

A NEW ROMAN ROAD TO THE COAST

I. THE ROAD FROM EDENBRIDGE TO MARES- FIELD THROUGH ASHDOWN FOREST.

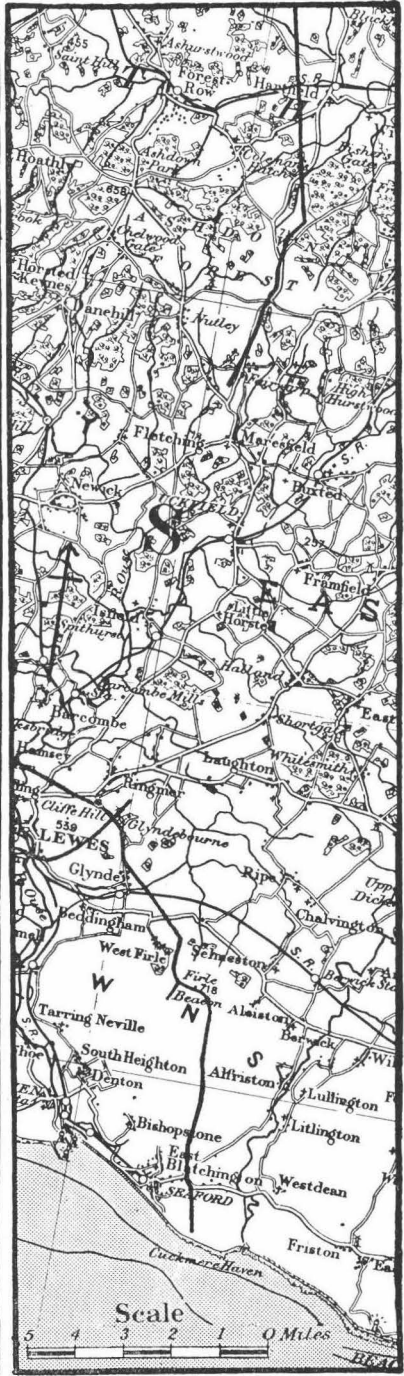
BY IVAN D. MARGARY, F.S.A.

DISCOVERY. The discovery of this section of Roman road must be attributed mainly to a fortunate chance, and is a striking illustration of the value of air photography. During the summer of 1929 I arranged for certain areas of Ashdown Forest to be photographed from the air, in the hope that the nature of some old tracks would be elucidated and that other antiquities might be revealed. The photographs were taken at an altitude of 4000 ft. in an evening light, so that the shadows cast by banks or in sunken tracks would be clearly shown.

This is not the place to describe the individual sites disclosed by the photographs, some of which have already been dealt with in *Sussex Notes and Queries*.¹ The tangles of mediaeval hollow ways and the evolution from them of our modern roads can be very clearly seen and would form an interesting study in themselves.

Among the areas photographed was the high north-south Forest ridge from Five Hundred Acre Wood (Buckhurst), by King's Standing to Camp Hill. In the northern half of this section, and especially clear between the Wood and Greenwood Gate (where the bridle road from Gills Lap to Crowborough crosses the Groombridge—Maresfield road), two very distinct

¹ *S.N.Q.*, III., p. 71, 72, 101.



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parallel marks were seen. They appeared narrower and much more regular than the usual marks due to hollow ways, were absolutely straight and parallel, and it was noted that they were in places obliterated by typical hollow ways. The great width of the strip (62 ft. on the ground) made it seem very doubtful whether an ancient road could be thus indicated, and my first visit to the line (in October, 1929), with the photographs as a guide, was a decidedly exciting experience, although tempered with some initial scepticism.

The lines proved to be shallow ditches about 4 ft. wide, while an agger or slightly raised causeway, generally some 18 ft. wide, occupied the centre of the 62 ft. strip. Between Greenwood Gate and Five Hundred Acre Wood the road is roughly parallel to and about 80 yds. west of the Groombridge road, but, on reaching a point 400 yds. south of the Wood, it makes an abrupt turn of 134° (i.e. the angle which the two alignments make with each other), and starts upon a new straight alignment heading directly for Edenbridge. The first 200 yds. of this alignment are especially clear, and form perhaps the finest visible portion of the road, at any rate upon the Forest. It is, indeed, fortunate that this is so, for upon this portion more than any other hung the key to the elucidation of the whole.

Without at this point reviewing the evidence in detail, it seemed clear that we had stumbled upon an exceptionally fine remnant of a Roman road right in the centre of an area where none was previously known to exist, and which had indeed been regarded by many former archaeologists as a trackless and impenetrable wilderness. The remains so far discovered were inspected by a number of Sussex and Surrey archaeologists, who all supported my view as to the Roman character of the road, and it was mainly the encouragement thus afforded that led to the continuance of an intensive search for traces of the road further to the north across country that at first sight appeared devoid

of all traces of a Roman alignment, though in the end it has yielded abundant evidence of a most satisfactory, definite, and indeed concrete character.

GENERAL SITUATION. The three miles of straight road across the wide flat valley of the River Eden at Edenbridge had long been accepted as a Roman Road, and it is so marked upon the 1872 Edition of the six-inch Ordnance Survey Map. Further north upon the Downs the portion of the Kent—Surrey county boundary that runs in a straight line for $4\frac{3}{4}$ miles between Wickham Court, near Addington, and Coldharbour Green, on the escarpment of the Downs above Titsey, is now also officially accepted as a Roman road, and it is of importance to note that these two straight sections are practically parallel, the northern section being on the bearing 14° , and the southern section 13° , W. of north (true), although the former would lie about $\frac{3}{4}$ mile west of the alignment of the southern (or Edenbridge) section if this were produced northward. The linking portion between Titsey and Crockham Hill has recently been explored in detail by Mr. James Graham, and we have, therefore, an accepted stretch of Roman road 14 miles long extending from West Wickham to a point $1\frac{1}{2}$ miles south of Edenbridge.

The northern alignment, if continued to London, strikes the Thames at Rotherhithe, and would meet Watling Street in the neighbourhood of New Cross, just at the point where the arc described by Watling Street, between Greenwich and Southwark, begins to turn definitely north-westward towards London Bridge. This is obviously the very point from which it would be most convenient to start a south-eastward radial road from London. It makes the greatest possible use of Watling Street before diverging, and in a very similar manner to that which appears to have been adopted in leading the more westerly Streatham—Godstone road out of Stane Street. The point of junction is at the meeting of New Cross Road, Hatcham Park Road (mentioned by Codrington as the probable

course of Watling Street here²) and Pepys Road, 450 yds. west of New Cross Gate Station. The few yards of New Cross Road that lie between Hatcham Park Road and Pepys Road are approximately in line with the latter, and it is significant that this alignment is on the correct bearing of 14° west of true north. There can be little doubt that Pepys Road marks the northern commencement of the route.

South of Edenbridge the line of the road is plain as far as Cobhambury, a small farm on the northern slope of the Dry Hill ridge, the principal ridge separating the Eden from the Medway, but beyond this it was completely lost. Dry Hill Camp (sometimes called Lingfield Mark Camp) lies about $1\frac{1}{4}$ miles west of the alignment upon this ridge. It is apparently a large Early Iron Age hilltop camp with triple ramparts, which in 1810 yielded one of the finest gold signet rings of Roman pattern to be seen in the Roman Britain room of the British Museum. It may be that the presence of this large camp so close to the apparent end of the road had prevented any search being made for its continuance further south. Apart from a few minor finds at Edenbridge and the record of an urn burial near Cowden in a position now lost,³ there appear to have been no indications whatever of Roman occupation in the district until the well-known Roman ironworks at Oldlands, near Maresfield, are reached. Any road following the Edenbridge alignment to the Forest ridge at Five Hundred Acre Wood would have to traverse nine intermediate ridges and cross the Kent Water, the Medway, two other considerable streams, and a number of minor brooks. It may well have seemed unlikely that a road would be constructed through such difficult country in the absence of any considerable traces of occupation.

Yet some evidence for the reason of the road's construction, though it may not have been the sole purpose, is visible in the road itself and in the country

² *Roman Roads in Britain* (3rd Edition), p. 46.

³ Ewing, *History of Cowden*, p. 15.

near its course. That purpose was the iron mining. Traces of iron smelting, the relics of ancient bloomeries, have been found by Mr. Ernest Straker⁴ at the following points along the route:—Beechenwood, Birchenwood and Waystrode Farm (Cowden), Castle Hill and Beeches Farm, Brockshill (Holtye, Hartfield parish), and Cotchford Farm (Hartfield). To these may perhaps be added: Smith Hook (Hever parish), Beeches Farm, Dry Hill (Lingfield), Basing Farm (East Grinstead), and Mount Noddy (Cowden), all within 1½ miles of the road and so within its sphere of influence.

The iron slag (or cinder, as it is called locally) produced by the primitive methods adopted in Roman and pre-Roman times is quite distinct in type from that which is found on the sites of the mediaeval and later workings so common all over the Weald. The iron was less completely extracted, and the slag still contains so large a proportion of metal as to be practically cast iron itself. It is thus very heavy and solid, and forms an ideal material for road-making, a very important consideration in a district where hard stone is conspicuously lacking. The road was found to have been constructed entirely of this cinder for long distances, and the distinctive character of the material proved a most valuable aid in tracing its course, for one could be quite certain of the artificial origin of small remains which could only have been regarded doubtfully had they been of natural stone.

It is not surprising that only very fragmentary traces of the ancient bloomeries are now to be found. The amount of cinder taken from them for the construction of the road must have been colossal, and would obviously have removed nearly all the evidence. It affords valuable proof of the extent to which iron was worked in the district before or just at the commencement of the Roman occupation, for it seems to me unlikely that a road of such good engineering, construction and alignment so near to London could have been built late in their occupation, nor is it likely

⁴ *Wealden Iron*, pp. 228, 230, 252.

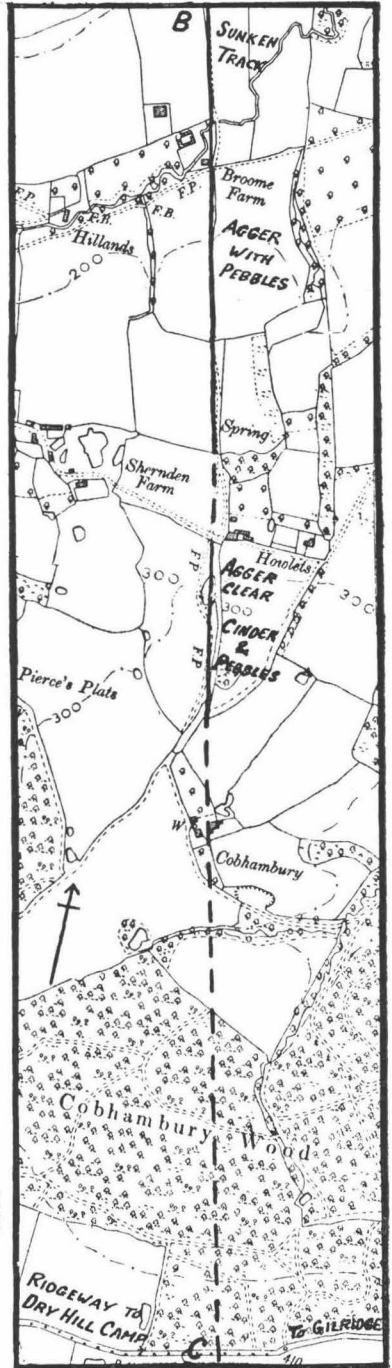
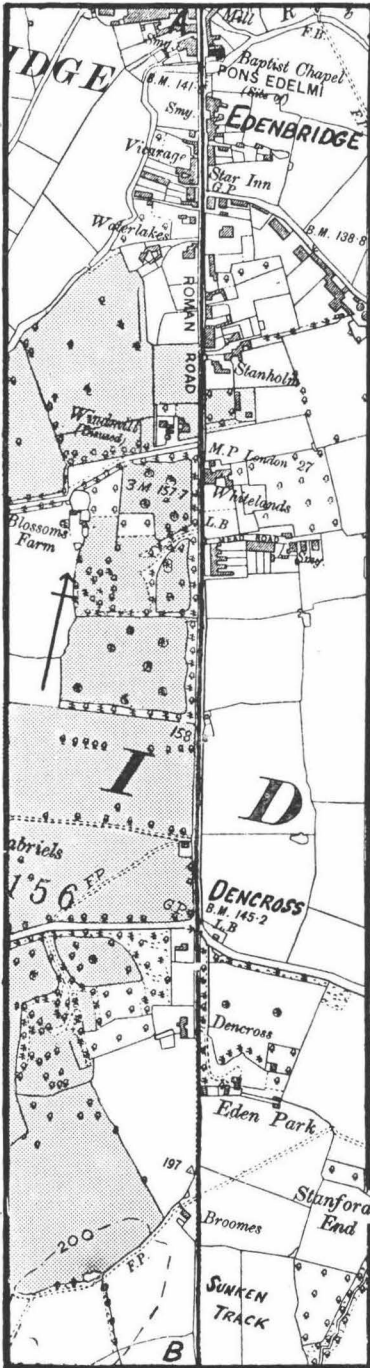
that such an extensive and valuable industry would have been left for long un-exploited. The probabilities surely point to the early driving of a military road through the heart of the Sussex iron district, to bring it under efficient control and ensure easy transport for its products.

I should like here to acknowledge with gratitude the ready help and advice I have received from Mr. Straker on every point relating to the iron industry. My knowledge of the types of cinder is due entirely to him, and he has inspected samples of it from every part of the road, personally visiting nearly all the iron-paved sections with me and being present at several of the excavations. In all references to cinder that follow it is to be understood that samples, or frequently the deposits themselves, have been seen by him and agreed to be of ancient type.

DETAILED SURVEY, EDENBRIDGE—MARESFIELD.

As it was considered likely that a road was to be looked for between Edenbridge and the Forest Ridge near Five Hundred Acre Wood, the first step was to trace a hypothetical continuation of the known Edenbridge alignment and see what could be found. I was fortunate in securing the help of Captain W. A. Grant, R.E., who kindly traced the alignment accurately across the six-inch maps for me. For this purpose the centre of the modern road at Marlpit Hill, north of Edenbridge, and at Dencross, were chosen as the best fixed points available upon the known portion of the alignment, although it is, of course, unlikely that they were the actual points from which the alignment was originally set out, Dencross especially being on low ground and probably not even a cross-road at that time. Still, this alignment has served as a valuable working base, although it is not quite on the real major alignment.

Captain Grant's prolongation of the Edenbridge alignment reaches the Forest Ridge 200 yds. to the west of the line actually occupied by the Roman road

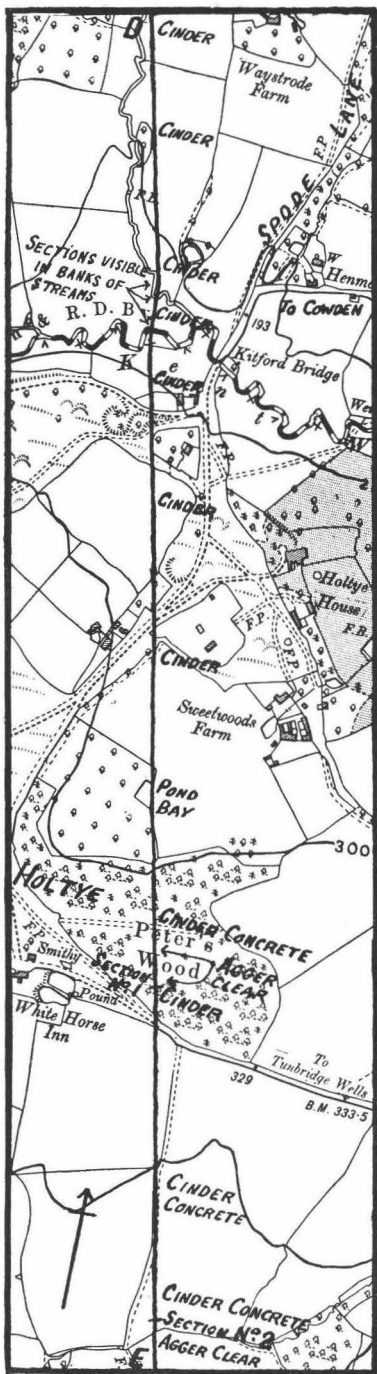
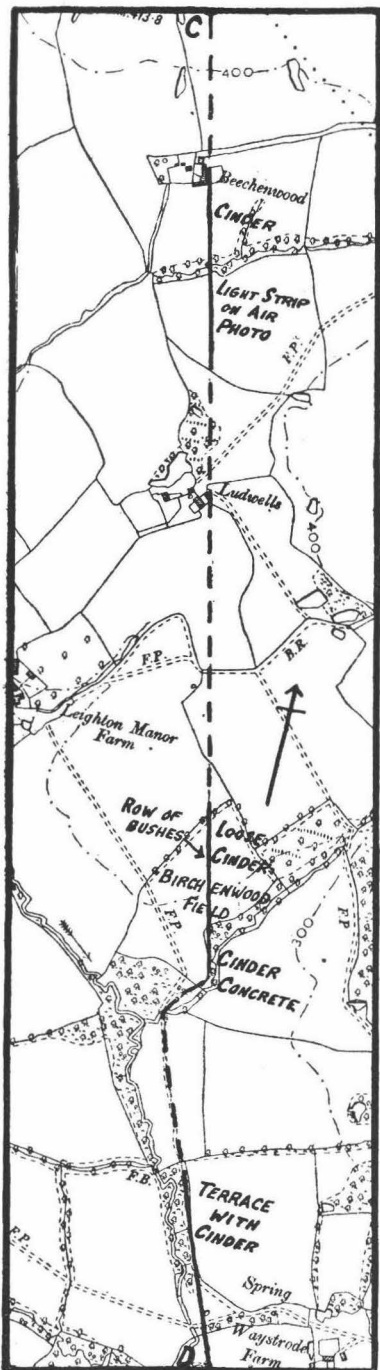


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there, and we have accordingly to seek for evidence somewhat to the east of the hypothetical line. A survey of the ground resulting from many visits to all parts of the line has secured this evidence just where it should be found, and the exact course of the road will now be described in detail.

The modern high road from Edenbridge follows the exact alignment for 1300 yds. to Dencross, where it diverges south-east to Cowden and south-west to Marsh Green and Lingfield. The line of the Roman road is continued for 400 yds. to the top of a minor ridge by a metalled lane. The descent to the stream at Broome Farm is marked by a cart track lying in a slightly sunken strip about 18 ft. wide, perhaps due to removal of the metalling, although the track is not entirely straight, and for the southern half the true course would seem to lie in the hedge bordering its western side. After passing Broome Farm the first distinct traces of the road itself can be seen. In the field immediately south of the farm the cart track runs on a raised strip 20 ft. wide along the west side of the hedge. Ploughing in the field east of the hedge has probably carried soil down the slope above the road on that side, but it is clear that the cart track lies upon a definite agger, raised some 20 in. on the west side, and pebbles can be seen in it. The agger ends abruptly at the south gate of this field, and in the next two fields approaching Howlets there is no trace, due no doubt to disturbance by the numerous springs there.

At Howlets the cart track enters an enclosed lane, and on the west side a conspicuously raised strip, overgrown with trees and bushes, is evidently the agger. Several large pits have been dug in it, and not much stone can be seen, but pebbles are to be found all along it together with several pieces of cinder, the first indications of iron to be met with on the course of the road. These traces end just where the lane curves westward away from the line 100 yds. before reaching the orchard of Cobhambury. The line passes right through the buildings of Cobhambury and on through



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Cobhambury Wood, but no traces can be found until the crest of the main ridge is crossed about 400 yds. west of Gilridge corner, and the farm of Beechenwood is reached. Here a field division running southward from the south-east corner of the farm buildings to a small stream proves to be a strip full of cinder, and, what is still more significant, the exact continuation of the line of this strip south of the stream (which flows in what is now a very deep gully) is visible in air photographs right across the next meadow as a distinct light strip between darker strips, a clear indication of the buried road, although nothing unusual is actually visible in the meadow. These remains are exactly in line with the last certain traces just to the north of Cobhambury.

The southward continuation of this line passes right through the easternmost corner of the main farmyard buildings of Ludwells, but there is no sign of it in the fields north and south of the farm. It crosses the lane to Leighton Manor Farm, 50 ft. east of the sharp northward angle that this lane makes in descending the hill towards the farm, and after cutting diagonally across two fields east of Leighton, enters Birchenwood Field 30 yds. west of its northern corner. This field has reverted to scrub and brambles, but the line of the road is indicated on the air photographs by a very prominent row of bushes growing exactly where the alignment of the Beechenwood section would strike this field. In addition to this, cinder is once more found all along the line through Birchenwood Field, while right in its south-eastern corner, exactly on this line, there was a bed of cinder solidly rusted together. It may be of interest to record that this mass was examined by Straker⁵ and myself in 1929 purely from the iron-working point of view, and before we had any idea that a Roman road might be involved. Straker was much puzzled by the solidly-rusted nature of the mass, like iron concrete, quite different from the usual heaps of cinder at old working sites. The cinder was,

⁵ *Wealden Iron*, p. 228.

unfortunately, removed by the farmer for road material when we had examined it, but from the abundant evidence of such concrete that will be described below we have little doubt that this mass formed part of the road at this point.

The line now enters somewhat difficult country, for after crossing a minor stream below Birchenwood Field, it must follow a rather steep-sided gill which runs along its course for 1000 yds. to the Kent—Sussex boundary at Kitford Bridge. For the first 200 yds. after crossing the stream at Birchenwood no traces are visible, although a cart track from Leighton to Waystrode Farm runs through the field. At the end of the field the track becomes an engineered terrace 30 ft. wide on the side of the gill, and is metalled with ancient cinder. It happens that the eastern hedge of the field we have just crossed forms a direct continuation of the alignment from Ludwells, but I do not think it can be considered as part of the road because (a) it would entail a very awkward and avoidable rise from the metalled section found in Birchenwood Field, (b) the descent to the metalled terrace further south would be just as difficult, (c) there is no sign of cinder along the hedge nor of any ascent or descent at the ends, although the fall of some 25 ft. is very steep. It is, of course, possible that the appearance of the gill has altered somewhat in detail since Roman times.

At the south end of the terrace the sunken lane from Waystrode cuts across the route, but beyond it there are distinct traces of the terrace again along the west side of the field adjoining the farm. The road skirts the eastern bank of the stream to a point where it makes a very sharp U bend 70 yds. before its confluence with the Kent Water. The U marks the position of the road, and the cinder metalling can be plainly seen as a layer 6–12 in. thick in the eastern bank of the west limb of the U at a depth of 2 ft. 6 in. below the surface. A clear section of the road is visible in the south bank at the base of the U. The metalling is 5–10 in. thick under 2 ft. 6 in. of top soil,

and the width about 37 ft. The agger is traceable from the bank of the stream, and further clear sections are again visible in both banks of the Kent Water (only 50 yds. distant). The metalling of cinder in each bank is 9–12 in. thick in the central portion, tapering off towards the sides of the road. The width is at least 30 ft. in the north bank here, and about 25 ft. in the south bank. It was probably a wide embankment across the valley, perhaps with a single bridge to take both streams, for it is remarkable how they now bend towards each other just above the road crossing. It is clear that 2 ft. 6 in. of alluvium has accumulated above the road level in this part of the valley, although the road would no doubt have been on a raised causeway in Roman times. The Kent Water is crossed 100 yds. (direct) west of Kitford Bridge, and the agger is visible running up from this to the lane leading to Furnace Pond, which it crosses 50 yds. west of Kitford Cottage, and cinder is found on it.

It is of interest to recall the strong local tradition that Spode Lane (from Gilridge to Waystrode) is a Roman road. There is now no doubt that Spode Lane, though probably not itself Roman, is the direct successor to the Roman road which lay some 300–500 yds. further west.

Cinder is found on the line in the fields from Kitford to Peter's Wood; there seems to be a bed of it just on the east side of the Holtye—Kitford road opposite some cottages, at a point 450 yds. south of Kitford Bridge, where a lane leads eastward to Sweetwoods Farm, and the bay of the pond just north of Peter's Wood is also on the line, though I could only find traces of cinder upon it.

Through Peter's Wood the traces are, however, as plain as any we have yet seen, for the agger is distinctly visible as a gentle swelling of the ground some 35 ft. wide, which becomes even clearer as the southern side of the wood is approached. It is thickly covered with loose cinder, and the original surface can be

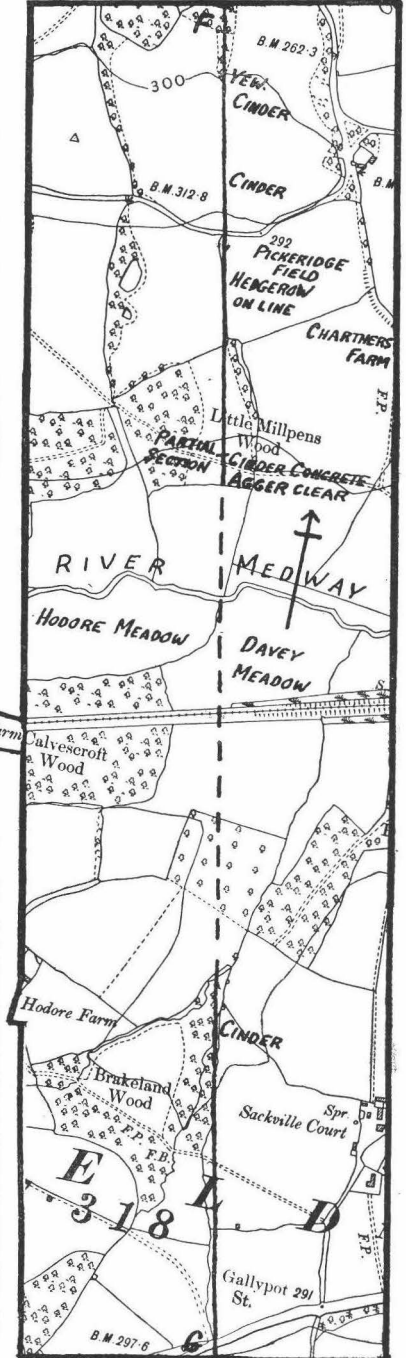
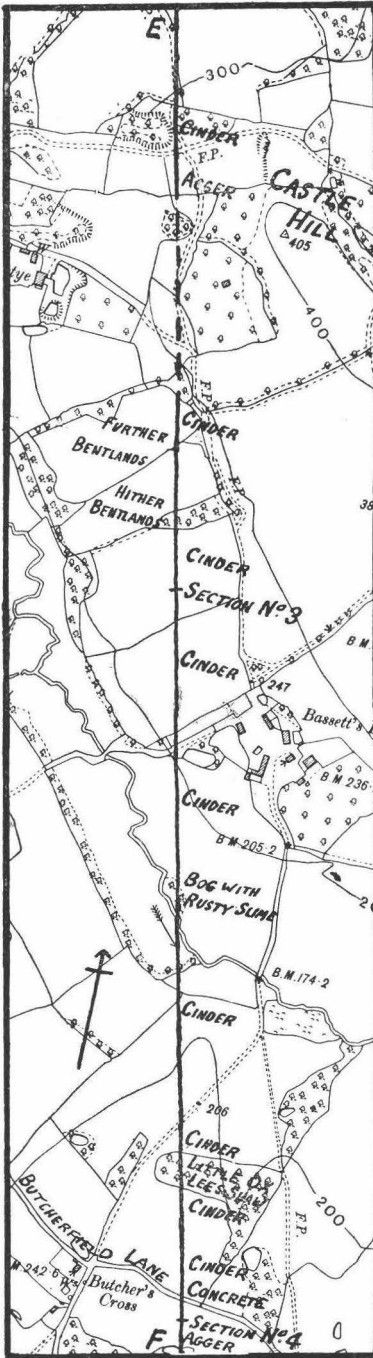
disclosed at about a foot depth, composed entirely of small pieces of cinder. The width is here about 12 ft., and the thickness and solidity varies considerably, due no doubt to disturbance by cultivation. (See Fig. 1, Section No. 1.) The agger can be clearly seen right up to the point where the Holtye—Tunbridge Wells road is crossed, 200 yds. east of the White Horse Inn. It cuts through the eastern side of the field south-east of the inn, but all trace of the agger is obliterated there save for loose cinder. The line enters the cart track leading southward from Peter's Wood to Castle Hill exactly at the point where a kink in the hedge bordering the west side of the track places this right on the line of the agger. Cinder at once becomes noticeable, and is in places a remarkably solid layer like concrete; indeed, it was this portion which drew attention to the exact position of this section of the road. The cart track soon bends slightly westward on approaching the stream at the bottom of the field, and the agger can be faintly seen continuing the direct line to the stream. It was excavated here (see Fig. 1, Section No. 2), and found to be composed of a solid mass of cinder, like iron-hard concrete, 15 ft. wide and a foot thick. Cultivation had, however, proceeded right over this, and the farm bailiff informed me that on one occasion, after a thunderstorm, the line of the agger was plainly indicated by a strip of corn blasted by the lightning, which had been attracted there by the iron slag layer. He also stated that the trees in the gill near Waystrode down which the road runs seemed especially prone to be struck by lightning, so much so indeed that his children were warned not to go there during storms. Across the stream the agger is very plainly visible as a cambered strip through the field, gradually disappearing under the hedgerow, which resumes its line near the top of Castle Hill. The line crosses the western shoulder of the hill between two large pits, and cinder is found in the strip between them under the footpath, while the agger is faintly visible again just beyond. The ground has evidently been much disturbed in

the next field and orchard east of Puckstye Farm, and no traces have so far been found.

On entering the land of Bassetts Farm, however, cinder is again found thickly under the turf, scattered, it is true, but most abundantly in the immediate vicinity of the line, which enters the field (Further Bentlands) almost exactly at its northern corner. This field and Hither Bentlands adjoining it have been heavily ploughed, to judge by the well-marked lands, and it is natural that the road should have been destroyed, but in the next two fields approaching Bassetts cultivation seems to have been lighter, and the surface of the road is undisturbed there for some distance, lying about a foot under the turf. It is a very solid layer of cinder, 7 in. thick, and probably about 18 ft. wide originally, judging by the camber, but the material had spread on the down-hill side as a thin metallated layer for a further 5 ft. (See Fig. 1, Section No. 3.) The site here is exactly in line with the remains near Holtye.

It may be useful to record here an example of the risk of being deceived by too obvious clues in road-hunting. There is in these two fields a line of shallow pits running almost parallel to the road some 45 yds. to the west. I was informed that stone had been dug from them by previous owners, and this fact, together with the plausible line and the striking resemblance both in air photographs and on the ground to a dug-out road some 20 ft. wide made me fully prepared to accept this as part of the line. Examination showed, however, that cinder was conspicuously absent, holes dug in undisturbed spots between the pits revealed nothing definite, and finally the road was found, as stated, dead on the correct line, luckily quite complete, just abreast of the pits! I learned subsequently that the pits had been dug along a natural outcrop of Sussex marble or winkle-stone.

The large meadow between Bassetts Farm and the stream shows no traces, apart from scattered cinder, and the lower part has no doubt a thick bed of recent



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alluvium. It is, however, very striking to note that just where the line should cross the stream there is a boggy patch oozing red rusty slime quite different from the clean appearance of neighbouring parts of the stream. This is most probably due to the buried layer of cinder contaminating the water.

The line continues straight on south of the stream, crossing the lane from Bassetts, cutting through the western tip of Little Ox Lees Shaw, and crossing Butcherfield Lane, 150 yds. east of Butcher's Cross. It shows plainly on the air photographs as a light-coloured streak across these fields, due probably to the early ripening of the hay over the stony layer, and cinder is plentiful all along the line.

The field south of Butcherfield Lane, which bears the appropriate name "Long Streak," probably from its shape and not on account of the road, yielded the most striking remains so far examined. The agger is plainly visible for 70 yds. across the field as a cambered strip 52 ft. wide, which on excavation proved to cover a 27 ft. roadway of solid cinder no less than 16 in. thick at the crown, rusted together into a hard concrete mass. (See Fig. 1, Section No. 4.) At its southern end this fine piece of road has been destroyed by a pit and beyond this a deep gully, probably due to the action of springs, lies practically on the line up the hillside. At the top of this gully stands a fine old yew, its trunk 4 ft. in diameter, a valuable landmark in tracing the road all the way from Castle Hill to Gallypot Street, and at its roots there is much cinder. It is probable that the road ran rather on the eastern side of the gully, but there is scarcely any trace.

The line crosses this prominent ridge almost at its highest point, and scattered cinder is found along it under the turf, the air photograph showing that the field on top of the ridge has been heavily ploughed. It crosses the lane leading to St. Ives Farm exactly where the west hedgerow of Pickeridge Field descends the southern slope, and follows this to the south-west corner of this field. It then passes down the middle of

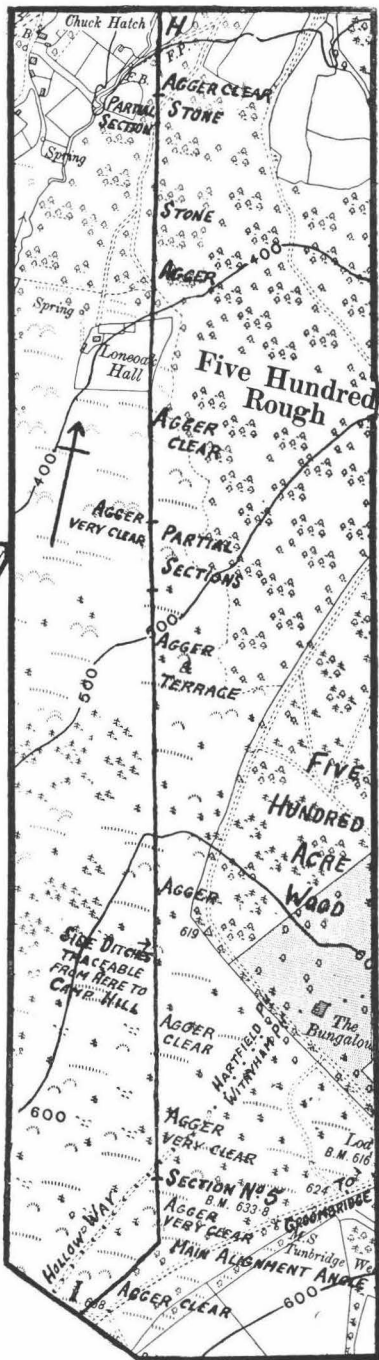
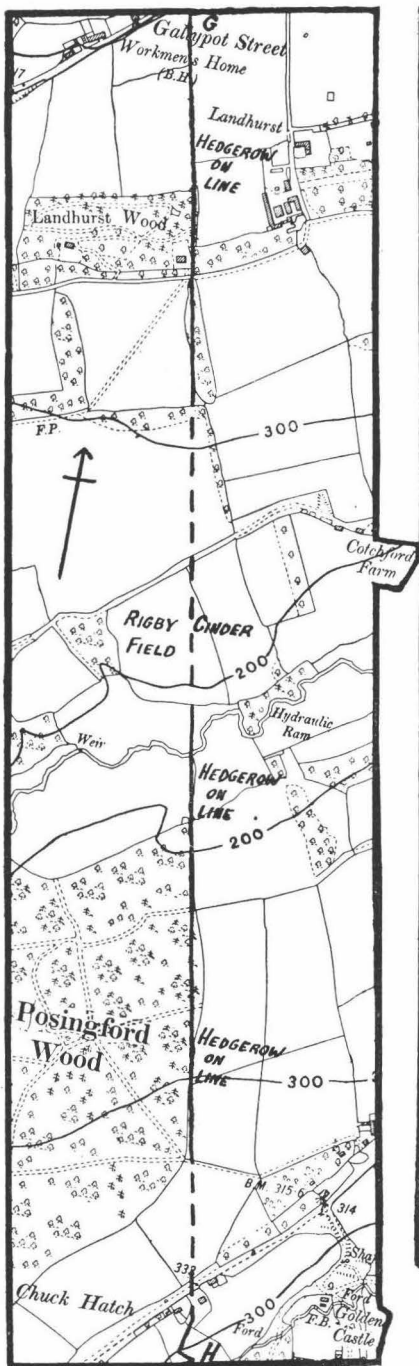
the narrow Little Mill Ponds field, which has on its eastern side a gully and spring very similar to that above Long Streak. In the lower half of this field the agger is plainly visible as a cambered strip, 42 ft. wide, along the centre of the field, and ending abruptly at the bottom. The metalled road was found to be 14 ft. in width here, of solid cinder about a foot thick.

We are now approaching the Medway, which flows past the next field (called Mill Ponds). The line crosses the river just at the south-east corner of Mill Ponds, and at the north-east tip of Hodore Meadow on the opposite bank, runs across Davey Meadow (crossing the railway just where gates happen to be placed), through an orchard to the northern end of Brakeland Wood. A line of hedge follows it almost exactly from this point along the east side of the wood, up to Gallypot Street on the Coleman's Hatch—Hartfield road, across it, and on along the east side of Landhurst Wood. This hedge line is 1100 yds. long, and is the first considerable indication of the alignment surviving in modern boundaries since leaving Cobhambury. This section of the road has consequently received less study than it perhaps deserves, as it seemed more important to establish those sections that were entirely lost. There are, however, some indications to be seen inside the eastern hedge of Brakeland Wood, where cinder is to be found in the strip (about 15 ft. wide) between the hedge and a small stream which appears to be cutting into the metalled layer. The cinder is visible in the bank at a depth of about 3 ft.

Having fixed the line of the road south of the Medway, let us examine more closely the crossing of the river. The south bank offers a convenient spur of higher ground approaching the river in Davey Meadow; on the north bank the ground is higher, but the level of the field called Mill Ponds has been altered by cultivation, making it difficult to say just where firm ground originally ended. The actual valley bottom must have been only about 200 yds. wide at this point, affording the narrowest crossing for some distance

along the river. In this connection the name "Mill Ponds," which is applied to no fewer than four fields and four woods on the north bank at this point, deserves attention. There is not the slightest sign of a pond, large or small, in this part of the valley floor to-day, and the names look entirely meaningless. The river is, however, liable to severe floods, even in summer, and owing to the soft soil is highly charged with silt when in flood. There is no doubt that if a pond were left derelict in the valley it would quickly become silted up, as has indeed happened a little farther upstream at Lower Parrock. We may safely conclude from these field names that a pond must have existed close to them, and I think the site of it is Hodore Meadow on the south bank, right opposite two of the Mill Pond Fields. The curve which the boundary of this field makes at its eastern end is highly suggestive of a pond, and this would put the bay just at a likely point in relation to the spur of higher ground in Davey Meadow, and just where the line of the road crosses. The interest of all this lies in the suggestion that the embankment of the road, even if (as probably) it was by then buried under the alluvium, made a hard ridge, which was utilised by the pond-builders as a foundation for their bay.

The line crosses the main road at Gallypot Street, about 170 yds. west of the entrance to Sackville Court. From this point the top of the conspicuous yew on the ridge above Butcher's Cross is just visible, and is a useful mark on the course of the road. At Landhurst Wood the road crosses another prominent ridge, which probably carried a ridgeway in the neighbourhood of the existing lane, as it is a good east and west route south of the Medway. The line follows the wide shaw southwards from Landhurst Wood, but cuts diagonally across the next two fields, making for the north-east corner of Posingford Wood. Cinder has been found on the line in Rigby Field south of Cotchford Lane, and a firm strip of land, though without any signs of metalling, crosses the valley of the next



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stream exactly on the line at a point 550 yds. south-west of Cotchford Bridge. Above the line of the road this stream passes through a marshy area, and it seems possible that the ruined embankment may have led to the formation of a marsh, as has been noted elsewhere,⁶ or else that, as at the Medway crossing, some old pond was embayed upon the road foundation, and is now silting up.

The east side of Posingford Wood lies approximately on the line, and there is a sunken strip along part of it, from which stone may possibly have been removed. It leaves the edge of the wood at the point where a footpath crosses, cuts diagonally across a small field, and reaches the high road at Chuck Hatch, 50 yds. south-west of a triangular orchard. Here it has to negotiate a deep gill and the first really awkward gradient so far encountered. The descent was probably by a zig-zag, right then left, of which traces are perhaps visible on the steep hillside. The ascent is easier and merely a stiff pull. It is curious that they troubled to make this unnecessary and awkward crossing, for it could easily have been avoided by ending the main alignment here and taking the road up the Gills Lap ridge to Camp Hill. The reason probably was that this low intermediate ridge at Chuck Hatch would be invisible when surveying the line from the north, and it is almost certain that the surveyor's marks would have been placed on the main ridge near Five Hundred Acre Wood, which is most conspicuous from intervening ridges all the way from Edenbridge. At any rate, it suggests that they did not regard this gill as a serious obstacle.

The road now enters uncultivated land on Ashdown Forest, and at first the agger is very distinct, running from the gate of a small meadow above the stream through a dense grove of hollies with a sunken strip along its eastern side. The agger is here about 18 ft. wide, metalled with a three-inch layer of the local sandstone upon a bed of yellow clay subsoil excavated

⁶ Belloc, *The Road*, p. 64.

probably from the lower strip at the side. Although the agger is well preserved across much of the Forest, we do not find a trace of cinder until approaching Camp Hill, the local stone being always used.

On emerging from the hollies it is destroyed by a maze of tracks leading to Loneoak Hall (a mysterious lonely croft), but can be traced beyond them through some larger trees, the lower strip along the eastern side being here especially conspicuous. Some irregularities in the surface of the Loneoak meadow can be seen upon the line, which leaves it exactly at the south-east corner of the field.

The road can now be followed unhindered up the long hill, keeping some 50 to 100 yds. from the fringe of Five Hundred Acre Wood. The agger can be very plainly seen just after leaving Loneoak and for some 400 yds. beyond (that is, when the bracken is not waist high!). Further on it appears to have been flattened by later use, but the line can be definitely seen as a slight terrace cut out of the rising ground on the east (or Wood) side. I think the agger was largely constructed here by just cutting subsoil from the hillside to make a suitable raised camber (which is still perfect in places, notably at 200 yds. south of Loneoak), leaving a wide flat hollow on the east side, which has gradually silted up in places. There seems to be very little stone in the perfect agger here.

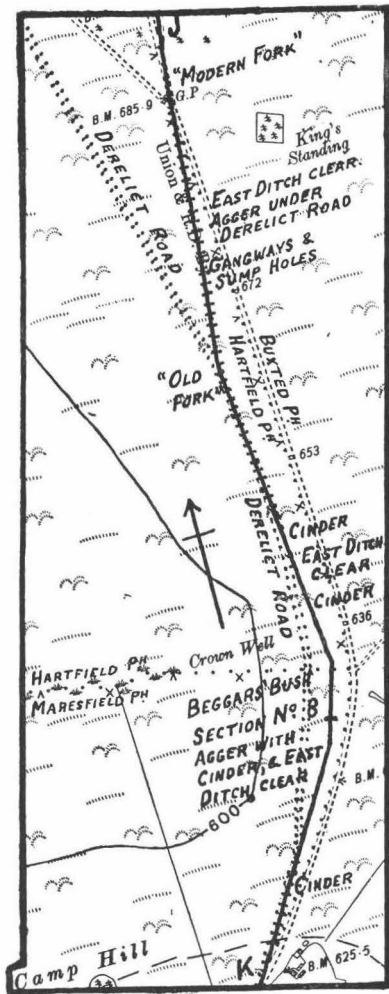
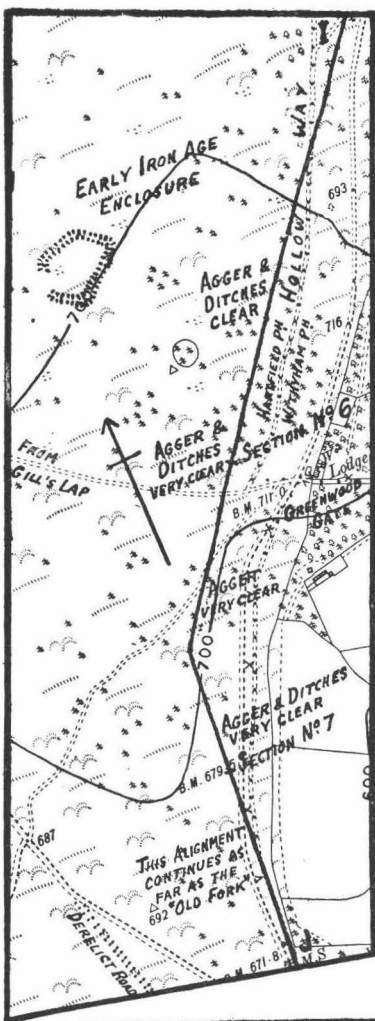
Near the 600 ft. contour the road reaches the crest, passing apparently through a very slight cutting there, partly formed no doubt in making the agger. The line passes 50 yds. west of the south-west angle of Five Hundred Acre Wood, but the road is quite destroyed near here by pits. At this point the side ditches suddenly become plainly visible, and as the road approaches the end of the long alignment it is a very fine sight, the agger clear and perfect with a distinct camber, 18 ft. wide, the ditches on each side being very plain, as light grassy strips through the dark heather about 62 ft. apart. The agger is metalled with a firm layer of rather hard sandstone 3 to 4 in. thick, but the

flat side spaces separating it from the ditches are unmetalled. (See Fig. 2, Section No. 5.)

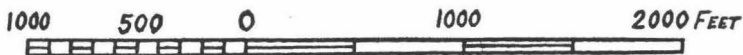
The long alignment ends 20 yds. short of the Groombridge—Maresfield road, about 100 yds. to the north of the entrance (on the east side of the road) to Heasman's Lodge. The ditches and the agger can be plainly traced right to the end, where the road makes a sudden angle of 134° , and can be traced just as plainly at the commencement of the new alignment. I have satisfied myself that the eastern ditch passes right across the southern end of the Edenbridge alignment, though it is very shallow, and this, together with the obvious turning of the agger and the absence of any indication of a road continuing the old line, seems definitely to preclude the existence of any such prolongation towards Crowborough at this point. There is, however, a distinct break, 34 ft. wide, in the eastern ditch, 10 yds. before it reaches its turning-point, which suggests the possibility of a track in the direction of Groombridge, though at present there seems to be no clear indication of a road on the Forest beyond, save for some hollow ways. This turning-point is a most interesting spot, for the agger and most of the ditches are very plain, and the actual angle of both can be observed, though unfortunately it is smothered in very thick heather.

The ditches and stony agger can now be followed continuously along the new alignment, roughly parallel with and 50–100 yds. west of the high road. They are crossed and obliterated by several tracks, including one notable hollow way, itself of ancient or at least mediaeval origin, and 5 ft. deep in places, which carries the Hartfield—Withyham parish boundary, and is clearly a successor to the Roman road. The agger is generally very slight, but the ditches are most distinct. The whole system can be very clearly seen as it approaches the cross track from Gill's Lap to Old Mill at Greenwood Gate. (See Fig. 2, Section No. 6.) Near this point an Early Iron Age enclosure, probably of an agricultural settlement, lies 250 yds. west of the road.⁷

⁷ *S.N.Q.*, III., p. 71.



SCALE OF THE DETAILED MAPS: 6 IN. = 1 MILE.



ROMAN ROAD PROVED —————
 " " INFERRED - - - - -

Based upon the Ordnance Survey by permission.

The object of this part of the route is evidently to follow the high ridge of the Forest regardless of the actual destination, and this was done by a series of at least four main short alignments designed to skirt first the valley sloping eastward to Old Mill, and then that westward towards Old Lodge. Traces of all these alignments remain.

About 250 yds. south of the track to Gill's Lap the road makes its next sudden bend of 146° , heading straight for the modern fork at King's Standing, a course which takes it over to the east side of the modern road for about 400 yds. The agger is very plain in the neighbourhood of the bend, and for a short distance northward appears to have taken advantage of a natural bank of firm sandy material, for no metaling was found on it, though it was clearly to be seen at each end of this portion. On the east side of the high road it is quite obliterated by hollow ways.

From King's Standing the course of the road lies through a tangle of tracks of different ages. Their plan and meaning have been greatly elucidated by air photographs. First there is the Roman road; parts of this have been obliterated by mediaeval hollow ways, some parallel to its line and others cutting right across all existing traffic routes (as near Beggars' Bush); then at some comparatively modern date two straight embanked roads were laid out, converging from Gills Lap and King's Standing at a point (which I shall call the "old fork") halfway between King's Standing and Beggars' Bush, and continuing past the Bush to Camp Hill; of these the King's Standing branch lies right upon the Roman road. Lastly, these straight roads, though in good condition (for they are still practically intact save for stone diggers' holes), were replaced about 1840 by the existing high roads forking at the modern fork close to King's Standing.

After all this it is really surprising that so much of the Roman road can still be traced, and indeed this is mainly due to its great width. The builders of the embanked roads were not inclined to cover the whole

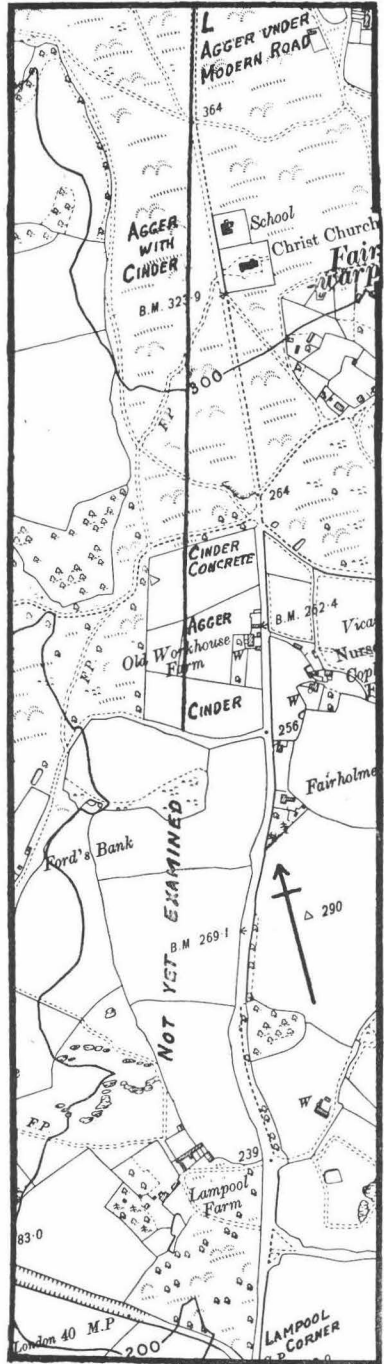
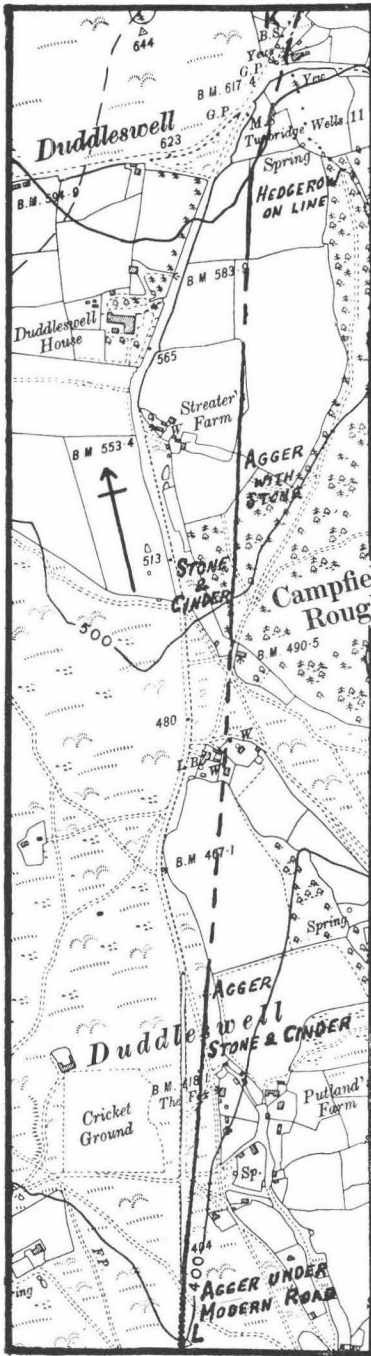
of the Roman sixty-foot strip, and so from King's Standing to the "old fork," although the agger is covered by the later road, the east ditch lies undisturbed outside and independent of the later bank. The west ditch can also be traced in places, but the ground has been more disturbed on that side. Two distinct interruptions about 20 and 45 ft. wide occur in the east ditch, 250 yds. south of the modern fork. This is of particular interest here, for it is just abreast of a site 100 yds. east of the high road where pits containing charcoal, burnt clay, bones and pot-boilers were found by quarrymen about 35 years ago, close to a cultivation area with several distinct lynchets. Close to each of the gaps in the ditch is a carefully-shaped sump-hole, or possibly a drinking-pool, which will be described below.

At the "old fork" the Roman road, traceable only by the east ditch, which is clear, makes another sudden angle of 167° , which carries it between the derelict banked road and the high road to a point abreast of the large holly clump known as Beggars' Bush (the Ordnance Maps mark "Crown Well" there), where an angle of 158° south-westward is made, but it is greatly injured here by hollow tracks. About 120 yds. further on another slight bend of 165° is made in the same direction and the road, especially its east ditch, can be traced plainly until it falls into the modern road close to the northern cottage in the north-east angle of the Camp Hill crossroads. It would have been very difficult to trace this portion of the road through the maze of other tracks, but for the fortunate circumstance that at a point about 220 yds. north of Beggars' Bush the use of cinder for the metalling was resumed and continued right to Camp Hill. It was thus easy to distinguish traces of the agger among the hollow ways when it would otherwise have been difficult to be certain about it. These tracks follow the line of the agger for some 200 yds. north of Beggars' Bush, reducing it to a knife-edge with remains of the layer of cinder visible at the top, but the east ditch is also

clearly visible for some distance here. The best remains of the road in this section lie about 70 yds. almost due south of Beggars' Bush, and about 35 yds. from the modern road (opposite telephone pole No. 76), where a footpath crosses the agger. The agger is perfect here, 14 ft. wide, metalled with small pieces of cinder and sandstone 3 to 4 in. thick, and the east ditch is very plain, though hollow ways have obliterated the other. (See Fig. 2, Section No. 8.) Sections of the metalling can be seen most conveniently in some small pits close to this spot.

Mention should here be made of the parish boundaries near this part of the route. From Five Hundred Acre Wood to Greenwood Gate the Hartfield—Withyham boundary follows the deep hollow way before-mentioned lying at the most 70 yds. to one side or the other of the Roman road. From Greenwood Gate to the modern fork at King's Standing the Hartfield—Buxted boundary follows one of the hollow ways on the east side of the high road (as marked on the Ordnance Map), being less than 100 yds. east of the Roman road near Greenwood Gate, and actually coinciding with it on approaching King's Standing. Southwards from the modern fork this boundary, and from Beggars' Bush the Maresfield—Buxted boundary, are shown on the maps as following the *modern* road (west side) right to Camp Hill. Even on this course they are at the most only about 50 yds. east of the Roman road. I think it is plain that these ancient boundaries were originally intended to follow "the road," and as this became forgotten they gradually became attached to the tracks in its neighbourhood which are the successors to the Roman road.

It seems clear that the portion of the boundary shown by the Ordnance Survey as following the modern road from King's Standing to Camp Hill cannot be part of the ancient bounds of these parishes, for the line of this new road did not exist before about 1840, and old residents still assert that the older derelict road is the true boundary. If that were so, the parish



Based upon the Ordnance Survey by permission.

boundary would have been almost coincident with the Roman road along the whole of this section.

As it was desirable to ascertain the evidence upon which the boundary on the maps was based, I asked for assistance from the Director-General of the Ordnance Survey, and he most kindly had the original records examined, and gave me the following report:

From our records it appears that at the original perambulation in 1872 of the portion of parish boundary referred to, difficulty arose as neither of the legally appointed meresmen could point out the boundary, and the Tithe Maps were not in agreement. The question was then referred to the Agent to the Lord of Ashdown Forest, Earl De La Warr. The Agent, Mr. George Edwards, Reve of the Manor, stated that the boundary as shown on the Tithe Map of Buxted, dated 1842, was correct, and the meresmen and the parish authorities agreed to it.

The boundary as now shown is thus evidently a modern compromise as a result of the true boundary having been forgotten. Perhaps this is significant, for had the line followed a well-known road, its position would surely have been easily remembered, whereas if the Roman road were the true line, this might well have been lost.

The alignment that brings the road to Camp Hill passes through the yew trees which stand in front of the cottage in the north-east angle of the cross-roads, and must have continued across the rough field in the south-east angle. Here the road meets a line of hedgerows, and making an angle of 166° starts upon a new major alignment which follows the hedgerows across Streater's Farm (a suggestive name which may possibly have the meaning "Dweller by the Street"), passing 110 yds. east of the old farmhouse. The agger is traceable as a swelling in the ground across the southernmost field of this farm to the edge of the wood called Campfields Rough. The metalling here is almost entirely of ironstone without cinder, which may account for the absence of traces along the hedgerow line. Through the south-west corner of Campfields Rough the line can be traced and a little cinder was found with the metalling. It leaves the wood just on

the west side of the gate beside a cottage, and crosses the green to the rear of the Duddleswell Store. Cinder is very thick upon the footpath across the green, but this may have been brought quite recently from Oldlands. The line then crosses a meadow and upon emerging, almost exactly at the south-west corner, the agger again becomes very plain for some distance, gradually converging upon the modern road which then follows its course for 330 yds. Near the old Fox Inn, Fairwarp, the agger is still very perfect, 21 ft. wide, mainly of ironstone about a foot thick mixed with a relatively small amount of cinder.

The line diverges west of the modern road 220 yds. north of Fairwarp Church, and the cinder metalling appears to be almost intact opposite the church, and the agger is faintly visible there. Quarries obliterate it near the southern edge of the Forest, but in the northern field of Old Workhouse Farm the undisturbed road surface, about 14 ft. wide, was found 160 ft. east of the north-west corner of the field. It is of cinder mixed with ironstone much rusted together and very hard. In the next field west of the farmhouse the agger is distinctly visible as a raised strip 28 ft. wide against the western hedge, and traces of the cinder were found on the line in the southern field. The alignment passes close to the west wall of a new house there, and points to Lampool Farm. It is clear that this is the new alignment south of the Forest pointing to Malling Down, east of Lewes, and it suggests that the road may yet be found running through Isfield in that direction. It would doubtless connect with the South Down road system near Ringmer. The whole course may have been laid out, as Mr. Winbolt suggests, with the dual purpose of affording direct connection from the ironworks both to the London market and to a Sussex port near the mouth of the Ouse. A Roman road through Glynde and over Firle Beacon to Seaford is already known.⁸

Since this paper was written the course of the road

⁸ A. Hadrian Allcroft, *Archl. J.*, LXXII., p. 201.

has been definitely ascertained at a number of points farther south, continuing the alignment commenced at Camp Hill. It runs through Park Wood and Upper Morgan's Farm to Shortbridge, then through the park of Buckham Hill House (undisturbed agger of cinder) and Lodge Wood, crosses the River Ouse near Isfield Church, and is marked by a line of hedgerows past Hole House and Gallops Farm where the agger, still of cinder, is again visible. The road probably recrosses the Ouse near Barcombe Mills, heading for Malling Down.

CONSTRUCTION.

Brief references to the width and thickness of the road have already been made, but complete sections were excavated at a number of points along its course, and these must now be considered in detail. The side ditches in the Forest portion of the route are so well preserved that it seemed desirable to include a special study of them, since this feature of Roman roads, though recognised elsewhere, is by no means well known or understood.

PETER'S WOOD, HOLTYE. (Fig. 1, Section No. 1.) A gentle swelling of the ground about 35 ft. wide, and thickly sprinkled with small pieces of cinder, is plainly visible in this wood just to the north of the Holtye—Tunbridge Wells road. A section was cut at a suitable spot 55 yds. inside the wood, and the road was found to be a thin, but hard, layer of rusted cinder in small pieces, 2–3 in. thick, resting upon the subsoil, which is of a rather dry sandy character at this part of the Holtye ridge. About 6–8 in. of surface soil and humus lay upon the road, and it is clear from the abundance of loose cinder that some disintegration of the road surface by cultivation and the woodland growth must have occurred, so that the depth of metalling may originally have been greater. The existing layer was, however, quite distinct for a width of 13 ft., beyond which the cinder was found scattered, and the layer too indefinite to be included as part of the surface.

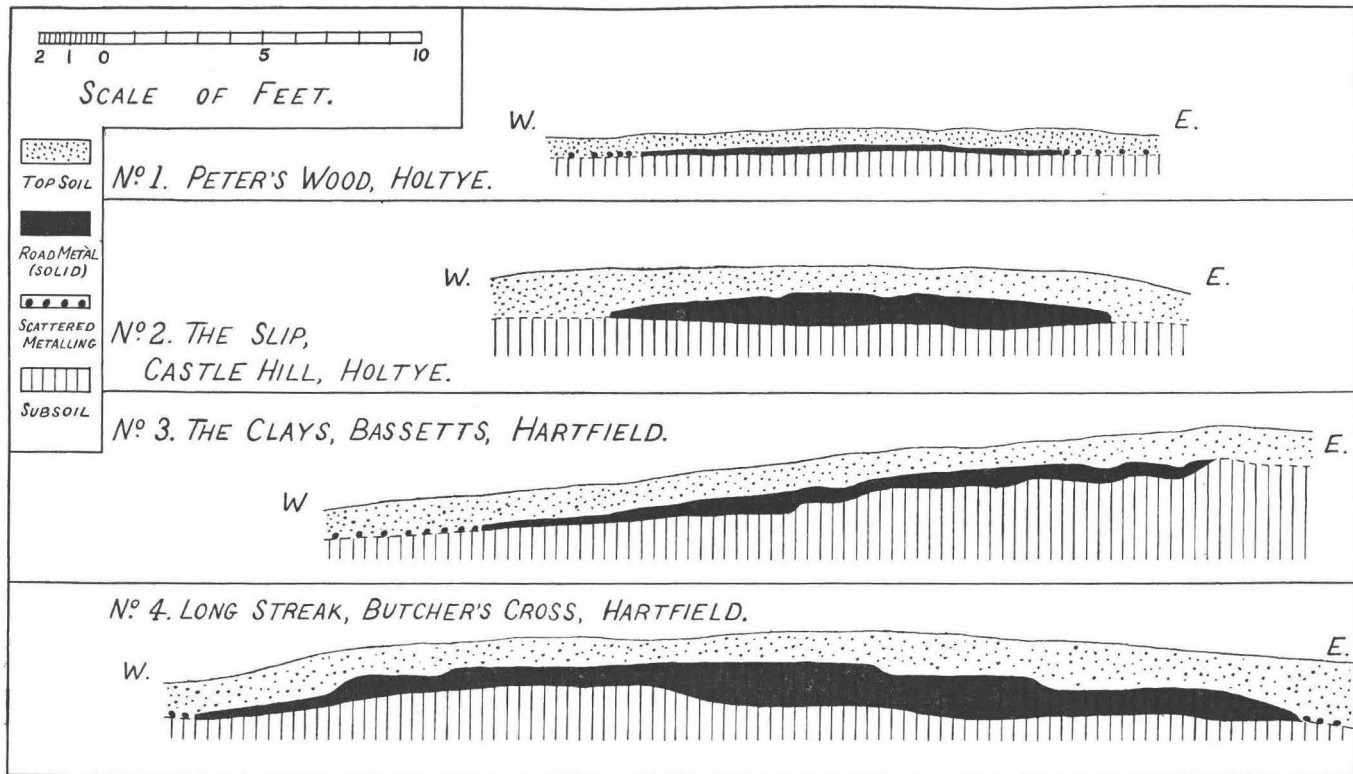


FIG. 1.

At a point where the line crosses a ride 70 yds. further north the road was found with a smooth hard concrete surface.

THE SLIP, CASTLE HILL, HOLTYE. (Fig. 1, Section No. 2.) A distinct cambered strip 20 yds. wide can be seen approaching the stream at the bottom of this field, 50 yds. east of the footpath. A section was opened at a point 50 ft. north of the stream, disclosing under a foot of surface soil the perfect undisturbed road with a surface as smooth and hard as a modern concrete floor. The width was 15 ft. 7 in., and the edges of the road were hard and clean cut, as can be clearly seen in the photograph, Plate I. (The steel rule shown on the surface is 6 ft. long and the spade stands 3 ft. high.)

A six-foot length of the road was cleared completely, and a number of irregular but roughly parallel depressions or ruts were distinctly visible upon its surface, as can be seen in the Plate. Taking the mean of two sets of measurements along each end of the exposed surface, the centres of these ruts occurred at the following distances from the western edge of the road:

1 ft. $7\frac{1}{2}$ in. well defined; 3 ft. 4 in. deep, irregular; 4 ft. $5\frac{1}{2}$ in. wide, shallow; 7 ft. $2\frac{1}{2}$ in. faint; 7 ft. 11 in. faint; 10 ft. 4 in. wide, clear; 12 ft. 3 in. irregular (at edge of steep camber); 13 ft. 11 in. deep, very narrow (15 ft. 7 in. east edge of concrete).

It is very difficult to form any definite opinion as to the gauge of vehicles from these figures. Some of the depressions at least were no doubt formed by the tread of horses—perhaps the wide shallow marks had this origin—and it must be remembered that the outer wheels of carts when near the edges of the camber would bear far more weight than those near the crown of the road, and so cause more wear there, as has clearly been the case.

Cutting through this concrete in order properly to measure the section was a matter of very considerable difficulty. The whole agger from side to side was a solid iron-hard mass as though cast in one piece, and

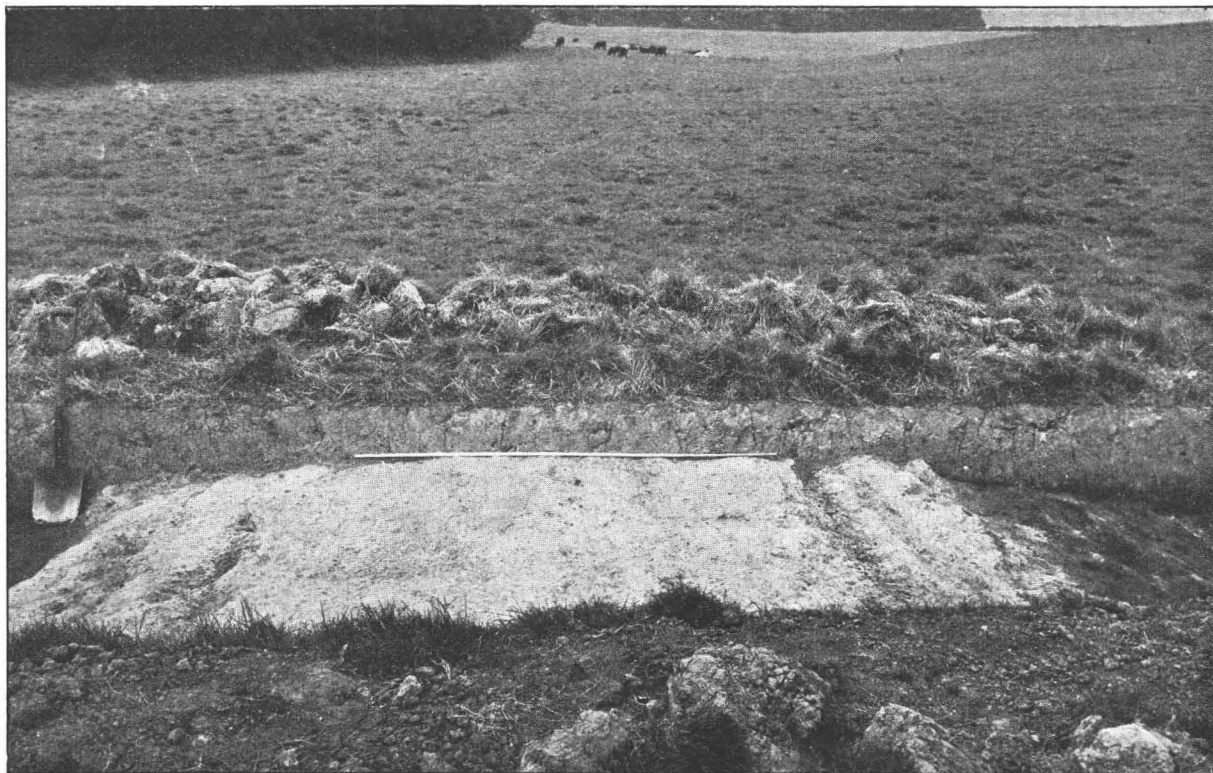


PLATE I.

Photo by H. Connold.

ROADWAY OF CINDER CONCRETE AT THE SLIP, HOLTYE (Section No. 2) looking North.

picks could scarcely make any impression upon it. Indeed, as can be seen in Plate I, showing the same section after excavation, a small portion of the crown was left intact, as the labour and time required for its removal would have been considerable. The concrete was composed of large lumps of cinder mixed with smaller pieces and fine material forming a very homogeneous mass. Mr. Straker, who was present at the excavation, was of the opinion that its rusting into such a solid mass could not be due entirely to natural causes, but must have been induced by some chemical action at the time of construction, possibly by vegetable juices introduced by adding layers of suitable material such as bracken, with the object of consolidating the agger across damp places as at this stream. A similar process is now in use for joining iron plates.

The depth of cinder at the crown of the road was one foot, and tapered off to about 3 in. at the sides. The level of the subsoil surface was slightly depressed towards the centre of the road due, no doubt, to the great weight of the overlying material. As can be seen in the plates and diagram, the camber of the road surface was in perfect condition here and gave a fall of 8 in. from the crown to the sides.

THE CLAYS, BASSETTS, HARTFIELD. (Fig. 1 Section No. 3.) There is an extremely faint indication of the agger as a gentle swelling across the middle of this field. A trial hole had disclosed the firm undisturbed road surface, and a section was therefore opened here at a point 300 yds. north-west of Bassetts Farm.

The surface of the metalling lay under 10–12 in. of soil, and proved to be a firm hard layer of small pieces of cinder somewhat rusted but without the concrete-like solidity of the preceding section, an average thickness being about 6 in. There is a considerable fall in the ground level towards the west across the road, and it was somewhat difficult to determine the original width. The crown of the road appeared to lie about 6 ft. from the east side (where the cinder ended abruptly), but on the lower western side the

metalled layer thinned off gradually until it became a mere vein of scattered cinder on the surface of the subsoil. The maximum width of the substantial layer might be called 23 ft., but the last 5 ft. of this was not more than 3 in. thick, and I am inclined to think, from the general appearance of the section, that the width was about 17 ft. originally, and that the remainder is due to spreading of the material during cultivation. The level of the subsoil (a rather stiff clay) beneath the road was very uneven, suggesting that foundering under the pressure of the traffic had occurred. The sharp depression, 12–13 ft. from the east side, was particularly suggestive of a mended pothole. Several rut-like marks on the surface were also noted, a pair near the crown being 4 ft. 6 in. apart.

LONG STREAK, BUTCHER'S CROSS, HARTFIELD. (Fig. 1 Section No. 4.) This is the most impressive visible portion of the agger yet remaining north of Ashdown Forest. A cambered turf bank some 50 ft. wide runs across the field, and a point 30 yds. south of the road, where it seemed most shapely, was chosen for the section. The original surface of the agger was found quite intact under 10–16 in. of soil. It was a firm hard layer of cinder concrete rusted into a practically solid mass very similar to that at Section No. 2, though a trifle less hard. When excavated it showed a tendency to come away in distinct layers about 1 in. thick, perhaps due to construction by ramming the material in layers. At the base the metalled layer ran out to the remarkable width of 35 ft., but, considering the steeply shelving edges of the camber, I think it would be better to treat the effective width of the road as being 27 ft., and there can be no doubt that the whole of this width was for actual use. Distinct traffic marks had been cut into the camber near its outer portion, giving it a terraced appearance, as the diagram shows, and suggesting that vehicles here kept to the sides of the road, and were not so frequently in the centre as on other sections. Perhaps it was actually constructed as a passing-place. The profile of the

subsoil surface is somewhat remarkable, and strongly suggests that a part of the subsoil under the eastern half of the road had been removed and piled up under the western half. On the west side the metalled layer is 6-9 in. thick, while on the east it is as much as 16 in. for a considerable width, quite unusual lavishness for roads in this area. The circumstances suggest that the road may have commenced as a metalled strip about 15 ft. wide upon a prepared foundation of subsoil, and that, when a decision to widen it was reached, the lowered space on the east side was simply filled up with cinder to the required depth. The ground near this section contains several springs and work at the sides of the agger was difficult. Scattered cinder continues for some distance, especially on the west side, as a distinct vein on the surface of the subsoil, but the extent of the actual camber is very definite.

LITTLE MILL POND FIELD, CHARTNERS FARM, HARTFIELD. (Partial Section.) The agger shows plainly as a gently cambered strip about 42 ft. wide down the centre of the southern portion of this field. A section was examined close to the footpath that crosses it, and the undisturbed surface of the road, 14 ft. wide, was uncovered below 12 in. of top soil. The metalling was entirely of cinder, about 12 in. thick, and appeared to be of similar consistency, both in hardness and in layer formation to the preceding section.

HOLLYWOOD North of LONEOAK HALL, CHUCK HATCH. (Partial Section.) The agger is very distinct through this wood on the south side of the deep gill at Chuck Hatch. It is 18 ft. wide, and has a broad low strip along its eastern side. On the crown of the agger, under 2 in. of top soil, there was a very well-defined layer of small lumps of sandstone 3 in. thick, resting upon the yellow clay subsoil, which appeared to be "made ground," and had probably been dug from the low strip.

SOUTH OF LONEOAK HALL, CHUCK HATCH. (Partial Sections.) The agger is here about 18 ft. wide and very distinct at several points within the first 400 yds.

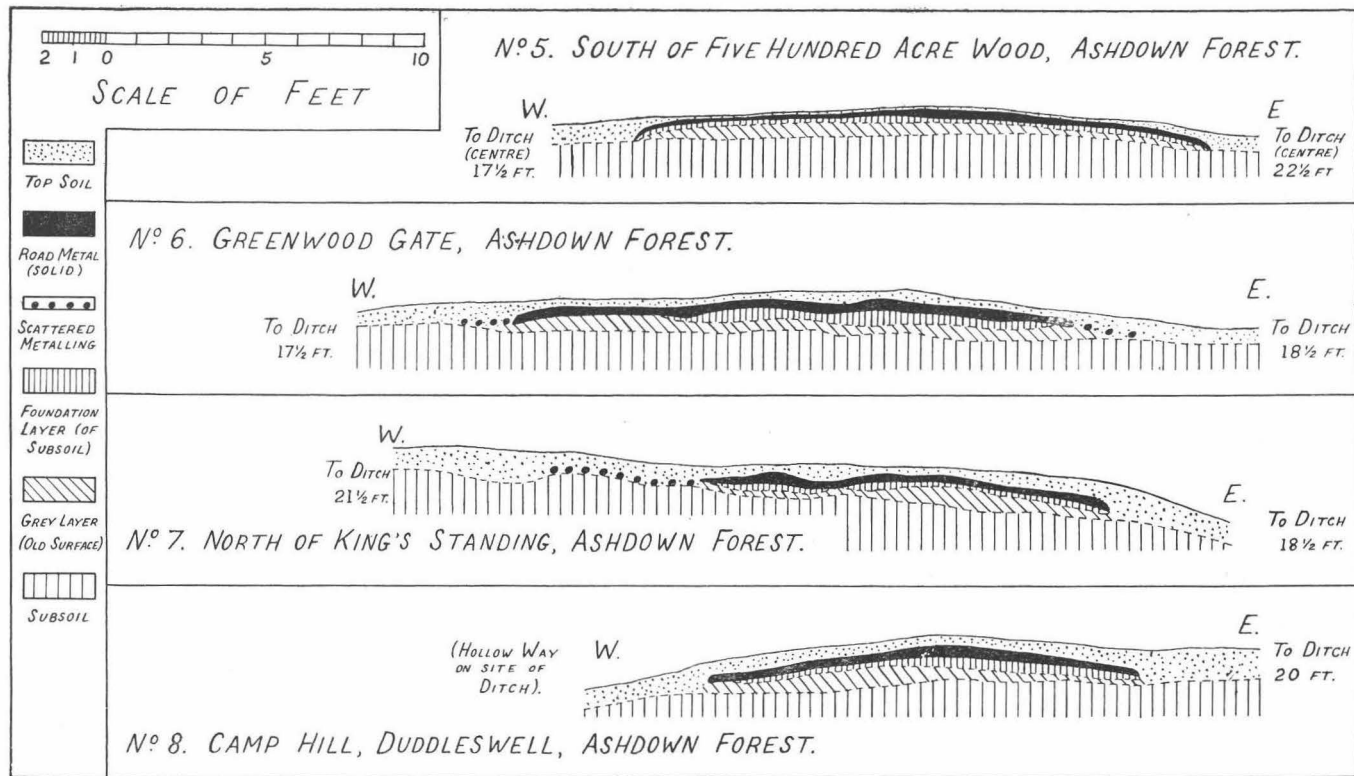


FIG. 2.

south of the enclosure. At 200 yds. south, the crown of the agger had 8 in. of top soil, and then 17 in. of yellow sand mixed with small lumps of sandstone (though there was no definite stony layer) upon a whitish subsoil. At 300 yds. south there was again 8 in. of top soil with 10 in. of yellow sandy subsoil mixed with small particles of ironstone and some larger stones, apparently in rough layers. There is a distinct low strip along the east side of the road here, some 20 ft. wide, with the hillside rising in an obvious terrace above it. It is probable that, having a sandy subsoil available, the engineers simply removed suitable quantities from the hillside, and piled it to form the agger, which has preserved its camber remarkably well considering the softness of the material.

SOUTH OF FIVE HUNDRED ACRE WOOD, ASHDOWN FOREST. (Fig. 2, Section No. 5.) A section was opened 100 yds. north of the angle which terminates the Edenbridge alignment, this part of the road being in exceptionally fine condition with perfectly-formed agger and the side ditches (which are such a feature of the Forest section) very well preserved.

On the crown of the agger the layer of metalling lies almost on the surface with only the thinnest coating of top soil on and among the stones, but (as in other parts of the road) there has been more accumulation at the sides, the camber thus having an appearance of greater width than was originally the case. The metalling is a well-laid compact layer of sandstone lumps here, 2 to 3 in. thick, somewhat resembling a macadam surface, and 17 ft. wide. The stones are roughly of hand-hold size, or smaller. The layer was sufficiently compact to be difficult to remove without a pick, and it was laid upon a bed of the yellow clay subsoil, now some 2 in. thick. Under this yellow layer was a very distinctive layer of grey clay resting upon the yellow subsoil and extending to the full width of the metalling, but definitely absent beyond this zone. Specimens were submitted to Mr. Cecil Maby, who very kindly reported upon them. The substance of



PLATE II A.

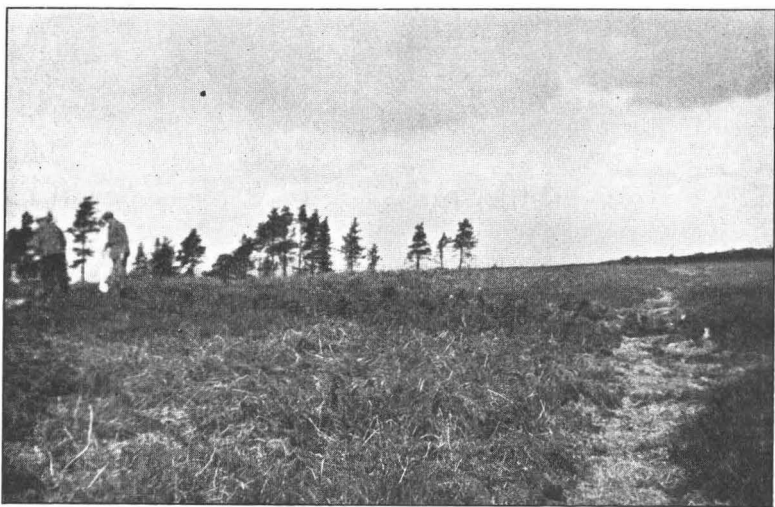


PLATE II B.

PLATE II. NEAR FIVE HUNDRED ACRE WOOD by Section No. 5.

- A. Looking East across agger, showing ironstone metalling with unmetalled "side road" beyond it under bracken.
- B. Looking North along East side of road, showing East ditch (narrow grassy strip) and unmetalled "side road" under bracken. (The two men are working on the metallated agger.)

the grey clay was found to be identical with the yellow, but with the addition of numerous small specks of vegetable matter, which caused the darker appearance. The specks were too minute to be identified, but the existence of a vegetable layer and its position here strongly suggest the remains of the original heath surface buried and decayed *in situ* under the road. Test holes dug at numerous points along the course of the road near here, in the agger, the lower side spaces and the undisturbed land outside the ditches, showed the grey layer to be almost always present under the agger, but never elsewhere. On either side of the metalled agger is a flat strip of ground 18–20 ft. wide extending to the ditches which are here 62 ft. apart, centre to centre. These side spaces do not seem to have been treated in any way, the soil layers appearing like those of the normal Forest surface. The purpose and construction of the ditches will be discussed later.

GREENWOOD GATE, ASHDOWN FOREST. (Fig. 2, Section No. 6.) The road with agger and ditches is very well preserved here, and a section was examined at a point 50 yds. north of the track leading from Greenwood Gate to Gills Lap. The general appearance was very similar to that of the preceding section, though the layers were not quite so perfect. The width of metalling was again 17 ft. and 3 to 4 in. in thickness under a similar depth of top soil. The layer of stones was very compact and similar to that described above. The foundation layer of yellow clay was clearly traceable, 3 to 5 in. thick, save for about 4 ft. of the eastern side, where it was apparently absent. The grey clay was again very evident, 4 to 5 in. thick, above the yellow subsoil. The centres of the ditches were 63 ft. apart here. Two depressions or traffic marks, 5 ft. apart, were clearly visible near the crown of the road.

NORTH OF KING'S STANDING, ASHDOWN FOREST. (Fig. 2, Section No. 7.) A section was opened at a point 40 yds. before the Roman road makes its first crossing of the road from Groombridge, 380 yds. north of King's Standing. The ground falls towards the east

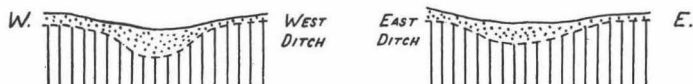
here, and the agger shows most clearly on that side. It is somewhat disturbed by hollow tracks on the west, and the metallated layer is uneven there, but the usual construction is on the whole still plainly traceable. The metalling is mostly 2-3 in. thick, with the yellow and grey layers quite distinct below it for 12 ft. from the eastern side. West of this the stony surface appeared to continue for a further five feet upon the untouched subsoil, possibly in order to equalise levels across the road. An interesting feature here was the finding of a distinct layer of charcoal between the grey and yellow layers extending to a width of 3 ft. near the centre of the road. Was it just the site of a camp fire used by the road-makers, or could it have been for some constructional purpose, as a signal or in clearing the track?

CAMP HILL, DUDDLESWELL. (Fig. 2, Section No. 8.) The agger and east ditch are plainly visible 70 yds. south of Beggars' Bush, Camp Hill, the camber being very perfect in shape. A section was opened here, and is of interest in view of the renewed use of cinder for the metalling. The same layers of material were plainly visible, first 4-6 in. of top soil, then 3-4 in. of metalling, with 2-4 in. of yellow clay bedding, resting upon the grey layer 2-7 in. thick above the subsoil. The metalling was only 14 ft. wide here, and the profile of the camber and definiteness of the edges make it certain that the true width was no greater. Sandstone lumps were mixed with small pieces of cinder for the metalling, and formed a very hard compact layer with smooth undamaged surface. The camber gave a fall of 8 in. from the crown to the sides, being thus similar to that of the well-preserved concrete portion of the road at The Slip, Holtye. It seems possible that this may have been the original camber to which the road was generally built, and that wear and tear upon the sections composed of softer materials has reduced them to the flatter outline now found.

THE DITCHES. (Fig. 3.) Continuous ditches, about 62 ft. apart, were evidently dug along the whole course

ROMAN ROAD DITCHES, ASHDOWN FOREST.

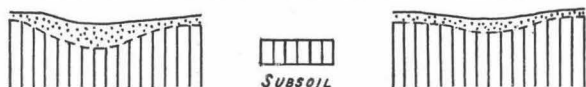
D1. AT SECTION N° 5, FIVE HUNDRED ACRE WOOD. D2.



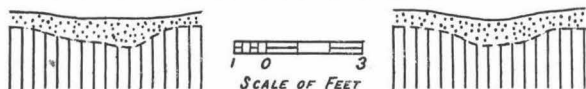
D3. NORTH OF MAIN ALIGNMENT ANGLE. D4.



D5. SOUTH OF MAIN ALIGNMENT ANGLE. D6.



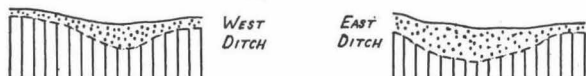
D7. NORTH OF GREENWOOD GATE. D8.



D9. AT SECTION N° 6, GREENWOOD GATE. D10.



D11. NEAR SECTION N° 7, KING'S STANDING (NORTH OF). D12.



SOUTH OF KING'S STANDING.

D13. WEST DITCH.

D14. EAST DITCH.

D15. EAST DITCH.



D16. NORTH OF BEGGARS' BUSH (EAST DITCH).



D19. NORTH OF CAMP HILL (EAST DITCH).

(AT SECTION N° 8).



FIG. 3.

of the road for over 2 miles, between Camp Hill and the south-west corner of Five Hundred Acre Wood. It is not at all clear that they ever existed northward from this point, and in the cultivated land no trace of them has been definitely found.

They vary considerably both in depth and width, even within a few yards, and though the shape also shows large differences, the ditches are alike in having a distinctly rounded bottom (like a rather flattened U), as though the material had been scooped out at right angles to the line of the ditch.

Measuring from the level of the existing surface about the ditch the usual depth is 16 in., but variations from 6 in. to 24 in. have been found. The normal width at the level of the subsoil is about 4 ft., but wide variations from 7 ft. to only 2 ft. have been noted. Yet the straight alignments of the ditches were most carefully maintained, and it is clear that the line was more important than details of actual construction.

Ditches of precisely similar character are found for 1200 yds. along Stane Street between Gumber Farm and Bignor Hill, and it is perhaps significant that this feature should be present on both roads just where they pass over high ground, while it is apparently absent elsewhere. The ditches show most distinctly in air photographs taken under my instructions during 1930, and closely resemble those on the Ashdown Forest photographs. Sections excavated near Gumber Corner by Curwen⁹ showed that in cross-section the ditches exactly resemble those on Ashdown Forest. On Stane Street, however, the ditches are 85 ft. apart, centre to centre, and the side roads are metalled.

It is surprising how clearly the ditches on the Forest can still be traced. They have become almost completely silted up with humus, which can be easily removed to show the original outline of the cross-section, for the subsoil is generally rather hard, and does not appear to have collapsed into the ditch before silting had occurred, while the splayed shape would

⁹ *S.A.C.*, LVII., p. 136, and Plates II. and III.

also help in their preservation. The humus still allows considerable quantities of water to percolate along the line of the old ditches, as has evidently been recognised by shepherds, for water-holes have been dug in them at intervals (the Forest being very waterless in summer on its higher slopes), as archæologists who walk carelessly along them will soon discover!

Apart from their variations in shape and size, the fixed alignments and the apparent indifference of the system alike to the fall of the ground and other circumstances of the surroundings, together with the complete absence of discharging side-drains, makes it unlikely that actual drainage was more than a secondary purpose. It should be noted that it is just along that part of the road where a layer of yellow subsoil was used as a bed for the metalling (as was found by Winbolt on Stane Street) that the ditches occur. The inference that the material from the ditches was used to form this layer is obvious, especially as no bank accompanies the ditch. At the same time, it is evident that the ditches were not mere quarries, but must have been carefully marked out as boundaries for the road before construction was begun. I conclude, then, that when the alignments had been decided upon, a zone about 62 ft. wide was accurately pegged out along the course of the alignment. Ditches were then dug to such a size as was required to give the soil necessary for the road foundation, the earth probably being excavated sideways towards the centre of the road and piled there in a well-packed layer upon the old heath surface (which now forms the grey clay layer).

It is not at all clear why so wide a margin was left here between the agger and ditches. The side spaces, though unmetalled, may have been used by horsemen, or, of course, it may have been just a new idea in road construction, perhaps with a view to keeping a clear strip beside the road. At any rate, the plan was adopted here uniformly for a considerable distance.

THE SUMP HOLES. (Fig. 4.) At a point about 230 yds. south of the modern fork at King's Standing

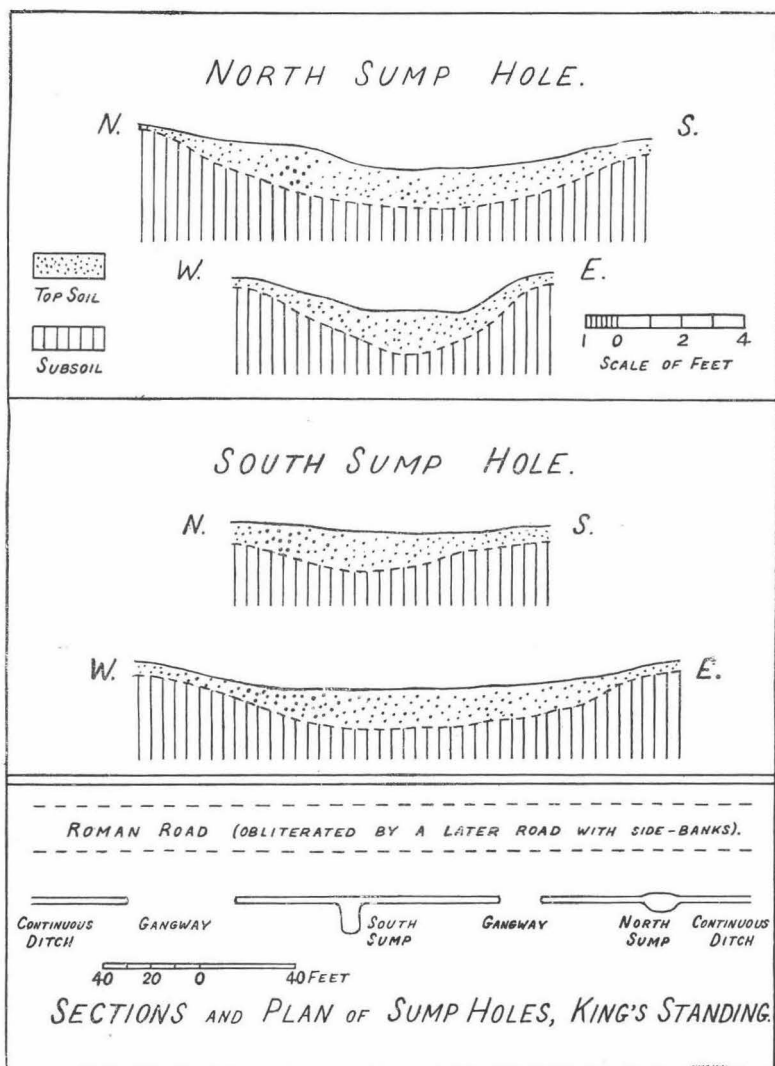


FIG. 4.

the east ditch possesses some features of unusual interest. The normal width of the ditch is suddenly increased to 8 ft. for a length of 14 ft., forming a shallow basin (which I term the North Sump Hole) with its longer axis parallel with the line of the ditch. Beyond this the ditch is continued as before for a distance of 42 ft., where it ends abruptly, leaving a gangway of undisturbed natural soil 19 ft. wide. Southwards the ditch is normal again for $57\frac{1}{2}$ ft., and then discharges into another basin (termed the South Sump Hole), measuring 14 ft. by 8 ft., the longer axis of the basin being at right angles to the line of the ditch in this instance. The ditch then resumes its course for 42 ft., where another gangway $45\frac{1}{2}$ ft. wide intervenes, and beyond this it continues indefinitely.

The natural soil just here is stony, with only 3-5 in. of surface soil, covered with a sparse growth of heather, and the ditch and sump holes are thus plainly indicated by the marshy growths of grass induced by the silted humus, which is constantly moistened by seepage along the course of the old ditch. It is also quite easy to determine the original profile of the works by careful removal of the humus. Both sump holes were excavated and proved to be nicely-shaped basins with a gently shelving outline similar to the U-shaped curve usually found in the ditches. The floors in each case appeared to be lined roughly with small lumps of sandstone, and it was evident that both had been constructed with a definite object, and were not mere pits of accidental shape.

The North Sump Hole was 2 ft. 4 in. deep, and very regular in profile. Being practically on the line of the ditch (though the additional width lay eastward, away from the road), it was more in the nature of a deepening of the ditch, the general fall being continued southwards.

In the South Sump Hole, however, the deepest part lay well off the ditch line, and the effect is thus much more that of a pool. The level of the ditch floor at the outlet south of the hole is 7 in. above that of the

inlet at the north side, and the hole itself is about 2 ft. deep.

Where the roadside ditches are clearly preserved on the Forest they are quite continuous, and indefinite breaks in them do not occur. It therefore seems fairly certain that the two gangways found near these sump holes were intentionally left, and the purpose of them may very well have been to connect the roadway with the Celtic farm near King's Standing, for the place where the occupation pits¹⁰ lined with burnt clay and accompanied by burnt flints, bones and charcoal were found by stone-diggers, has now been pointed out to me by Mr. H. Walter, son of the actual quarryman, and lies 300 yds. due south of King's Standing Clump, and 100 yds. east of the modern road. A trial excavation there has (so far) yielded one small flint flake.

The sump holes may have been used as drinking pools for animals in the vicinity of this settlement, and their gently shelving form perhaps points to this. Water is not easily found during dry periods on the higher parts of the Forest save in artificial pits, which would naturally have been very rare in those days, and the drainage along the ditches might have been regarded as a useful supply. In that case, however, it is not clear why the South Sump Hole should have been placed in a closed section of ditch which never had a catchment length of as much as 60 ft.

An alternative suggestion is that they were simply intended to take the drainage and prevent overflowing of the ditch at the gangways, being emptied by the inhabitants of the settlement when desired. It is surely significant of a regular plan that the sump holes are in each case 42 ft. short of the gangways.

EVOLUTION OF THE PRESENT ROADS ALONG THIS ROUTE. There can be little doubt that difficulties with the stream crossings near Waystrode Farm caused the Cowden section of the Roman road between Beechenwood and Kitford to be abandoned at a very

¹⁰ S.N.Q., III., p. 76.

early period in favour of the high-level route followed by Spode Lane. The westward curve of the modern road from Kitford to the White Horse Inn, Holtje, is also an improvement, since it avoids an unnecessary dip north of Peter's Wood. The footpath and lane from the Inn past Bassetts Farm to Butcher's Cross follow the old road very closely, but also make more use of higher ground, especially in approaching the stream south of Bassetts. The small westerly deviation at the crossing of the stream between Holtje and Castle Hill is a very clear example of a divergence due to a broken culvert or bridge, compelling the use of a new crossing-place, probably at a fordable point.

South of the Medway the lanes do not show such a clear relation, though the track from Chartners Farm by Sackville Court to Landhurst lies fairly close and parallel to the Roman line. Mention has already been made of the early tracks along the Forest portion of the route.

It is probable that for many centuries there was no real through road from Edenbridge to Hartfield, apart from these lanes, for Ewing¹¹ mentions that in "Cary's Roads and New Itinerary" (1814), Cowden is not shown as being on a coaching route, and the accompanying map of Kent marks the road turning west to East Grinstead from Dencross, but omits the south-eastward road to Cowden and Hartfield. Some portions of this road, however, must be of early origin, to judge by the deep hollow ways lying beside the modern road for considerable distances north and south of Hartfield. It is curious that after so long an interval circumstances have now restored a continuous first-class road from Edenbridge through Dencross, Cowden Pound, Hartfield, Chuck Hatch, and Camp Hill to Maresfield. The length of the Roman road between Dencross and Camp Hill cross-roads, is 10.2 miles, and the modern route is only 0.9 mile longer, not so large a difference as a glance at the map would suggest.

In conclusion, I should like to express my thanks to

¹¹ *History of Cowden*, p. 230.

the landowners and tenants along the route who, with only one exception, have all been most helpful in granting facilities for the examination of the road.

SUMMARY. Conclusive evidence of the existence of a Roman road, commencing on Watling Street at New Cross and running southward by West Wickham, Titsey and Edenbridge, continuing thence by Holtye and Hartfield to Ashdown Forest, and southward again by Fairwarp near Maresfield, is set out. Extensive remains of the metalling, frequently of cinder (slag from ancient iron-working), can still be found, usually 15-18 ft. wide and about 1 ft. thick. The road was probably designed to open up the area of British iron mines and connect it with London and the Coast.