

**UNIVERSITY OF WINCHESTER**

The search for a possible direct Roman road between Winchester and London

David Michael Calow

**MA in Regional and Local History and Archaeology**

FACULTY OF SOCIAL SCIENCES

September 2011

This independent study has been completed as a requirement for a higher degree of the University of Winchester.

## CORRECTION SHEET

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ABSTRACT

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This independent study has been completed as a requirement for a higher degree of the University of Winchester.

The Ordnance Survey Map of Roman Britain shows five Roman roads radiating from Winchester. Three roads run west, one north to Silchester and one south to Chichester.

There may be an undiscovered Roman road from Winchester to the east. Such a road might have linked Winchester to London and, if constructed, would have had an important impact on Romano-British development in Surrey and NE Hampshire. The Surrey Archaeological Research Framework highlights the possibility of a Winchester to London Roman road as a key issue to be resolved in understanding Roman Surrey.

This dissertation reports the results of research to try to establish if a direct main Roman road was built between Winchester and London. The report discusses Roman roads, the methodology used for such investigations, the results of others who have researched the same problem and site investigations directed by the author for the project. The report considers some problems with the traditional methodology and opportunities created by new technology.

There is good evidence for a direct Roman road between Winchester and Neatham but little for a direct Roman road between Neatham and London. The report discusses whether this is because the investigations have looked in the wrong place or for the wrong thing or if a direct Roman road between Neatham and London was not built. The conclusion is that it is more likely that the area between Neatham and London was served by secondary roads some of which were probably based on earlier tracks and that this raises more general questions about the development of this part of Roman Britain.

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## ACKNOWLEDGEMENTS

The author would like to thank Dr D Bird, Mr D Graham, Mr A Hall, Professor A King, Mr D Weston and Dr Julie Wileman for their help in many discussions during the research for this project and the following for their help and for permission to carry out surveys and excavations:

### Bighton and Medstead

Mr and Mrs Neish and Dr and Mrs Garnett, landowners, for giving permission to carry out surveys and excavations and Mr D Allen, Hampshire County Archaeologist, for advice. The work was carried out by members of Surrey Archaeological Society and Basingstoke Archaeological and Historical Society and thanks are due to Mr A Hall, Mrs P Hulse, Mr J Oram, Mr M Peryer, Mr J Reading, Mr P Stone, Mr I Waite, Mr M Watson, Mr D Weston and Mr A Wiltshire. The earth resistance survey was carried out by Mr D and Mrs A Graham and the author is grateful for their help.

### Isington, Tongham and Flexford

Mr J Mayhew, Mr T Poulson, Mr and Mrs R Duckworth and Mr and Mrs M Dawkins, landowners, for giving permission to carry out surveys and excavations and Dr D Bird, previous Surrey County Archaeologist, for advice. The work was carried out by members of Surrey Archaeological Society and thanks are due to Mr R Duckworth, Mr A Hall and Mr J Reading. The earth resistance survey was carried out by Mr D and Mrs A Graham and the author is grateful for their help.

# THE SEARCH FOR A POSSIBLE DIRECT ROMAN ROAD BETWEEN WINCHESTER AND LONDON

## INTRODUCTION

The Ordnance Survey Map of Roman Britain shows five Roman roads radiating from Winchester. Three run west, one north to Silchester and one south to Chichester (Map of Roman Britain, 2000).

There may be an undiscovered Roman road from Winchester to the east (Margary, 1967, 518). Such a road might have linked Winchester to London and, if constructed, would have had an important impact on Romano-British development in Surrey and NE Hampshire.

The search for a possible direct Roman road between Winchester and London should be considered in the context of what is known about Roman roads in Roman Britain and elsewhere in the Roman Empire and what can be said about the development of the area between Winchester and London from the Late Iron Age to the end of the Roman occupation.

There may have been a direct Roman road for all or part of the route or transport may have been by secondary roads, tracks or by river. A better understanding of the communications in the Romano-British period would be valuable and the Surrey Archaeological Research Framework highlights the possibility of a Winchester to London Roman road as a key issue to be resolved (Bird, 2006, 41).

## CHAPTER 1 EVIDENCE FOR ROMAN ROADS

### **Roads in the Roman Empire**

There were over 50,000 miles of main roads in the Roman Empire. If secondary and private roads are added the total length was much greater (Chevallier 1976, 205). Despite the scale of construction we know little about when and how particular roads were planned, built and maintained, whether they followed earlier routes and if they were used or abandoned after the Roman period.

There are some documentary sources and epigraphic evidence for roads in the Roman Empire but little is directly related to Roman Britain and less to the area between Winchester and London.

The *Peutinger Table*, the *Antonine Itinerary*, the *Ravenna Cosmography* and others provide maps and lists of routes. Siculus Flaccus, a surveyor at the time of Trajan, Gnaeus Ulpianus, a third century lawyer and Agenius Urbicus, a fourth century surveyor, wrote about the roads. Milestones, inscriptions and other documentary sources also provide information (Smith, 1890, Chevallier, 1976). These sources have been used to discuss Roman roads since at least the sixteenth century (Palladio, 1570, Camden, 1607, Bergier, 1622, Gautier, 1721, Stukeley, 1724, Horsley, 1736).

The reliability of these sources is not sure nor is it certain how far what applied in one part of the Roman Empire also applied elsewhere. However, following Gnaeus Ulpianus (Smith, 1890, Chevallier, 1976, 87), Roman roads outside towns can perhaps be categorized as:

- a) *Viae militares*: strategic public roads owned and managed by the state.
- b) *Viae publicae*: main public roads managed by *curators* under the control of a consul, praetor or legate. The roads ran between towns,



ports and other main roads. The land on which they were built was probably owned by the state and maintenance probably paid for by the state which levied neighbouring landowners for part of the cost.

- c) *Viae vicinales*: local public roads managed by canton magistrates. The roads ran between villages, other local roads and main public roads. Some may have been *diverticula* running diagonally from main roads. Local roads may have developed over long periods of time and have been constructed out of public or private funds. The maintenance cost would have been largely met by neighbouring landowners.
- d) *Viae privatae*: private estate roads or private roads leading from a public road to a private estate. The estate would normally have paid for and maintained the roads and decided whether to make them available for public use.

There would also have been access roads, drove-ways, bridle-paths and footpaths.

Von Hagen and Chevallier wrote about roads in the Roman Empire from a European point of view. Both describe Roman roads as a major achievement that developed over time and often continued in use long after the end of the Empire (von Hagen, 1967, Chevallier, 1976).

Von Hagen said the roads were ‘the most enduring monuments of Rome’, saying it is ‘not possible to overrate the value of these great *viae* in the history of man’s development’. He wrote of ‘highways precisely laid with pavements of massive.....polygonally shaped stone....set and interlocked so that the road surface.....could endure a century without repair’ (Von Hagen, 1967, 8).

Chevallier was as impressed by the network but said Roman roads varied considerably. This might be because the land and raw materials varied, because individual engineers and work groups varied their construction methods and because the amount of use and quality of repair varied. He, as others, quoted

Statius, a first century poet who described the construction of the *Via Domitiana* as a two layer system. Gangs would mark out the road, clear the land, smooth outcrops of rock, dry hollows, divert streams and excavate a deep trench. The trench was refilled with stones, gravel and other material. The surface could be metalled and held in place with kerbs and wedges. The two layer system would become multi-layer over time as the road was repaired (Chevallier, 1976, 83).

Chevallier argued that Roman surveyors used maps and trigonometry and were therefore not restricted to straight sections between high points. He remarked how carefully access roads were surveyed so that land allocation was fair. For Chevallier, Roman roads formed a network of well organized long term civilian roads most of which were probably local or private. They might be earth roads, gravel roads or paved roads. They were often used for land boundaries and could be lined with trees or low hedges. There would have been signs and mileposts, tombs, altars and roadside buildings. Routes had to take account of animals and provide opportunities to drink and graze and for shade and shelter (ibid, 65).

Other writers are less overwhelmed by the scale of the network pointing out that the Roman network was similar to road networks built in a similar way in the nineteenth century in, for example, the French colonies (Gallo-Roman, 2011). A detailed Military Engineering textbook published by the British Army discusses surveying and constructing similar roads in British colonies and shows that with common sense, training and sufficient manpower adequate roads can be built reasonably quickly using local materials to survive most weather in most topography (Creedy, 1935, 23).

The Roman road network in mainland Europe seems to have been comprehensive and mainly civilian and much continued in use after the end of the Roman Empire. It is helpful to have this image in mind in trying to assess how roads between Winchester and London may have appeared in the Roman period.

## Roads in Roman Britain

There is less documentary and epigraphic evidence for Roman roads in Britain than for elsewhere in the Roman Empire. Stukeley's drawings show how Roman roads were buried in mud by the eighteenth century (Figure 1). Codrington gives examples of some Roman road surfaces which were still intact but says that although 'the destruction of the Roman roads for the sake of their materials began long ago....their wholesale obliteration took place when the turnpike roads were constructed' (Codrington, 1903, 14). It has taken a great deal of mapping, field work, aerial photography, geophysics and excavation to recover our knowledge.



Fig. 1 Foss Way 1722 (Stukeley, 1724, 91)

The best-known twentieth century writers about Roman roads in Britain are probably Codrington, Crawford and Margary. (Codrington, 1903, Crawford, 1953, Margary, 1948, 1955, 1957, 1967). They recognized that Roman roads varied considerably from place to place and over time but argued that because they were surveyed using straight alignments with changes of direction at high points and constructed and maintained according to general

practices they could be identified because they were different from any other roads built in Britain before or until the eighteenth century.

Margary is the most important of the three. He analysed 7400 miles of Roman roads in Britain and suggested there were four types: initial military roads, later civilian roads, roads for the layout of land settlement areas and pre-Roman track-ways converted to Roman standards (Margary, 1967, 6). For him, straight sections were of particular importance in identifying Roman roads because he thought Roman surveyors did not normally use maps but set out routes using straight alignments with slight deflections at high points to keep on line (ibid, 19). This applied both to initial military roads and later civilian roads where alignments were shorter but still straight (ibid, 18). He described the roads in terms of straight sections of well-constructed embankments 'derived from the excavation of a broad ditch along one or both sides of the road' (ibid, 19). He believed in multi-layer construction suggesting local materials were used with larger stones for foundations and surfaces 'carefully laid, of finer material well rammed down, often in successive layers' (ibid, 21). He wrote of the 'consummate ability shown by their constructors in choosing the most suitable direct route' (ibid, 504). Obstacles were avoided, traversed or, in the case of steep sided valleys, negotiated by turning the road 'along the side of the valley, usually in the upstream direction, on a well-graded terrace-way, resuming the main alignment as soon as the obstacle had been passed'(ibid, 19). Straight outlier ditches were possible '2-4 feet wide and quite shallow' in two formats one 'averaging 84 feet from centre to centre and a secondary class 62 feet apart' (ibid, 22).

The creation of the main network, he thought, took place between AD 43 and AD 81, a period in which he said 'Roman roads were constructed in the grandest style wherever in the Empire they were required' with the 'best features of the construction normally employed at that time, subject only to the materials locally available' (ibid, 504).

Margary discussed how the roads would have gone out of use when they were no longer maintained. 'Wooden bridges would be the first to go with

wash-outs in hilly districts...fallen trees in forests...incidents which would break the roads into discontinuous sections' (ibid, 23). He pointed out that roads near coasts could have been dangerous 'providing a ready means of penetration for raiders' and suggested that unlike the situation in Gaul the later inhabitants of Britain were 'independent economic units' with less need for roads. Some roads continued in use, some were used for boundaries but many were overgrown and buried by hill wash, alluvium and woodland (ibid, 23).

The main problem as far as the search for a Roman road between Winchester and London is concerned is that while these writers discussed the principles of the main roads they did not explain the secondary roads as well. Crawford put it rather bluntly saying that 'besides the somewhat artificial system of military roads – which are what we usually mean when we speak of Roman roads – there was also a maze of native tracks'. He claimed 'it is a fairly safe rule that roads which change direction on low ground are not Roman' (Crawford, 1953, 57) and warned that 'most attempts to reconstruct in detail the network of minor tracks are foredoomed to failure' (ibid, 75).

Davies, a more recent analyst, has written about Roman roads in Britain as an engineer on the basis of a detailed study of over 600 published excavations (Davies, 2002, 24). As Chevallier, he argues that Roman engineers had maps and trigonometry. Straight alignments were chosen because they were convenient rather than a consequence of trial and error methods. Roman engineers could therefore use high ground or low ground and introduce bends (ibid, 50).

Davies found the most common structure had two layers with an upper surface over a foundation. Although 17% of surfaces and 26% of foundations had large flints or stones the majority were built with small or broken stones. The average thickness was 51cm (ibid, 57). Brushwood was sometimes used for the base on wet sites over clay and silt. Reconstruction appeared frequent with many repairs and 'some evidence... that in the early stages roads were narrower and more lightly built' and 'later overlaid by more substantial constructions' (ibid, 154).

Davies reports the average width of metalling at a surprisingly wide 6.51m which he compares with a minimum width for two carts to pass of 4.41m. He mentions some even wider roads including a section of the Chichester-Silchester road at 11.2m and of the London-Chichester road at 7.4m. Davies is not convinced that there were regular outer ditches as Margary suggested. The gradient for a gravel surface was not normally above 1 in 15 but there are short lengths as steep as 1 in 8 or even 1 in 5 (ibid, 73).

Davies tries to understand the strategic thinking behind decisions to build specific roads in Roman Britain. He suggests that after the initial roads the network would have developed over time and proposes 'military penetration', 'territory-holding' and 'frontier-support' roads. He demonstrates that dating roads is as problematic as many excavators have reported and his research shows only 5% of excavated roads had dating evidence. He suggests there may be more variability in the dates when roads were constructed, used and abandoned than is generally understood and it may be necessary to date a road from the settlements it served (ibid, 36).

If most Roman roads and, in general, only Roman roads had straight alignments then, as Margary says, identifying Roman roads 'does not call for much technical archaeological knowledge' (Margary, 1967, 506). However, even if this is true for the main Roman roads, it is unlikely to be true for the *viae vicinales* and *viae privatae* which probably formed the majority of the network and the archaeological knowledge required to identify these is much greater.

CHAPTER 2: METHODOLOGY FOR SEARCHING FOR ROMAN  
ROADS IN BRITAIN

The traditional methodology for searching for main Roman roads in Britain is based largely on the work of the writers mentioned above. They argued that even if the remains of main Roman roads were damaged they could be identified because they were different from any other features in the landscape:

- a) The routes were strategic and long distance, often radiating from Roman towns.
- b) The roads were normally built in straight sections in open country with slight changes of direction at high points and fords. Routes in broken or hilly country were less straight but roads were formed of short straight sections.
- c) Alignments were carefully chosen to take advantage of ground conditions and to avoid obstacles. Obstacles that could not be avoided were overcome by engineering with as little deviation from the strategic route as possible.
- d) Although there were local variations the main Roman roads were built to a pattern with 5m-8m of road metal, an un-metalled berm 2m-9m wide on either side of the road metal, one or two roadside ditches and, in some cases, shallow outlier ditches parallel with the road and 20m -28m apart.
- e) Construction methods depended on soil conditions and locally available materials.
- f) Roman roads were used for several hundred years. Finds of Roman artifacts and evidence of Roman repairs can confirm their date.
- g) Roman roads were significant features in the landscape which, even if abandoned, influenced later boundaries and place and field names.

Codrington warned against believing legends and early British documents. He was particularly concerned about the confusion caused by an Itinerary attributed to Richard of Cirencester and the 'effect of this fabrication believed

in by antiquarians' (Codrington, 1903, 27). He emphasized Roman sources, accurate maps and taking the time to visit sites.

Crawford put more emphasis on field research and aerial reconnaissance and gave considerable and detailed advice about the topographic evidence that could be found. However, he retained untested beliefs in 'prehistoric thoroughfares' (Crawford, 1954, 78) and, as a 'field archaeologist' did not emphasize excavation (ibid, 56).

Margary used the most up to date technology available at the time. He explained that because the organic remains in roadside ditches could promote vegetation whereas road metalling was likely to stunt growth a main Roman road could show in aerial photographs as dark straight parallel lines separated by a lighter area.

Margary argued for detailed desk research to develop suggested routes using local knowledge, archive material, accurate maps, place names and aerial photographs. He recommended walking the routes to narrow down suggestions to more precise alignments and gave examples of landscape features which might help. There may be embankments or hollows, field boundaries might follow the line of the road and there may be remains of road construction material. There may be unexplained kinks and bends in boundaries and modern roads. Older buildings might be sited on the firm ground a Roman road could provide. Close inspection of the topography may show obstacles to avoid, natural terraces to follow, good and bad places for fords and high points that might have been used for a change of alignment. Field research should also identify locations for excavation with the best chance of success. Margary knew other features in the British landscape can resemble Roman roads and stressed that great care must be taken to avoid deceptions and make a correct identification.

The final stage in Margary's process was excavation that for him was the essential test of any proposed route of a Roman road. Trenches at least 1m wide and 10-25m long should be dug at right angles across the alignment. The



length of the trench was important because even if the road metal was only 5m wide the longer trench could show the important edges of the road, the berms, ditches and other roadside constructions (Margary, 1948, 34). Ideally, there would be two trenches across each section several hundred metres apart because a single one metre wide trench across a linear feature could be difficult to understand. The trench should be taken down to natural to understand the road construction and if possible the ground surface before the road was built. Sections and plans should be prepared and drawn and the trench documented and photographed at each stage of excavation (ibid, 34).

Margary provided much detailed advice but his main contribution was to insist on a more scientific approach. He clarified the three-stage process of desk research, field work and excavation, insisted on consistent, methodical and published records so that the process was controlled and repeatable and encouraged collaboration rather than lone working to achieve the best ideas.

The Viatores searched for Roman roads following Margary's methodology. They used desk and field research, kept careful records and worked collaboratively. They suggested over 700 miles of additional Roman roads in the SE Midlands, many of which might be classed as secondary. However, they did not systematically test their suggested routes by excavation (Viatores, 1957, 16). Their work is important and secured Margary's support but would have been more convincing with more excavations.

Hall has reinforced the importance of excavation. In the case of Stane Street, the route of a much discussed main Roman road, he has shown by excavation that apparently convincing theoretical alignments derived from desk research and field walking have been mistaken. Hall has also emphasized the need for precision because even a main Roman road leaves little trace on either side and an excavation that just misses the road finds nothing (Hall, 2008, 247).

Experience suggests the traditional methodology for searching for main Roman roads in Britain described by Margary was a sensible use of available

technology. However, it relied heavily on straightness to diagnose a Roman road and was less effective for identifying secondary roads. Moreover, as Davies has shown, although excavations are necessary tests for Roman roads excavation alone is often not sufficient to prove either that a linear feature is Roman or even that it is a road.

New technology has reduced uncertainty in identifying and dating linear features. Firstly, there is more information. Developer financed excavation has meant more excavations and watching briefs. Metal detectorists have increased the number of finds and satellites have produced more vertical photographs. The quantity of data may now be enough to identify meaningful variations. Moorhead, for example, has suggested that evidence from more than 150,000 finds of Roman coins recorded on the Portable Antiquities Website can be used to help identify Roman roads (Moorhead, 2011).

Secondly, there is easier access to data. Digitized early maps, aerial and satellite photographs, machine searchable archive documents, excavation reports and find spots are available on line in a way Margary would not have thought possible. Three dimensional computer maps have made it easy to model possible routes in relation to the terrain.

Thirdly, new techniques such as carbon dating, environmental sciences and geophysics have improved the results that can be achieved from excavations.

Davies found only 5% of excavations of Roman roads in Britain produced datable artifacts. However, even from the author's limited experience finds of charcoal, shell, bone and other materials suitable for carbon dating are more frequent. Each sample costs about £400 to process but this can provide a date for at least part of the feature.

Environmental sciences have provided more understanding of Roman ground conditions, for examples wet areas which have since been drained but which would have been avoided by Roman road engineers. Identifying and

dating linear features from pollen evidence may also be possible. The cost may be too great for a typical Roman road excavation but might be possible if the excavation is included as part of a broader research project.

Geophysical techniques, especially earth resistance and magnetometry, have made it possible to survey features under the surface. Earth resistance can identify hard surfaces while magnetometry is a powerful tool for identifying ditches and settlement areas. These techniques are within the scope of typical Roman road excavations. Lidar, however, an aerial survey technique that allows small differences in land height to be detected even through leaf cover, is more expensive. Results to a one metre definition are available on line free of charge for parts of the area between Winchester and London (Geomantics, 2011) but have not so far provided evidence for unknown roads. More detailed surveys might produce better results but the cost was too much for this investigation.

Not all new techniques have been successful. For example, statistical methods have been suggested to detect whether events shown on modern maps could have Roman origins. Chevallier tried to work out whether the distribution of modern junctions and boundaries could be at Roman intervals but his assumptions seem too complex to be credible (Chevallier, 1976, 122).

## CHAPTER 3: METHODOLOGY FOR SEARCHING FOR A DIRECT ROMAN ROAD BETWEEN WINCHESTER AND LONDON

The research for this project followed Margary's recommended methodology of desk research, field work and excavation. The desk research covered the geography of the area, the historical background, documentary evidence, aerial photographs, archaeological reports and reports from other investigators who had worked on the same subject.

### Geography

A direct Roman road between Winchester and London would roughly bisect a kite-shaped area of 3000Km<sup>2</sup> in SE England defined by the Roman roads between London, Chichester, Winchester and Silchester (Figure 2).



Fig. 2 Roman roads and sites between Winchester and London (Map of Roman Britain, 1978)

The route runs over the hilly western part of the North Downs. Most of the high ground is chalk but there are areas of clay with flints and sandstone. The hills are cut by river valleys three of which by chance run roughly in the same direction as the route. The landscape in the north is dominated by wet ground associated with the tributaries of the River Thames. There are various obstacles but high ground capped with clay with flints at Four Marks is particularly difficult. There is one key crossing point over the low isthmus east of Farnham.

### **Historical background**

It seems that ‘at the time of the Claudian invasion of AD 43 the southeastern region was dominated by two major kingdoms and that these had (or had previously had) some sort of formal client relationship with Rome’ (Mattingly, 2011, 83). The kite-shaped area is mainly linked with the southern kingdom associated with the Atrebates that, even if the eastern boundaries are not clear, included Silchester, Winchester and Chichester (idem, 83).

The southern kingdom was assigned to Togidubnus perhaps in the later AD 40s and probably annexed peacefully into the rest of the Province in the early AD 70s (Cunliffe, 1973, 24-29, Mattingly, 2011, 89-90).

London, founded about AD 50, was the provincial capital. From what we know Chichester, Winchester and Silchester were first under a client king (Mattingly, 2007, 277) and became capitals of three cantons established by Roman administrators for, respectively, the Regni, Belgae and Atrebates.

Chichester may have developed from a pre-Roman settlement further south (Cunliffe, 1970, 1) and was perhaps the most Gallic of the early British towns which may have been a religious centre (King, 2010). There are indications of an early Roman military presence and Fishbourne Palace, the first version of which is ‘generally identified as a residence built for Togidubnus’ (Mattingly, 2007, 373), is nearby.

Winchester may have started as a pre-Roman market linked to migrants from Gaul and became the capital of the *civitas* of the *Belgae* created by Roman administrators (ibid, 389). The town seems less important in the early Roman period, more important in the later Roman with a further decline followed by dominance as the Saxon capital.

Silchester was occupied in the Late Iron Age and may have been taken from the Atrebates by the Catuvellauni and stayed in their hands under Epaticcus until the Roman occupation. Silchester may also have been an early Roman military base which continued as a local capital and focal point for roads to the South and South West until it was eventually abandoned in the post-Roman period (Fulford, 2010, 2-9).

The four cities were joined by direct, engineered Roman roads with straight alignments that were probably built by the state by about AD 50. These appear to have stayed in use through the Roman period and survived at least in part to recent times. In addition one further main road is known which formed a direct link between Chichester and Silchester.

The route between Winchester and London via Silchester is sixty-eight miles and relied on crossing the Thames at Staines. There was a longer route via Chichester which is ninety miles. A direct route through NE Hampshire and West Surrey would have been sixty-two miles. It is unlikely that a saving of six miles could justify the cost and disruption of a new main road. It is possible that extra road capacity was required or that non-economic factors were important such as access to Wanborough Temple (SU 92050 49568) or the need for a territory marking route between the Atrebates and Regni but there is no evidence for these and secondary roads would probably have been adequate.

There is some evidence that the route via Silchester and Staines was vulnerable to flooding. A major inundation had probably occurred at Staines early in the second century and 'swept away almost all earlier Roman deposits' (Jones, 2010, 9). Other flood episodes are possible and would have disrupted road traffic but this should not be exaggerated. Boats and pontoons could have

been used and a new bridge could have been built more quickly than a new road.

The more convincing justification for a direct Roman road would be to increase the economic output of North-East Hampshire and North-West Surrey. This is examined in more detail in Chapter 7.

### Documentary evidence

The oldest documentary evidence is an entry in an eighth century copy of Iter XV of the Antonine Itinerary, Codex Vindobonensis 181, kept in the Osterreichische Nationalbibliothek in Vienna. The date of the original document is uncertain but should be AD 100 - AD 300 (Rivet, 1979, 153). Iter XV shows a place called Vindomis to be 15 Roman miles from Silchester and 21 Roman miles from Winchester. This document is shown in Figure 3 (Roucoux, 1984, 12) and its importance is discussed in detail in Chapter 4.

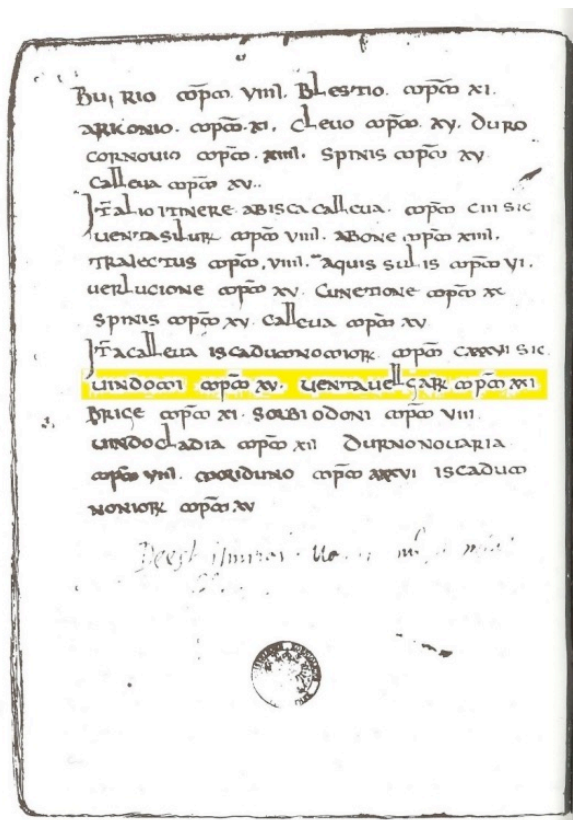


Fig. 3 The entry in the XV Antonine Itinerary for Vindomis from Roucoux, 1984





The relevant Tithe apportionments and Tithe maps were carefully checked for field and place names which might suggest an early road. Fifty eight possible items were found and are listed in Appendix 1. However, although some researchers have emphasized the significance of such names the Surrey and Hampshire Place Name directories suggest many are post-Medieval and even if some have a Saxon origin there is no evidence of a link to the Roman period (Gover, Mawer and Stenton, 1934, Coates, 1989). It seems more likely that the 'stony fields' and 'stony fords' in this area were so named because they were stony rather than that they marked the line of a Roman road.

### **Aerial and satellite photography**

Aerial and satellite photographs of the remains of a Roman road sometimes show a long straight light area six or more metres wide bordered by darker strips two to three metres wide. The light area relates to poorer than average growth of grass or crops above the road surface and the dark strips relate to better than average growth above roadside ditches. In practice not all roads had ditches and ploughing damages or eliminates the remains. Features such as tracks, field boundaries, pipelines and war defences can look like Roman roads and aerial photographs can be deceptive.

Satellite photographs are available on line but are taken after twentieth century development. One of the most useful areas of desk research was the examination of aerial photographs held at the National Monuments Records in Swindon and in the Surrey and Hampshire County Council offices. Many of these were taken before 1950 and show the land before recent ploughing and urban development.

### **Archaeology**

The project was discussed with local archaeologists including those associated with the excavation of the Roman town at Neatham. They provided an overview of what was known about the Romano-British period in the area

and information about the work of other archaeologists. They suggested it would be better to start from Winchester and work towards London because the best chance of finding evidence was between Winchester and Farnham.

The main sources of information were published and unpublished excavation reports, the Surrey Historic Environment Record, the Hampshire Archaeological and Historic Buildings Record and the Portable Antiquities Scheme database. The evidence indicated that compared with the flourishing agricultural Iron Age economy suggested for the South Downs (Reynolds, 1979, 11, Mattingly, 2007, 365) North-West Surrey was relatively undeveloped with areas of wetlands and open woodland with animal grazing until about AD 100 (Lambert, 2009). There were a few hill top sites and lowland settlements where small, long established and self-sufficient groups lived in roundhouses near marshy rivers. If there were fields, they do not appear to have been defined by ditches. Most artifacts appear to have been produced locally and what little evidence there is for trade and communications suggests connections might have followed the direction of the rivers north towards the Thames rather than land routes from east to west (Lambert, 2009).

There appears to have been more widespread Romano-British settlement in the early second century. The largest known Romano-British settlement within the kite-shaped area defined in Figure 2 is at Neatham which the excavators calculated may have had a population between 2270 and 3972 (Millet and Graham, 1986, 154). This appears to have had a formal area with a mansio and courtyard, a crossroads, a further road that may have reached the potteries at Alice Holt and an area of informal housing. The town appears to have started about AD75 on the north of the River Wey where the Chichester to Silchester Roman road crossed the river. Importantly for this project, the crossroads seems to date from about AD125 (Millet and Graham, 1986, 13). These findings gave new importance to the location of Vindomis, the unidentified Roman settlement listed in the XVth Antonine Itinerary between Silchester and Winchester illustrated above and discussed in Chapter 4.

Roman small towns also developed at Staines and Ewell and perhaps at Kingston (Hawkins, 1996) with a possible roadside settlement near Farnham (Jones, 2010, 42). There is evidence for rectangular buildings at Abinger, Ashted Common, Barley Pound, Bighton, Broad Street Common, Cobham, Coldrey, Compton, Dorking, Farncombe, Farnham, Leatherhead, Rapsley, Wisley and Woking. The use of roof tiles, glass, iron, large quantities of coarse pottery from Alice Holt and occasional fine ware from St Albans, Oxford and the Nene Valley suggests established trade routes.

It is possible that in line with a more general picture for Roman Britain the economy of the area developed in the second and third centuries, declined during the fourth century (Mattingly, 2007, 325) and may not have shown signs of recovery until the sixth century or later. Neatham does appear to have continued through the second and third centuries and declined in the fourth century and the location was perhaps re-used as a cattle market in the Anglo-Saxon period (Millet and Graham, 1986, 157-160). Staines, however, appears to have prospered in the second century and then declined not to recover until the seventh century (Jones, 2010, 43). Southwark prospered from the late first to the late third century then declined and appears to have been abandoned by the middle of the fourth century (Cowan, 2009, 15-33). On the other hand, whilst there are signs of landscape change in Surrey from about the third century there seems to be no archaeological evidence so far of the fourth century problems in the Empire (Bird, 2004, 170). Place names and personal names from early documents with British elements are said to be relatively frequent and there are Saxon cemeteries from at least the sixth century suggesting both Britons and Saxons were in the area (ibid, 174).

Most small towns in the area, for example Alresford, Alton, Bletchingley, Chertsey, Farnham, Godalming, Guildford, Haslemere and Reigate, appear to have Saxon or Medieval origins with little trace of Roman occupation (O'Connell, 1977). Winchester and Southwark, the two most important places, have important Roman origins and were royal and religious locations from at least the seventh century.

## **Previous archaeological investigations**

At least six investigators or groups of investigators have undertaken research relevant to a possible Roman road between Winchester and London.

Lowther spent much of his life investigating Roman Surrey with numerous excavations. A copy of a hand-drawn map (Lowther, c1950) shows he had concluded that there was no engineered Roman road between Alton and London but a track through Farnham, Guildford and Leatherhead to Croydon.

Clarke, Margary, Rolston, Woodhouse and others revealed a Roman road between Chichester and Silchester between 1949 and about 1970. This included the key discovery of a group of Romano-British burials at Neatham in 1969 (Rolston, 1970, 20-22).

Millet and Graham produced extremely important evidence when they excavated at Neatham between 1969 and 1979 and established this was the site of a previously unknown Roman small town on the Chichester to Sichester road with a Roman crossroads with stub roads pointing towards Winchester and London. Their results have provided much information and the discussions of their results have been an important source of ideas for this project (Millet and Graham, 1986, esp 1-12 and 151-160).

Simons searched particularly between Neatham and Farnham. He was not able to find evidence beyond the sites of Roman finds and concluded a Roman road had probably existed and that the route closest to Neatham had been buried under the A31 (Simons, 1981, 40). He was unable to trace a route between Coldrey and Farnham but thought it was likely that the road had run on the northern ridge where the ruins of the Norman castle now stand (ibid, 47).

Clarke made further investigations into suggestive straight roads and tracks between Neatham and Winchester but does not seem to have reached any firm conclusions and did not publish his results.

Whaley has published the results of a series of excavations and other investigations and concludes that an engineered Roman road existed between Winchester and Guildford (Whaley, 2006, 2007(a), 2007(b), 2008(a), 2008(b), 2008(c), 2009). He suggests the route was from Alresford through Chawton Park and Ackender Wood to Neatham, crossing south of the River Wey between Neatham and Farnham before re-crossing the River Wey to run north of the Hog's Back to Guildford. This controversial route is linked to an even more controversial claim that evidence for the road can be found in significant remains of centuriation that he says his statistical methods have identified today in modern field boundaries throughout the area.

The main objections to this claim can be summarized under three headings. Firstly, it is implausible to suggest Roman engineers would select a route that followed the difficult river cliff on the south side of the River Wey involving two river crossings, a significant terrace, four major causeways and a long diversion from the direct line when an easier dip slope route north of the river was available and normally used by later travellers.

Secondly, the lack of solid evidence that features are man-made rather than natural, or if they are man-made that they date from the Roman period. Furthermore, the use of unsubstantiated test methods such as 'flint counts', the 'angle of repose of flints in clay' and 'binocular summit determinations' makes the evidence un-convincing. Major features such as the embankment at Bentley Station (SU 79454 43160) and the terrace at Mill Court (SU 77369 42275) are more likely to be post-medieval than Roman and much clearer dating evidence would be required to make a case for greater antiquity. Recent work on the route by the same team has produced unclear results and it has been difficult for the excavators to decide whether their findings are the remains of field boundaries, undated forest tracks or natural features (NEHHAS, 2010).

Thirdly, the claim that modern field boundaries can be used to detect centuriation and Roman roads in Britain is unconvincing, at least without excavations. Centuriation, used in many parts of the earlier Roman Empire but

rarely suggested as likely in Roman Britain, was a process by which land, usually near a city, was allocated to civil or military personnel in fixed units. Centuriation would have been unusual anywhere by the second century and particularly so in NE Hampshire with few towns or garrisons. Moreover, recent studies such as those by the author at Flexford reported in Chapter 6 below suggest that Roman field boundaries do not relate to modern field boundaries. If there is an unusual array of straight modern field boundaries in the area surveyed by Whaley this is likely to relate to enclosures and the alignment of the boundaries is likely to have been determined by the topography.

These objections have meant Whaley's proposals have gained little support despite the quantity of research published.

### **Field work**

Crawford and Margary give lists of features to look for by field work (Margary, 1967, 513-514). The author's experience was that field work provided a better understanding of the topography and made clear the scale of obstacles created by rivers and streams, the exact locations of high points in undulating ground and changes in local geology not shown evident from maps. However, although the field work did not reveal many new features it was possible to identify some points of interest not mentioned by others.

### **Excavation**

The objective of the desk research and field work was to develop a suggested route, identify suitable locations for excavations to test the route and consider the problems that would need to be overcome. Six separate sites were investigated for this project and the results are discussed below.

The main concern was that because the excavations would be small and in rural areas with few datable artifacts and because the features were likely to have been damaged by ploughing it would be difficult to decide whether the features were natural or man-made and, if they were man-made, to show how

they could be dated. Various proposals were considered during the project to try to resolve these problems.

Firstly, the features could be examined by more experienced archaeologists and geologists once they were exposed. In practice, the relatively small excavation trenches made it difficult to provide enough evidence but their guidance was essential and this was the most successful approach.

Secondly, it was thought that since a road would have been used by vehicles that could have deposited magnetic fragments, soil samples could be taken from the excavations and the magnetic particle content compared with soil samples from other known Roman roads and more neutral contexts. Samples of 100 grammes wet weight were taken and wet sieved through a 500 micron sieve. The coarse particles were dried and tested with a magnet using the same magnet each time. The particles attracted to the magnet were counted. The results are shown in Appendix 2. This produced figures that seemed sensible and which supported the identification of the Medstead feature as a road. However, it would be necessary to have a much larger database to have more confidence in the results.

Thirdly, it was suggested that since flints were usually used for road surfaces in the area, the proportion of graded and knapped flints found might help determine whether a feature was natural or man-made. Unfortunately, this was not successful because suitable control samples were not identified.

Fourthly, it was thought there could be a difference between the pollen in a relatively recent man-made linear feature and a feature formed naturally during an earlier geological period. Pollen samples may even provide a guide to date if they could be compared with other samples of known date. Other excavators have experimented with this and suggest it may work (Woolliscroft and Davies, 2007) but it was too expensive to use within the scope of this project.

Fifthly, although artifacts were rare there could be more frequent remains of charcoal, plant fibre and shell which could perhaps be dated by carbon 14 analysis. Unfortunately, although there were many more remains which could perhaps be dated by carbon 14 analysis it was only towards the end of this research that a reasonably priced laboratory was identified.

## **Conclusions**

The first conclusion was that it was too difficult to consider the whole route between Winchester and London within the scope of the project and it would be more realistic to concentrate on three sections: Alresford to Neatham, Neatham to Farnham and Farnham to Cobham.

The second conclusion was that although the traditional methodology described by Margary would be necessary it may not be sufficient to identify what may prove to be secondary Roman roads. Magnetometry and earth resistance would be used to increase the area of ground that could be studied, carbon 14 analysis and environmental results may help and it may be necessary to work from known settlements to find access roads.

The third conclusion was that although it was plausible that a main Roman road between Winchester and London had been built, and much enthusiasm within the local archaeological community to find it, there was little firm evidence yet available. The fact that the road may not have been built and that communications may have been by secondary tracks and by water meant it would be important to consider what was known about the historical background, what evidence there was for economic development and what questions it would raise for understanding the area if it was concluded that the road had or had not been built.



## CHAPTER 4 INVESTGATIONS BETWEEN WINCHESTER AND NEATHAM

### **Geography**

The section between Winchester and Neatham is dominated by two areas of high ground; chalk upland east of Winchester and high ground capped with clay with flints at Four Marks. This clay becomes extremely sticky when wet and has long been a challenge for road builders.

### **Documentary evidence**

Entries in the Antonine Itineraries for Pontes, Calleva and Vindomis ‘gave rise to much discussion, conjecture and enquiry’ (Long 1836, 1). Gradually Pontes was identified with Staines and Calleva with Silchester but Vindomis, listed in the XVth Itinerary, was not satisfactorily located. Rivet at first considered the discovery of the Silchester to Chichester Roman road and the Roman town at Neatham justified identifying Neatham with Vindomis because the distances matched (Rivet, 1970, 61). However, by 1979 he doubted his earlier conclusion because the ‘necessary road linking Neatham with Winchester has still not been found’ and suggested changing the distances given in the Itinerary to make Vindomis correspond with a Roman settlement at the Wheatsheaf Inn, North Waltham (SU 5645) (Rivet, 1979, 179).

Medieval texts give occasional references that support the idea of an engineered Roman road. One in the Charters of Selbourne Priory for Beech and Tydden c1260-70 says ‘half an acre called la Forehelve, lies near the land of Henry le Nyueman at la Stonie Street’ (Macray, 1894, 36). This is close to the Medstead excavation site discussed below but no more information is given and the precise location has not been identified.

Evidence from antiquarian commentators suggests the remains of a Roman road could be seen between Alresford and Alton and part of the way between Alton and Farnham:

‘From this place [Alresford] to Alton there goes all along a Roman Highway’ (Camden, 1607)

‘All along a perfect Roman way from Aulton to Alresford’ (Aubrey, 1690)

‘...the great Roman highway, which leads from Winchester to Alton, and, as ’tis supposed, went on to London, tho’ we no where see any remains of it, except between Winchester and Alton, and chiefly between this town [Alresford] and Alton’ (Defoe, 1724)

‘I rode between Wintchester and Farnham thro’ Alresford and Alton and observ’d in many places signs sufficient of that nature : tho’ it is horridly out of repair, and even in the midst of summer very bad, notwithstanding such plenty of materials everywhere to mend it’ (Stukeley, 1724, 196)

‘The certain visible remains of the Roman way between Farnham and Alton, and in several places between Alresford and Alton’ (Horsley, 1736, 459)

It is not clear where the remains were nor why they seemed Roman but apart from Stukeley, who said he also saw traces of a Roman road between Farnham and Staines, there seem to be no antiquarian reports of Roman roads north or east of Farnham. Stukeley also provides another perspective in his drawing of Winchester in 1723 (Figure 5). Roman roads to the north, west and south are shown but he does not mark a road rising to his vantage point in the east (Stukeley, 1724, 83)

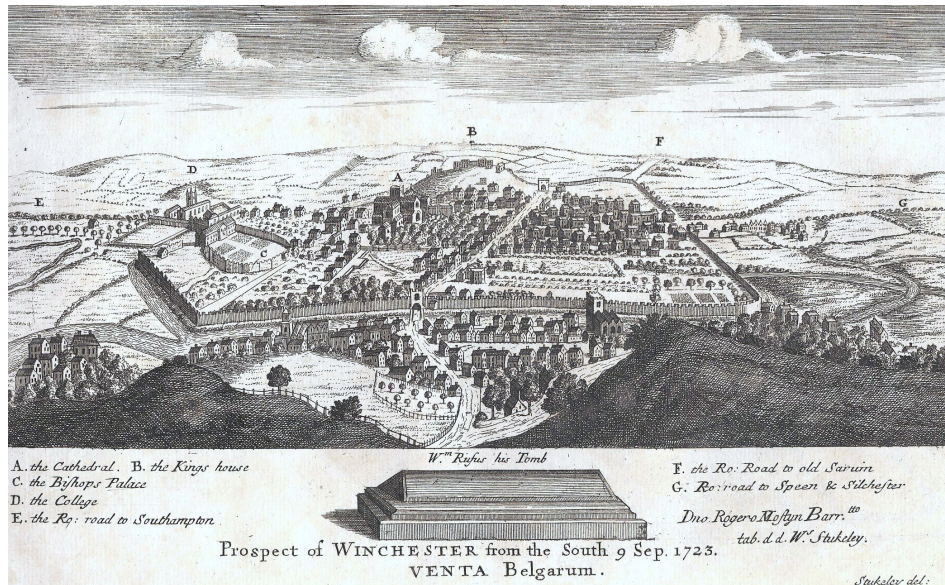


Fig 5 Stukeley's drawing of Winchester in 1723 showing Roman roads north, west and south but not east

It is perhaps difficult to draw many conclusions from the antiquarian reports except perhaps that their commentaries seem to agree that they thought they had seen what they called a Roman road between Alresford and Alton.

### Aerial photography

Studying the aerial photographs of this section was particularly important not only because of the findings but because it led to an opportunity to meet and share results with another researcher, David Weston, who was also using aerial photographs to study a possible Roman road between Winchester and Neatham.

Weston had identified several important photographs and drawn three conclusions. Firstly, it was possible to discount various plausible routes between Winchester and Neatham through Ropley because although aerial photographs provide clear evidence for early roads running north-east and south-west near Orr's Meadow (SU 54826 29800) they show none running to the east (Weston, 2008, 22). Secondly, if a Roman road had not been built east

of Orr's Meadow it would probably have crossed the River Itchen at Seward's Bridge (SU 57399 32200), Alresford (ibid, 22) and thirdly, if a Roman road could be identified between Seward's Bridge and Neatham it could be assumed there was a connection to Winchester even if the route could not be identified (ibid, 22).



Fig. 6 Aerial photograph of Orr's Meadow east of Winchester (SU 54826 29800) showing clear traces of early roads running NE-SW but no traces running east (58RAF/2862 14May59 NMR)

As Figure 7 shows there are at least three plausible routes for a Roman road between Winchester and Alresford. There is, however, no firm evidence for or against any one. The route along the Itchen matches the distance in the Antonine itinerary most closely but the differences are too small to be meaningful. It was beyond the scope of this study to explore all three routes especially since subsequent roads may have removed most of the evidence.

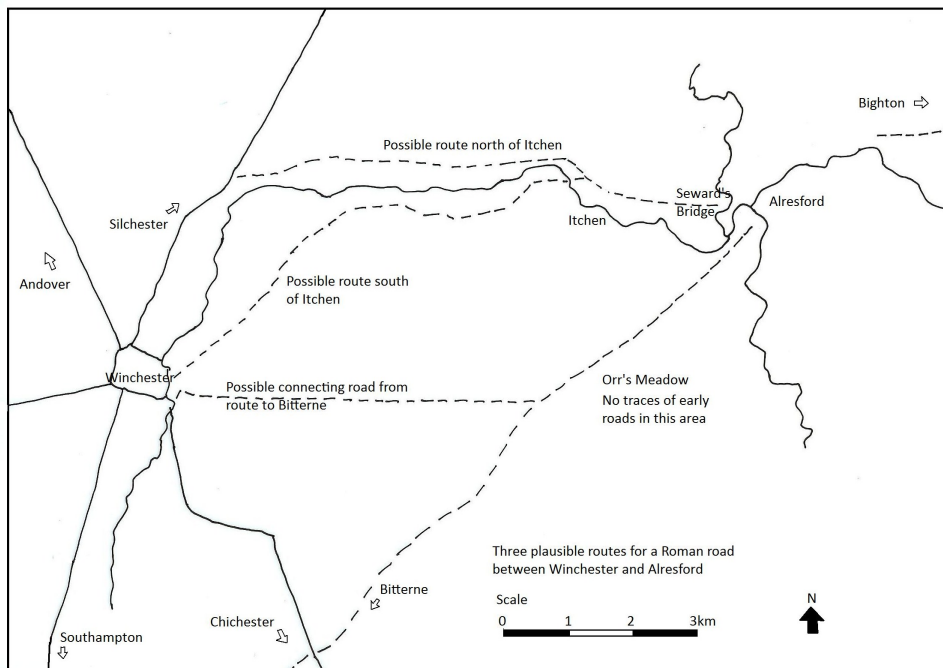


Fig 7 Three plausible routes for a Roman road between Winchester and Alresford

The conclusion was to concentrate on aerial photographs covering a direct line between Seward's Bridge and Neatham. This produced two locations of interest: Bighton (SU 62499 35125) and Medstead (SU 67304 37525). Weston also had a valuable insight into the comments of the antiquarian commentators: who said they had seen a Roman road whilst travelling between Alresford and Alton 'The road they were most likely to have been on (and from which they saw sections of a Roman road) was the medieval road between Alresford and Alton which ran through Bighton...the route via the Ropley valley did not come into being until the building of the turnpike' (Weston, 2008, 23).

The linear feature near Bighton can be seen on several aerial photographs of which the earliest is CPE/UK 150 21SEP46 4218 shown in Figure 8. The feature is approximately 0.5 km long with a possible five degree deflection at SU 6249 3513. The photographs show two parallel but irregular dark strips about 10m wide separated by a light area 10-15m wide. The strips are wider than usually seen and it was noticed that later photographs showed the light

area spreading to the south-west. The feature is in line with a similar but weaker mark in a field west of Bighton and a terrace cut into the hillside 25m north of the known medieval road through the village which was probably the road used by the antiquarian writers. The feature runs roughly parallel with the same medieval road in the valley bottom 80m south of the site.



Fig. 8 Aerial Photograph of Bighton (CPE/UK 150 21Sep46 4218 HCC)

Two aerial photographs of Medstead show a single linear feature of variable intensity approximately 7m wide and 0.7km long. The two photographs are NMR RAF/58/182 17-07-1967 0118, taken in 1967, and HCC run 18 218425.258 29-07-1984 taken in 1984 (Weston, 2008, 24). The 1984 photograph is reproduced in Figure 10. The photograph shows a three-degree change of direction in the linear feature at SU 6716 3749.

The linear features at Bighton and Medstead do not align exactly with each other but a small change of direction at a high point at SU 65254 36778 allows the features to connect and the line can be projected to Neatham. Although this

route crosses difficult hills between Alton and Alresford the average gradient is 2% and the steepest section about 6%. This is in keeping with recommendations for gradients for cart traffic given to British military engineers where the absolute maximum gradient is set at 10% with 5% as the ruling gradient and 2% as the average gradient in hilly country (Creedy, 1935, 32).

### **Excavation at Bighton (SU 62314 35018)**

The site is on a south-west slope of ploughed land on chalk 103m above sea level. The feature was visible on the ground as a linear concentration of flints ranging from 40mm x 40mm to 250mm x 200mm. The flints started at a point below a break in gradient near the top of the slope and gradually reduced towards the bottom of the slope. There was no obvious source of flints although there were probably flint seams in nearby chalk pits. The farmer said he normally ploughed along the slope and the flints made the area difficult to plough.

Earth resistance suggested an area of deeper plough soil north of the break in the gradient. There was an area of high resistance 2-3m wide to the south followed by an area 6m wide which might relate to a scoop in the natural chalk.

A 10m x 1m trench was excavated by hand across the linear feature between SU 62314 35018 and SU 62309 35026. The plan and west section are shown in Figure 9.

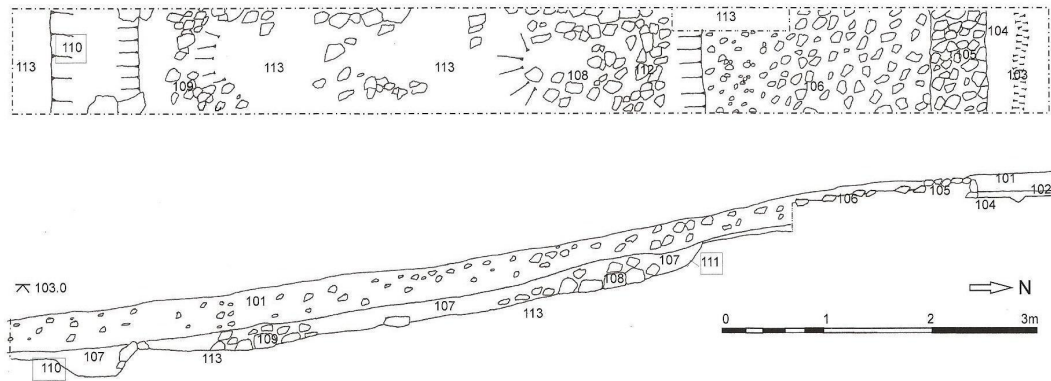


Fig. 9 Bighton: plan and west section of excavation

The majority of the trench was overlain by recent dark brown plough soil (101). At the north of the trench the plough soil appeared free of flints and overlaid 10cm of light brown soil (102) and a layer of orange brown soil (104). A small gully 5-10cm deep (103) had been cut into the orange brown soil. At the surface and immediately south of (104) was a feature of tightly packed flints approximately 50cm wide (105) and south of (105) was a 2.2m spread of loose flints just below the surface (106). A slot 1m x 0.25m was cut and showed the loose flints were about 20cm thick and overlaid a 10cm layer of light brown soil (107) and natural chalk (112).

Deep ploughing south of (106) had formed 20cm-40cm of modern dark brown plough soil (101) containing many broken flints from 40mm x 40mm to 100mm x 100mm. Beneath (101) was friable light brown soil (107) with few flints but many small chalk fragments. The light brown soil was above and amongst large flints up to 200mm x 250mm lying on or embedded in natural chalk (113). The larger flints were concentrated in two sections (108) and (109). The natural chalk appeared to have been cut in two places: on the uphill side at (111) and approximately 5.5m south on the downhill side at (110) where a U-shaped ditch 80cm wide and 20cm deep was found. South of the ditch the gradient reduced. The plough soil (101) was about 30cm thick with



many flints and overlaid 10cm of light brown soil (107) and natural chalk (113).

Flints from the plough soil were set aside during the excavation. They appeared to be regular sizes from 40mm x 40mm to 100mm x 100mm. About 10% had at least one flat surface which may have been knapped but which might have been natural tabular flint. One of the larger flat surfaced flints appeared to be in situ (112) with the flat surface horizontal at the point where the road surface might have been. This may have been coincidence but it raised the possibility that the road surface had been formed with the flat surfaces of the flints. By comparison almost all flints at Medstead were rounded.

The loose flints were replaced in the trench after the excavation to form a layer approximately 30cm x 1m x 5m weighing an estimated 1.5 tonnes. If the estimate is correct it would have required at least 750 tonnes of flints to construct the 0.5km linear feature on the aerial photograph.

There were no artifacts found apart from a length of rubber pipe at a depth of 30cm in the modern plough soil.

### **Discussion of Bighton**

Aerial photographs show the linear feature cuts across the side of an uneven slope in two straight sections for 0.5 km and that it aligns with other linear features to the east. It is unlikely that an isolated feature of such size, straightness and length was a field boundary or farm track. The interpretation is that the feature represents the ploughed out remains of an engineered Roman road.

A terrace had been formed by cutting into the natural chalk of the hillside at (111). A road base was constructed with parallel banks of large flints up to 200mm x 250mm on the uphill (108) and downhill (109) sides of the road. The road core was filled with earth (107) and a surface was probably formed of compacted smaller flints. There was a possible small gully on the north side

and a U-shaped ditch on the south side. The road surface may have been 5m wide and the embankment about 80cm above ground level on the downhill side.

The features on the north side of the road may represent a grass verge 2.5m wide, a catch-water drain above the road built to intercept storm water running down the hillside (105) (Creedy, 1935, 16) and a ploughed field (104). It is also possible that the flint feature was the base of a wall. The deeper soil of the upper field, trapped by the flints, appears to have caused the wide northern dark strip on the aerial photograph. The light area spreading to the south west appears to relate to the spread of flints downhill. The dark strip to the south does not seem to relate to the ditch (110) but to an accumulation of soil in a low point of the field south of the ditch.

The road presumably went out of use before the medieval road at the bottom of the valley developed although the remains may have remained visible.

#### **Excavation at Medstead (SU 67353 37572)**

The site is on high ground at 215m on a ridge running SW-NE between Medstead and Alton. Although the top of the ridge is flat the land beyond the ridge slopes steeply to the NW and SE. The underlying geology is chalk capped by clay with flints. The clay varies between yellow sandy clay at the site and red plastic clay at other locations on the ridge.

The single 7m wide dark, long and evenly defined linear feature on the aerial photograph was unusual and suggested a zone more fertile than the rest of the field. The feature was visible on two separate photographs taken seventeen years apart and it was unlikely that it could have been the result of an agricultural process such as spraying. There was no trace of the feature on the ground. Earth resistance suggested areas of higher resistance but was inconclusive. Research confirmed that this was not the route of a pipeline or other modern trench and there was no sign on early maps of a field boundary at

this point. However, if the feature was a Roman road, the strip would probably relate to the road surface rather than a single and unusually wide ditch and it was difficult and important to try to explain how this might have occurred.



Fig. 10 Aerial photograph of Medstead showing single 7m wide linear feature (HCC Run18 218425.258 29.07.1984 HCC)

An 11m x 1.6m trench was excavated by hand between SU 67353 37572 and SU 67358 37563. The plan and west section are shown in Figure 11.

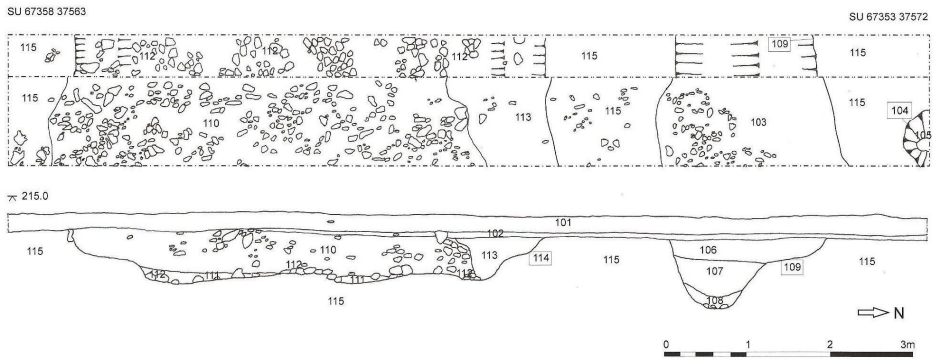


Fig. 11 Medstead: plan and west section of excavation

The surface was approximately 20cm of yellowish sandy clay plough soil with flints up to 50mm x 50mm (101). Underlying this was 5cm of greyish yellow clay (102). Below these layers were four features within yellow sandy clay (115) which appeared to be natural. The main feature (110) was red plastic clay 5m x 1.6m with many rounded flints 20mm x 20mm - 100mm x 200mm. North of this was an area of brown clay 1m x 1.6m with few flints (113). North of this was a further area of yellow sandy clay (115) and a larger area of brown clay (103) 2m x 1.6m but in this case with many flints up to 100mm x 100mm.

An 11m x 0.5m slot was excavated along the west section. The red plastic clay with flints appeared to be the fill of a 5.5m wide trench cut (114) into natural yellow sandy clay (115). The red plastic clay was about 50cm thick with many rounded flints throughout. There were three groups of large rounded flints up to 200mm x 200mm (112) at the base of the red plastic clay some of which were embedded in yellow sandy clay (115). The base was wet and between and around the flints was up to 10cm of sticky black material which appeared to contain fibrous matter (111). The stench from this was remarkable and lasted at least 24 hours after excavation. Adjacent to the red plastic clay with flints but within the same cut (114) was an area of brown clay 1.6m x 1m x 50cm thick (113) with few flints.

North of (113) was yellow sandy clay and north of this a U-shaped ditch approximately 2m wide and 1m deep cut (109) into yellow sandy clay. The ditch had three layers; orangey clay 30cm thick (106), greyish brown clay 45cm thick (107) and wet yellow sandy clay with flints at the base (108).

In the north east of the trench a semicircular hollow 60cm wide and 30cm deep appeared to have been cut (104) into yellow sandy clay and filled with brown clay (105).

No artifacts were found except two small worked flints from the plough soil.

## **Discussion of Medstead**

The interpretation is that the feature was the remains of an engineered Roman road constructed on clay. A trench 5.5m wide and 60cm deep had been cut into natural yellow sandy clay. The road base had been formed with large rounded flints and perhaps a blanket layer of vegetation. The core was formed from red plastic clay mixed with medium to large rounded flints with a probable surface of smaller rounded flints. A small gully had formed on the north and perhaps also the south side of the road. A deeper ditch had been built on the north side of the road leaving a berm between the road and the ditch.

The red plastic clay had presumably been taken from elsewhere on the line of the linear feature. The use of two different types of clay may have been deliberate or the accidental result of delays in the construction process, perhaps due to the need to weather the clay, which meant the clay was not replaced in the same place from which it had been extracted. It was noticed during the excavation that after rain the yellow sandy clay dried quickly and without cracks whereas the red plastic clay dried more slowly with cracks. The different water retention properties may have created the dark stripe visible in the aerial photograph that was not otherwise explained.

A ditch 2m wide and 1m deep was found 1.5m north of the road. There was no evidence to show the ditch was contemporary with the road but good practice for the design of a road on an impermeable clay surface requires one or two roadside ditches which should be, as in this case, about 0.25m deeper than the base of the road. Diagonal drainage channels would be cut across width of the road at the base every four to seven metres and through the berm to drain into the ditch. The channels would be filled with rounded stones to avoid clogging (Creedy, 1935, 89). The excavation trench was only 1.6m wide. It would be worthwhile to return to the site to widen the trench to try to reveal a drainage channel.

It appeared that ploughing had dragged flints from the road surface to the area of the ditch where they had accumulated (103). There was no evidence to explain the small hollow in the north-east corner of the trench (105).

## Conclusion

The excavations at Bighton and Medstead provide good evidence that an engineered Roman road approximately 5m wide was constructed between Alresford and Neatham. There were no finds to provide evidence for the construction date and all that can be said about the end of the life of the road is that it was presumably out of use before the medieval road was established. There may be other Roman roads in the area and different routes may have been used at different times during the Roman occupation.

The suggested route is shown in Figure 12. Further work on the suggested route should help to understand the road, particularly between Bushy Leaze Wood (SU 6862 3808) and Neatham. It would also be valuable to investigate the route between Bighton and Medstead and evidence might be found in Stonyland Copse (SU 6317 3705) and Foul Lane (SU 6618 3705).

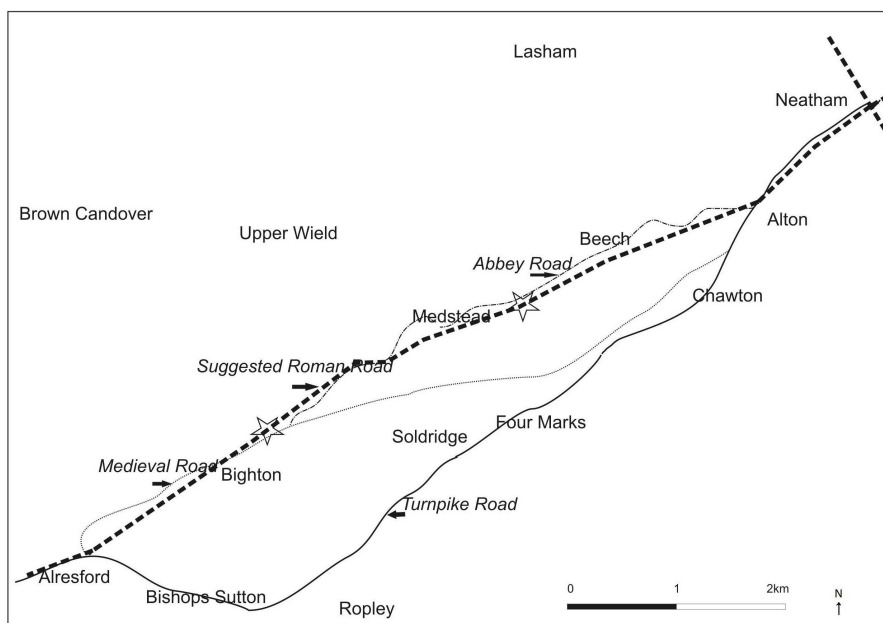


Fig 12 Suggested line of Roman road between Alresford and Neatham

## CHAPTER 5: INVESTIGATIONS BETWEEN NEATHAM AND FARNHAM

### **Geography**

The eight miles of this section are important to these investigations because, as discussed below, given the crossroads on the northern side of the river at the Roman town at Neatham, the gentler slope of the northern side of the river valley and the isthmus at Farnham it is difficult to imagine that a main Roman road between Winchester and London would have followed another route between Neatham and Farnham apart from the north side of the River Wey.

There are at least two routes on the north side of the river. The higher route links the springs at Alton and Holybourne, the churches and Farnham Castle. The lower route is closer to the river.

### **Documentary evidence**

The area is reasonably productive. Documentary evidence from two manors of the Bishopric of Winchester at Bentley and Farnham shows they were as productive as most of the manors in the Bishopric in the thirteenth and fourteenth centuries (Titow, 1972, 126). Nineteenth century maps show the sites of seven water mills between Neatham and Farnham with evidence for fish ponds in the valleys of the tributary streams. Most woodland names suggest the woods were managed and there are numerous quarries for chalk and building stone.

Nineteenth century ordnance survey maps indicate the road the north of the River Wey was formed of approximately thirteen straight sections between the crossroads at Neatham and the fork at Farnham. This was the medieval King's Highway, the later turnpike and is now the A31 (Figure 13).

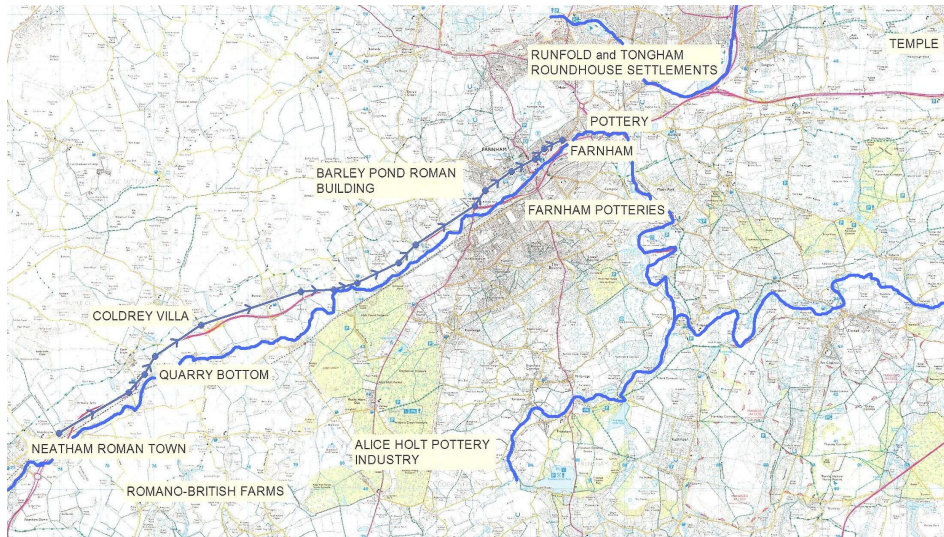


Fig. 13 Thirteen straight sections of the nineteenth century road between Neatham and Farnham

The straight sections have been interrupted by what appear to be three diversions at Coldrey (SU 77007 43665), Turk's Mill (SU 80302 44335) and Coxbridge (SU 82782 45925). The diversion at Coldrey may relate to redefining estate boundaries. The diversion at Turk's Mill may be related to changes in the course of the River Wey and the fields show the remains of many tracks which appear to have been formed by traffic moving uphill to find a dry route. The small diversion at Coxbridge may relate to the stream. Apart from these diversions each change of alignment is at a high point, break of slope or stream crossing. Several changes of alignment coincide with road junctions or civil boundaries.

Willey (SU 81217 44769) is a particular example. At this point a 24 degree change of alignment coincides with the point at which the old course of a stream and the boundary of Farnham hundred cross the road. The name appears in a tenth century charter as *weo leage*, identified as a compound of *wig*, *weoh* (idol, temple) and *leah* (wood or clearing), and in 1200 it is referred to as *les forches de Weleye* (ancient gallows) (Gover, Mawer and Stenton, 1934, 175). Together, these suggest that at this point the road has a long history.



The thirteen different straight sections in eight miles of average countryside suggest this road was not built as a new main Roman road because if so it would have been more engineered with fewer alignments. This may be the line of a pre-Roman track that was upgraded with straight sections with changes of alignment at key points.

### **Aerial and satellite photographs**

Many aerial photographs of the area exist some of which indicate early field patterns but there is little yet identified which provides evidence for a Roman road. One aerial photograph has been suggested as showing the parallel lines characteristic of the ditches of a Roman road near Froyle Mill (SU 76762 43068) but close examination showed the photograph had been reversed. When corrected the feature appeared to be the line of an abandoned farm track on a different alignment.

### **Archaeology**

There are several known Late Iron Age and Romano-British sites in this area of which the largest is the Roman town at Neatham. There appear to have been Roman buildings with mosaics at Coldrey (SU 77007 43665) and Barley Pound (SU 79490 46750) and a Roman pottery with an associated dwelling at Six Bells (SU 85152 47735) near Farnham. There is a substantial Iron Age hill top earthwork at Caesar's Camp (SU 76762 43068) and for several hundred years until about AD 100 there were round house settlements near Runfold (SU 87702 48420). South of the River Wey there was a substantial Roman pottery industry at Alice Holt with other potteries nearer to Farnham and Roman sites at Holt Pound, Frensham and Binstead.

It has often been suggested that the remains may be under the existing A31. Construction work for Bentley by-pass cut across the possible route in 1990 but an archaeologist carrying out a watching brief did not see evidence for a Roman roads. The only Roman context was close to Coldrey where the remains of a possible cobbled surface were seen (Kavanagh, 1997). However,

the archaeologist has said the site was a sea of mud and it was possible that the remains of a Roman road would not have been noticed (Kavanagh, 2007).

There have been numerous excavations for pipelines and building sites on either side of West Street and East Street in Farnham, the most obvious place in Farnham to find remains of a Roman road or at least of roadside ditches, but no Roman remains have been found. The evidence so far is that although there was a small sixth century riverside settlement, and a Saxon church was mentioned in the Domesday Survey, Farnham did not develop before the twelfth century (O'Connell, 1977, 19)

Faced with circumstantial evidence for the route of a Roman road but with no support from excavations or aerial photographs the methodology used for the project was to try to identify specific locations along the route where close investigation by field walking and perhaps excavation could provide evidence. Two types of location were sought: an area of difficult country where, if a Roman road had been built, engineers would have been obliged to undertake engineering works and a location where the turnpike and A31 may have been diverted away from the original route where traces of an original road may remain.

### **Site investigations**

The location chosen for the area of difficult country was Quarry Bottom (SU 75994 42705) where Ryebridge Stream has formed a steep sided valley 260m long, 70m wide and 20m deep. A main Roman road from the eastern stub of the crossroads at Neatham to Farnham engineered to Roman standards would require either a bridge over the valley or a diversion west along the valley to the nearest crossing point and a return to resume the line of the road.

Field walking at Quarry Bottom showed earthworks 8m high across the stream at C the best point for a bridge. There is also a clearly defined road 7m wide engineered into the northern side of the valley at B the point where a Roman road which had been diverted west to avoid the steep valley would

have resumed the original line. However, the medieval road, the turnpike and the A31 all cross Ryebridge Stream at this point and there are several substantial engineering works which are difficult to disentangle (Figure 14).



Fig. 14 Satellite photograph of Quarry Bottom (SU75994 42705)

Early maps also show quarrying for building stone at D – hence the name Quarry Bottom. The terraced road could be a quarry road. Early maps also suggest the valley was used for crayfish farming. The earthworks could be the remains of a post-medieval dam. Alternatively, crayfish farmers might have built their dam using the remains of earlier works.

There are faint marks in satellite photographs of the field to the north east at E which relate to hedges removed in the twentieth century. However, such hedges might have been on the line of an earlier road. Earth resistance, augering and field walking were therefore carried out in the fields north east of the valley to investigate the features in the satellite photographs but there was no evidence for a Roman road.

The second proposal was to identify a location at which the turnpike and A31 might have been diverted and remains of an original road preserved. The most promising site (SU 77019 43350) is in fields near Coldrey House at G. This area was excavated by Wade in the 1950s (Wade, 1950). The findings

described in his report suggest magnetometer and earth resistance surveys might identify Romano-British buildings, access roads and perhaps a road to Neatham. For this it would be necessary to have the consent of the landowner but this was not achieved within the time scale of the project.

### **Conclusion**

The most likely route for the proposed main Roman road between Winchester and London through Neatham is on the north side of the River Wey close to the line of the turnpike road between Neatham and Farnham. However, although there is circumstantial evidence that local tracks were upgraded to create a secondary Roman road at this point there is little direct evidence in favour of a main Roman road. This is negative evidence against the proposal that there was a main Roman road between Winchester and London.

This evidence is not conclusive. This is an important section of the route and the following further work is worthwhile:

- a) 1m x 10m trench across the turning area of the road cut into the hillside at Quarry Bottom (SU75994 42705)
- b) A Magnetometer survey at F in fields south of Coldrey House (SU 76992 43370)
- c) Detailed examination of the old bridge and ford at Turk's Mill (SU 80317 44385)

This work could provide evidence for an original road if it existed.

## CHAPTER 6: INVESTIGATIONS BETWEEN FARNHAM AND LONDON

The thirty mile section between Farnham and London was too long to study for this investigation which has therefore concentrated on the section between Farnham and Cobham.

### **Geography**

This section is dominated by the isthmus at Farnham which strongly influences the routes in the area. There is a large east west chalk ridge known as the Hog's Back cut by the River Wey at Guildford. South of the Hog's Back is a scarp slope below which a greensand valley runs from Farnham south of Guildford to Dorking. North of the Hog's Back the dip slope has bands of chalk, gravelly orange clay from the Reading Beds and red London clay. Further north is a high sandy plateau. The north is dominated by wet areas associated with the Blackwater, Wey, Hoe and Mole rivers (Farr, 2008). These are shown in Figure 15 which also shows a most likely route for a main Roman road if it had been constructed.

### **Historical background**

There are Romano-British sites along the greensand valley south of the North Downs. However, although there are signs of early tracks and evidence that the existing road was engineered at several points to avoid wet ground there are no signs of any short straight lengths that might suggest a main Roman road south of the Hog's Back.

The ridge of the Hog's Back formed the south boundary of the Royal Forest of Windsor soon after 1066. The Royal Park of Guildford was enclosed by Henry II in 1154 and disparked by the Earl of Annandale after 1630 (Crocker, 2005, 187).

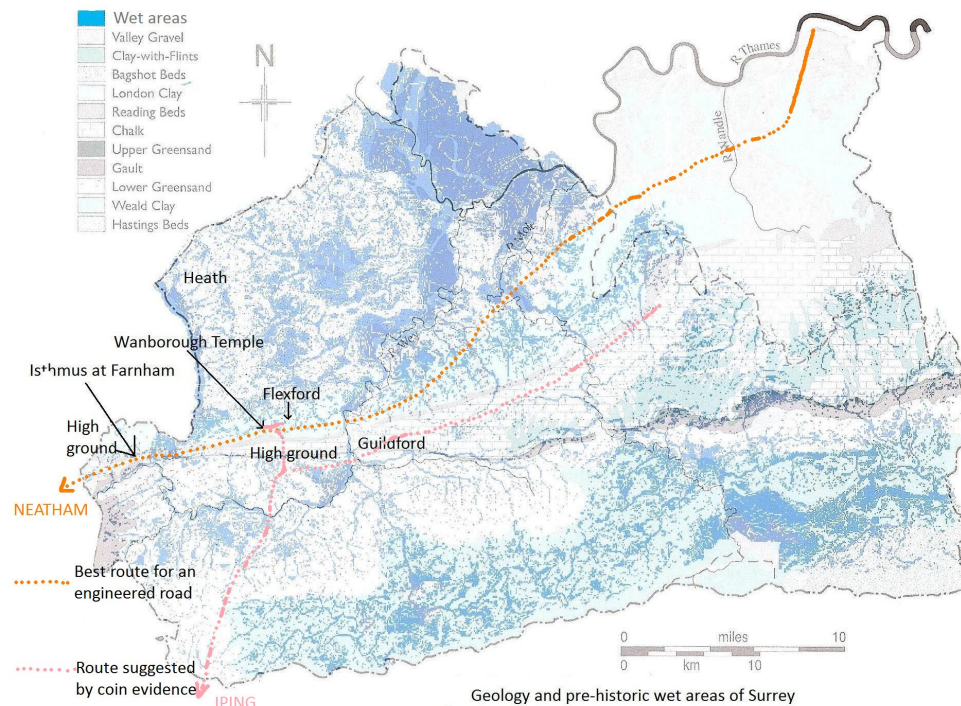


Fig. 15 Geology and pre-historic wet areas of Surrey (from research by Farr, 2008) indicating a likely route for an engineered Roman road and a route suggested by coin evidence (from database by Hall and Stanley, 2010)

There have been several Romano-British finds along the Hog's Back and a satellite photograph of parallel features on the Hog's Back yet to be investigated but there is strong negative evidence that suggests it is unlikely that there was a main Roman road along the Hog's Back between Farnham and Guildford. Firstly, very little Roman material has been found near the river in Guildford. Secondly, if the justification for a new main Roman road was to open up land it seems unlikely that it would have been built on the top of a high ridge away from the land and water supplies. Thirdly, the medieval King's Highway between Farnham and Guildford follows the southern boundary of the Royal Forest of Windsor and descends into Guildford with a gradient of 1:8. A Roman engineer would not have been constrained by the later Royal Forest and could have used a shorter and simpler descent into Guildford with a gradient of 1:25. This was not done and it is therefore unlikely that the route along the ridge of the Hog's Back was a main Roman road.

From this process of elimination the search for a main Roman road between Winchester and London has concentrated on the area north of the Hog's Back.

### **Documentary evidence**

Local archaeologists have often suggested that place names support the case for an east west Roman road. Some of the more frequently mentioned are:

- a) 'Stratford Bridge' (TQ 06278 57560): however, this is dated to the 13th century and is said to relate to the medieval road (Gover, 1934, 143).
- b) 'Street' is a common village name in Surrey. Baker Street is dated to the 17th century, Broad Street, Wood Street and Street Cobham to the 16th century (Gover, 1934, 87).
- c) 'Fairmile' in Cobham (TQ 11435 61221) was previously Fare Mile (Senex, 1729) and Hare Lane (Ogilby, 1675) but even if this suggests the medieval road followed the line of a Saxon road it does not provide evidence that the Saxon road was preceded by a Roman road.

The relatively late dates suggested for the origin of the names does not prove there was nothing Roman before naming was formalized but it does show how little evidence there is to support local beliefs that the names have a Roman origin.

### **Aerial and satellite photography**

Most of the features of interest in aerial and satellite photographs can be explained by relatively recent farming, pipelines, war defences and construction. There are a few small rectilinear features east of Flexford which may be Romano-British fields (SU 9368 4986).

## Archaeological evidence

Various routes meet on the isthmus east of Farnham for example from Staines, Chertsey, Guildford, Dorking, Godalming, Winchester and Odiham. It has been suggested that some may have Roman origins (Bird, 1987, 167). For example, there is a straight alignment at Stone Hill between Farnham and Chertsey which the Viatores suggested might continue to St Albans (Viatores, 1964, 125-136).

There is increasing archaeological evidence for Late Iron Age and Romano-British settlement north of the Hog's Back. The sites include:

- a) Roundhouse settlements close to the Blackwater river at Runfold (SU 87627 48400) in use from about 500 BC to AD 100. The area appears to have been wooded. (Lambert, 2009)
- b) A pottery east of Farnham in use from about AD 100 to AD 400. A bathhouse was added in the third century and a small dwelling in the fourth century (Lowther, 1956, 55)
- c) An important religious site near Wanborough in use from about AD 40 to AD 300 (Williams, 2007, 257).
- d) A Roman villa at Broad Street, Worplesdon in use from about AD 120 to AD 320 (Poulton, 2005, 84).
- e) Metal detector finds of Roman material from Wanborough, Henley and Flexford (Hall and Stanley, 2010)
- f) Second and third century Roman pottery from Willey Green and Misley Copse (Jones, 2009)
- g) Rectangular Romano-British building at Manor Farm, Guildford
- h) Ditched enclosures from the second and third centuries in North Guildford
- i) Romano-British settlement evidence, iron smithing and ditches at Flexford in use from about AD 120 to AD 300 (Calow, 2011, 2)

The Historic Environment Record (HER) and Portable Antiquity Scheme (PAS) records for Surrey have been brought together in a database (Hall and



Stanley, 2010). The Portable Antiquity Scheme records can also be studied on line (PAS, 2011). These resources make it possible to map different types of recorded find sites in Surrey. The 786 recorded Roman coin finds in Surrey were plotted (Figure 16).

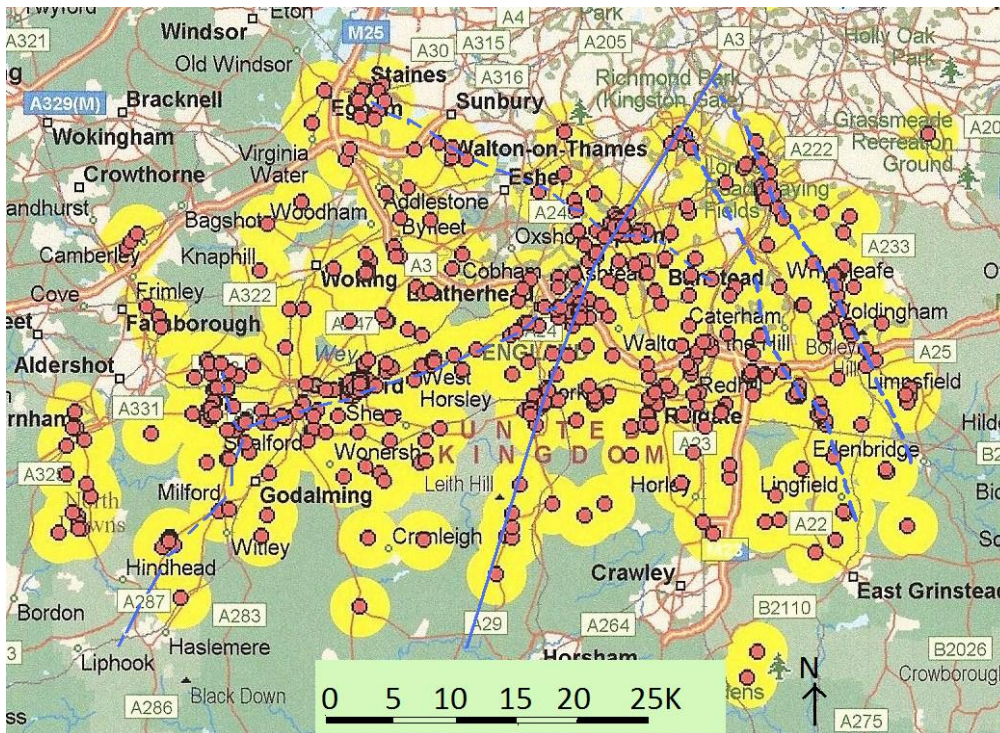


Fig. 16 Distribution of Roman coin finds in Surrey with indicated routes in blue (from database based on Portable Antiquities Scheme and Surrey Historic Environment Records by Hall and Stanley, 2010)

This showed concentrations at known Roman sites (Staines, Croydon, Leatherhead, Ewell, Walton, Godstone, Titsey, Compton, Farnham and Wanborough) and align with known Roman roads from London to Brighton and Chichester.

However, the finds also show unexpected concentrations at Shalford (TQ 00970 47483), Merrow (TQ 03190 50903) and near Betchworth (TQ 2075 5237) and suggest an as yet unknown route along the North Downs from Ashted passing south of Guildford to Hindhead and perhaps Iping (see Fig 16) with a branch north over the Hog’s Back to Wanborough. There is also the suggestion of routes from Ewell east to Staines and west to Banstead.

Interestingly, the Ewell end of a road that could have reached Banstead was discovered in 2009 (Cotton, 2009).

It has not yet been possible to plot the coin finds by the dates of the coins so it is not clear if the implied route to Iping is early Roman, late Roman or multi-period. The coin evidence does not support a direct engineered route from Farnham to London north of the Hog's Back.

### **Field work**

Extensive exploration for this project has given a better understanding of the topography, particularly the difference between the drier ground and the wetland.

Several reasonably well constructed roads 5m-10m wide with side ditches and banks have been found abandoned and overgrown which early maps suggest were in use in the eighteenth century. This investigation has concentrated on a largely abandoned road which follows a dry route between the Blackwater and the River Wey (see Fig 17). The key features are:

- a) Part of the remains of Wanborough Temple lie underneath the road.
- b) The road forms the boundary of the hundreds of Woking and Godalming.
- c) The road passes south of the Roman villa at Broadstreet Common.
- d) The original road ends abruptly at the west boundary of Guildford Park but the hundred boundary continues. The road may therefore have been cut by and be earlier than the emparkment of Guildford Park in 1154.
- e) The road appears to have been diverted at Flexford to go north of Guildford Park after 1154.
- f) The diversion may have taken advantage of the remains of another early road which passed north of the Roman villa at Broadstreet Common.

The suggestion is that a Saxon road may have followed Romano-British tracks to Wanborough Temple but went over the site rather than round it and

perhaps did not respect the site. The parish and Saxon hundred boundaries (Blair, 1991, 13) were on the same line as the road. The road was cut and diverted north after 1154 when Guildford Park was emparked although the hundred boundary stayed in place. The investigation suggested Flexford (SU 93330 50108) was a promising area for more detailed investigation. It also suggested that if the road between Flexford and Wanborough Temple had been part of a straight road to Farnham the road would have passed through fields on the north slope of the Hog's Back near Tongham (SU 8925 4854) which was a second area of interest.

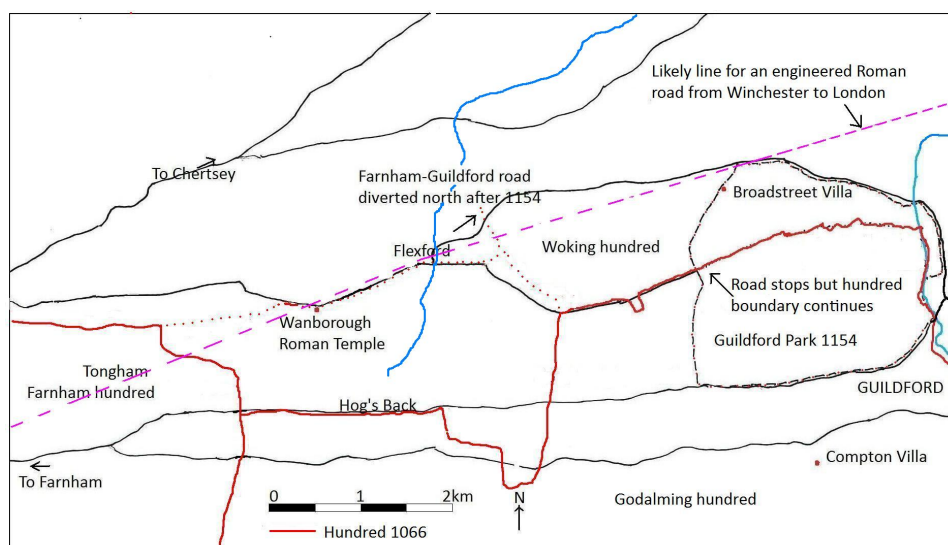


Fig 17 Early roads between Farnham and Guildford with hundred boundaries at 1066 after Blair, 1991

### Excavation near Tongham

A streak on an aerial photograph of land near Tongham (SU 89250 48543) was investigated with the kind permission of the landowner. The streak tied up with an unexplained kink in the access road to Poyle Manor (SU 89737 48638) and was on a possible line for a main Roman road between Farnham and Flexford passing Wanborough Temple. Five 1.5m x 1.5m trenches each 5m apart were excavated to cover a strip 27.5m long across the line of the streak. Two contexts of ploughed land about 20cm thick were found in each trench.

Natural clay was found beneath the ploughed land. There was nothing which could suggest road construction at this point and it was concluded that the streak related to farming activity.

### **Excavation at Flexford**

The Rocque map of 1768 shows Flexford Green (SU 9333 5011) was a stopping point by a ford between Farnham and Guildford and shows an unexplained diversion in the stream which can still be seen in the undergrowth as a constructed feature.

With the kind permission of the landowners an earth resistance survey was made of an area of unused ground where the existing road diverts from the direct line. This suggested there may be a ditch at the hundred boundary and an area of resistant material north.

A 1m x 10m trench was excavated across the area of high resistance. This is shown in Figure 18. It was not possible to excavate further south because of the roots of mature trees. The first layer was 25cm of grey silty topsoil which covered the entire trench (101). Beneath this was a 5cm layer of yellow silty sand with few flints (102) above a 5cm layer of greyish yellow silt with many small flints 50mm x 50mm (103). This flinty layer was 7.3m long and had three straight sided gullies 20cm – 40cm across and 15cm deep running east west across the trench. The layer contained a sherd of post-medieval stoneware.

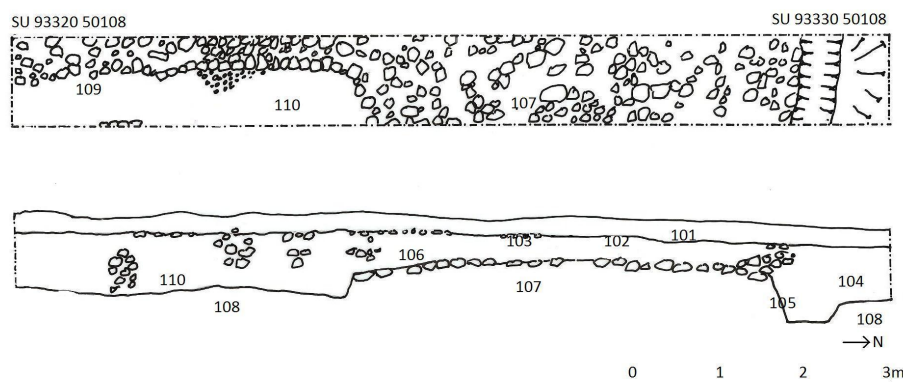


Fig. 18 Old Stud Farm Flexford: plan and east section of excavation

At the north end of the trench there was a layer of yellowish green clay 80cm thick lined with flints up to 150mm x 200mm on the south side (104). This appeared to have been cut (105) into natural red clay (108).

Beneath (103) was a layer of yellowish sandy silt with few flints. Below this were highly compacted flints covering an area 5.5m x 1m and 0.5m thick (107). The flints were both broken and unbroken and were larger at the edges of the feature (150mm x 150mm), smaller at the surface (50mm x 50mm) and about 100mm x 100mm throughout the rest of the feature. The surface sloped from the centre down to the north and south. The flints were embedded in natural red clay (108). The flint feature extended south at right angles to the main feature. The only find within the flints was a small sherd of highly abraded red pottery 20cm x 10cm.

At the south of the trench was an area of disturbed red clay with groups of flints (110). It seemed as if this may have been cut into the flints (109).

Four test pits were excavated to the north and east of the trench to test whether the area of tightly packed flints (107) continued elsewhere. Each pit revealed similar flints about 50cm below the surface. The flint area extended at least 30m x 50m and the edges were not found.

A geologist familiar with the area visited the site and reported that although he could not be sure he thought on balance the flint features were natural (Green, 2007).

## **Discussion**

Flexford Green and the ford were used as a stopping point for animals and traffic on the lowland road between Guildford and Ash until the eighteenth century. Experience on site during winter showed the area is subject to considerable flooding. Silt and natural clay at the approach to the stream would be impassable without the hard standing provided by the flint features.

The east west gullies in a layer of silt with many flints (103) containing post-medieval pottery were interpreted as wheel ruts confirming the direction of the traffic. It appeared that this layer was the upper surface of a post-medieval road with a roadside ditch (104). The post-medieval road had taken advantage of the flint layer (107) but it was not possible to determine whether (107) was natural or man-made, or a perhaps a combination of the two. For example, some flints may have been naturally deposited at the location and others may have been added to deal with the mud over hundreds or thousands of years. A further excavation on the east side of the stream might have resolved the question but the landowner did not give permission.

It was not possible to say whether the lower flint feature (107) was the remains of a Roman road or a natural feature. It was therefore decided to expand the area of search to a radius of one mile from Flexford to find alternative locations where investigations could reveal Romano-British activity which could lead to discovering access tracks and roads.

A landowner with fields 900 metres north east of Flexford reported finding Roman pottery while digging drains. Mole hills showed abraded sherds of Roman pottery throughout two fields but there was no indication in aerial or satellite photographs of archaeology.

Surrey Archaeological Society made a Geoscan FM 256 magnetometer available and approximately 10 hectares were surveyed by the author with the landowner and colleagues from the Society between October 2008 and May 2011. The results in Figure 19 show a considerable range of features including ditches and areas of possible furnaces. Two particularly interesting features were a set of roughly parallel north south ditches which might mark a track (T5). This was roughly in line with a track 500 metres away which joined the undated and unidentified linear flint feature described above.

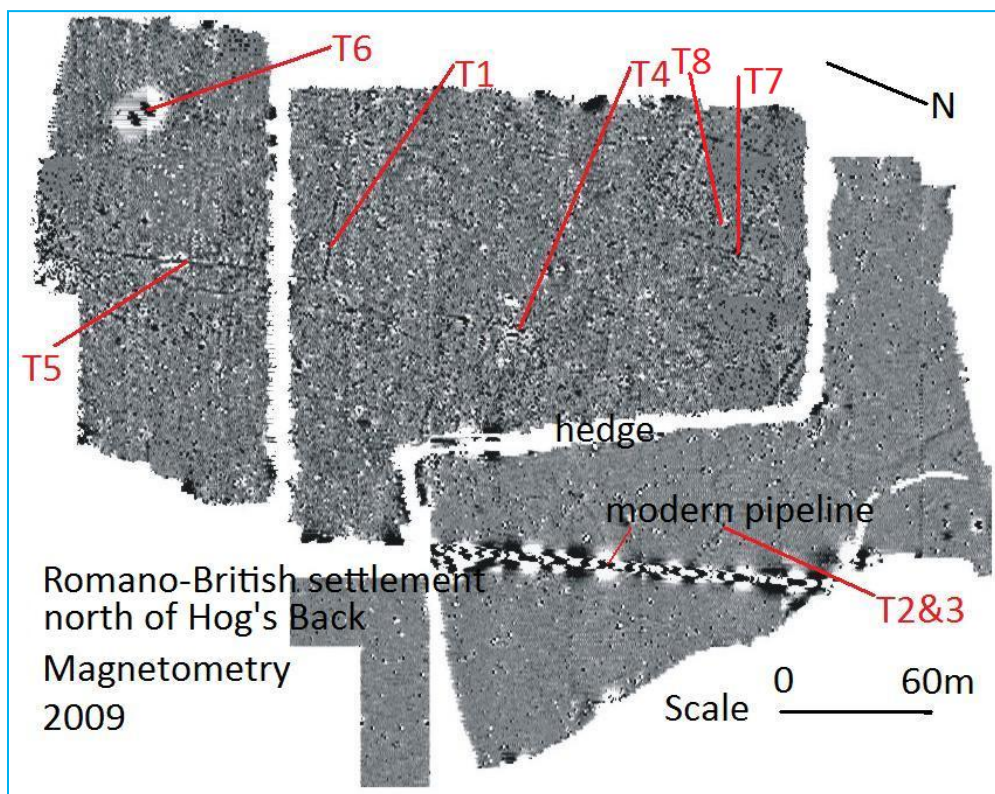


Fig.19 Flexford magnetometry and trenches 1-8

### Excavations

The Flexford site is within a kilometre of almost every possible line that a direct engineered main Roman road between Winchester and London could take. The magnetometry results suggested considerable Romano-British activity with a possible settlement and access roads that might provide a clear indication if a main road was nearby. The author directed 23 exploratory

trenches from 1m x 4m to 9m x 3m between 2009 and 2011 and metal detectorists working under controlled conditions have surveyed the plough soil. It is beyond the scope of this project to include a detailed report that will be published separately but the results so far are summarized below.

The archaeology lies below 40cm of plough soil and above natural clay and gravel of the Reading Beds. The site does not seem to have been ploughed much since the nineteenth century. Although earlier ploughing has removed some of the archaeology there are at least five hectares with archaeological remains. In one location, for example, a simple hearth 40cm below the surface had been slightly damaged by ploughing but was otherwise as it was when the fire was extinguished.

There are occasional small retouched flints which may be Mesolithic and which are found throughout this part of Surrey. One small area has produced what is thought to be Late Iron Age or Early Roman local pottery (Jones, 2011) and a Late Iron Age copper alloy figurine of a boar (Rudling, 2011). There are many finds from the second, third and fourth centuries but so far no finds which can be dated between the Roman and post-medieval period.

The pottery evidence suggests occupation was concentrated between AD 125 and the end of the fourth century. Several sherds of a mortarium with a late stamp of Matugenus were found in a sealed context at the bottom of a ditch and dated at AD 120-125 (Hartley, 2009). More than 5000 sherds (100kg) of Romano-British pottery have been recovered so far, mostly from ditch fill and settlement debris in hollows. This suggests the main activity from AD 125 to AD 250 was in the northern area followed by a change in land use and a concentration of activity in the southern area from AD 200 to AD 350.

Metal detectorists have found 71 Roman coins on the site. Each find spot has been recorded using GPS. The coins have been identified at the British Museum, allocated Reece period numbers (Casey, 2009, 29, Moorhead, 2011, 2) and plotted on a map of the site shown in Figure 20. The coins support the idea of second, third and fourth century activity on the site.



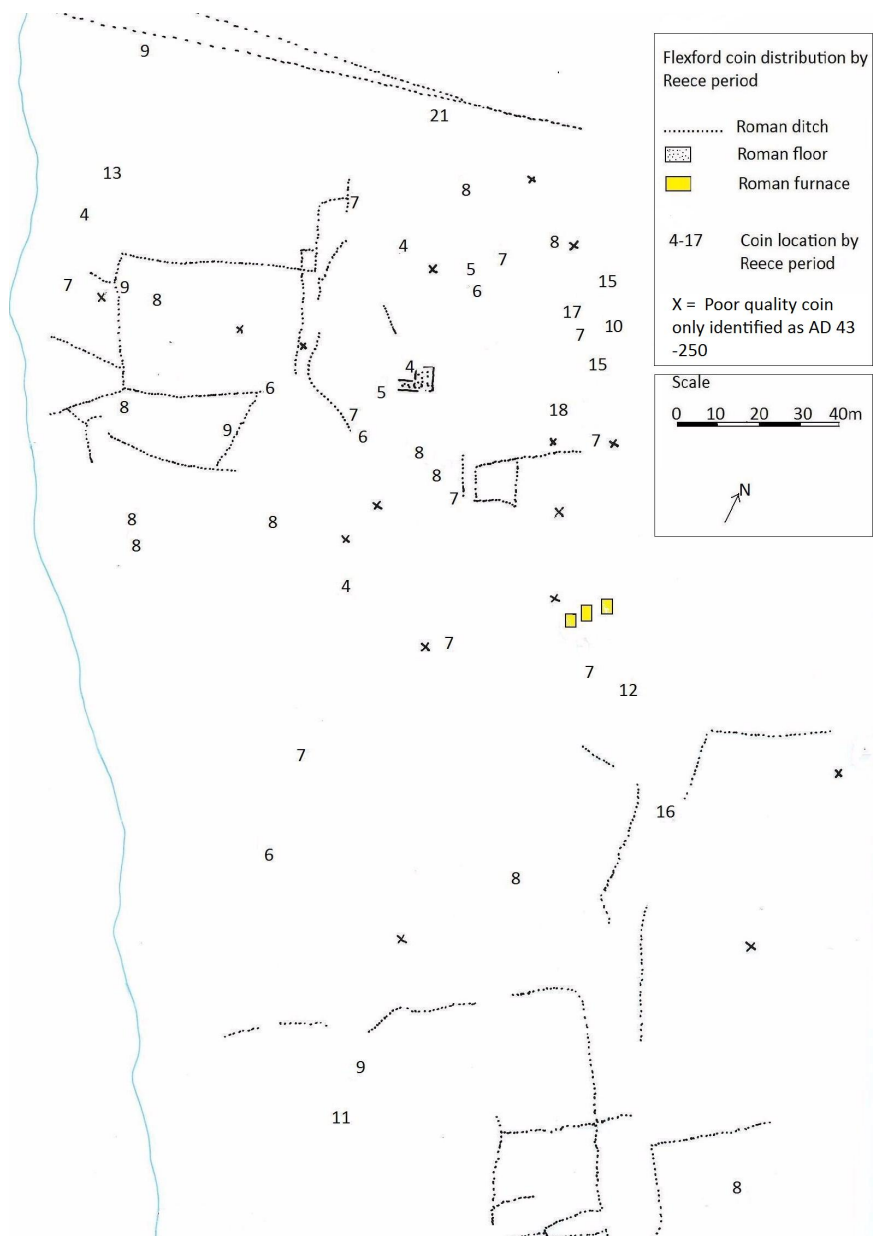


Fig. 20 Flexford: a Romano-British settlement site near the potential route of a Winchester to London Roman road

There was iron and perhaps lead alloy production on the site. At least three furnaces have been identified and excavated and magnetometry indicates there may be others. The furnaces have an unusual design with 2m x 0.5m x 0.15m gullies full of furnace debris. Charcoal and hammerscale plates and droplets are distributed through the furnace debris and one furnace had a possible ritual offering of three almost complete pots in a pyramid set in the debris. A similar

furnace was identified out of seventy excavated at Southwark and the excavators suggest it may have been to allow slow cooling of long steel objects such as swords (Hammer, 2003, 163). A charcoal sample has been sent for carbon dating.

Neither the coins nor the excavations support the suggestion that the roughly parallel ditches shown in Figure 19 represent a north-south access although the coins perhaps suggest paths leading from the centre of the field to field corners. Excavations in the southern area show settlement activity and faint traces in the magnetometer results suggest parallel features but so far there is no clear evidence for a road.

This is a potentially significant Romano-British site on the north of the Hog's Back close to the probable alignment for a direct engineered road between Neatham and London if one was built. The expectation is that further study will produce evidence which will help understand road communications but so far there is no evidence that there was a direct engineered road in the vicinity.

## **Discussion**

The area north of the Hog's Back appears to have been relatively undeveloped until about AD 125 by comparison with what has been claimed for West Sussex. There was a long established roundhouse settlement near Farnham which appears to have been based on the wetlands of the Blackwater river until about AD 100.

There seems to have been an attempt to develop the area from about AD 125. This continued until perhaps AD 250 after which the associated ditches appear to have gone out of use. Settlement continued on the site until about AD 350 but there is no further indication that the land was cultivated before the late medieval period.

There must have been communications routes in the area during the Romano-British period but there is no evidence so far to support the idea that a main engineered east west Roman road was built in the vicinity. Communications may have relied on secondary roads and tracks and perhaps made use of the small local rivers. The coin evidence in Figure 16, for example, surprisingly suggests traffic for Flexford and Wanborough Temple may have come north over the Hog's Back from Compton, from an unknown route heading for Hindhead and perhaps Iping and Chichester.

## CHAPTER 7 DISCUSSION

### **The economic case**

Millet estimates the population of Roman Britain at 25-32 people per Km<sup>2</sup> (Millet, 1990, 181-186) with a Roman small town in Eastern England every 15Km (Millet, 1995, 32). Mattingly is more conservative, with an estimate of 17 people per Km<sup>2</sup> (Mattingly, 2007, 368).

Neatham is the only Roman small town known within the kite-shaped area between Winchester and London. Neatham is 25Km to 50Km from the next Roman town which is a much lower density than Millet suggests. Perhaps the density of population in this area was half Millet's suggestion at 13 per km<sup>2</sup>. This would be in line with Bird's estimate of 10-15 per Km<sup>2</sup> for all Roman Surrey (Bird, 2004, 79) and would suggest a population for the 1500Km<sup>2</sup> served by a Winchester to London road of about 20,000 most of whom would have lived in the west or in the environs of Roman London. The central area may have been sparsely populated and although secondary roads or tracks would be expected the size of the population may not have justified a direct engineered road.

Local industry and agriculture would have increased the requirement, both for products heading towards London and towards the southern ports. Pottery from Alice Holt, forest and quarry products would have benefited from a direct main road. However, some secondary roads were available and the quantities involved were not so significant that they could not have been moved by pack animals and small carts on secondary roads and perhaps by small boats on the rivers.

There are place-name indications of a Saxon 'herepath' between Winchester and London and the Gough map (Figure 4) shows that at least by the 1360s one of five King's Highways serving London ran through the area from Winchester and the south-west and would have linked the estates of the

Bishops of Winchester at Alresford, Bentley, Farnham and Esher with their bases at Winchester and Southwark. The medieval population was perhaps not much greater than the Roman population and that might suggest that if the output of the area justified a main road in 1360 it may have justified a main Roman road.

However, it is not clear from details of the estates of the wealthy Bishops of Winchester that the King's Highway of 1360 was much more than a road for horses and occasional carts. The small yields (Titow, 1972), the small number of wagons, carts and cart-horses and the few journeys listed (Page, 1996, 211) suggest medieval cart traffic was slight.

There does not seem to be a compelling economic case for an engineered Roman road between Neatham and London and the apparent low medieval traffic volumes add some support to this conclusion.

An additional concern is that it appears that neither the Saxon herepath nor the later King's Highway between Winchester and London made use of the remains of an earlier Roman road for their route. This is not conclusive and, as at Bighton, where the excavation results suggest the King's Highway was within sight of but separate from the Roman road, other factors may have been involved, but it is a further indication that the Roman road was not built.

### **Documentary evidence**

Iter XV of the Antonine Itineraries supports the existence of an engineered road between Winchester and Neatham but although eight other Itineraries involve London none could relate to a road between Neatham and London. This is not conclusive as, for example, what we now know as Stane Street was not included in the Itineraries but it offers further negative evidence against the existence of an engineered road.

## **Strategic and historic considerations**

Togidubnus controlled the southern kingdom from about AD 50 to the early AD 70s (Mattingly, 2011, 90, Cunliffe, 1976, 29). He was sufficiently well known to and trusted by the Romans before the invasion to be made a client king and, Tacitus says, for ‘certain domains’ to be ‘presented’ to him. Tacitus describes him as a king ‘who maintained his unswerving loyalty right down to our own times – an example of the long-established custom of employing kings to make others slaves’ (Tacitus, AD 98, 14).

Although the boundaries of the kingdom are not known it has been suggested that they would have included the iron production of the Weald, the main southern ports, Silchester, a key bridge at Staines and probably the main land routes from the south coast to London (Mattingly, 2011, 89).

It is reasonable to think no major decisions would have been taken affecting his kingdom without his personal involvement and perhaps at his personal cost. That would apply to decisions to build roads between Chichester and Silchester and between Winchester and London.

It may have been difficult for Togidubnus to control the kingdom from Fishbourne. For example, if, as Fulford has suggested (Fulford, 2010, 3) Silchester was burned at the time of the Boudican revolt in AD60-61, Togidubnus would have had important problems to resolve. Securing the peace, reconstruction and subsequent protection would have required money and effort. Creighton discusses a Flavian mosaic at Fishbourne showing an idealized town with gates, walls and a grid of roads and dating from about the time Silchester was remodeled. As Creighton says, it is tempting to conclude that the room with the mosaic was linked to the decision to rebuild Silchester (Creighton, 2006, 152). The room may even have been the place where the decision to build the Chichester to Silchester road was taken which, from the limited evidence available (Millet and Graham, 1986, 13, Rolston, 1971, 22) appears to have been constructed around AD 70 to AD 90.

There are several features of the Chichester to Silchester road which are curious and which may have a direct relevance to whether a Winchester to London road was built.

Firstly, although the route is shorter than the route via Winchester it is only 28% shorter (40 miles vs 54 miles) and has steeper gradients. If shorter distance was the most important objective it could have been 2 miles shorter if the route had been direct instead of through Iping.

Secondly, the route does not seem to take the commercial opportunities fully into account. The settlement at Neatham was located on the north side of the river while the Alice Holt pottery industry had developed on the south (Lyne and Jeffries, 1979, 16) and it seems Neatham was probably not connected to Winchester until fifty years after the Chichester to Silchester road had been built (Millet and Graham, 1986, 13).

The road might perhaps have been a status road to allow Togidubnus to travel directly between Silchester and Chichester but it seems too long and too expensive to maintain for this purpose. For the same reason it seems unconvincing to suggest it was built just for faster messaging since a good track would have been enough and, under pressure, the journey between Chichester and Silchester via Winchester could have been done in a day. If the road had been built for commercial reasons it could have passed closer to more villas and more industry and been linked to Winchester more quickly.

The specific location of Neatham on the north side of the river is of interest. The administrative boundaries are not known; Cunliffe suggests the southern watershed might have been used (Cunliffe, 1973, 2) but an administrator might have preferred the definite line of the River Wey. Millet and Graham suggest the site might have been in a boundary area of the four surrounding cities (Millet and Graham, 1986, 159). Locating the settlement on the north side of both the watershed and the Wey seems to put Neatham under the influence of Silchester.

Davies suggests this was a territory-holding road (Davies, 2002, 117) but this does not explain why the connection to Winchester was delayed until AD125 since a connecting road would appear to have made it easier to hold the territory. Perhaps the original purpose of the road was to provide access between Chichester and Silchester without passing close to Winchester, suggesting that Winchester, perhaps a base for migrants from Roman Gaul, could be unsafe.

It is also possible that the route pre-dates the Roman occupation. The coin evidence in Figure 16 above suggests Iping might have been the junction of an early and presumably pre-Stane Street route from Chichester to the north-east and the Chichester to Silchester road might have been on the line of an earlier direct route to the north-west.

There is little firm evidence why or even whether it was Togidubnus who decided to upgrade or build a new main road between Chichester and Silchester but the evidence does suggest it is highly unlikely that there was a decision to build a main road between Winchester and London at the same time.

It seems that after Togidubnus died the administration of his kingdom was brought into line with the rest of the province (Mattingly, 2011, 90). The next period seems to have been a period of disruption in Britain (Oppen, 2008 p78) and it is unlikely that further roads would have been built in the kite-shaped area before the arrival of Hadrian in London in AD 122.

There is some evidence of economic development in the area after Hadrian's visit: the date for the east west cross road at Neatham is suggested as around AD 125 (Millet and Graham, 1986, 13); the area south of the river at Neatham was developed from the mid second century (Graham, 1991, 17); the pottery industry at Farnham developed from around AD 100 (Lowther, 1956, 55); the Iron-age settlement near Farnham continued using roundhouses until the early part of the second century when they appear to have been abandoned after several hundred years of continuous occupation on the site; the earliest



stages of the rural settlement at Flexford date from about AD 125 and the settlement at Binscombe dates to the same period (Smith, 1977). The first temple at Wanborough was built about the middle of the second century (Williams, 2007, 152)

It is perhaps reasonable to suggest that from about AD 125 an administration which wanted to develop the local economy could justify a new road between Winchester and Neatham and might have contemplated a road between Neatham and London. However, by then it may have been easier to upgrade existing tracks rather than build a new main road which would have cut through existing land holdings.

This situation seems to have continued until perhaps the end of the second century when unrest following the assassinations of Commodus in AD 192 and Pertinax in AD 193 and the arrival of Septimius Severus may have made new civilian road construction unlikely. This seems to have been continued in the third century when city defences were improved (Mattingly, 2007, 328). Unrest continued into the fourth century (*ibid*, 231) and by the second half of the fourth century the towns themselves were in decline (*ibid*, 325) and new road construction would have been highly unlikely.

The main period when new road construction in the kite-shaped area seems feasible was between approximately AD 125 and AD 190. The evidence suggests a new road was built between Winchester and Neatham around AD 125. It is plausible that a track between Neatham and Farnham was upgraded at about the same time and that upgraded tracks continued from Farnham west of the Blackwater to Bagshot, north of the Hog's Back towards Chertsey and south of the Hog's Back to Dorking but there is no evidence so far that a major road construction project was undertaken between Neatham and London.

## CONCLUSION

The impression from those writing about the Roman road network in Europe is that it was built over many years and was mainly for civilian use. There were many secondary roads and the network continued in use long after the end of the Roman Empire. The impression given by those writing about the Roman road network in Britain is that the main roads were built quickly and for largely military reasons relatively soon after the occupation. The network of secondary roads in Britain seems less well developed than in Europe and much of the network appears to have gone of use after the end of the Roman occupation.

The methodology for identifying main Roman roads in Britain set out by Margary and others made good use of the technology available at the time but was not sufficient to date the main roads or identify the secondary roads. It is difficult to be sure when the main roads were built, whether they were well maintained, how many secondary roads there were and what continued in use after the Roman occupation. More recent developments, particularly magnetometry, earth resistance, carbon dating and rural settlement studies, have improved the evidence available for Roman roads, fields and settlements and made it possible to get a better understanding of the rural landscape.

This research has found it is probable that a new Roman road was built to connect Winchester and Neatham at about the time of Hadrian's visit and suggested that a pre-existing track was upgraded between Neatham and Farnham at about the same time. It is possible that other tracks in the area were also upgraded in this period. These could have included a track south of or along the North Downs between Farnham and Dorking as well as a track between Farnham and Staines and tracks north of the North Downs between Farnham, Woking and Cobham. These may have reached small river ports on the Blackwater and Wey rivers.

There were probably secondary roads serving London from the south-west which may have reached Kingston, Cobham, Leatherhead and Staines. The coin evidence suggests an early route from Leatherhead towards Chichester passing south of Guildford. There is no clear evidence so far for a direct main Roman road between Neatham and London but secondary roads may have been built. Further understanding will come from settlement studies such as at Flexford and Ewell that should provide a better understanding of Romano-British communications and activity in the area. This may also provide information about relationships between the four surrounding centres at London, Silchester, Winchester and Chichester and perhaps show whether this area developed in line with other parts of Roman Britain.

Appendix 1: Features from 1840s Tithe Maps and Apportionments, Estate and OS maps for area between Neatham and Southwark that might suggest an early road

Record Office reference	Parish	Item	App Ref	Grid reference	Location	Comment
21M65F7/17/1	Bentley	High Lane Field	286	787434		
		Gravelly Close	256	782432		
		Terrace Field	476	807447		Entrance to Northbrook
21M65F7/20/1	Binstead	Narrow Streets	872	784406		Isolated
		Stone Field	195	779427		NE Isington river terrace
		Stones Field	189	783428		Ditto
		Stones Field	191	780428		Ditto
		Budd Stone	194	780418		Ditto
		Stone Meadow	190	781428		Ditto
		Stonehouse Copse	323	773423		
		Stonehouse Field	324	772423		
21M65/87/57/1	Croddall	The Folly	1602	802484		Probably relates to Farnham Deer Park
		Gravelly Field	1864	777466		Probably natural gravel on hill top
		Gravelly Wood	1866	776463		Ditto
21M65F7/96/1	Froyle	Road Close	99	761447		
		Cold harbour and five acres	208	753439		
		Stoney Common	226	744447		
861/1/64	Farnham	Stoney field	2261	834452	Wrecclesham	
		Ridgeway Lane Field	2237	842455	Middle Bourne	Now Ridgeway Lane and Green Lane
		Stoney Field	1073	832488	Hog Hatch Farnham	
		Folly	1093	833485	Hog Hatch Farnham	Folly and Cottage
		Folly Ground	3263	882431	Whitmead	
NA	Wanborough					No tithe maps or Apportionments prepared for this parish
864/1/8	Ash and Normandy	Old Ford Meadow	311	Na		
		Old Ford Moor	340	Na		
101/1/108		Three Stones Field	167	491903	Poyle farm	Poyle estate map 1778
101/1/108		Stones Field	244	491903	Poyle farm	Poyle estate map 1778
101/1/108		Stones Row Field	250	491903	Poyle farm	Poyle estate map 1778
		Gravelly Field	77	Na		
		Lower Stone Hill Field	149	Na		
		Upper Stone Hill Field	153	Na		
		Causeway Moor	535	Na		
101/1/108		Stony Plats		917512		Poyle estate map 1778

864/1/142	Worplesdon	Stone Field	260	995531		
		Lower Gravelly Field	813	954518	Anger's Hill	
		Great Path Field	744	964521	Fairlands	No path on map
		Little Path Field	742	964519	Fairlands	No path on map
		Blacklands Fields	773-5	954526	Clasford	
		Harbour Field	1071	946524	Whipley Manor	
		The Walk	503	978529	Pitch Place	No walk visible
		Three Stones Field	1292	906505	West Wyke	
		Great Three Stones Field	1311	905504		
		Wyke		911513		Market? On John Norden map 1594
		Broad Street Wood Street Baker Street				Many Surrey villages called 'Street'
864/1/110	Seale with Tongham	No entries of interest				
864/1/106	Puttenham	Little Holloway Field	357	934478	Puttenham	
864/1/112	Send and Ripley	Ford Mead	173	043565	Devonia Farm	Stream but no Ford on map
		Street Meadow	479	047552	Burntwood	Could be N-S or E-W road
		Little Street Field	1188	044530	Clandon	
		Great Street Field	1158	045532	Clandon	
		Stoney Meadow	589	033564	Papercourt Farm	
		Stoney Meadow	590	033564	Papercourt Farm	
		Old Land	1123	044549	Burntcommon	
		Oldlands Copse	1124	045548	Burntcommon	
		Many small long fields in this area called "rue"			Shaws or field access	
864/1/134	Wisley	No entries of interest				
864/1/98	Ockham	Terrace Field	62-63	073557	Bachelors Copse	
		Stradford Stream	359	063575	Stream from Ockham Mill to Ockham	Main bridge is most interesting point
		Old Lane Field	624	085574	Martyrs Green	
		Dipford Field	326	064572	Nr Stradford Stream Bridge	
		Parish boundary, Bolder Mere and stream		073583	Possible straight before Turnpike	
864/1/108	Pyrford	Coldharbour Field	41	044597	Pyrford	
		Coldharbour Copse	33	039601	Pyrford	
		Coldharbour Farm	32	040600	Pyrford	
864/1/138	Woking	No entries of interest				
864/1/118	Stoke by Guildford	No entries of interest				
864/1/92	Merrow	No entries of interest				
868/1/2	East Clandon	No entries of interest				
864/1/36	West Clandon	No entries of interest				
864/1/38	Cobham	Cobham Street to Ripley (straight)	John Norden	101605 to 052568		No meander in Mole at Chatley

			map 1594			
		Hare Lane (Fare Mile 1729 Senex)	Herman Moll map 1724	115614		Detour at Painshill shown
		Chatley Farm Villa		088597		
864/1/58	Esher	Hares Lane	Lindley and Crosley 1793	147645		By Esher
863/1/32	Long Ditton	No entries of interest				
863/1/50	Kingston	Norbiton Street	John Rocque 1768			
863/1/98	Wandsworth	Upper Green Street Shot		246740		West Hill
		Lower Green Street Shot		246731		West Hill
863/1/54	Lambeth					
	Southwark	Cold Harbour	John Rocque			Area between Stockwell and Camberwell
No tithe	Ewell	Cold Harbour	John Rocque			Area between Ewell and Worcester Park
864/1/28	Chessington	Gravell Shot	42	188624		
		Castle Hill	32	198626		Why a castle - castra?

Appendix 2: Table of magnetic particles found in 100g samples from known Roman features and other locations compared with Medstead.

Location	Feature	Magnetic particles in a 100g sample
Rural Roman road at Barcombe villa samples taken at 1m intervals	Ditch	2
	Road edge	12
	Road surface	4
	Road surface	6
	Road surface	0
	Road surface	16
	Road surface	0
	Road edge	10
	Ditch	16
	Berm	12
Roman side road at Ewell	Ditch	14
	Road surface	14
Modern road	Road surface	36
Modern garden	Soil on chalk base	6
Roman furnace at Flexford	Gully near hearth	100
Medstead Roman road samples taken at 1m intervals	North edge of road	8
	Road surface	6
	Road surface	3
	Road surface	13
	Road surface	8
	Road surface	7
	South edge of road	12
	Berm	1
	Berm	2
	Berm	1
	Berm	1

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