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ROMAN GREENWICH

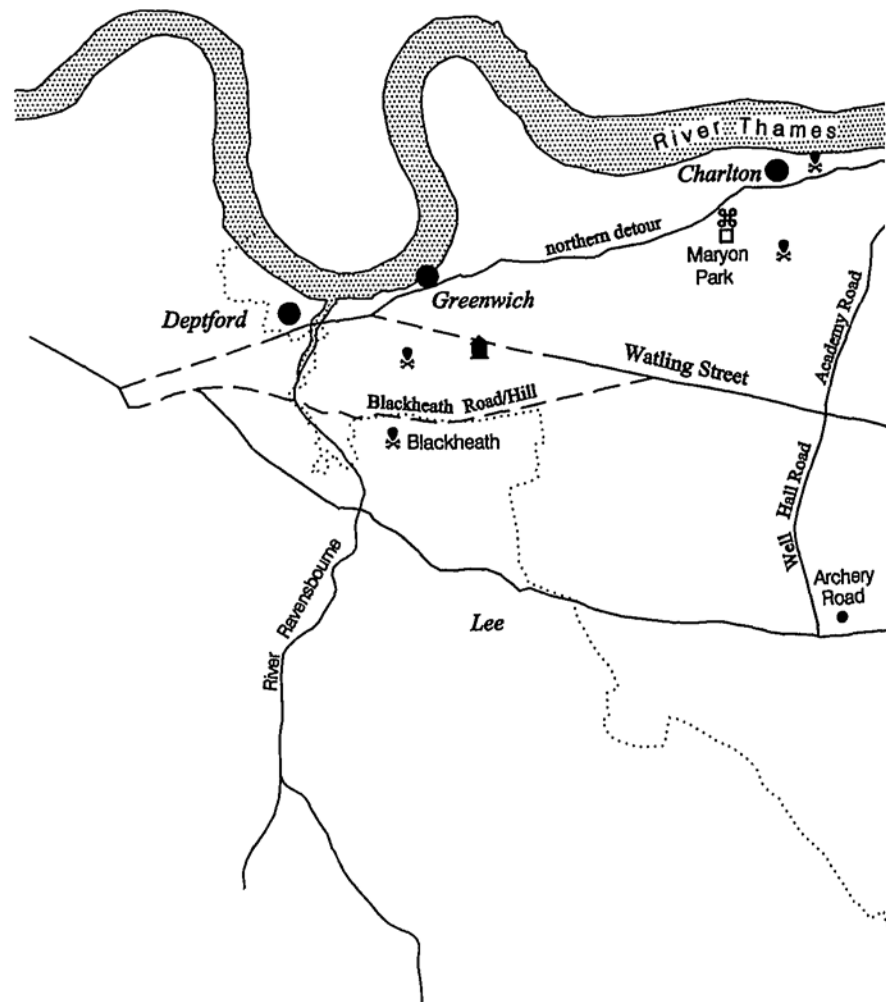
GARY BROWN

Since 1974, when Reg Rigden produced his survey of the Romans in Greenwich, there has been a significant increase in the number of fieldwork interventions within the London borough of Greenwich, formerly part of the historic county of Kent. Most of these have occurred within the last ten years following PPG 16. This paper represents the first attempt in the last quarter of a century to synthesise the results of previous chance finds and scientific investigations.

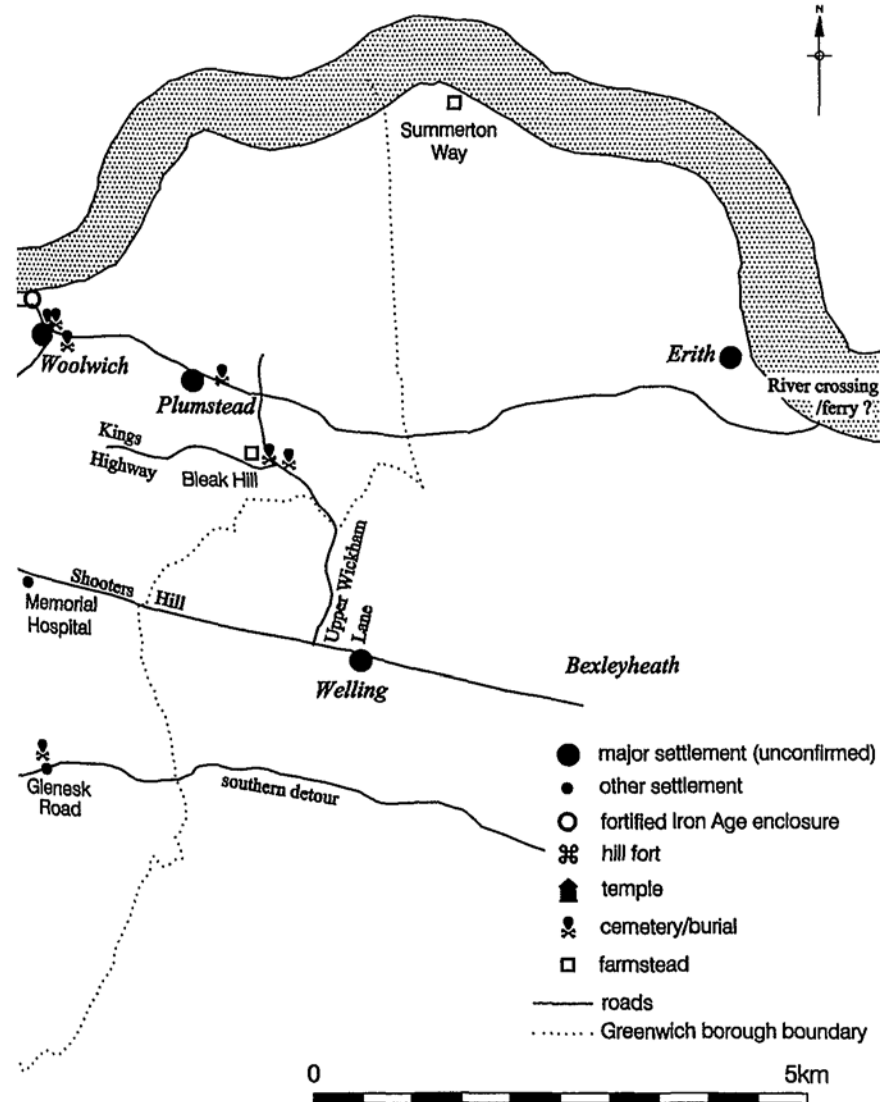
On existing evidence the Greenwich area did not contain important centres of population prior to the period of Roman occupation. The little understood late Iron Age Charlton Camp and defensive enclosure at Woolwich are discussed below. Rather it was an area through which to pass by road, or bypass altogether by river transport.

This apparent under-population may at least in part be explained by the area's geology, for the most part of poorly draining London Clay or heavy clays and gravels of the Woolwich and Blackheath Beds which form a plateau. Shooters Hill (c. 125m) is one of the most prominent topographic features in the Borough and is composed almost entirely of gravel-capped London Clay. An ellipse of London Clay surrounds the hill. The natural state of this land would be boggy heath, vestiges of which remain, for example at Blackheath, Woolwich or Eltham Commons, or as woodlands. Maps drawn in the late sixteenth century (e.g. Symonson's map of 1596) provide some indication of the extent of these woodlands, and an examination of the early Ordnance Survey editions indicates that even until the late nineteenth century large woodland estates survived. Today small pockets are found in the suburban environment (for example, Oxleas Wood).

Between the poorly drained lands in the south and the reclaimed marsh lands to the north of the borough is a narrow band of well-drained Thanet Sand which drops sharply towards the River Thames. It is here that all the principal historic centres of the region are located, from west to east – Greenwich, Charlton, Woolwich, Plumstead, Welling and Erith (**Fig. 1**) – in all of which Roman remains have been recovered.



Map 1 Roman Sites and Road Network in Greenwich and adjacent areas.



To the north of the Thanet Sands are extensive areas of reclaimed marshes. Research suggests that throughout the period of Roman occupation the high water mark of the Thames was some 4.57m lower than today, and that these margins themselves may have been inhabited (Spurrell; Lakin). Further, observations made by the nineteenth-century antiquarian Spurrell, and latterly by various archaeological units, suggest that large tracts of these low lying lands were themselves covered with forest or woodlands. The marsh deposits in the vicinity of Dartford, Dagenham, Rainham, Erith and Plumstead have been found to contain fragments of predominantly alder, yew, birch, hazel, elm, and oak. Where the stubs of their trunks can still be found protruding from the peats indicates the actual forest site. At Crossness, Spurrell records that 'some large yews were dug up, and one I saw fetched...was 15 inches, and another exceeded 18 inches in diameter, and there were others larger still which I did not measure'. He made the additional, and not insignificant point, that the yew has an aversion to both wet and saline conditions. One may infer therefore that the Thames, in this location at least, was not prone to regular flooding, and that the site was above the high water mark throughout the lifetime of the forest. In 1779, during the excavation of a canal adjacent to the Woolwich Warren (Arsenal), a Bronze Age sword was located 1.83m below the contemporary ground surface. Close by was another relic of the forest, though in this instance all that was located was the 'trunk of a tree which was become very black and almost as hard as ebony' (*Archaeologia*, VII, 413-14).

Iron Age Occupation sites

Until sand quarrying all but destroyed it, there existed at Maryon Park, Charlton, a large hill fort, apparently first occupied in the Bronze Age. Flinders Petrie surveyed the site, or rather the pathetic fragmentary remains, in 1880. By this date the greater part of the hill had already been destroyed by sand extraction. A map drawn in 1840 demonstrates the severity of the damage which had already occurred, and it is surprising, given the number and quality of the artefacts recovered during the one serious archaeological campaign by Elliston Erwood, that only one find from the site was reported prior to the twentieth century (see *Archaeologia*, XVI, 363, pl. xiv).

At the very least the site was a bivallate, sub-rectangular enclosure situated on a prominent headland roughly along the 30m (100ft) contour. The limited area available for examination precluded any comprehensive study of gateways, palisades or other defensive elements nor confirm that the fort was completely surrounded by two ditches.

Excavation of the hill fort remains was undertaken by Elliston Erwood in 1914-15 and 1923. A detailed history of the site has not been determined and this is likely to remain the case, so limited was the scope of investigations undertaken by the excavator. This is not to criticise him as it was he, recognising the importance of the site, who hastily made preparations to excavate parts of it prior to its total destruction by quarrying activities. (Credit should also be extended to the British Archaeological Association who made funds available for the excavation and publication.) As a consequence there is no way of assessing if what remained was representative of the whole.

Elliston Erwood's reconstruction (1916) suggests that the fort was sub-rectangular in plan, being wider to the north than in the south. On his estimations the outer ditch enclosed an area of approximately 7.08ha (17.5ac) and the inner 3.03ha (7.5ac). The width of the outer ditch measured between 42.7m (140ft) in the north and at the curve 18.3m (60ft) in the south; the inner ditch was more-or-less consistent at approximately 31.3m (70ft). As excavated the outer ditch was 2.13m (7ft) deep and the inner 2.44m (8ft) deep, though as defensive structures their quality was greatly enhanced by earthen ramparts, slighted fragments of which survived. These ramparts were constructed, as far as can be determined, from the upcast of the ditch cutting. The presence or absence of timber revetments was not noted.

At the base of the ditches in several locations Erwood believed he found remnants of fires, though he does not record whether there was any *in situ* scorching. The continuing description of the materials, i.e. ash, calcined flint and charred bone (1916, 144) suggest that the materials represented discard debris, e.g. hearth rake-out. Elsewhere other discarded waste including pottery and 'loom weights' were recovered from the excavated ditch sections. Internally it is difficult to determine exactly what the status of the features were that Erwood uncovered, or their date. The evidence, such as it is, suggests that there was occupation on the site from the first quarter of the first century BC.

It has recently been suggested (Wait and Cotton) that the enclosure shares similar morphology with sites both on the Continent and closer to home, such as Moor Hill Farm, Rainham and Gun Hill, Tilbury (both in Essex) and may have had cult associations. The destruction of the monument reduces almost to zero the opportunity to confirm or challenge any interpretation of the site.

In 1986 and 1987 small scale investigations were undertaken at the site of the former Woolwich Power Station, the results of which have not yet been published. However, it would appear that a large defended enclosure with ditches up to 7.6m deep contained settlement

features such as round houses and pits (Greenwood). It has also been suggested (Wait and Cotton) that the enclosure, which was adjacent to the river, may have accommodated shipping. The exact nature of the settlement is uncertain and requires further and more detailed investigation. It seems almost certain that the same community would have occupied both the hill fort and the lowland defended enclosure.

THE ROMAN ROAD NETWORK

Probably the single most important and certainly most enduring feature built by the Romans in the Borough is the road best known as Watling Street. Aulus Plautius and his legions probably established the road by AD 50. It extended from the invasion port of Richborough through to Canterbury, Rochester and on to London.

Whilst authorities agree the route between Rochester and *Londinium*, passing through settlements at Dartford, Welling and North Southwark there is less unanimity concerning its exact course after reaching Blackheath.

Before discussing the alternative courses of the road, its physical appearance can be outlined, as recorded by eighteenth and nineteenth-century antiquarians. Within Greenwich only a few recordings by modern observers have been made, for as Elliston Erwood noted that the Turnpike Trusts straightened and widened the road in the mid eighteenth century. In addition, in order to ease gradients they cut the top off Shooters Hill and 'made deep cuttings and filled up hollow places with the removed material, so that in some places the original surface has been removed for a depth of six feet (1.83m) or more, and in others it has been buried for a like depth' (Elliston Erwood 1925a). In more recent years the road has again been upgraded and widened.

One of the few recent findings came in 1995 when a watching brief recorded a fragment of the southern camber of the road and the roadside ditch. The road was composed of compacted gravels within a sand matrix. The ditch was set back from the road by approximately 1m and its surviving dimensions were 50cm in width and 30cm in depth (Thomas). The investigations also concluded that the road was built in a construction trench which was backfilled with gravel and clay, a technique also recorded on the London to Colchester road (Taylor-Wilson).

Hasted, writing in the mid eighteenth century, states the road was clearly visible on Bexley Heath and on into Welling, and Stukeley noted its course over Shooters Hill, but unfortunately furnishes no further details.

In the late seventeenth century Dr Robert Plot noted that 'The Roman Watling Street is pretty plain on Blackheath' and was but faintly traced eastward to the Lee (Leigh) turning when its course was lost until 'about half-a-mile before you come to Shooters Hill, but there it lies very plain and high with ditches on each side of it'. He adds that fragments of the road were seen on the hill itself, and these presumably are what Stukeley had previously observed. In the early eighteenth century the antiquarian Woodward wrote to Sir Christopher Wren informing him of a number of finds of Roman date from the Greenwich locality, including traces of a road. At a later date an acquaintance of Woodward, reported that the road survived to 1.22m in height, at least 14m wide and was traced for more than a 250m. Unfortunately the exact location is not known, although Woodward refers to it as 'Green Common'.

Until recently the course of Watling Street in the vicinity of Blackheath/Greenwich Park has been questioned. The favoured route was that by Blackheath Hill and Blackheath Road to Deptford Bridge, and onto the Old Kent Road (Margary; Somerville), the latter eventually connecting with the bridgehead in Southwark (Heard). Such a route has not been substantiated archaeologically. In Southwark excavations of fragments of Watling Street suggest that the road was established after AD 50 and probably before the Boudiccan Revolt of AD 61 (Heard).

Antiquarian notes and archaeological fieldwork now suggest that the road continued in a north-westerly direction through Greenwich Park towards, and subsequently over, Deptford Creek and on through Southwark and ultimately across the bridge into *Londinium*. The detractors of this route question whether it was sensible to cross the creek at one of its widest points and one where there may have been extensive marshes (Somerville). Although such a course may not have been followed in the post-Roman periods there may have been other imperatives during the Roman occupation that necessitated a crossing at this point, not the least being the temple/shrine identified in the park (see below). It is worth reiterating that throughout much of the period of Roman occupation the levels of the rivers (Thames and Ravensbourne) were considerably lower than today. Recent excavations (Divers) close to the west side of the confluence of the two rivers failed to record any evidence of significant Roman occupation in this location. The possible crossing may have been located to the south of this point.

Montmorency, in support of the proposition that the road took the course towards the creek, cites an enclosure notice of a road in 1434 which had hitherto crossed through Greenwich Park. The direction of

the Shooters Hill Road would take it close to the site of the temple (see below) and it would appear to substantiate this claim. More recently Somerville has questioned Montmorency's interpretation of the document and is of the opinion that it was only a subsidiary or secondary road that was enclosed; for the record the deed reveals that the portion of enclosed road measured 748yd in length and 5.5yd in width. The latter measurement coincides fairly exactly with a gravel surface located on the south side of the building in the park – 5m or 16ft 3in. (Sheldon and Yule). Further fieldwork in 1999 (Swain and Sheldon) recorded the road in the proximity of the temple as it approached the lowlands of the Thames valley. It should also be noted that another patch of gravel metalling, at least 25m in extent and 1.22m thick, has been recorded c. 300m south-east of the building, and close to Maze Hill. The date of this feature is unknown but it does appear to be more substantial than that recorded to the north.

Much research is still required in order to settle the point. The Antonine Itinerary (*Itinerarium Provinciarum Antonini Augusti*) records a route from Rochester to London (*Iter II*) which is that commonly called Watling Street. It is probable that one or other of the two suggested routes above represents the final miles into *Londinium*. This does not mean that the other route was not Roman in origin, merely that it was not part of Watling Street. A myriad of streets and thoroughfares were built during the period of Roman occupation and do not appear in the Itinerary (Rivet; Rivet and Smith).

One road not included on the Itinerary and which may have had Roman origins ran, and indeed still does run, along the edge of the marshes, linking the now substantial settlements of Greenwich, Charlton, Woolwich, Plumstead and Erith. There is as yet no definitive proof that this road was a Roman foundation (or indeed predate this), the earliest reference to it being in 1023 when the body of St Alfege was carried overland between St Paul's Cathedral in London and Canterbury Cathedral. However, as noted above, all these settlements are founded on the well drained Thanet Sands, and there is sufficient, if not overwhelming, evidence to suggest Roman occupation at each location; it seems logical that a road was built to connect them.

The identification of this putative route is not new. Elliston Erwood suggested it (1928), but only as an alternative to the direct line of Watling Street, rather than complementary to it. He referred to it as the 'Northern Detour'. He also suggested the likelihood of a 'Southern Detour' skirting around the London Clay with the road diverting from that of Watling Street near New Cross and continuing through Lee, Eltham and Bexley. The greater part of the 'Southern Detour'

extends outside the Greenwich Borough boundaries (and is not discussed here); it is marked on antiquarian maps. (The Glenesk Road funerary remains – see below – were located very close to the route.)

Another possible, though more minor, east to west road on the same alignment as the Kings Highway along the south side of Plumstead Common may be suggested. It cannot yet be inferred whether the road continued west following the Plumstead Common Road and then on towards the Nightingale Stream, though this seems likely.

North to south axial routes are rather more difficult to identify, and more research is needed in this area. Early maps can, to a certain extent, suggest promising alignments and orientations, but these often lack detail.

Symonson's Map of Kent (1596) marks all the centres of population referred to above, Watling Street, the 'Southern Detour' and a forest landscape in the vicinity of Shooters Hill. Only a single north to south road is marked, and that with a single dotted line. There is little difficulty in identifying this as the Well Hall/Academy Road alignment, and which connected Watling Street with Woolwich and the estuarine fringes.

Later, and more detailed maps, such as Andrews, Dury and Herbert's Map of Kent (1769) show all the routes indicated above, including the Kings Highway/Plumstead Common Road, and others including some oriented north to south. Those which are shown extending into the marshes to the east and west of Woolwich, including the Greenwich Peninsula are not considered at this juncture as in most cases there are documentary sources indicating they relate to medieval droving, dike-building or reclamation activities. The most likely candidate for a north-south road founded in the Roman era is the irregular alignment formed by Wickham Lane/Upper Wickham Lane, especially because it forms a junction with the Kings Highway, an intersection where two burial sites have been located and structural activity may be inferred (see below, *sub Bleak Hill*).

ROMAN OCCUPATION SITES

Structures - Greenwich Temple/Shrine Site

The most well known but relatively little explored structure so far located within the Borough is the temple or shrine site in Greenwich Park. Excavations undertaken in 1999 by Birkbeck College and *Time Team* have undoubtedly increased greatly our understanding of the site and fully published results of the investigation are eagerly awaited.

This site was first discovered and excavated in 1902 and partly re-excavated in 1978-79. There are only short summaries published of the results of these earlier excavations (Webster; Jones). When the first work was undertaken this part of the park was covered with elm, but time and the ravages of the Dutch Elm Disease destroyed a great many, including those in the vicinity of the Roman structural remains. In 1978 an evaluation was made to determine the extent of the damage but this work was of a very limited nature designed to cause minimal disturbance to the structure (Sheldon and Yule).

The results of the two earlier investigations indicate that the building was of two distinct phases, the first commencing *c.* AD 100 and lasting until the mid third century. At this date it was replaced with a more substantial structure, more or less on the same site and on the same orientation. The second building, on coin evidence, lasted throughout the remainder of the Roman occupation, although there may have been some alterations or additions in the late fourth century (Sheldon and Yule).

Very little has been ascertained of the nature of the first building, save that it had narrow walls (less than 400mm, the width of the foundation trench) which were probably half timbered at superstructural level, though even the foundations had been comprehensively robbed. The internal floor, located to the north of the wall on a raised platform, was probably composed of beaten earth. On the south side of the building was a metallised surface *c.* 5m wide and which may have been part of Watling Street or a subsidiary route (see above). Although the later excavators found no indication as to the cause of the demise of this building, Webster had a definite opinion: 'Judging from the large quantities of ashes, charcoal, nails with burnt wood attached, and burned pottery which were found covering a considerable space on one of the floors it would appear that a portion of the villa had been destroyed by fire'. He described the floor as in a poor state of repair and that the 'stones ... were much discoloured and cracked'. Although the composition of the floor is not described one might infer from the above description that this (unidentified) part of the building contained stone slabs, probably oolitic limestone, a material listed by Webster.

One area of confusion is the date of the fire. The 1978 excavations have suggested that the life of the Phase 1 building extended until the mid third century, whereas Webster records that two coins of Hadrian were found on the burnt floor, suggesting that the fire occurred in the mid second century. Possibly there was only a partial rebuild following the conflagration, or there may have been a third structural phase.

The rebuild phase of the structure indicates that it was constructed

on a similar alignment and ground plan to that of the earlier phase. Ten metres of the south wall and 2m of the north wall, including the corner were located, with the south wall positioned approximately 1m south of its predecessor. No *in situ* walls were located in the earlier excavations and neither were their robber trenches identified. The 1978 excavations indicate that the replacement building had more substantial walls, the south wall foundations being 750mm wide and the west wall 1m wide. The foundations themselves were composed of flints and pebbles set in mortar. The superstructure of the walls appears to have been of masonry, though, as with the first building these had been extensively robbed. However, Sheldon and Yule suggest that the wall was formed of a flint and mortar core with ragstone facing. This is at least in part confirmed by the 1902 excavations where Webster records that squared blocks of stone were recovered, some with channels cut through, and that 'in several instances fallen walls with tiles mortared to the stones', suggesting that the wall contained regular brick tile courses.

Internally the floors were, as with the earlier building phase, laid on a substantial raised platform, the top of which occurred c. 600mm (2ft) above the contemporary floor surface to the south (Sheldon and Yule). *In situ* remains of tessellated floors were recovered from both earlier phases of excavation and were seen to be bedded on a 9in. (230mm) bed of concrete (*opus signinum*). One small fragment of the tessellated floor was fenced off for display purposes, and is almost certainly part of the same floor recovered in 1978. Other internal tessellated floors were laid at a lower level than the displayed fragment suggesting either terracing down the hillside or the location of specialist rooms such as a bath suite, for which there is no supporting evidence, or private chambers.

Small pieces of 'highly polished' black and white tiles were recovered *ex situ*, but their presence suggests that the building contained at least one polychrome mosaic floor, and elsewhere other flooring may have taken the form of stone slabs. The walls were adorned with painted plaster, large quantities of which were located across the excavation area, 'but particularly by the floor with *tesserae* intact' (Webster). The decorative scheme included figurine and floral designs and a number of colours: reds, black, brown, purple and white. It has been recorded by the VCH that a fragment of green porphyry was also located and probably formed part of a wall veneer, though there is no evidence of this find in the catalogue of finds at the Borough Museum, nor in the list of finds recorded by Webster. At the junction of the floor and wall there appears to have been a quarter round moulding, the equivalent of a skirting board, identified by Webster as cornices.

Other decoration may have included columns, not of stone, but of circular bricks rendered with plaster and painted with a marble effect. The latter is supposition as only circular tiles have been recovered (Webster). The VCH reported that 'parts of the drums of three diminutive columns' were also found, but, as with the wall veneer, there is no record of them in the catalogues and one must assume that they have been lost. They may have originated from a portico or similar structure and were decorative rather than load bearing.

Fragments of statuary and at least four inscriptions have been recovered, three in 1902 and one in 1999. The latter read *MIN LIU CUS* on three lines and is thought to be associated with an emperor cult.

The majority of other finds from the site was of a domestic nature. Attention is drawn to the presence of such utilitarian items as whet or hone stones, a key and lock fragment, iron knife, hippo sandal, pottery, shell and bone, and coins. Elliston Erwood (1925b) made a retrospective assessment of the pottery, which in effect is no more than a list. The coins, which are listed in Webster, have elicited much comment too, for the most part focusing on their number, more than 300, and date rather than their distribution, mint, alloy, etc.

In addition to the excavations of the main building geophysical investigations have revealed that there were a number of out-buildings associated with it, but further and more detailed investigations are required to determine their purpose.

The most recent investigations (in 1999, Swain and Sheldon) appear to have positively identified the structure as a temple, the evidence comprising the occurrence of inscriptions, statuary, and the number of coins as well as the raised floor platform and hill top location. As to the identification of the builders, this too may have been achieved. The important find in this respect in the recent investigations was the recovery of a tile stamp with the inscription *PPBRLON* which means 'Provincial Procurator of Britain, London'. The tile, the first found away from *Londinium* and its satellite in North Southwark, was from the office of the Imperial Procurator, and indicates that the Greenwich building was built by the Roman administration with government funds.

A short distance to the south-east of the main temple building was, until the early part of this century, a square or rectangular enclosure, described as an earthwork enclosure, having both a mound and ditch. This site was partially examined in 1906 by H. Jones, one of the Greenwich Park excavators, but on that occasion he failed to publish the results. However, it has been established that Roman artefacts (tiles and pottery) were recovered from within the interior of the

enclosure but not without, and therefore it is reasonable to assume that it was a 'structure' of Roman date. It is also reasonable to concur with (Sir Mortimer) Wheeler that although there is insufficient evidence to identify the function of the building/enclosure, that it was undoubtedly associated with the other Roman building in the park. We can now assume that this was part of the temple complex.

Structures - Trinity Hospital site

Fragmentary remains of one, probably two, other masonry buildings of possible Roman date have been incompletely recorded to the north of the temple building. Unspecified Roman remains were located to the south of Romney Road close to the junction with Park Row, and further south in the grounds of the Trinity Hospital, a fragment of tessellated floor has been observed. A short distance to the east, putative Roman foundations have also been found. It is probable that the foundations and floor were part of the same structure, though neither its extent, ground plan, nor its date of construction or demolition have yet been determined.

A number of recent trial excavations undertaken within the grounds of Trinity Hospital by MoLAS and the Trust for Wessex Archaeology have failed to find Roman structural remains. This in great part was due to the degree of post-medieval damage although Roman pottery was recovered. It is possible that the earlier findings were of medieval fabrics.

Montmorency records that in the eighteenth century within the vicinity of the Trinity Hospital a sword decorated with a *fascies* was found. He assumed that it was a Roman ceremonial sword and that the building was an official residence. There is no evidence to support this premise (although the 1999 discovery of the *PPRBLON* tile may be relevant) and even he concedes that the *fascies* may be a later addition, possibly done in an attempt to authenticate the date of the find.

Other Occupation sites

Blackheath

On Blackheath, south of the putative Blackheath Hill route to *Londinium* a number of cremation urns were discovered within which were 'fragments of bones which had been submitted to the action of fire but imperfectly burnt' (*Archaeologia*, XV, 292) and other ceramic vessels. Wheeler was of the opinion that the vessels, which were given to the British Museum, probably date from between the mid first to early second centuries and he illustrated two of the examples.

The recorder of these urns, found in the earl of Dartmouth's kitchen garden, expressed his surprise that all the finds were located just 61 cm below the then (eighteenth-century) ground surface. This very shallowness may help to explain the absence of structural remains, i.e. the whole ground surface had been substantially lowered since the Roman period. The absence of local building stone in the London area made dilapidated or buried remains, especially Roman, particularly vulnerable to robbing for reuse in the medieval and later periods.

A number of other Roman burials from Blackheath have been recorded by various eighteenth- and nineteenth-century sources (VCH), one of which apparently had a roughly inscribed pot with the title of Marcus Aurelius. It is probable that the vessel itself is genuine but the inscription is a much later embellishment. In the letter dated 1710 from Woodward to Sir Christopher Wren (referred to above) there is mention made to 'a great number of urns and other things discovered on Black Heath' though he then dismisses the importance of them, except to show that 'there were Habitations...scattering and at intervals along...a Roman Road' (Montmorency). Unfortunately there is no record as to the nature of the 'other things' although one may have been the glass vessel or possibly an urn also known to have originated in this locality (Hasted).

Charlton

The Iron Age origins of Maryon Park was discussed above. The evidence of Roman occupation of this site is poorly understood though two things are apparent:

- i) it was occupied from the first to the third century and probably into the fourth century (Elliston Erwood 1950; VCH).
- ii) the nature of the occupation was essentially agricultural.

One assumes that the site, located close to the route of towards London, would have come to the notice of the Roman military. The apparent slighting of the defences (which may have occurred soon after the invasion as a Claudian coin was found in the base of a ditch) would have prevented its use by renegade tribesmen, but there is no evidence that the Roman military occupied it.

The evidence, such as it is, supports the pastoral nature of the hill fort settlement. Worn quern stones indicate agricultural processing, bones of sheep and cattle may be indicative of animal husbandry, with craft activities suggested by finds of triangular loom weights. Fragments of iron shears were also found.

In Elliston Erwood's 1914-15 excavation season a circular stone

structure was recorded (Elliston Erwood 1916, 152) which may have been part of a kiln or corn drier. Two other areas of circular and compacted ground may reflect similar structures. In 1906 a possible kiln was recorded as 'a round building of about 20 square feet and with walls of flint standing up to two and a half feet [76cm] high' (Rigden).

Some industrial activity at the Maryon site is also indicated. Iron and copper slag was recovered (Elliston Erwood 1916). According to Vincent (1906) a possible hearth in the face of the quarry had been observed when heat cracked pebbles were recorded to a depth of 12in. (30cm). The nature of the products has not been determined, although iron objects particularly nails, were recovered from numerous locations across the site. Occasional finds of roof tiles, both *tegulae* and *imbreces*, suggest that buildings of Roman date were present at the site.

Woolwich

A settlement, of as yet undetermined size, must have existed on or near to the site of the Woolwich Arsenal, for although no structures have been recorded, a great number of cinerary and accompanying vessels were found in this location during the nineteenth century, and more recently an inhumation cemetery has been discovered. All were located on the lowlands in, or adjacent to the marshes, immediately to the north of the Northern Detour. In contrast, the historic settlement (founded pre-Domesday Book), and therefore possibly the Roman also, was established on a chalk outcrop at Market Hill.

A large number of cremations have been recorded to the east of the outcrop in the grounds of the Woolwich Arsenal, in particular in the vicinity of Dial Square. The first record of finds was made in 1841 when convicts employed in drainage works uncovered at least nine ceramic vessels. These, from descriptions in contemporary records, appear to have comprised one cinerary urn containing ash and bones, and the others were described as funeral vases. The latter were of a variety of shapes and sizes including two face pots and a barbotine jar. The convicts, anticipating finding buried treasure, broke many of the vessels.

In 1853, and from the same general area (under No. 29 Store at Dial Square) further burials containing votive offerings and other artefacts were located, again by convict labour. A letter written by the officer in charge of the diggings described the finds (quoted in Foot):

The depth at which the pieces lay was about 10 feet [3.5m] and in a light gravelly soil - it does not appear that they were placed in any case, and consequently they have received considerable injury in being dug out.

A quantity of Bones (of birds or small animals) were likewise discovered in the same place as well as the remains of Bottles, the glass is of a very inferior description, thin and of a bad colour. Some metal ornaments were also found. [PRO Board of Ordnance: In Letters: Thames, 1853-4 (WO44/297)]

Other records provide the additional information that at least one vessel contained the remains of human bones, and in two others, ashes (*Illustrated London News*, no. 616, 4/1853). The discovery of further cremations in this location were made in 1856 though details of their finding are absent beyond the fact that the vessels were in Elliston Erwood's possession (1928). It appears likely that the cremation burials at the Royal Artillery site in Woolwich date to the fourth century (Foot, 149), which in itself is interesting, as will become apparent below. Many of these artefacts are still in existence and several of them may be viewed at the Greenwich Borough Museum, Plumstead, whilst others are in the reserve collections of the British Museum.

Archaeological excavations by the Oxford Archaeological Unit in 1999 at the site of the Dial Arch Gun Boring Complex record the presence of a large enclosed cemetery, where fragments of the northern, western and southern boundary ditches were noted (Ford and Wilkinson). Approximately 150 N-S orientated grave cuts were recorded, but unfortunately the acidity of the soil was such that the majority of bone material had dissolved away. Occasional cranium and teeth fragments were recorded as were a total of 13 body stains and 35 coffin stains. The majority of the grave cuts contained iron nails indicating that the dead were buried in wooden coffins.

There were some obvious clusters of graves, and it is suggested that these may represent evidence of family burial groups. In addition a prolonged use of the cemetery is indicated not only by artefacts but also by three phases of intercutting graves in some cases. Grave goods were not particularly common, but included complete pottery vessels, coloured glass beads, copper alloy bracelets, shale buttons and bracelets, and a glass vessel.

In addition to the inhumations, a total of nine cremations were recorded, only one of which was contained within a ceramic vessel, which contrasts with the nineteenth-century findings. Of particular interest was a possible pyre site, as evidenced by a severely scorched pit.

Preliminary work has been undertaken on the artefacts and it is suggested that the southern part of the cemetery contained vessels of the first and second centuries whilst those to the north spanned the

first to fourth centuries. It is suggested that there was an expansion from a southern core northward. Such an interpretation may be further refined with more research of the grave goods.

Other burial sites exist in other locations around Woolwich. In 1852, for example, on the site of the Royal Dockyard, 'sepulchral urns' were located. Three years later during brickearth excavation another cremation urn was dug up (Elliston Erwood 1928), though in this instance it was located to the south side of the Northern Detour.

To date the focus of the settlement at Woolwich has not been established although there are at least two possibilities. The first, suggested by Foot, is c. 200m to the north-east of Dial Square, where in the nineteenth century during ground investigations a 1m thick layer of gravel with brickbats was observed below almost 2m of cleaner gravel. Whilst Foot accepts that these finds may be of post-medieval date he suggests that finds at this depth may well be Roman. Although this location was within the marsh in the recent past at least, it is not improbable that buildings of Roman date were established on these lowlands. In addition, Spurrell observed quantities of building materials, pottery and cinerary urns from Crossness at the river's edge (see below).

The second, and more probable location, is the Woolwich Power Station site, which is very close to the Royal Arsenal. Archaeological excavations were conducted here in 1986 and 1987, but regrettably details concerning the excavations are sparse. From those details that have been made public it is evident that in addition to late Iron Age features there was a substantial N-S orientated ditch 25ft (7.62m) wide flanked by a parallel smaller ditch, perpendicular to the river. From within the ditch large quantities of third- and fourth-century pottery and coins were recovered. Away from the major perimeter ditch a number of smaller ditches and pits were uncovered.

Pottery from the ditch mirrors the dates of the vessels used in the cremation cemetery, and it may be that the ditch represents one element of a defended enclosure within which was the settlement site. This raises many questions, for example, was the settlement established only in the late third/early fourth century? Was there an already established settlement that was later enclosed in response to external raiders? Was the site a *fabrica* rather than a settlement, or of some other description? This is a site of high archaeological potential and academic interest, and it is extremely important that no opportunity is lost to examine all development sites in the vicinity of the waterfront, the Woolwich Arsenal or in the core of historic Woolwich. Investigations by Pre-Construct Archaeology during the installation of a riverside park revealed no evidence for either Iron Age nor Roman features due to the very shallow level of the groundworks.

The OAU's investigations at the Dial Arch Gun Boring Complex recorded a number of postholes, pits, ditches and gullies which they assess as a low level extra-mural settlement.

Plumstead

At Plumstead, within what may be considered its historic core, there is some evidence of a Roman settlement. This is by no means conclusive, but is suggested by at least two instances of non-cemetery finds, located on either side of the Northern Detour (here Plumstead High Street).

The more westerly of these finds groups comprises, on the north side of the road, one coin of Constantine I (AD 307-337) and the other a coin of Constantius II (351-54) whilst the single find on the south side of the road comprised an earlier coin, that of Antonius Pius (138-151) and part of a slide key. Of the second, and eastern group, one coin, that of Valentinian (365-378) was found to the north of the road, while to the south others of Lucius Verus (161-169), two of Constantine, one of Constantine II (317-337), and one which is undeciphered have been recovered.

These few coins may represent casual losses along the marsh road, but the fact that they were all found within such a limited area and, apparently, not elsewhere along the route, probably indicates the presence of a structure or small settlement. Unlike Woolwich there is, as yet, no evidence for a cemetery in the immediate locality and it is unlikely that bodies or cremated remains would have been carried the more than 2km to the Dial Square cemetery, or even the 1km to the burial site at Bleak Hill (see below).

The coin evidence, such as it is, suggests a foundation date for any settlement from the mid second century and extending through to the last quarter of the fourth century. Without excavation it is not possible to determine the existence or nature of structures associated with this postulated settlement.

Bleak Hill

It was suggested above that there were Roman antecedents for Wickham Lane and the Kingsway. This is based on the fact that both roads can be shown to be of some antiquity, but also, and more importantly, from the number of finds of Roman date recovered from the eastern part of the route. Three find-spots of coins have been recorded, although only one has been identified (Constantine), whilst for the most westerly coin-find, supposedly of gold, there are only documentary sources. However, no structural features have been identified along this route.

A habitation site may have existed on or near to the site of 20 Waterdale Road, where a number of second- and third-century vessels have been recovered, including a black burnished bowl, two ceramic bottles, a poppy head beaker and mortaria (Elliston Erwood 1947). The site is located towards the base of Bostall Hill, in a sheltered location close to a stream, features that would have encouraged occupation.

A short distance to the east, domestic rubbish of Roman date was recovered from a deep intrusion, presumed to have been a denehole. The finds included the fragmentary remains of at least seven ceramic vessels, part of an iron knife, an iron bell with the clapper still attached, and a roof tile (*tegula*). Skulls and bones of ox, pig, and goat, as well as the antler of a roebuck, give some idea of the diversity of meat consumption. Numerous fragments of human skeletal remains were also found (Payne 1895).

In 1887, during sand quarrying and within only a few yards of the denehole, evidence of two inhumation burials was recovered. The more complete example comprised a N-S extended skeleton. The body had been placed within a lead coffin and this in turn had been set within a wooden case (Smith). The coffin was recovered from almost 1m below the late nineteenth-century ground surface. The inner lead coffin measured 1.83m in length, though the lid was 90mm longer, was 380mm wide and 300mm deep. Bead and double ring moulding around the edge decorated the lid and rough diagonal scratches were made at the head end of the lid and coffin body (Payne 1887a). An adult female, possibly aged between 25-30 years, who left 'a most perfect skeleton' was contained within the coffin. No grave goods accompanied this burial, but two locks of auburn hair were found at the base of the skull, presumably from the young woman.

Of the second burial, which was found 1.52m below the surface, there are conflicting accounts concerning the degree of survival. Payne (1887a,b) records that only the skull remained, but Smith asserted that there was at least the pelvis also remaining. Both accounts agree on certain other details, such as the occupant being a male, that he was buried N-S and without any form of encasement.

In contrast to the female burial, this one was accompanied by grave goods, two ceramic vessels; a black jar from the Upchurch workshops and a red vessel with a handle. These suggest that the male was buried in the late second or early third century, and the close proximity of the female suggests a similar date of burial. We may infer from the orientation of the burials that Christian rites were not observed.

The status of the site has not yet been archaeologically tested, but from the chance finds (shears) one can suggest that it was probably an

agricultural unit, though one which presumably generated enough surplus cash to cover the cost of at least one lead coffin. Building materials (with the exception of the tile fragment) have not been recorded from the vicinity.

Memorial Hospital

In 1923, during the construction of the Memorial Hospital, Elliston Erwood recorded two intercutting pits and an undated shallow ditch which may have been a contemporary feature. It is not clear whether all the features had been horizontally truncated, for example by ploughing. Both pits were circular in plan, the diameter of the earlier feature (Pit 1) was 1.83m and that of the later feature (Pit 2), 2.74m. Pit 1 was, as recorded, only 460mm deep, the basal 178mm of which was filled with burnt clay and charcoal. From this fill scorched flint and pottery fragments were recovered. Pit 2 was similar, only larger and shallower (230mm), having been truncated by an access road. One difference however from Pit 1 was that its base was composed of clay, approximately 24mm thick, though there is no record of it also having lined the edge. Burnt material, and other debris, was recovered from the overlying fill.

Elliston Erwood estimates that approximately 50 pottery sherds were recovered from the two features and that at least six vessels were represented. Only one vessel was even partially reconstructable, and this proved to be a first century *olla*. Other debris, in particular animal bones, were recovered from both pits, as was a piece of burnt clay, interpreted as briquetage.

The ditch was 610mm deep and approximately 3.05m wide, the disparity between the two suggesting severe horizontal truncation. No finds were recovered to indicate the date of back-filling. Neither was the nature of the ditch's fill recorded, which itself may have indicated function, e.g. water carrying or boundary, and whether the upper fills had been truncated.

The function of Pits 1 and 2 also remains uncertain. If they were domestic rubbish pits then presumably there were dwellings/occupation in the vicinity also.

Could the briquetage fragment in fact have been a fire bar from a kiln and the burnt debris from the firing process? The evidence for a kiln site is less than overwhelming on two counts: location and more importantly the absence of kiln wasters. A third possibility, in particular for Pit 2, is that the features represented sunken-floored structures, not necessarily dwellings. Other structural features, especially postholes, were not observed either within or without Pit 2. A fragment of mortaria was found some distance downhill to the west,

and may well have originated from close to the pit group (Elliston Erwood 1925a).

Eltham

In 1916, at Archery Road, remains of a 'definite Hut floor' of Romano-British date were found. From the occupation debris fragments of coarse and fine (samian) pottery, and a bronze pin were recovered (Elliston Erwood 1928). Unfortunately there was no further appraisal of this site or material and it stands alone in this part of the borough with regard to structural remains. Rigden, in the absence of any other data, was probably correct in identifying the site as a small-holding.

In 1913 approximately 700m due east of the above site, at Glenesk Road, part of a cremation cemetery was found. Workmen uncovered two complete vessels and others were either broken in antiquity or during the course of the labourers' activities. From the records (Vincent 1914) it would seem that two cinerary urns were present, and both contained burnt bones. One, however, was mistaken for a cannon ball and was destroyed by the workmen, but the other was recovered intact.

At least one other vessel accompanied the urns, and this was a smaller ceramic bottle which was apparently stood within a bowl or cup, fragments of which were recovered from the site. The pottery dates the cremations to the second half of the second century (Rigden).

Coins have been found in other locations around Eltham, the earliest being Hadrianic in date, though they predominantly date to the fourth century.

Welling

A Roman settlement has long been suspected at Welling (in Bexley), located as it is bestride Watling Street and on a natural spring line. To date only limited archaeological fieldwork has been undertaken, but chance finds have been made since the early nineteenth century. Garrod and Philp have recently summarised the evidence for Roman occupation at Welling. They suggest a settlement occupying several hectares, although they acknowledge that no building remains have yet been identified. Three wells, two of which were timber-lined, were found in close proximity to Watling Street. The bulk of the evidence has been provided by the finding of inhumation and cremation burials, and coin and pottery finds which have been recovered over a wide area. This evidence suggests that occupation commenced in the first century and lasted through to the fourth.

The indications are that Greenwich did not contain major settlements which suggests a basically rural population. However, the predominantly clayey soils would not have been particularly con-

ductive to agriculture, but as we have noted it is possible to propose small settlement groups, perhaps farms, scattered throughout the area of the borough. Archaeological investigations elsewhere have demonstrated that occupation did occur on areas of heavier soils throughout the later Iron Age and Roman eras. Much of the higher ground may have remained relatively unaltered, as woodland and heathland although exploited for timber, coppice, fruits and grazing.

A clearer, perhaps somewhat surprising, picture is beginning to emerge from the marshes. Large-scale investigations at Summerton Way (Lakin), just outside the borough, demonstrated that the environment was considerably drier in the Roman period than in the preceding eras, and that the river level had dropped throughout the period of occupation. As a consequence land previously considered to be marginal at best was ripe for exploitation. This was certainly the case on this part of the Plumstead Marshes. The earliest occupation occurred after AD 250 and the land continued to be exploited until the end of the fourth century at least. The landscape appears to have been one of rectilinear fields delineated by drainage or boundary ditches on a N-S orientation. The ditches themselves were typically broad and shallow (2m wide and 500mm deep) and drained towards the Thames.

Apparently associated with the ditches were pits containing domestic type refuse, pottery, animal bone and charcoal. Some hearths were found; these may have been contained within some form of wooden superstructure but the evidence was limited.

In the last quarter of the third century the landscape was subject to an extensive flood event following which the field systems were resurrected, this time on a NW-SE alignment. It was possible to determine that at least one field measured 50m x 30m and was flanked on its eastern side by a 7m wide driveway. Pottery recovered from the ditches indicate that the new system was laid out after AD 350.

Material recovered from the ditches and pits at the site suggest that the fields were used for cultivation of arable crops, especially spelt wheat (*Triticum spelta*) and bread wheat (*Triticum aestivum*). In addition there was some evidence for the processing of the crops on site, but it was not clear whether the consumption of the product was purely local, for example at the putative occupation site at Crossness Head, or for the more distant occupants up-stream at *Londinium*.

The Summerton Way excavations are important in demonstrating that lands historically known to have been marshes could be sufficiently well drained to grow crops and support a local population. One should envisage therefore in the later years of Roman rule a managed landscape, composed of a chequerboard pattern of cultivated fields on the flat waterside lands, rather than one of reeds and sedges.

It is not possible at present to come to any firm conclusions regarding the status of Greenwich during the Roman occupation. Rather, the paper has attempted to draw from the existing records relevant information regarding the location of chance finds and various archaeological investigations suggesting where future work might be profitable.

Before the nature and status of Roman settlement in the borough of Greenwich can be comprehensively assessed (some years hence) a number of further and complementary investigations must be undertaken. Some of these will, for want of a better term, be 'by the spade'. Further investigations of riverfront sites, particularly at Woolwich, are desirable. Reinterpretation of the excavated remains and artefact assemblages from Maryon Park, Charlton, may lead to a reassessment of our understanding of the tribal distribution of the *Cantiaci* in the years prior to the Roman invasions (for there may be some connections with the invasions of 55 and 54 BC). Certainly the recovery of a Claudian 'medal' from the bottom of the ditch suggests early military occupation, if not reduction, of the hill fort. Such a reassessment will take on fuller significance when compared with the evidence of Iron Age material recovered from the nearby Woolwich Power Station. The results of these two sites should then be assimilated into the regional framework of late pre-Roman Iron Age and early Roman occupation sites of north-west Kent, for which there is considerably more data.

Obviously, we have a very limited picture at present of the landscape of the borough in the Roman era. Like other metropolitan areas, it suffers from the masking effect of the built environment. We are unable to utilise effectively aerial photography or geophysical survey to assist in the prediction of new sites. Instead urban archaeologists must base their predictions of new sites on other criteria, for example the proximity to known sites, chance finds entered onto the SMR records and references to features or artefacts entered into antiquarian records. It is hoped that this study provides a useful basis for a systematic analysis of findings and a pointer for future researches.

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