ditches (Chapter 2 and App. XII). This was a significant site that required a Roman presence from an early date, hence reorganisation in the Claudian period. Relevant for the Cambridge region would have been the setting up of the Catuvellaunian *civitas* with a capital at Verulamium. The Cam valley might be expected to have been part of it and Cambridge the natural choice for a local administrative centre. At this time the Cambridge region, with the neighbouring Iceni also Roman allies, would have had little military significance, but after the rebellion of AD 60 it could have been a frontier zone where a fort would be able to monitor the Icenian border and stop dissidents moving round the fen edge. Since the rectangular feature interpreted as a fort has good evidence for Flavian but not Claudian dating it seems likely that it was laid out in the aftermath of the rebellion and was garrisoned until danger passed, perhaps when Agricola was moving more troops out of southeastern England to use them in the north. Little of the interior of the fort was available for examination, but its ditch-siltings showed that it was in existence though not necessarily in use for several decades, while the area round it was kept clear of buildings, and it was then deliberately slighted. It had outlived its usefulness by the end of the 1st century and its site was levelled.

It must be emphasised that evidence for a fort is far from conclusive; it depends on the projected shape (and only two partial sides were found), the ditches, the pottery (App. VII, Plates LXXI–LXXIV: 384–427), the route of 2nd century Akeman Street (which appears to follow the fort's main street), its location commanding cross roads and a river crossing on the brow of the hill, the absence of settlement clutter within and around the feature, and the place name element *Duro* (see below). None of these arguments would stand alone, and there is no evidence for military equipment among the small finds other than, perhaps, the two *Aucissa* brooches (App. I: 26 and 27). Nor is there any need to require a fort at this time as a significant factor in the origins of the town, for these are better explained in relation to its Iron Age antecedents and its role in Hadrianic developments, with special reference to the Fens (below). It was in any case quite a small and short-lived structure, unlikely to be effectively manned after the initial aftermath of the Boudiccan revolt. It is however noticeable that the settlement is comparatively rich in artefacts at this time, in relation to later periods. Virtually all the brooches for example date to the 1st century.

Creation of the 2nd century town

Early in the 2nd century there was massive reorganisation, involving levelling the fort and infilling the pits and ditches of the derelict Iron Age village. Gravel streets were laid out from the Via Devana and parallel to Akeman Street at 20m intervals. They do not seem to have continued down the southwestern hillside and only one street (4) was found on the other side of the road. Along the gravelled streets small dwellings were erected, built of timber, wattle and daub, and thatch. They were of several styles and had small fenced and ditched yards. The domestic zone on the hilltop on what had been previously state-owned land must have been for a relatively poor group although the pattern and quality of pottery suggest more wealthy buildings nearby. Whether these people were employed in some way by the province or the *civitas* cannot be certain but there was little evidence of industry. Reorganisation on this scale would in itself require significant outside influence, most probably by the *civitas* authorities (Barry Burnham, pers comm). This 2nd century floruit parallels similar developments in the region at Godmanchester and, even more, at Water Newton, and is part of a wider effort to organise provincial supply systems more carefully (*ibid*).

Apart from wide scale administrative changes noted in Britain and much of the Empire at the beginning of the 2nd century, a specific reason for the settlement on Castle Hill flourishing at this time could be that Hadrian ordered the building of a *mansio* at the road junction as part of his land settlement programme within the Fens. There are two arguments for interpreting the stone building with hypocaust in this light. Firstly, it is the right distance from staging posts at Wimpole Lodge (Horton *et al* 1994), Godmanchester (Green, 1960) and from a possible site at Stretham in the Fens. Secondly, Cambridge then as in later times was the gateway to the Fens, an area that is thought to have been under direct imperial administration. Akeman Street can be dated to the early 2nd century both within the excavated town and in the Fens, where dating and constructional evidence was found in 1999 (Tim Malim, pers comm), as can Car Dyke, another important element in developments of this area as a producer of food and leather for the military zones (Jackson and Potter 1996, Macaulay and Reynolds 1994). However, it must be noted that the remains excavated in Cambridge were only those of a small building, comparable to villa baths or baths provided for higher ranking officials/soldiers only, not the full range of personnel (Black 1995), and Ernest Black (pers comm) considers that we should be cautious in the building's attribution to an imperial initiative. Given the lack of domestic buildings of the kind likely to have such facilities, another function that might convincingly be suggested would be linked with the shrine (below), in line with Folly Lane, Verulamium and probably many other towns where bath houses and ritual sites are both recognised.

Major roads

The two main roads in the early 2nd century had gravel surfaces and side ditches. The location of the *mansio*, cellared building F12, the shrine, and some later features indicate that the roughly north-south route now given the name Akeman Street, not the east-westerly Via Devana, was the principal route at this time, as would be expected from its function as an access route to the newly settled Fenlands. Villas and prestigious burial sites further along this road at Arbury are other indicators of its significance north of Cambridge in later centuries. To the southwest it originated as a spur road off Ermine Street at Wimpole Lodge. This road was excavated on the Ridgeons Garden site, where it can be seen as the main road through the fort, and a considerable length of it was recorded northwest of Castle Street during construction work for Castle Court and associated offices. It exits the walled town through the East (*recte* Northeast) Gate (opposite modern Hale Street) where, in a plan made in 1838 (CUL Map bb.53.83.12) a route named Beach Way is shown. The route is roughly followed by the modern street pattern (principally Stretten Avenue/ Carlton Way/ Mere Way) through Arbury to King's Hedges, beyond which it can be picked up as a green way dividing the parishes of Milton and Impington before being lost in the present A10 to Ely. To the south there was later a road through the 'West' gate, creating a hollow way that was in use until the 19th century. It appears to be a separate road (Street 5), unless Akeman Street, as is quite possible, swerves to a different angle within the unexcavated area to avoid the steeper hill side. One other reason for the shift may be that a southerly route, following the river to a fording place at Newnham (a route later lined with early Anglo-Saxon cemeteries) was by that time more important than the earlier southwesterly route that crosses fields to Barton, then follows the A603 to Wimpole Lodge and Ermine Street.

The Godmanchester Road (known from the 18th century as the Via Devana), a main road from northwestern England to the southeast from the 1st century, was excavated at the exit through the North gate and observed in builders trenches at intervals between that gate and its junction with Akeman Street. East of that junction the road poses a frustrating problem, for no trace of it has been found. A route to a bridge must surely be assumed in light of the known road (including the artery of Bridge Street/St Andrew's Street/Hills Road which follows a ridge of gravel through Cambridge) to Worsted Lodge (Malim *et al* 1997). The very name of the town, *Duroliponte*, like the Anglo-Saxon *Grantabrycge* and modern *Cambridge*, appears to recognise the crucial nature of the river crossing. Unfortunately the place name etymology is unclear. According to Rivet and Smith (1979, p 350–1) the *Duro* element probably refers to a fort and *liponte* to 'a boggy overflowing river', but it would seem likely that such a clear reference as *ponte* would only stick if a bridge actually was a feature of the town in Roman times. The part of the town lying on the presumed Via Devana route east of Akeman Street has been severely disturbed, as excavations at the Law Courts demonstrate, and it may well be that the road past the junction was a slight affair. In any case, although a road here was an invaluable route while a wooden bridge was in use, it had little point whenever it was not functioning. Even Roman stone bridges were known to collapse, and the later wooden bridges at this point were notoriously unreliable and often replaced by ferries (Taylor 1999). Except when there was a military presence ensuring maintenance it may have been more convenient from some directions to cross the river upstream by ford at Newnham or downstream by ferry at Chesterton. Both routes were certainly used in Anglo-Saxon and medieval times. It is also possible that the Roman road is closely followed by the modern, post-medieval, one in which case it may never be found. On the plans of the town we have tentatively shown the route leaving Akeman Street where there was some slight excavated evidence. At the opposite exit en route for Godmanchester a feature found in excavations at New Hall (App. XII) may be a roadside ditch for this road. The New Hall excavations also gave clear evidence for yet another road from the southwest (Margary's 231, 1967)

Ceremonial site/shrine and other ritual features

The shrine in RGS/CP has long been an enigma within the setting of a 2nd century Roman town. Obviously having a religious but not apparently funerary function, it is associated with a group of ritual shafts containing burials of dogs and infants. Some clues to the context of these features came with the publication of excavations at Folly Lane, Verulamium (Niblett 1999), for the shafts there have significant features in common and are worth considering in detail in relation to Cambridge.

The principal shaft at Folly Lane, on a road leading out of Verulamium, was much earlier in date, about 55 AD, and fitted more closely into the pattern of timber-lined burial chambers found in Late Iron Age Britain and Europe. It was 6.9m square and 2.9m deep, had vertical sides massively revetted with more than one layer of timber, a flat base with sacrificial goods deposited on it, and a substantial superstructure that was deliberately demolished and pushed into the shaft beneath. The shaft contained fragments of many pots, (virtually none normal domestic ware), amphorae, nails, iron fragments, and molten silver and copper alloy. Beside this shaft a pit included pyre debris (including a coat of iron mail, bridle bit and toggle, carved ivory, and more molten silver and copper alloy, iron fragments, nails and amphora sherds). Interpretation of this site was that of a very high status burial laid out in the principal shaft, the body being then cremated and the remains deposited in a separate burial pit. To judge from the broken pottery and amphorae feasting was an important part of the proceedings. The site continued to be sacred long after these events. It was covered with a turf stack and a

Romano-British temple was later built over it.

The Cambridge example was similar in size, 8.18 x 5 x 2m deep, with the same vertically revetted sides and flat bottom, though with one semi-circular end. Here too there was evidence for a great superstructure and thick lining of the cellar with nailed layers of timber and, judging from the corroded lumps interpreted as hinge and brackets etc, other elaborate wooden features. The whole edifice had burned and the cellar filled with its remains, along with luxury vessels and other evidence of high status feasting and amusement. Like Folly Lane, it was therefore probably linked to a burial ceremony, and both can be seen more as ceremonial sites/shrines than simply mortuary structures. In this respect we can see parallels with early Christian churches, where it can be difficult to disentangle shrines to important or saintly individuals that come to be used for general worship from churches that are used and enhanced by tombs and burial rituals. At Cambridge no relevant burial was discovered but, odd though the whole site is, it would surely be unparalleled to have the burial itself in a central location within the settlement. If the above interpretation is correct, perhaps the actual cremation remains could be in one of the several burial sites around the town, although there were unexcavated areas near the shrine where burnt bone may have been deposited.

There are many similarities between the artefacts and animal remains in Cambridge and Folly Lane. Smashed samian, flagons, amphorae and other imported wares in great quantity, whole layers filled with oyster shell, and several thousand iron objects, including hob nails, are common to each. Folly Lane included horse bones and very fine horse equipment, though dogs are absent from this collection. Other unusual animal bones common to each include cat, hare and chicken, as well as the normal pig, cattle and sheep. The complete animal sacrifices at Cambridge, especially the three dogs with iron collars forming a triangle around a pot, are less well paralleled. A problem with artefacts such as the bone flute, the Bacchus intaglio, gaming counters, coins, bone and jet pins, and spoons is that they could equally be grave goods or items associated with other activities on the site. It should be noted, though, that there are gaming counters from several late Iron Age and Roman burials, and the iconographic importance of the Bacchus cult and its other-worldly associations makes the intaglio especially significant (Martin Henig, pers comm).

As in Cambridge, the Folly Lane shrine was associated with narrow ritual shafts, of which nine out of a possible 28 were excavated. They were between 2.5 and 6m in depth, and 1.5 to 2.5m in diameter, flat bottomed and vertical sided, sometimes with a lining. One had a defleshed human skull and a dog skull on the bottom and puppy bones and butchers' waste in the fill, and another contained two ox skulls. The fills of these shafts, again as in Cambridge, were deliberate and often of sterile material, and occurred at intervals from the mid 2nd to later 3rd century. An outstanding and consistent feature of the 13 excavated Cambridge shafts was the burial of babies with dogs. These infants were less than ten days old and therefore without rights to normal burial under Roman law, and we should see their inclusion as part of the macabre ritual of the site rather than interpret the shafts as elaborate graves for the children.

The use of deep shafts to communicate with the Otherworld, and burial of dogs/hounds for their role as guardians after death have been discussed extensively by Miranda Green (especially 1992), Martin Henig (1984) and Anne Ross (1967). British hunting dogs, which Strabo describes as small, rough-haired and swift, were well known in the European world and, together with horses, had a privileged position because of their status as hunt animals. During the Iron Age they are often found in pits and shafts in southern Britain and northern Gaul (eg Ross 1967), and the custom continued in the Roman period. Complete skeletons are commonly found, and so are skulls or just articulated joints. The falcon deposited in shaft 6 was also connected with elite hunting activities and may be seen in a similar sacrificial light, although many large birds are particularly associated with augury, either through study of their flight or examination of entrails (Henig 1984). Deep straight-sided shafts, sometimes with footholds and linings, and reuse of pits and wells for ritual, are found on many Iron Age and Roman sites, including forts (eg Carrowburgh, Newstead) and some of the most Romanised towns (Caerwent, Great Chesterford, Silchester, Wroxeter and Verulamium) (Ross 1967). Deposits in them are, as ever, difficult to distinguish from rubbish, but carefully arranged vessels, complete animals (especially dogs), animal and human skulls, and sections of deliberate infilling in shafts otherwise protected from weathering and ordinary debris are taken as indicators. Such shafts are found throughout Europe and in many periods from early prehistoric times. The infant burials are most difficult to parallel in such a context. They are very commonly found beneath floors and in pits, ditches etc but clear ritualistic intent is rare. A J Rook (pers comm) has excavated 19 neonates in a possible *temenos* ditch at Great Humphreys, Aston, Herts, while at Ware in the same county there were scattered infant bones near a temple , and at Springhead, Kent, there were many infants within one *temenos* and temple, including two that had been decapitated (quoted and discussed in Philpott 1991). Elsewhere, for example at Portchester, there are many pits which include both infant and dog bones, but these are mixed with many other species and the animals are not complete skeletons. These therefore appear to be just rubbish pits for the fort. The dogs on this site ranged from the size of modern toy poodles to that of Alsatians (Hooper 1975).

Although the floruit for the Folly Lane site and its chthonic cult is given as later 2nd–3rd, the same as Cambridge, the burial itself is *c.* AD 55, which is late but not unreasonable for an Iron Age burial. Finds from the Cambridge site however place it in the middle of the Roman period (eg Samian Ware, p 137), though the feature could have been used for many

years before its destruction and infilling. If its interpretation as a mortuary site is correct this makes it the latest survival of the ostentatious Iron Age types of burial found in southern Cambridgeshire as well as Hertfordshire and Essex. It is a tradition which can be seen continuing in many Roman-period burials, most spectacularly those at Bartlow Hills. There the graves were eventually covered with high mounds, the burial chambers were just large chests and the debris of feasting has not been found, but the very rich grave goods that accompanied cremations were mostly linked to carrying on the festivities in the next world (Gage 1833, 1840, 1842, Taylor 1998), and otherwise seem to represent similar attitudes to life after death. Bartlow was in use from the late 1st to early 2nd century AD, and so is a link through the time when Roman burial customs were generally being adopted.

The shrine's prominent location, on the hill top, near a cross roads and directly connected by road to the bath house/*mansio* building, show that it was no secretive or marginal cult but was central to a population probably much larger than the town. It also had long-lived significance, for the area was kept clear of houses and some of the ritual shafts have deposits of the 4th century. The closest parallels recognised so far are Folly Lane itself and, to a lesser extent Stanway, King Harry Lane (which has several examples of mortuary enclosures and pyre debris containing cremated grave goods), and the Lexden tumulus, (all discussed in Niblett 1999). Stanway is not so rich and the grave goods have not been burned, but they may be satellite graves for a similar princely mortuary ritual. These date to the late Iron Age and very early Roman period.

There were other features, most of them near the shrine, which were excavated as rubbish pits and wells (as some undoubtedly were) but which, in light of the definitely ritual associated features are worth noting in this section, and there were no doubt others that were even less diagnostic and which test to the limit our notorious inability as archaeologists to tell ritual from rubbish. It is however perhaps also worth noting that, despite the range of features that may be interpreted as ritual, there is a lack of the votive-type artefacts that are found in such numbers on temple sites. The only obvious exception is the fragment of a pipe clay figurine (App. I: 193), apparently depicting flowing robes. This is not therefore a site where the usual offerings were brought to the gods as they were, for example, to so many shrines around the fen edge (Taylor, 1984 and 2000). Features thought to have a ritual element include the following. Fuller details are given in the text.

RGS VI: 18a and b, shallow pit containing 14 ox skulls, adult human long bone and jaw, late 3rd and early 4th century pottery, tile and burnt limestone blocks.

CP. 7b (Fig. 4.12). Circular, probably plank-lined well, excavated to 3m without reaching bottom. Contained part-worked bone pin shafts and animal bones, mainly sheep. 1st and 2nd century sherds. The well appears to have been used, after partial infilling, as a setting for a large post, packed with squared stones, large sherds and part of a puddingstone quern, resting on a hard circular lump of chalk marl.

RGS IV. Well 16. Plank lining. In a pocket of ash 2m down was a baby under 10 days old and 10 other human infant bones. 2nd–3rd century sherds, including 3 from an urn with a painted face. Some bones, mainly of mature sheep and cattle, also fish.

RGS VI (19c–j). Near-rectangular, vertical-sided, flat-bottomed pit, 3.35m deep. Wattling or brushwood lay on packed chalk at the bottom. On this was a horse surrounded by ash and two beakers (Plate CXXIV: 885–887). There were decayed planks on two sides of this level, with a circular wooden object – perhaps a small wheel – and an iron hilt-shaped object (Plate XXVII: 201, 202). Late 2nd to early 3rd century sherds (Plates CXXIII–CXXV: 873–892).

SH 83 IV. Pit F1. Large oval pit. 3rd century. Many oyster and mussel shells, bronze pins fragments, 74 iron nails, 42+ shoe studs, plaster fragments. perforated bronze disc, neck of glass vessel, early 2nd century stamped samian, bone needle, iron bridle and antler cheek bits (Plate XIX: 166, 167), fragments of iron with wood adhering (Plate XX: 169).

RGS. Well VI (25). (Fig. 5.5, 5.6) Circular, 95cm in diameter. Excavated to water level at 5m. Timber lined at top. Below were two opposed rows of foot. It contained a skeleton of a horse and three almost complete vessels (Plate CXXVII: 896–898). Above were ash and chalk marl lumps, fragments of iron, thin strips of wood, and much daub with timber laths attached. Uppermost fill contained a few bones, including one human femur.

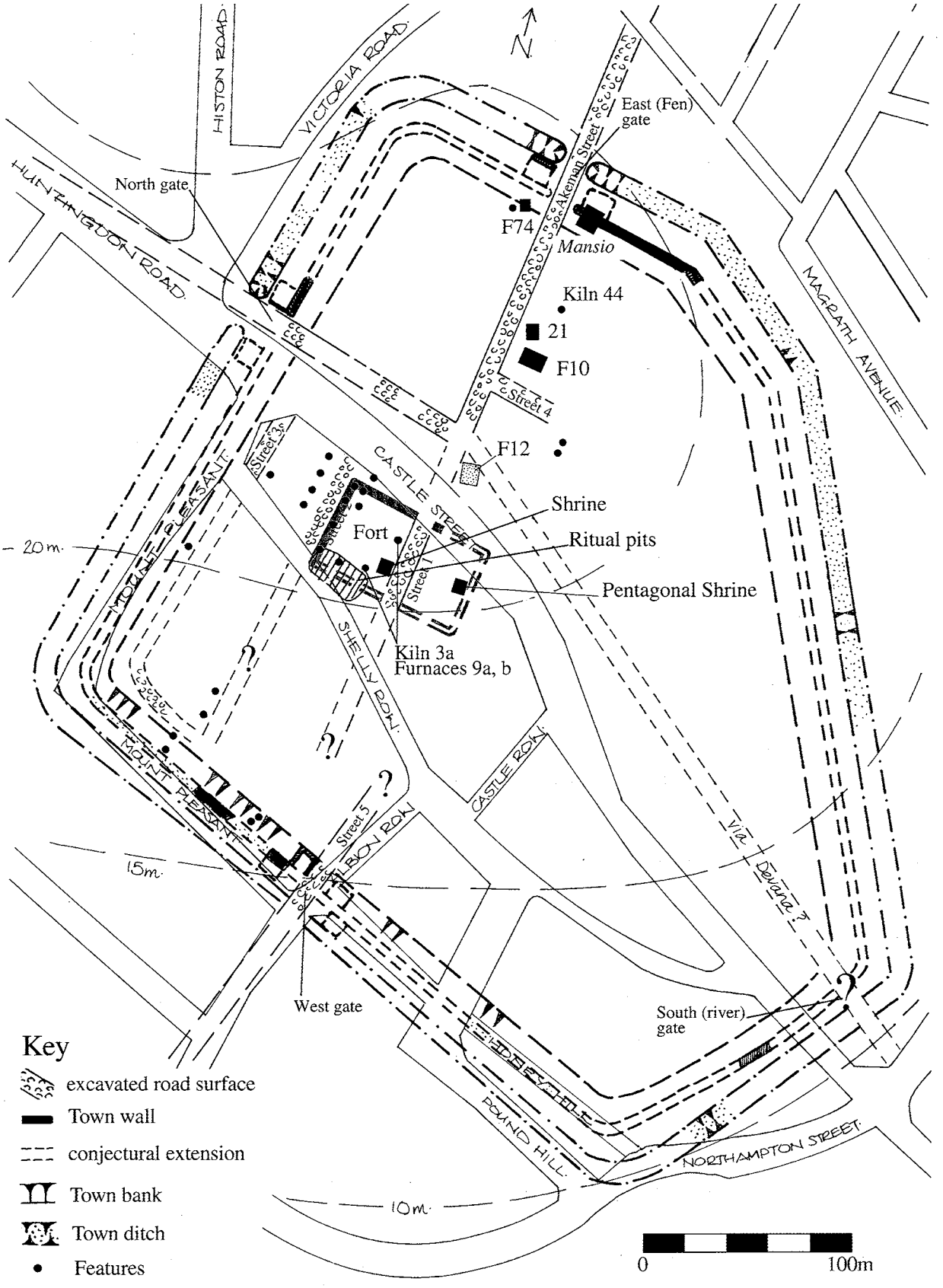
RGS 26 contained several thousand sherds, many of them fine wares similar to those in the shrine, and glass. It may be associated with clearance works of the shrine

There was also one normal burial, RGS VII Grave 17b.

The shrine burnt down in the first quarter of the 3rd century, and later that century a small pentagonal wooden structure was built close by. It has a similar plan to temples such as one excavated in Godmanchester by H J M Green (1985), but is far smaller. Its closest parallels are baptisteries such as Uley (Woodward and Leech 1993), usually recognised as stone structures. Later, perhaps significantly, the whole area appears to have been undisturbed until the construction of the church of All Saints by the Castle in the late Saxon period.

3rd century occupation

The settlement at this time seems to have shrunk. Houses of the 2nd century were now derelict and rubbish and gravel pits were dug through them and their courtyards, although this is perhaps uncharacteristic of the settlement as a whole. Against the decreased number of houses there is an increased amount of rubbish in the pits, and the roadways were still respected. Some houses and yards continued to be used until the moment at which the defences were built over them. Ritual shafts etc described above were in use.



7.2 Roman Cambridge

The 4th century walled town

In the 4th century the population became more concentrated. Gravelled streets were renewed and new dwellings were erected over filled-in quarry and rubbish pits. The houses were only slightly more sophisticated than those of a century earlier, for although there was some use of roof tiles, painted wall-plaster and cement for floors, they were single roomed, timber constructions with gravelled and fenced yards.

In the early 4th century some 9 hectares of the settlement was walled, a major change that must have been ordered at a high level. The wall of Barnack limestone 1–3m thick, enclosed an irregular polygon and had a rampart bank, four gates and a ditch. There is no evidence of any previous defences and the evidence was conclusive that wall, bank and ditch were constructed at the same time. It seems to have been a sudden decision of the government, for the defences lay above and through dwellings recently occupied.

The shape and location of the walled area show that it was required to cover the road junctions as well as the approach to the bridge. The wall at the foot of the hill was on the edge of the river flood plain and the others closely followed the edge of the gravel capping to the hill, so the ditch was cut into gault clay which probably held water. The design of the 4th century defences presents some unusual features, different from those of the neighbouring towns of Godmanchester and Great Chesterford (Burnham and Wacher 1990). The building of a bank behind the wall is unusual and was presumably copying 3rd century models, and the gateways with reduced wall thickness behind the towers seem unique. The resources required to fortify the settlement were considerable, for neither limestone nor clunch are found nearby. The limestone came from Barnack some 40 miles away (and further by water) and the nearest clunch is in the chalk hills south of the river. The transporting of some 10,000m^3 of material alone must have called for organisation and resources way beyond the local community.

The wall and bank were in places built through, on and over still standing structures, not surprisingly, given the sprawling nature of settlement. At Mount Pleasant the bank lay directly on pits and a house with ashes still on its hearth. In Haymarket Road both bank and wall ran through a large gravel quarry and to the north the wall cut through the *mansio*, and even included part of its walls in the defences. The area chosen for defence was also selected for reasons other than military requirements. Inclusion of the steep hillside beside the river despite its defensive disadvantages suggests, like the artefactual evidence, that it must have been an important, perhaps the most important, part of the settlement. There are also many stray finds in all directions around the town wall, and in excavations to the west (Christopher Evans in App. XII, and pers comm for excavations in progress) show that urban elements were at least as developed outside the walled area as within it and extended for a considerably greater distance. At this time too the nature of the town became even further removed from our normal notions of Romanised urbanism. The one stone building was no longer in use, a body was buried near to it (significantly, lying prone and with his feet removed), and occasional kilns were allowed within the walls.

It is suggested therefore that the fortifications were built on governmental instructions as part of a provincial defensive scheme, and it is necessary to consider why this occurred. Up to the 4th century East Anglia, a peaceful area since the Boudiccan revolt, had many towns but few defended sites apart from the forts of the Saxon Shore. The only walled towns in Norfolk were Caistor by Norwich (the *civitas* capital), and the small industrial settlement of Brampton. There were none in Suffolk, and in Cambridgeshire the only defences were the other side of the Fens, at Water Newton and Godmanchester. Essex was similarly weak outside Colchester. As Chris Going (1998) has argued for Essex, the 4th century seems to be a time of shrinkage and general impoverishment in town and countryside in eastern England, side by side with occasional signs (eg treasure hoards) of spectacular wealth. This can be interpreted as indicating an increased need for food exports following disasters on the Continent. Ammianus Marcellinus, for example, records the reconstruction of burnt granaries in Gaul to house supplies of grain from Britain in AD 359, and the emperor Julian himself wrote (*Letter to the Athenians 279D*) at the same time about the large number of ships that were brought over from Britain to help the Gallic provinces. Eunapius too, while recounting the making of a treaty with the Chamavi, says that their co-operation was needed for the essential transport of grain from Britain to continental Roman garrisons (quoted in Ireland 1986). East Anglia was the very area where grain and livestock production was vital for provisioning the armies of the Rhine and Hadrian's Wall, and Going (pers comm) relates the archaeological signs of intensification of farming and especially evidence for large-scale production on state-run *latifundiae* at the expense of peasant farmers to the demands the Empire was making on food-producers in this area.

At this time too the region's position on the North Sea coast with navigable rivers from the Wash into its heartland made its vulnerability to attack from northern Europe sharply apparent. No town walls could defend much of the population, but they could protect a centre where tax, especially corn, was collected in kind, and it is suggested that this was the primary motive for the defence of Cambridge. Cambridge throughout the Middle Ages was a centre for collection and marketing of agricultural produce, using the Cam and the roads that converged here, and it was not only well-sited for such a role in the Roman period but was also the natural exit point for routes north and east via the Wash. Great Chesterford, too, also on a bridgehead of the Cam and crossed by long-distance east-west routes, changed from an insignificant place (incidentally, also noted for its religious sites and bath house but little else) to a fortified town at the same time. Other towns on navigable rivers in Eastern

England (eg Caistor, Horncastle, Water Newton, Great Casterton, Godmanchester) also had new or improved defences at this time. These towns can therefore be seen as an attempt by central government to give defence in depth to a region that was feeding the Empire and was vulnerable to foreign attack once the forts of the Saxon Shore were passed. How these defences were manned is another problem, for military equipment has not yet been found, with the possible exception of a crossbow brooch (App. I: 38). More interestingly, were they effective? This is not the place to enter old controversies on the role of Anglo-Saxon mercenaries, but it must be more than coincidence that both Cambridge and Great Chesterford, like Caistor by Norwich, have large and early Anglo-Saxon cemeteries just outside their walls.

The final years

The early 5th century is another enigma. Anglo Saxon cemeteries of exceptional interest nearby, at Girton and St John's cricket field (Hollingworth & O'Reilly 1925, Taylor 1997, 1999), began in the 5th century, and there were numerous other burials of the 6th century on both sides of the river and elsewhere in southern Cambridgeshire. There were no traces of burning or other destruction in the period found in the excavations, but the only indications of habitation within the walls were coins of Eugenius and Majorian and a structure cut into the top of shaft 35 (p. 55) which was suggested to be a possible grubenhaus, but at 1.18m in depth is perhaps more likely to be the cellar of a Roman building. Substantial 'black earth' build-up was noted over the slight constructions and ditches which were all that existed during the period of later use, a formation that is recognised in London and elsewhere as deriving from decayed timber and domestic waste accentuated by later gardening and intensive agriculture (Courty, Goldberg and MacPhail 1989, 261–8). Since the lower 10cm of the post-settlement soil contained only late Roman sherds, it could have been so used in the 5th century.

It is intended that evidence from the post-Roman periods will be discussed in a separate paper.

Conclusions: the life of the town

Many aspects of life within Roman Cambridge have been illuminated by the excavations described in this report, however tentative and controversial our conclusions are. The ordinary commercial life that we expect from an urban context however eludes us still, although the region around saw considerable industrialisation, with huge areas of Horningsea, Milton and Waterbeach used for pottery kilns. Economic life never seems to hbeen much developed, the only recognisable craft being manufacture of bone pins, apart from two single kilns in the 4th century. Cambridge has nothing that can be identified as shops fronting onto streets, but there were at least two back lanes where most of the small houses clustered, while the larger buildings that probably had public functions lined Akeman Street on the opposite side of the Via Devana. This is a higher degree of town planning than is usually apparent in towns of this kind. The oculist's stamp (App. I:108) is an item quite often found in towns and is thought to be part of the stock of itinerant specialists. As in medieval Cambridge local trade for the surrounding countryside would have been important, a function that can leave extraordinarily little trace. We must remember, for example, that Stourbridge, one of Europe's greatest fairs, was held on the outskirts of Cambridge for hundreds of years with scarcely a physical trace surviving, and that markets, still a feature of Cambridge life, were (and often still are) just a matter of people bringing produce and crafts for sale in the open air or temporary stalls, again leaving no trace but an open roughly surfaced area. Religion, ritual and servicing administrative functions would also have employed some people. However, it would appear that most gained at least part of their livelihood from agriculture, just as inhabitants of Cambridge were to do throughout the Middle Ages and into the 19th century. It is also likely, given the disparity between the huge amount of quarrying and rubbish disposal compared to the humble nature of occupation evident for much of the life of the town, that significant areas remain to be discovered, and that the walled area may never have been the centre of settlement.

Until the fortification of part of the town, interpreted here as a move to protect grain supplies collected as tax in kind to supply the hard-pressed army in the 4th century, the reasons for the existence of Cambridge seem to originate in an existing Iron Age settlement which was developed under Hadrian to form part of the *cursus publicus*, from which grew further administrative functions for a local region, ie the area that was within a day's walk for the return journey, as well as a wider region of the southern Fens. Modest markets presumably functioned alongside this official presence, but it may have been the religious life of this centre that most marked it out from often wealthier rural settlements in the surrounding area in the minds of those living at the time.

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