

ROMAN ROAD

RESEARCH — 3

Stane Street:

location of the posting-stations

By CHAS. E. TITFORD

NO ARCHAEOLOGICAL evidence has yet been uncovered to confirm the site of the nearest posting station to London. There is thus all the more reason to consider the very considerable amount of evidence of a different character that is available in order to arrive at a reasonable conclusion pending final confirmation by the spade.

Twenty years ago, I. D. Margary advanced the suggestion that this nearest station may have been at Merton. Having referred to Hardham and Alfordean which are now accepted as being the sites of the first two stations out from Chichester, he wrote as follows:¹

"As these two occur 13 and 24 5/8 miles from Chichester, it is certain that there were two more nearer London. No traces of them have been found, as would probably have been the case were they still in open country and it is therefore concluded that the most likely sites for them are at Dorking and Merton 11 3/8 and 26 1/8 miles further on, where the towns would have destroyed all surface traces. Confirmatory evidence may yet be dug up during building operations, but the distances and the sites render the supposition probable." Then later, presenting the case for Merton, he wrote: "The site of the Abbey lies alongside this line (as drawn on his map) upon the west, close to the Wandle; it is thought to be the most probable site for the fourth and last posting station, being 14 3/4 miles from the assumed Dorking site and 7 3/8 miles from London Bridge, quite a likely division of the route, since it was usual to make the final stage a short one. The early occupation of the site of the Abbey would account for the obliteration of all trace of the station."

On each of the points raised there is evidence available. Of outstanding importance is the question of distance, i.e. mileage, as this is a form of evidence that does not call for archaeological confirmation. It is a factor that remains unaffected by circumstances or time. Distances are today what they were to the Romans and can be considered from the point of view of those who planned the Street. Their aim would naturally be, as far as circumstances permit-

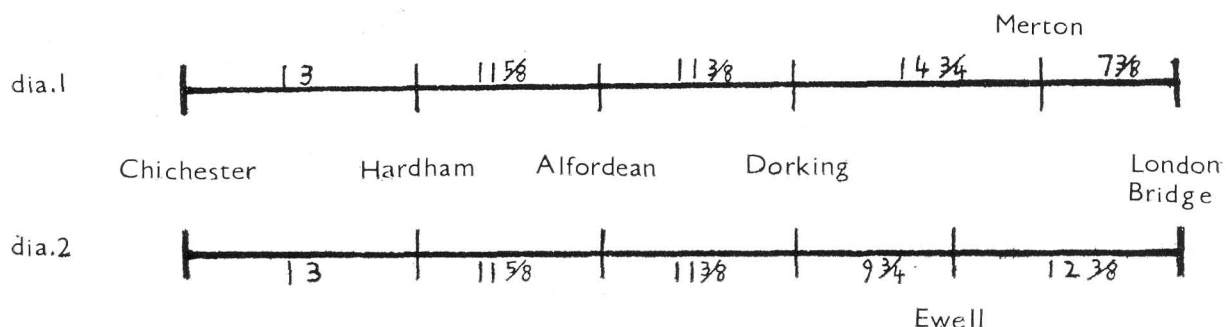
1. I. D. Margary, *Roman Ways in the Weald*.

ted, to space the stations out at regular intervals along the route, taking into account however any physical features that might affect adversely or otherwise those who would be using the highway.

Thus, to be specific, they would take into account the fact that the stage immediately after leaving Dorking would involve crossing the Mole and then ascending and crossing the Downs. As the rest of the course of the Street to London would present no difficulties of this character, their natural plan would be to make the distance between Dorking and the next station comparatively shorter than the last into London. Diagram No. 1 indicates the relative mileages along the route if the fourth station were at Merton.

The first station out from Chichester was 1 3/8 miles greater than average and the second exactly average, with the third to Dorking a trifle less than average (a quarter of a mile). But the next, the difficult stage over the Downs from Dorking to Merton, far from being less than average would have been 3 1/8 miles greater; and, indeed, the longest stage of all along the whole route from Chichester to London. That the last stage should be only half the length would hardly recompense the fatigued traveller. What is more, the justification advanced for making it so short leaves out of account the fact that traffic along the Street was not in the one direction only. The last stage into London was the first out. There could be little attraction for the traveller to travel only 7 5/8 miles to the first station with the knowledge that he would have to travel twice that distance on the difficult stage to the next at Dorking. That the planners would have sought some more appropriate site for the nearest posting station to London is obvious, and the most likely alternative site that suggests itself is Ewell where there is evidence of a large Roman settlement. Sited here, the stages would be as shown in Diagram No. 2

The first stages to Dorking would, of course, be unaffected, but the difficult stage over the Downs between Dorking and Ewell would be 1 7/8 miles less than average and the shortest on the whole route; yet the stage out of and in to London would be only three-quarters of a mile more than average and less than the last into Chichester. The advantage of siting the station at Ewell rather than at Merton could not



have been other than apparent to the planners; the only possible reason that could have led them to site it at Merton, is either that Ewell was not suitable for the establishment of a station or that Merton offered some advantage so marked as to outweigh the serious disadvantage of distance. These considerations direct attention to the topographical character of the two areas.

Merton is in an area that even today is marshy in character and must have been even more so in Roman times. Indeed, there is archaeological evidence that in this area the course of the Street was in fact slightly diverted in order apparently to find a suitable crossing of the Wandle². In marked contrast, the course of the highway through Ewell is on high, dry ground with ample space on either side for the establishment of as large a station as might have been required to accommodate the traffic likely to use it. A further consideration the planners would need to take into account is that a station has not only to be erected, it has to be maintained and provisioned also. From this point of view, Merton in its marshland on London Clay was poorly endowed. On the other hand, there were few areas along the whole course of the Street as well endowed by nature as Ewell in these respects. In addition to its very ample supply of crystal clear water for man and beast, it had wide stretches of pasture for cattle, meadow for the supply of hay, woodland for timber and pannage for pigs, denes for sheep shearing and arable for grain crops. A station sited in Ewell could be self-supporting for the satisfaction of all its primary needs requiring little to be transported to it from sources outside its own immediate area.

Turning to archaeological evidence, we have only the assumption that at Merton, the building of the Abbey is accountable for the fact that so little evidence of Roman settlement has been found. This can be neither proved nor disproved; yet even if it be accepted, it still does not greatly help. Stane Street and its stations were in use over a period of

some three centuries. Whatever the size of the original station enclosure, it is hardly acceptable that during three centuries of occupation the area could have been confined strictly within the station's bounds. The progressive exploitation of the resources of the area would have led to some expansion. Leaving out of account evidence outside the village, at Ewell archaeological evidence of Roman occupation extends over an area of little short of a square mile; however large may have been the area occupied by the Abbey, it cannot have been of that dimension. Further, that the Street ran through Merton is deduced from the fact that a line drawn from a known site in Morden Park to another in Wandle Park would pass close to the Abbey whereas actual sections of the Street have been uncovered in Ewell.

This leaves one final question to be asked. If on the grounds stated it be accepted that the nearest station to London was not at Merton and yet not at Ewell, then where else might it have been? This question is not as unanswerable as might appear. Had it been anywhere south of Ewell, it would have made the fourth stage unnecessarily short at the expense of making the fifth unnecessarily long; had it been north of Merton, it would have made the fourth stage quite hopelessly long and the fifth absurdly short. The only alternative would thus be somewhere along the 4½ miles between Ewell and Merton; namely in north Cuddington, north Cheam, north Sutton or Morden. In none of these areas have evidences of Roman settlement been found; and if they should be later, the topography of none of these areas is suitable for a posting station.

Recently, the present writer sent a resume of the above evidence to Mr. Margary and he has kindly consented to the quotation of his reply. He wrote:

"I agree that quite a strong case can now be made out for the posting station to have been at Ewell rather than at Merton. So much more has been found out about Ewell since Winbolt's day although so far nothing definitely like the actual station enclosure has yet been found. I think your

2. D. Imber, "Stane Street at Clapham," *the London Archaeologist* 1, 12.

argument on the actual stage distances seems quite sound. There is of course no doubt that there was a Roman settlement at Ewell large enough to have metalled side streets and its situation would have been quite suitable for the station."

As it is undesirable that anything should be read into this that may not have been in Mr. Margary's

mind when he wrote it, no comment will here be offered. It may, however, be pointed out that, unfortunately, apart from a few fairly old shops in the High Street, the rest of the Ewell area is residential, built up mostly during and since the inter-war period. So opportunity for excavation on any but a very limited scale is unlikely to arise for at least fifty years or more to come.

Analytical comments on the Highgate Pottery

Tests Made on the Local Clay

SAMPLES of clay were taken at a depth of 3-4 feet from the area immediately surrounding Kiln 2. When dug, the clay was a bright greenish-ochre colour, fairly clean and very plastic. Preparation was minimal: the more obvious foreign bodies were revealed by thin-slicing and picked out by hand. It was then prepared by "wedging": a technique of mixing to ensure even consistency and to remove air.

Although more plastic than the standard red earthenware obtainable from potters suppliers, the Highgate clay threw and modelled well. From the "leather" hard to the dry state it shrank by 12.5%. When fired to 750°C it showed no shrinkage between the dry and the fired state. Test pieces were fired at various temperatures from 750°C to 1080°C: the colour changed to a brownish-red at 750°C becoming a brighter orange-red at the higher temperatures. The pieces were passed on for thin sectioning (see below).

A fresh series of tests was then made using different proportions of the sand which is present in quantity to the south of the site. These were measured to compare shrinkage rate.

The clay was first reduced to a slurry and put through a 100 mesh sieve. Three samples were prepared: one of the sieved clay with no additive, a second containing 10% of sand, and a third containing 20% of sand. (The clay and sand were completely dried out to ensure accurate weighing.)

The three samples were then fired to 900°C. None showed any shrinkage between the dry and the fired state. They were then fired to 1060°C. It was found that the proportion of sand had made no difference to the rate of shrinkage in the firing, (there was a shrinkage of 4% in all three tests).

These tests were in no way intended to reproduce the work of the Roman potters since their methods involved using wood for fuel which produced a "reduced" atmosphere resulting in the familiar grey or blacking colour. The samples were "clean" fired in an electric kiln and were undertaken for the purpose of discovering temperature resistance, degree of shrinkage and possible additives. Thin sections have been made for comparison with sherds of Highgate Ware.

It is hoped to make further tests and possibly to build a simple kiln of the type found on the site so that the clay can be fired under conditions approximating to the Roman methods.

MARY LAMBERT

Statistics

THE Highgate site poses an extreme example of a problem common to most archaeologists—it reveals a great quantity of excavated material, containing a vast amount of information, which will be wasted if it is not sifted and interpreted. The statistical approach is of value because, by dealing with attributes of the pottery which can be measured or counted, it can reduce part of our mass of information to manageable proportions. Also, we can reduce our work-load by taking a sample of the available material, and still have confidence in our results, provided two conditions are satisfied. Firstly, the attributes we chose must be relevant, and secondly, the sample must be representative and large enough for the statistician to work on.

The attributes used are broad type and rim diameter, which are both relevant to problems of how the pottery was produced and what it was used for. The theory of sampling does not allow us to say how accurately a particular sample from various parts of the dump, and from some of the pits, we have avoided the dangers of bias which might come from examining just one level or just one area of the site.

Further statistical work is progressing on two fronts. The first is an attempt to divide up the broad types so far used into smaller natural groups, and the second is a study of the relationships between the different types to see what can be deduced about the site as a factory.

C. R. ORTON

Thin Sectioning

THE technique of thin sectioning in the study of ceramic material is derived from that used by the mineralogist in the study of rocks. The thin section is made by grinding one surface of a sherd's section perfectly flat with carborundum powder, cementing that surface to the microscopic slide and then grinding the specimen away until it is transparent.

In thin section the Highgate pottery is seen to contain a large amount of sand embedded in a matrix of clay. The clay has too fine a structure to be adequately resolved with the optical microscope, so the work is concentrated on the minerals found in the sand. The most common is quartz, the majority of which is present in crystalline form although a small proportion appears as chert. The second most common mineral is feldspar in various forms, most of this is orthoclase, with some plagioclase and a very small amount of microcline. Muscovite