

THE SUSSEX WAR DYKE : A PRE-ROMAN THOROUGHFARE.

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IN *S.A.C.*, LIX. (1918) Dr. Eliot Curwen and Dr. Cecil Curwen described and illustrated a long series of Downland "covered-ways," advancing reasons for believing them to represent roadways, in many cases of pre-Roman date. The most striking, albeit not the most typical, example of the series is that (*op. cit.* pp. 40-41) which runs across the northern end of Arundel Park from the bank of the Arun just south of Houghton Lodge—locally better known as Southwood—westward towards Dalesdown Wood beyond Whiteways Lodge. While admitting it to be in many respects exceptional, Messrs. Curwen yet express their belief that this, too, was a covered-way and was once used as a road. In the present article, the outcome of some three years of enquiry, there is adduced certain new evidence which tends to confirm the belief that this particular covered-way, the War Dyke, was actually a road of pre-Roman date, whether or no the same holds good of all examples of the type.

In matters of this sort the speculations of the antiquaries of a century or so ago are commonly of little value because of the absence of adequate maps, plans and details. Nevertheless it is of interest to find that E. Cartwright, speaking¹ of this "most remarkable trench . . . which leads from the summit [of the Downs] to the river at the base," calls it "the probable remains of a road by which the camp was supplied with

¹ *Rape of Arundel*, Vol. II. (1832), p. 222.

REFERENCES

- PARISH BOUNDARIES (dotted line)
- CONTOURS (dashed line)
- MODERN ROADS ETC (solid line)
- ANCIENT ROADS (long-dashed line)
- TUMULI * (asterisk)
- CHURCHES + (plus sign)

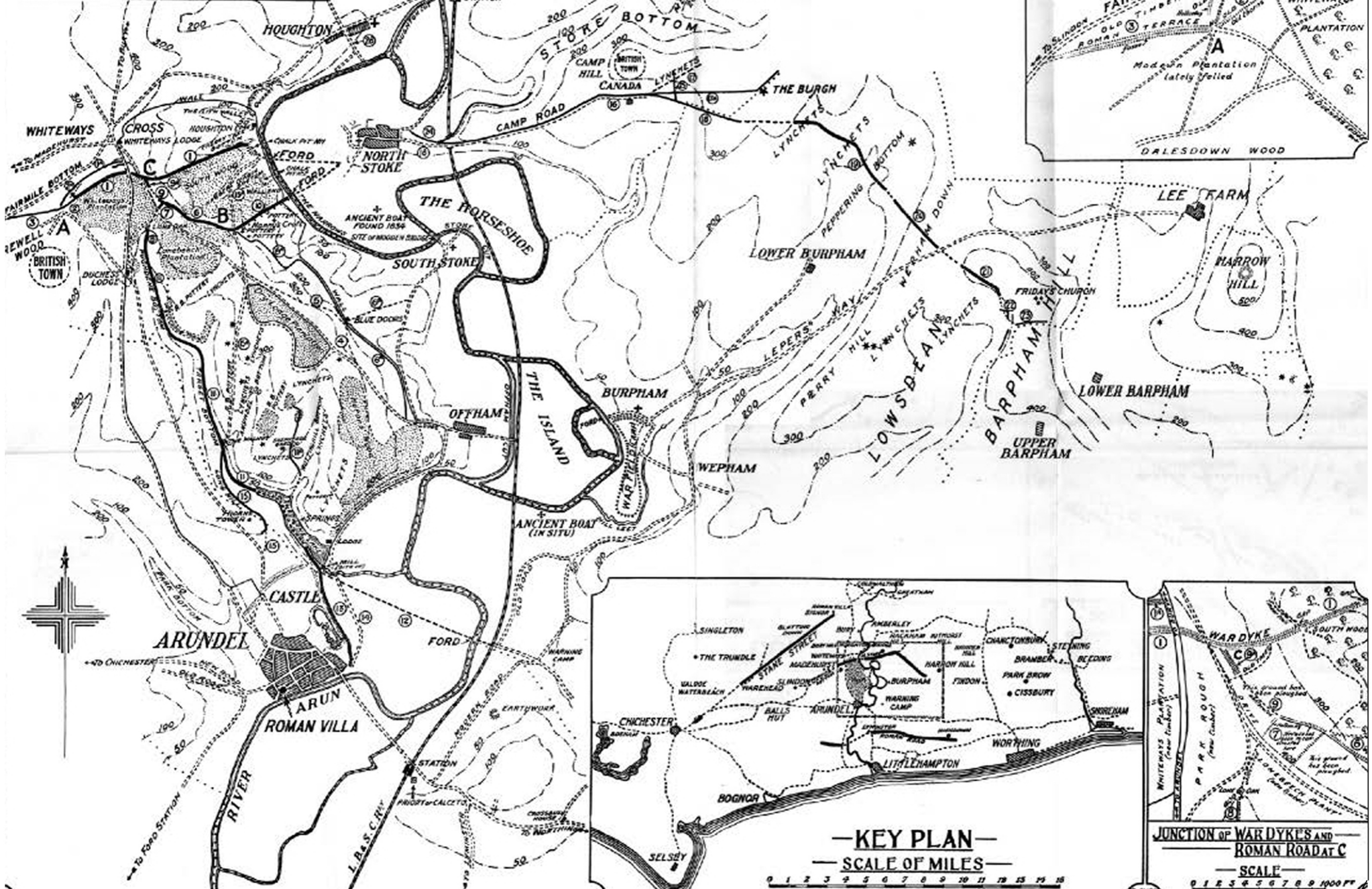
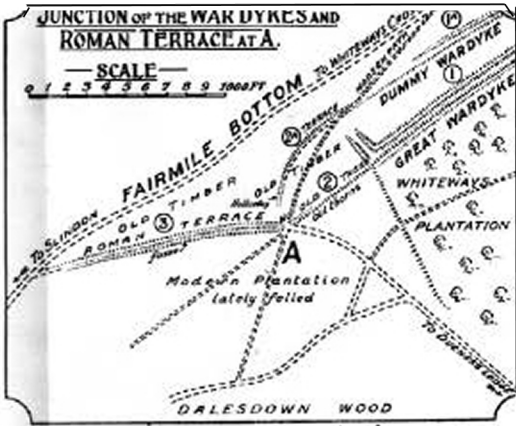
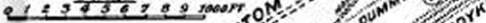
THE WAR DYKE, AND CONNECTIONS.

SCALE OF MILES



JUNCTION OF THE WAR DYKES AND ROMAN TERRACE AT A.

SCALE



JUNCTION OF WAR DYKES AND ROMAN ROAD AT C.

SCALE



water." Where was the "camp" in question he does not say, but one may reasonably conclude that the great series of earthworks on Rewell Hill² is intended. He adds that "the general opinion" of his time attributed this "trench" to the Danes.

To the few local people who still remember local names, this work (No. 1 on map), or at least such part of it as lies between the Arun and Dalesdown Wood, is known as the War Ditch or War Dyke, and is associated with Cromwell and the Civil Wars; and though any such association is probably wholly baseless, the name is retained for its convenience. Its total length, as described by Messrs. Curwen, is 1580 yards, its over-all breadth is in places as much as 100 feet, and the fosse is 60 feet more or less in width. Owing to the lie of the ground the depth of the fosse below the covering bank or banks varies greatly. Without question it is one of the most imposing earthworks in all Sussex.

Sections of the War Dyke taken at any point where the ground on either side is level or nearly so, as, for example, just west of the Arundel-Bury road (*S.A.C.*, LIX., plate II.), show a medial fosse between two lateral *valla*; but where the earthwork passes along or down the flank of a hillside, the sections mostly show one vallum only, and that upon the lower or downhill side.³ The work, however, as far as it is described by Messrs. Curwen, is without question one continuous entity, of one date and one purpose. It follows that, whatever be the date and the purpose, other earthworks in which is exemplified either form of section, viz., either a fosse between two lateral *valla* or a fosse between the natural fall of the ground on the one side and a single vallum on the other, may quite possibly be of like date and purpose, or even, if not too remote in situation, parts of the War Dyke itself.

² *S.A.C.*, LXI., pp. 20-39.

³ This, being obviously a much more economical method of construction than the other, may explain certain cases where this and similar earthworks prefer to follow the flank of a ridge rather than the ridge itself.

Sections of the forms described are characteristic of other works which are indubitably roadways, and in all probability of Celtic, i.e. pre-Roman date. On Buckland Bank in Falmer, and on Park Brow in Sompting, are capital examples of the bivallated fosse, where there is no possible doubt that it is a road, and strong reason to believe it to be of pre-Roman age; and in both cases it occurs on level ground. Elsewhere, as in Eastwick Bottom in Patcham, occur examples of the other form, where the presumed roadway is descending the flank of a hill-side; and in such cases the fosse is attended by a single massive vallum on the downhill side. Thus the various sections of the War Dyke at various points are precisely like those of admitted Celtic roads, differing only in their greater dimensions. In point of mere construction there is no difference, and therefore no reason why the War Dyke should not have been built to serve as a road. It may be surprising at the first blush to have so immense a work attributed merely to the road-engineer, but it is to be remembered that roads have throughout the centuries been built to fit the traffic they were designed to carry. Presumably it was so even in pre-Roman times, and the fact that we know nothing of the sort of traffic which might in a remote age call for a roadway even 20 feet wide, does not justify us in deciding that the War Dyke cannot have been built as a road. In Cranborne Chase is a similar work of a width of 200 feet,⁴ and no one has seriously questioned that it was a Celtic road and nothing else.

The hill-top at or near Whiteways Cross (377 O.D.) is at the present day a very important road-ganglion. Its name declares that it has long been so. It must, indeed, always have been so, for to this point converge all the ridges west of the Arun, and from it any roads

⁴ In the parishes of Gussage All Saints and Wimborne St. Giles. It crosses the Downs in a right line for three continuous miles, demarcated by straight and unusually narrow *valla* about five feet in height, and the roadway (200 feet wide) is perfectly flat. The Romano-British town on Gussage Cow Down (Colt Hoare's *Vindogladia*) lies athwart it in such fashion as to show that the road is of older date than the town. It heads direct for Stonehenge, 16 miles distant to the N.N.E.

which have followed these ridges or the intervening valleys must "take off" to cross the river and so reach the eastward Downs and the heights of Rackham Hill (636 O.D.) and Kithurst Hill (697 O.D.) The trough through which winds the river from Houghton Bridge to Arundel has a north-and-south length (crow-flight) of three miles, with a normal width of less than half-a-mile. North of Houghton Bridge it broadens out into the much wider level between Hardham, Amberley, and Pulborough. South of Arundel it expands in like fashion, that town occupying the extreme point of a north-and-south ridge which descends from Whiteways Cross between the river on the east and Park Bottom on the west. Further southward to the sea stretch four miles of uniform green flats, the old-time estuary of the river, from either bank of which jut out the tongues of slightly higher ground whereon stand Lyminster and Ford, both places of great antiquity. The river is now tidal at spring tides for a distance of some miles above Houghton Bridge.

The present course of the river between Houghton Bridge and Arundel is the outcome of a series of improvements by which it was made a great thoroughfare of traffic not merely from Littlehampton to Pulborough and on by the Rother as far as Midhurst, but by canal also to the Wey and so to the Thames and the whole of the Midlands. There was living until lately in South Stoke a man who could remember having made the journey by water from Littlehampton to Birmingham. Less than 50 years ago the river-side farmers kept each his own barge to take his produce to market at Arundel or elsewhere, and many of them still got a large part of their household supplies direct by water from London. Books such as Kent's *Directory* of the latter part of the 18th century give notice of the departures of the cargo-boats from one or other London wharf to the most unexpected inland spots, Arundel amongst them⁵; and local tradition avers

⁵ "Arundell . . . Ves(sel), Yoxall's Wharf, Southwark."—*Kent's Directory*, 1791.

that at that date Burpham, whose solitary claim to greatness nowadays is the love that Ruskin very properly bore it, was well nigh as busy a spot as was Arundel itself, the crews of a hundred barges making it noisy by day and by night.

Among the "improvements" mentioned are three "Cuts," by which have been eliminated five out of ten awkward corners, and the actual length of the water-way from bridge to bridge has been reduced from nine miles to less than six. The Offham Cut was made so late as 1862-3 to prevent the constant flooding of the ground across which was then being built the railway from Pulborough to Arundel and Ford; and much of the *déblai* from the Cut was used to form the railway embankment alongside. Only sixty years ago, then, the "brooks" of this part of the valley were drowned at every high tide. The making of the Cut side-tracked Burpham, but obviously that village had already lost all importance as a centre of economic distribution. Canal-traffic was, in fact, by that date moribund. Its heyday belongs to the 18th century and the first quarter of the 19th century.

The other "Cuts" are known respectively as the South Stoke Cut and the Houghton Cut. The old channel at Houghton is no longer passable. That at South Stoke can be negotiated only by small row-boats at the top of the strongest tides. Even the Burpham loop is rapidly silting up. For the most part all three still serve as parish boundaries, but the course of the boundary immediately west of Burpham shows that there was a time when the river's main channel lay further to the west, a small part of the parish being now isolated on the right bank of the loop.

The devious course of the river before the various improvements were made implies that at that date it had little stream and was for the most part very shallow. One prime result of the straightening of its course was to add greatly to the volume and force of the water, and therefore to the scour; and this last has been intensified by considerable dredging and by

embanking. The material for the embankment was, and is, obtained from various quarries in the chalk slopes along the western bank of the river between Houghton Bridge and the Black Rabbit Inn, some of them of immense size. When the first attempts at embankment were made is of little importance. At the present day the "brooks" on either side are liable to be waterlogged at every spring tide throughout the year, and in winter they are constantly inundated over long distances and for weeks together. From Houghton Bridge to the coast there is not a village, nor even so much as an old steading, to be found in all their length, and it is certain that until recent times they formed the bed of a vast estuary completely severing the Rapes of Arundel and Bramber. Sufficient indication of their early character is to be found in the ancient boats from time to time discovered in the boggy soil.⁶

A Roman road running westward through Poling to the extremity of the dry land beyond Lyminster Church, one infers that in Roman times there existed some means of crossing the estuary at Lyminster; the name of Ford declares as much, and it is said that in 1890 there could still be seen here traces of the road's course down to the stream,⁷ while from Lyminster to Tortington ran also a corduroy track of unknown date.⁸ In earlier times the estuary was probably impassable at any point below Arundel except by boat, and it is likely that even the Romans affected the *trajet* between Ford and Lyminster partly by ferry.

At Arundel was provided a permanent crossing not later than 1151, when Adeliza, Countess of William de

⁶ One was found in North Stoke in 1834 (Horsfield, *County of Sussex*, II. 147), a second in Burpham in 1858, and a third yet remains buried in the soil in the same parish, near the railway-bridge spanning the southern end of the Burpham loop. The question of the real age of each or any of these boats is not here discussed. They may be British, but it is self-evident that the Saxons must have long used the same means of navigating the estuary, and there is no reason to suppose that they did not also use "dug-outs" for the purpose. Those who assume that monoxyle dug-outs are necessarily of greater antiquity than boats of any other fashion will find proof to the contrary in Strabo, c. 155.

⁷ *S.A.C.*, XLIII., p. 105.

⁸ So the late Capt. W. Kemp, of Lyminster, told me.

Albini, lord of Arundel, founded the Priory of Pynham or de Calceto with the express duty of maintaining the causeway (*calcetum*), still so called, which leads from the foot-hill by the market-place to the opposite high ground beside the railway station,⁹ a total length of some 700 yards. From that day to this has stood here a bridge,¹⁰ but how long previously this crossing may have been used there is no evidence to show. Like the other great castles of Sussex, that of Arundel presumably commanded a river-crossing,¹¹ but whether the crossing was at the present bridge, or rather at the point next to be described, it is impossible to say.

Local tradition yet remembers a ford at Warning-camp, 1000 yards north-north-east of Pynham Priory, where, even with all "improvements," the water is but three feet deep at low tide and was less in earlier times before the stream was dredged and embanked. A now "blind" lane runs down to the river from the east, and beside it, a quarter of a mile from the river, stood the vanished chapel which was the customary attendant of mediaeval fords.¹² The lane points direct for Swanbourne Lake, where, as will be seen, debouched a very important and very old road (No. 11 on map) coming from the direction of Whiteways Cross.

The next possible crossing is at Burpham, a mile further to the north-east, where the setts of a paved ford are still intact in the river's bed, almost opposite to the end of the village street. The age of this ford is quite unknown, but it cannot well be very ancient. Anyone who used it must, before gaining firm land at Offham

⁹ *S.A.C.*, XI., pp. 91 *sqq.*

¹⁰ In yet earlier times the main stream of the Arun probably followed the line of the Municipal Borough's boundary, and in that case the principal crossing would be, not at the site of the present bridge, but 400 yards further to the east, near the present-day Railway Hotel.

¹¹ Cf. the present writer's article on "The First Castle of William de Warrenne" in *Arch. Journal*, 1917, pp. 60-62.

¹² Additional evidence of the old-time importance of this spot is possibly to be seen in an anhistoric earthwork 500 yards south-west of the site of the chapel, just on the edge of Batworth Park. To judge from appearances only—and there is at present no other evidence available—it is a Celtic moot, a *circus*, and implies the presence of a considerable settlement of a date between 400 B.C. and the end of the Roman era. See also *S.A.C.*, XLVI., p. 199.

on the western side of the river, traverse at least 750 yards of "brooks" all much below tide-level, and until 60 years ago constantly drowned. It was probably made only to give access to the detached part of the parish lying west of the Burpham loop.¹³ There is no right of way across the "brooks" to Offham. Nowadays there is, indeed, no provision for vehicles of any sort to cross the "trough" at any point between Arundel and Houghton Bridge.¹⁴

The bridge at Houghton is thought to date only from 15th century.¹⁵ It has been destroyed more than once, for the current here is very strong; and though it is quite possible that under exceptional conditions of tide and season the spot may have offered a practicable *trajet* in very early times, it can never have been safe or easy. North of the bridge there is no crossing whatever nearer than the by-road from Greatham to Coldwaltham, three crow-flight miles away.¹⁶

Now as it is accepted as fact that there existed an immemorial east-to-west roadway—the "Tin-Way" of old writers—along the entire length of the South Downs, the question arises, Where and how did that roadway cross the Arun?

The answer to this question is broadly hinted by the orographical map. Coming to all intents in a right line westward from Chanctonbury by Highden and Kithurst Hills as far as Rackham Hill, the roadway would naturally drop thence south-westward down the

¹³ The peculiar disposition of the village street, at right angles to the river rather than parallel therewith, is probably due to the lie of the great fosse and vallum of Burpham Camp.

¹⁴ The wooden bridge at South Stoke is not counted, as it is no thoroughfare. It was built only when was dug the Cut, which made it necessary as a means of reaching "The Horseshoe." Previously there had been a similar bridge crossing the river immediately under South Stoke Farm ("Stickney's"), which provided communication between the Stokes. The course of the old road to this bridge is still plainly visible on the southern bank.

¹⁵ *S.A.C.*, XVII., p. 215. W. D. Peckham accepts this date without demur (*S.A.C.*, LXII., p. 36). Mark Boniface, of Bury, told me (1921) that in laying drains beside the present road through Houghton the surface of the earlier road was found (1912) 4' 6" below the present level, "steined with 12-15 inches of flint, as hard as concrete."

¹⁶ Sir H. Tregoz, lord of the Manor of Greatham *temp.* Ed. II., built a stone bridge here (*S.A.C.*, XVI., p. 259).

long nose of Camp Hill to North Stoke, whence the passage across the flat would be but some 450 yards; and rising thence towards Whiteways Cross, it would turn north-west through Houghton Forest to regain the main ridge of the hills on Glatting Down. Such a course entails, indeed, something approaching a right-angle bend, but it is the course laid down by the *natura loci*. There follows the question, Is there any evidence that there ever existed a crossing at the spot indicated?

Outside the west wall of Arundel Park, at a point 250 yards south of Whiteways Lodge, the War Dyke (No. 1), breached for a few feet by the modern high road from Arundel to Bury, continues in the same line for some 500 yards further, then making almost a right-angled turn, runs northwards for 50 yards, and consequently ends on the brow of an abrupt slope.¹⁷ There is no discoverable sign that it was ever continued in the same northward direction, and the sharp fall of the ground makes any such course highly improbable. That it merely doubled back upon itself and struck eastward again is inherently unlikely. The probability therefore is that in some shape it was continued westward (see inset to Map).

Some 75 yards away to the north of the War Dyke a second and smaller covered-way of precisely the same form runs (1*a* on map) parallel with it from the Arundel-Bury road westward for 450 yards (*S.A.C.*, LIX., p. 39, and plate II.). It is locally spoken of as the "Dummy (i.e. small) War Dyke." Of its course further east there is no hint discoverable. As it falls down the hill westward its section as usual changes, the up-hill vallum disappearing in the hillside, and the down-hill vallum presently tailing out on the steep slope. Here, according to Messrs. Curwen's plate, it ends. But in reality it passes imperceptibly into a very noticeable

¹⁷ Apparently the work has never been interfered with here, and it ends now as it ended when first made, the two equal banks tailing out from a height of 7 feet at the angle to a mere 3 feet at the end. This sudden arrest overlooking the tops of the trees below is one of the oddest effects in Sussex earthwork known to the writer.

terrace-way (2a), 12 feet or more in width, which continues in the same line so as to pass directly across the northward termination of its bigger fellow, some 75 feet away and 20 feet lower down the hill-side, here very steep. It is scarcely possible to doubt that the one work was originally connected with the other, but all superficial trace of such connection has been obliterated by a recent trackway which here comes up from Whiteways and, crossing the line diagonally,¹⁸ goes onward to the point A on the map. The terrace 2a maintains its original course for another 100 yards, bearing somewhat to the left with the contour of the hill, and rising slightly, it again assumes the form of a holloway for a short distance, vanishing at a point only 20 yards away from A. Precisely at A begins a very remarkable "slunway" (3 on map), which provides an easy path, still in the same general line, down the western flank of Rewell Hill into Fairmile Bottom.

Thus, within the space of a short half-mile we have a typical covered-way (1a), an unmistakable terrace-way (2a), a holloway, and the "slunway," all in one general line and each merging into the other; and as three items out of the four are indubitably roads, the inference that the covered-way was likewise a road is almost certain. To argue that the "Dummy War Dyke" was originally built as a defensive work and later utilised as a roadway is idle; as well maintain a railway cutting to be of a different date from the track it carries.

Reverting now to the point where the greater War Dyke makes its sudden bend to the north, it is plainly evident that, whereas the inner (northern) vallum was purposely brought to a perfect angle, the angle of the outer (southern) vallum was never so completed. There is a decided gap where the angle should be, and the gap is exactly in line with the westward projection of the War Dyke's general course. The gap leads at once to a broad and smooth terrace (66 feet wide),

¹⁸ For a few yards the modern trackway and the older terrace-way coincide, the steep fall of the hill leaving no alternative.

which follows (2 on map) the foot of a pronounced lynchet (7–10 feet high) throughout the entire distance from the gap to the point A and the “slunway” already mentioned. Along the brow of the lynchet grow old thorns, the remnants of an erstwhile hedge, and ancient beech-trees are dotted thinly about the falling hillside below, but along the terrace there is to be found no old timber; and while there is ocular proof that the terrace communicated directly with the War Dyke at one end by the gap described, there is similar proof that at the other end it was continued directly onward from A by the “slunway” (No. 3). In fact the sequence of Slunway—terrace-way 2*a*—covered-way 1*a* is exactly repeated in the sequence of Slunway—terrace-way 2—War Dyke; whence it is to be inferred that the great War Dyke was as much a roadway as was the “Dummy” War Dyke.

The convergence of so many various roads at A probably finds its explanation in the great group of earthworks in Rewell Wood some 300 yards away to the south; and the evidence going to show that those earthworks represent a British settlement of a date *circa* 150 B.C.,¹⁹ one is prepared to believe that some of these roads are of the like antiquity.

“Slunways”—the local term to denote any road or track which *slants* down the face of a hill—are numerous in the vicinity of Whiteways, and they are of various ages. Two examples (Nos. 4, 5 on map), not inaptly known locally as “The Stag’s Horns,” which climb the north-east face of the Down within the Park, leading from Blue Doors to the unplanted gaps dividing Dry Lodge Plantation from (4) Herons Wood on the south-east and from (5) Lonebeech Plantation on the north-west, are possibly of very modern origin; but a third example (No. 6 on map) can hardly be of less than Roman age, for it forms the only discoverable continuation of the terrace-way (No. 8 on map) which comes up out of Pughdean,²⁰ and the latter is not

¹⁹ See *S.A.C.*, LXI., pp. 20–39.

²⁰ This appears to be a modern spelling of Pewdean (XVIII. century). I have not met with any earlier forms.

merely of characteristic Roman form, but in its southward course skirts a part of the Park which is thickly strewn with pottery and other remains of Romano-British date, indicating a very extensive settlement. Intact as far as Lone Oak, it is obliterated for 200 yards across the highest part (400 O.D.) of the ridge, to be resumed in the form of a much mutilated holloway (No. 7) descending the upper part of the hill's northern face.²¹ When the fall of the hill becomes more abrupt the holloway, swinging to the east, drops into the upper end of the terrace-way No. 6, and so descends one of the steepest slopes in the neighbourhood.²² About the lower end of the terrace-way (200 O.D.) the character and disposition of the timber preserve the plan of fields now parked, but along most of the terrace itself, a length of some 600 yards, the greater age and density of the trees declare that the roadway went out of use a long time ago. Ploughing must at all times have been an impossibility along the whole length of the terrace, and no vehicle of more than Roman gauge can well have used its narrow path. Several huge beech-trees, rooted in the very centre of the roadway, show that no vehicle of any kind has for many generations passed along its lower half, and the creep of the chalk at some points has almost covered the road.²³

The terrace-way ends where it is crossed by a south-to-north trackway known as "the old road (from Arundel) to Houghton." This (No. 15*a*) is still a public thoroughfare, and remains so even when the rest of the Park is formally closed annually on March 25th. Further east the timber preserves the line of yet another road (No. 6*a*) which ran on past Blue Doors to Offham. This may have been Roman in origin, for there was possibly a Roman settlement of some sort at

²¹ The obliteration of the road across the ridge is explained by the planting of Lone Beech Plantation and by the construction of the drive along the N.E. edge of it. The mutilation of the hollow way is the result of ploughing.

²² In some places the fall of the hill-side approaches 1 in 2.

²³ The upper half of the terrace, being still used from time to time as a timber-trail, is occasionally cleared and remade after a fashion. The lower half, too steep and narrow for this purpose, has not been interfered with, the timber-trail branching off northward about midway.

Offham,²⁴ but, joined as it was at Blue Doors by a road from South Stoke (6*b*), it must at no remote period have been the most direct means of communication between that village and Houghton bridge. There is a short piece of it some 100 yards east of the foot of the terrace (No. 6), where it measures 35 feet over. The spot where all these roads converged was the site of a dwelling certainly as late as 17th century, as is shown by the pottery and other relics which litter the surface of what was once the field adjoining ("Nanny's Croft").²⁵ But there is pottery there of every period back to Romano-British times, and amongst it even some of the coarse, ill-burnt stuff, studded with grains of flint, such as it is customary to refer to the Bronze Age. There was probably a cemetery, there was certainly a settlement, here in Romano-British times.

The meeting at the spot (B) of so many roads, for long centuries, has almost obliterated yet another (No. 10), which followed the floor of the adjoining combe north-eastwards for some 500 yards, dropping another 200 feet and so reaching the bank of the Arun. Like most unpaved roads on falling ground, it is a holloway, becoming more and more definite as it descends. Old beech-trees have grown up on it in places, and in other places the floor has been broken by pits, larger or smaller, probably made in the search for flints.²⁶ Having been taken as a bounder of the parishes of Houghton and South Stoke, it must once have been a very much more noticeable feature than now it is, and this also explains a slight vallum which follows its eastern edge; but even in its present mutilated form the

²⁴ I have been told that a quantity of Romano-British pottery was recovered from an old well which was opened, a few yards west of Offham Farmhouse, in 1894, but I can obtain no confirmation of this. Offham (*sic*) was a manor T.E.R. (*Domesday*, XIX*b.*, 46.)

²⁵ "Nanny" is said to have been the mother of two sons who got into trouble for throwing down part of the Park Wall, presumably as a protest against the parking of Nanny's small domain by "Jockey of Norfolk."

²⁶ This does not imply that the road was ever metalled. Similar pits are to be found all along the floor of other combes in the vicinity, where no roads are discoverable. The modern road-contractor knows that the floor of a Downland combe is usually a mass of natural flints, and the flint-trade was very active along this part of the Arun valley until a generation ago.

holloway is in most places far too large—10 feet over and 3–4 feet deep—to be explained as the result of throwing up that insignificant vallum. Romano-British pottery, pot-boilers, and oyster-shells litter its course. Crossed by the wall of the Park some 50 feet away from the river, it re-appears at once, dropping into the stream 60 yards below Wall-end in the form of the holloway usual in such cases. Just 450 yards away from the opposite bank ends the made road through North Stoke, pointing almost direct towards the spot.

Had the objective of this road (No. 10) been Houghton, a mile away to the north, it would have followed rather the course taken by No. 15*a*, “the old road to Houghton”; and if No. 10 had ever communicated with Houghton, No. 15*a* would hardly have supplanted it. Its objective therefore was not Houghton. Moreover, before the river was banked there was, just under the southern side of the War Dyke and at the outfall of Harber’s²⁷ Cabin Bottom, a considerable inlet fed by strong perennial springs, and it was to avoid the necessity of crossing this inlet that the “old road to Houghton” took its actual course. One of these springs, which still gushes out in the actual bank of the river here, is yet remembered to have had a great reputation for the cure of rheumatism. To this day there is no room for a roadway southward along the stream to South Stoke, the foothills falling precipitously to the river. As the road leads neither to, nor near to, any discoverable homestead, nor to any quarry, and as there is no sign that this part of the Park has ever been cultivated, it cannot be dismissed as merely a farmer’s or a carter’s track of whatever age. Unless it was aiming to get across the river, it is impossible to understand why it should take the course it does.

The facts suggest that the road was aiming at a ford, or possibly a bridge, and as the road itself is with

²⁷ A modern name. Harber (?Arber, Arbour) was a charcoal-burner and flint-digger of the last century, who here built for himself a makeshift hut. Such, at least, is the local explanation.

small question as old as the Roman period, it follows that there did exist at this spot a practicable crossing in the Roman time. The spot is 500 yards south of the eastern extremity of the War Dyke, and to all intents mid-way in a straight reach of half-a-mile's length. At either end of this straight reach, more particularly at the northern end by Houghton Lodge, the current, throttled by the sudden bend of the channel, is too violent and irregular to permit of any crossing.²⁸ Along the straight reach, however, albeit swift, it is equable. The bottom is hard throughout, as is the case wherever a river has cut its way through the chalk barrier, and along this reach, as its local name of "The Narrows" suggests, the stream is less wide than usual. If a crossing existed at the spot indicated by the road No. 10, there is no reason why there should not have been another at any point along The Narrows where the ground allowed of an approach to the water's edge.

Returning now to the upper end of the terrace-way No. 6, there are faint signs of its having once continued straight on (No. 9), pointing direct to the spot (C) where the War Dyke is now breached by the drive from Whiteways Lodge; but this part of the hillside has been under cultivation in the past, as the absence of trees declares. Further on the ground is dotted with timber, some of it of very great age, and direct in the required line through the trees runs for 75 yards the remnant of a fine covered-way (No. 9a) 60 feet in width. At some recent date a bank of soil has been thrown across the gap by which it must originally have entered the War Dyke, so that anyone passing along the Dyke has no suspicion of its existence; but the vegetation of this bank—the only green patch to be found in all the War Dyke's length—tells its own tale; the bank is made soil, and it is scarcely to be doubted that it was formed at the same date as the similar bank which carries across the War Dyke itself the drive to Whiteways Lodge. There is no question whatever that 9a is a road, and

²⁸ Before the Houghton Cut was made the current would presumably be much less violent.

that it linked the War Dyke at the one end with the terrace-way (No. 6) at the other. Its floor, it may be remarked, is not so deeply sunk as is that of the War Dyke, but some feet higher, a fact which may imply a later date. There are signs that it swung left so as to enter the War Dyke slunwise; there is no sign that it crossed the Dyke and was continued beyond it. Here, then, is another material hint that the War Dyke was at one time used as a road. (See inset to map.)

Much more obvious is the junction of No. 6 with the holloway No. 7, and its connection thereby with the terrace-way (No. 8) at the head of Pughdean. The latter falls regularly to a hard greenway (No. 11 on map) from 6 to 9 feet wide, which follows the valley's floor past the targets and The Walnut to Swanbourne Lake, being plainly visible to the water's edge, a total distance of $1\frac{1}{4}$ miles. This is a made road with a perfectly flat surface, so hard as to have wholly defied the rabbits, who industriously turn up the looser soil on either side of it and throw out pieces of Romano-British pottery.

Swanbourne Lake is entirely artificial. It was formed to serve as a mill-pond. There was a mill, and therefore some sort of a mill-pond, here from the time of *Domesday* until about 1840. Mill and mill-house stood at the southern end of the dam thrown across the valley's gorge, where is now the Castle Dairy. The pond was fed, as is the Lake, by copious perennial springs rising in its bed at a point near the middle of the Lake's present length, just below the spot where debouches Ruttinghill Bottom. Prior to the damming of the valley the flow from these springs must have made its way to the river by what later came to be the mill-leet, a channel old enough to have been taken as bounder of the parishes of Arundel and South Stoke; and any road from the direction of Whiteways Cross would naturally pass to the west of the springs or their effluent, in order to avoid the necessity of crossing these lower down. As there is no reason to suppose that any mill or dam existed in Roman times or earlier,

one infers that the road followed this course, along what was at that time a dry valley, to the point where later stood the mill. This view finds confirmation in the course of another ancient road (11a) of terraced form, which descends the easy western side of Ruttinghill Bottom towards the Lake, on such a course as to fall into No. 11 some 200 yards above the point where rise the springs.²⁹ There was a ford at Warningcamp, distant only 1100 yards from the hard ground at the Swanbourne Valley's gorge. To that ford lead a number of roads from the eastern side of the valley, but on the western side there is no discoverable road to connect therewith unless it be No. 11, which is situated as near to the ford as was permissible, and is in the right line. There is relatively high ground along the required line (No. 12) across this part of the flats, so that the *trajet*, if somewhat long, would not be dangerous.

At the point where later stood the mill diverged a road ("Mill Lane," No. 13), which followed the foot-hills beneath the walls of the castle into Arundel. This cannot be less old than the mill, to which it provided the sole means of access from the town; it remained indeed the only road out of Arundel northward along the river until 1894, when was opened the handsome "Mill Road" (No. 14 on map) now in use. But it is probably of much earlier date, for Arundel was occupied in Roman times, and if the Roman settlement was not a large one, amongst its constituents was one handsome house of which the tessellated pavements were disturbed at the western end of Tarrant Street in 1896 in the course of digging for the sewerage of the town³⁰. This settlement must have had some means of communication with the ford at Warningcamp, and Mill Lane probably provided it. So soon as the causeway

²⁹ This road (10-12 feet wide), traceable for some 600 yards, begins as a holloway at a spot where Romano-British pottery abounds and where are superficial signs of a dwelling-site. It passes S. by the eastern edge of a spot called "Shepherd's Garden," where are several barrows, and drops into the gorge of Ruttinghill Bottom in such a way as to preclude its ever having had any other objective than that here suggested.

³⁰ S.A.C., XL. (1896), p. 283.

and bridge at Arundel came into being, Mill Lane would be adopted as *the* thoroughfare for most of the traffic moving eastwards from Whiteways Cross by way of Pughdean to the bridge.

Roman Arundel had direct communication with the more extensive settlement which covered the central part of the Park, and with the north, by a road (No. 15 on map) leading due north past the eastern side of Hiorne Tower (215 O.D.). Destroyed thus far by various undertakings connected with the ancient or the modern Castle, it is continued down the slope from the Tower in a characteristic Roman terrace-way ("Long Hill,") 6-9 feet in width to join the road No. 11 at The Walnut³¹, so avoiding the detour by way of the Mill; but traffic from Whiteways Cross would mostly prefer the latter route because, while little longer, it wholly avoided the considerable climb (nearly 200 feet) entailed by the ascent of "Long Hill."

The Celt made and used terrace-ways of a rude kind, but those of Roman date are to be recognized by their more careful grading, by the absence of any retaining bank upon their outer edge, by the fine quality of the grass which covers them, and above all, by the careful provision for their drainage³². There were two methods of providing for such drainage. On very steep slopes, where the construction of a wide roadway was inadmissible, the method was simply to tilt the flat surface of the terrace in the downhill direction, so that the water-shot from above should run across the roadway and escape harmlessly over the edge. When the slope was gentler, and the roadway therefore was wider, a continuous catch-water gutter was dug along the inner side of the terrace. Such gutters were proportionate to the work required of them: at the upper end, where

³¹ A map of 1779 shows standing at this spot a house named Pewdean Lodge.

³² There is a striking illustration of the difference between the Celtic and the Roman work on Westmeston Hill. The Celtic terrace, of irregular gradient, degenerates into a mere holloway; it is covered with the coarsest of Downland grass, and has no provision whatever for drainage. Therefore, the Roman constructed a new one, in which each of these faults is made good, the route being thereby both eased and shortened.

the water-shot must necessarily be small, they are either not apparent at all, or of only slight dimensions; but they increase in size as they descend until, at the lower end, where they have to deal with the water-shot from a very large surface above, they are sometimes of such size that the roadway itself assumes the appearance of a flattened earthen vallum (in reality the *agger*) covering a great fosse (in reality the gutter). Gutters of this size were feasible only where the fall of the hill was gentle, needful only where the height of the hill above (and the consequent volume of the water-shot to be dealt with) was very considerable. There are capital instances at the lower end of the terrace which descends Westmeston Hill, and along the lower course of the Stane Street terrace in Bignor Tail Wood.

The "slunways" about Whiteways Cross illustrate these general principles. No. 6 is built on the face of a hill of which the fall is so steep that no wide roadway was possible; therefore the road is narrow (averaging 9 feet only) and there is no gutter, but the floor of the terrace is tilted heavily down-hill. No. 8, on the other hand, which is built on the side of a hill where the fall is very slight and very short, is wide—15 feet at the lower end, broadening to 20 feet at the upper end by Lone Oak—with extremely small tilt and a lateral gutter. The latter, though slight, is still quite visible, and its presence is further betrayed by the workings of the moles and the rabbits. These animals have even broken the actual edge of the road here and there, where it is *made* earth,³³ but neither moles nor rabbits can disturb the hard-rammed bed of the green-way (No. 11) by which the terrace is continued southward along the floor of the valley (Pughdean).

But the terrace-way (No. 3) on Rewell Hill is anomalous. The fall of the hill is not abrupt, the terrace itself is short (300 yards), and the water-shot to be dealt with is very small; yet the roadway is flanked by

³³ From the method of their construction the up-hill half of the road-bed of Roman terraces is the natural solid chalk, the down-hill half being "made" earth.

a gutter of extraordinary dimensions. Right on the brow of the hill it is actually wider (11 feet) than is the roadway itself. The fact calls for explanation, and when it is further observed that the *agger* of the terrace-way and its gutter lie in the line of the War Dyke's westward projection along the terrace No. 2, as well as in line with the other terrace (No. 2*a*), there arises the suspicion that *agger* and gutter may represent what were once the vallum and the fosse of a work precisely like the War Dyke. Careful sections taken at various points near its upper end confirm this surmise; the Roman terrace-way No. 3 has, in fact, been formed along the crown of the vallum of an earlier covered-way, and some of the material removed therefrom has been thrown inwards upon the original fosse to give additional width to the terrace-way.

From the lie of the ground only it is reasonably certain that the original work was, in fact, a part of the War Dyke which has been reconditioned by Roman engineers; in which case obviously the original work was pre-Roman. Moreover, as the Roman who altered it, retained it as a roadway, it is not unreasonable to infer that the original pre-Roman work was itself also probably a road. To the same conclusion point also the facts that (*a*) the War Dyke, like its fellow the "Dummy War Dyke," merges at its western end into an unquestionable roadway, and (*b*) with the War Dyke communicates the unquestionable road No. 6. But if the War Dyke was actually a road, it ought to be possible to recover some traces of its further course to east and west of the portion (No. 1 on map) already recognised and surveyed by Messrs. Curwen. And if any such traces can be recovered, the fact will go far to disprove alternative theories which would explain the War Dyke as merely a boundary line or as a defensive and military work.

At the present time the War Dyke's eastern termination is in the face of a large disused³⁴ chalk-quarry

³⁴ It presumably went out of use only when this part of the Park was walled, about the year 1811.

excavated in the extremity of an outlier of the Down overhanging the western bank of the Arun. Coming thus far along the northern flank of the only ridge which runs directly and continuously down from Whiteways to the river, it ends, 400 feet away from the present water's edge and 65 feet in air, at a point some 150 yards south of Houghton Lodge. This is near the most westerly point of the wide loop described by the river about the village of North Stoke, which lies on the foothills of the eastern bank at a distance of 600 yards from the present water-way. The Ordnance Map shows the church of North Stoke to stand at 37 O.D., the foothills running out some 150 yards further towards the river. Beyond these there extend some 450 yards of dead flat water-meadows, only kept free from continual flooding by an embankment along the river's edge. Here, at a point 530 yards south of the church, was found in 1834 one of the ancient boats already mentioned; but no such evidence is needed to convince the observer that the whole of this level was drowned land at no remote period. The timber proves it; to the edge of the foothills grow ancient trees, but the levels carry never a tree of any kind.

For a mile and a half, from North Stoke to the great barrow called The Burgh, the ground rises steadily in a long ridge, the flats of the Arun marching on the south, and on the north a curiously abrupt combe—Stoke Bottom, with its smaller affluents of Medley and Grevitt's Bottoms—isolating it from the mass of the Downs above Amberley. The ridge runs a little north of east, nearly in the same line as that which carries the War Dyke from the Arun to Whiteways, and the two are curiously similar in the regularity of their fall, their straightness, and their isolation from the high ground adjacent. A roadway coming down the one might be expected to continue up the other.

A district road (No. 16) runs all the length of the eastern ridge from North Stoke by Camp Field (200 O.D.) to the cottages known as Canada (270 O.D.),

where it forks. The left-hand branch (No. 17), now remade on a slightly different course somewhat further to the north, originally ran straight onward (No. 17a) over the turf to The Burgh, and thence turned north-east to climb the main ridge of the Downs on Rackham Hill. The latter part of its course, coincident with a parish boundary (North Stoke-Burpham), is known as "King's Road," because it leads to the adjacent fields of "King's Farm," land which was only brought under cultivation by a person of that name who until some twenty years ago occupied the North Stoke farm. This fact is put on record in order, if possible, to nip in the bud the growth of a baseless legend which would connect the name of "King's Road" with the flight of King Charles from Worcester.³⁵

The other branch (No. 18 on map) strikes somewhat south of east from the fork at Canada for 650 yards, then bending full south-east drops into the dreary upper end of Peppering Bottom. Beyond Peppering Bottom rises Wepham Down, a bold north-and-south ridge, behind which the ground rises yet higher to Friday's Church (469 O.D.), itself the northern apex of the parallel ridge of Barpham Hill and New Down. Between these two ridges the intervening ground gradually falls to the south, forming a bottom known as Lowsdean.³⁶ A mile east of Friday's Church rises the fortified summit of Harrow Hill (549 O.D.), and the same distance south of Harrow Hill lies in the valley (177 O.D.) the old site of Michelgrove House and Park.

Across Barpham Hill runs east-and-west a short but fine covered-way (No. 23 on map; not described in

³⁵ According to this story, Charles spent a night at the old George and Dragon Inn at Houghton, intending to ride thence on the morrow eastward by way of Houghton bridge and Amberley Hill. Informed, however, that the Parliament's men had during the night occupied the roads in that direction, he eluded them by riding south, then east to the ford at Burpham, and thence northward to the ridge by "King's Road." Had he actually followed such a route he would have deserved to be captured. That he verily crossed by Houghton Bridge appears to be certain; see Allan Fea, *The Flight of the King*, and the documents there collected.

³⁶ I have no documentary evidence for the spelling of this name, which is here written as it is pronounced. As there were until recently many barrows in the vicinity, and a few still remain, it is a fairly safe conjecture that Lowsdean represents Hlawesdene, "Barrow Bottom."

S.A.C., LIX.), 700 feet in length, and in places as much as 10 feet deep, with an over-all measurement of 54 feet. It owes its exceptional degree of preservation to its having been taken as bounder of the parishes of Burpham and Angmering, and also as the mark of two contiguous farms. In dimensions quite comparable with many parts of the War Dyke, it has the same constructional features, and it lies more or less in the required line. Its western end has been destroyed where it drops down the slope into Lowsdean, but there is no reason to doubt that it negotiated that slope slantwise and so linked up with another earthwork (No. 21) 270 yards away to the north-west.³⁷ This is a massive vallum forming two sides of a parallelogram, its fosse upon the uphill (N. and E.) side; the shorter arm (60 yards) is aligned with the postulated extension of the Barpham Hill covered-way into Lowsdean; the longer arm (400 yards) resumes the general line to the north-west, aiming directly for Canada and Camp Hill. It lies on the flank of the hill, and in such a position we should not, from the analogy of the War Dyke in Arundel Park, expect to find traces of any second vallum.

The abrupt fashion in which this earthwork ends on the open turf shows that here it has certainly been destroyed by the plough, nor is it possible for the eye to detect for the next 450 yards any smallest superficial trace of its earlier existence; but on the ridge of Wepham Down, on the precise line of the work's assumed westward projection, it is again discernible (No. 20), partly in the dip of a shallow trench and by the extra-luxuriant growth of the grass therein, partly by the character of the mole-casts along the line. Moles invariably work by preference in loose soil, and for that reason they have burrowed freely along the line of the

³⁷ A slight and fragmentary earthwork, No. 22—two sides of a rectangle—which lies between, may represent the remains of a later enclosure rather than part of the original roadway. There is reason to think that hereabouts there fell into the trunk line another road vaguely traceable, as covered-way or terrace-way, hence onwards over Perry Hill into Wepham, and possibly to Warningcamp and the ford there.

old fosse, where they throw up little but black mould; other casts to right and left of this show little or no mould, but quantities of comminuted chalk. This chalk is the dispersed material which was thrown out of the fosse to form the covering banks right and left. In certain lights the line of this now vanished earthwork as it falls down the western face of Wepham Down—the fall is gradual, and the earthwork therefore took a direct course down-hill—is plainly visible from the high ground of Arundel Park (Dry Lodge) $2\frac{1}{2}$ miles away.

Across Peppering Bottom the work (No. 19 on map) is plain to view for a considerable distance, a great holloway 9 feet deep and 50 feet over, meandering somewhat according to the accidents of the ground, but still maintaining the same general direction. It is flanked by lynchets of more than average size (7–8 feet high), and broken once or twice by old ponds now dry, and there can be no doubt that it was in use as a farmer's roadway until very recent times. As the ground lifts towards Canada it is again lost, but the branch-road (No. 18) maintains the line.

Hence onward along Camp Hill to the railway tunnel the district road (No. 16) has overlain the original road, which must have followed the southern flank of the hill, and would therefore have but one vallum. A remarkable terrace-way called "The Slype" (No. 24) begins at this point, rounding the steep nose of the ridge and so dropping into North Stoke. Subsequently used as part of "the old road (from North Stoke) into Amberley," this terrace—8 feet wide and 230 yards long—is in section precisely like the old (? Roman) road between Blue Doors and Offham (No. 6a), and can hardly be anything but old. It may be connected with the presence of an old ford serving Hog's Lane (below p. 79).

The name of Camp Hill preserves the memory of a large *enceinte*³⁸ which was destroyed only in the last

³⁸ Cartwright, *Rape of Arundel* (1832), p. 225. He says that "discoveries of coins, etc., are recorded, but none of them preserved and authenticated."—Horsfield's *County of Sussex* (1835), II., 147.

century, apparently for the sake of the flints of which it was largely built. A more or less circular work lying immediately north of the line of the ancient road, it represented a town of its period, and helps to account for the obvious fact that, as at Whiteways Cross, so at Canada there has evidently been a road-ganglion of the first importance. Roadways of all types and all ages are still visible hereabouts wherever cultivation has spared them. Amongst them is an almost obliterated covered-way (No. 25), which leads northwards into Stoke Bottom, and possibly communicated by way of Medley Bottom with a remarkable terrace which follows the eastern brow of that combe and links up direct with the immense covered-way known as Rackham Banks. The latter being in every way similar to the War Dyke, was probably also a road, and may be supposed to have communicated with the trunk-line to North Stoke by a road (now lost) along the lower part of Stoke Bottom leading into The Slype (No. 24).

The foot-hill on which stands North Stoke ends in a very pronounced, if shallow, semi-circular scarp marking the old-time limit of tides, and in the centre of this semi-circle stands the church. Between the church and the scarp the grass is broken by a number of old lynchets. One or other of these facts would seem to have suggested the idea that there once existed an enclosure about the church.³⁹ There is to-day no sufficient evidence for any such theory, nor does the semi-circular scarp appear to be in any way artificial.⁴⁰

Hilaire Belloc declares⁴¹ that the place-name Stoke throughout the South of England "is associated with

³⁹ P. M. Johnston, F.S.A.: "the site of the church, within an earthwork enclosure, suggests a pre-Christian origin, perhaps an ancient burial-place" (*North Stoke Church; Report on its History and Architecture*, 1908).

⁴⁰ A similar feature is to be seen at South Stoke, in an exactly similar position below the church, and is due to the same cause. It may be seen also at various points right and left of the Ouse Valley below Lewes.

⁴¹ *The Old Road* (1904), p. 75. He is speaking of Itchen Stoke in Hampshire. It is to be remarked that the manors of North and South Stoke both appear in *Domesday* in the plural form of Stoches, "the Stakes" (A.S. *stoces*), and it is quite possible that the two received their distinctive epithets with reference to a staked ford situate somewhere on the river between them. There appears to be a general agreement amongst authorities that the name of Stoke has

the crossing of a stream." It refers, he says, to the "staking" by which the path across swampy ground was demarcated and consolidated. So far as the writer's knowledge goes it is a fact that Stoke commonly denotes places at or near a ford, but the reader will probably agree that it were desirable to adduce some more concrete evidence than this. The equation of Stoke with "ford" may serve as corroboration; it is not sufficient evidence in itself.

Positive traces of the existence of any causeway from North Stoke across the "brooks" are of the slightest, but such as they are they suggest that there were two such causeways, leading to the river's bank at points opposite to the termination of the Roman road (No. 10) and of the War Dyke (No. 1) respectively. Both appear to have started from the slight tidal scarp at which ends the made road, 230 yards south of the church.

As some part of the channel ("The Narrows") has been repeatedly dredged, and the various "improvements" of the river have given to it at this point a stream so strong as very effectively to scour it, it is not likely that there should remain to-day any markedly raised ford or causeway in its bed. Nevertheless it is a visible fact that for some 600 yards below Houghton Lodge the surface is in places curiously broken, more particularly at low water, in such sort as to suggest that the channel here is not so clear as elsewhere. On my first mentioning the fact (1919) to the Duke of Norfolk's Head Keeper, a man who has known the neighbourhood for many years, he told me that he had always noticed it, and that he attributed it to there having been an old ford hereabouts. Tom Buller, a native of Arundel, who claims the sole privilege of netting this part of the stream, is positive that a ford once existed hereabouts, as also a second somewhat higher up, connecting North Stoke with Hog's Lane

reference to a "stake" or "stock" of some sort or other. Compare the occurrence of another North and South Stoke in south Oxfordshire on the eastern side of the Thames between Wallingford and Goring, where another prehistoric road connected the chalk downs of Berkshire with those to the north-east (Chilterns).

(No. 26) and Houghton village. Captain E. H. Mostyn, late of the Duke's Estate Office, was likewise positive of the existence of a ford near Houghton Lodge, though I could not learn upon what grounds.

The present termination of the War Dyke is 65 feet vertically above the river, but only 400 feet distant from the river horizontally. Had it been continued to the river in a right line, it cannot have made a less abrupt descent than 65 in 400, or close upon 1 in 6⁴²; and probably before the chalk-pit was made the fall of the hill's original face was very much steeper, to judge by that of the adjacent slopes abutting on the stream. Also, the embanking of the river having added many feet of level ground between the chalk-pit and the stream, the hill's original fall must have been still more abrupt. As it is quite unlikely that the War Dyke would take a direct course down a slope so steep, the probability is that it descended obliquely, as it did in the case of Rewell Hill; and if it was indeed a road, then like most roads which descend to a running stream it would make the approach *secundo flumine*, i.e. it would turn south rather than north. There are still to be seen the definite signs of such a turn of more than 20° to the south. Projected thus down the slope, it must have reached the river's bank at a point about 100 yards lower down, just where the outbreak of the springs at the gorge of Harber's Cabin Bottom made a wet inlet some 100 yards in length.

It is to a spot 350 yards further south that the road No. 10 points. This being itself beyond all question a road, the fact is proof that there did exist a crossing at that spot; and if the stream of "The Narrows" was fordable at one place, it was presumably fordable at more places than one. The War Dyke's coming so near to the same spot is in itself some evidence that the War Dyke also was a road. But the road No. 10 is Roman, whereas the War Dyke, as shown by its adaptation to Roman requirements on Rewell Hill, is pre-Roman. The

⁴² There is a fall of something like this in the War Dyke's course through the Park, between the 300-200 feet contour lines.

War Dyke, therefore, was making for a pre-Roman ford. And any ford hereabouts can have had for its objective only the dry ground at North Stoke and beyond. This, then, was the spot where the "Tin Road" crossed the Arun. Lying as they do in the same general line, and presenting in better or worse preservation precisely the same constructional features as the War Dyke, it is reasonable to conclude that the works across Peppering Bottom and Wepham Down, in Lowsdean and over Barpham Hill, are all so many parts of the eastward course of the War Dyke, and that the whole represents a great pre-Roman thoroughfare.

The course of the War Dyke westward beyond Fairmile Bottom is matter for future enquiry. There is abundant ocular evidence that the Bottom has been for long centuries a busy line of traffic, and in all probability the traffic of Roman and of pre-Roman times alike passed along it to its mouth at Slindon, two miles further on, and thence direct west to Chichester. If so, the War Dyke is probably to be recognised in the ancient "entrenchment" shown on the Ordnance Map to run past Warehead Farm and Waterbeach to the Valdoe in Goodwood Park, or in the parallel work which until the last century was traceable from Chichester itself eastward as far as Ball's Hut Inn in Slindon. Peter Martin seems to suggest⁴³ that in his belief the former was the original line by which the Stane Street entered old Chichester. Chichester being the headquarters of the Regni, the surmise that the War Dyke was a work of their building is natural, but perhaps unwise. It may as a roadway be of much greater antiquity, though its peculiar form may very well be due in some measure to that energetic Belgic tribe,⁴⁴ who, as the existing remains about Chichester would suggest,

⁴³ *S.A.C.*, XI., p. 129.

⁴⁴ Lieut.-Col. J. B. P. Karslake, writing in *Antiquaries' Journal*, Vol. I., pt. 4, seems to credit the great defensive works about Regnum rather to the Atrebates, immigrants from across the Channel within the century preceding the Roman conquest. Whatever their name, there is little reason to doubt the Belgic origin of the tribe.

had a *penchant* for rearing earthworks on a grand scale. Welsh tradition definitely asserts⁴⁵ that the Belgic Celts did actually construct through roads from end to end of Britain, and recent researches go a long way to confirm this hitherto neglected assertion. The further question why the Belgae, or any other people, should have adopted a form of roadway which to us seems so very unpractical and so extremely laborious, must for the present remain unanswered. It is on a par with the question why the Romans, or some other people, should have adopted a form seemingly quite as unpractical and almost as laborious, in constructing the great central *agger* and twin side-tracks of the Stane Street across Gumber Down.⁴⁶

It can hardly be a mere coincidence that a road laid out along the course of the War Dyke as here traced would directly connect Regnum with the group of earthworks in Rewell Wood and with the settlement on Camp Hill.⁴⁷ Somewhere here, as has been suggested (p. 78), it may have thrown off a branch (No. 25) connecting it with the great covered-way crossing the ridge of Rackham Hill, but the trunk line, continued across Peppering Bottom, Lowsdean, and Barpham Hill, is accompanied throughout by the visible evidence of a large anhistoric population, lynchets, barrows, and the like on every hand; and it would link up also with

⁴⁵ *Triads of Dyfnwal Moelmud*, in *Myfyrian Archaeology*, p. 921 *fol.* Cf. Geoffrey of Monmouth, *Hist.*, III., 5. Geoffrey, who attributes their building to Belinus, son of Dyfnwal (or Dunwallo), specifies four great trunk roads. Critics have usually been content to dismiss them as inventions of Geoffrey's brain, begotten of a distorted memory of the "four great Roman roads." But living in the earlier half of the 12th century, Geoffrey must have been perfectly familiar with the course of those four Roman roads, to which the roads he attributes to Belinus have no relation whatever. They represent, indeed, a polity which was based, not on London and the Channel, but upon Caerwent and Southampton, one of them being said to run direct between the last-named pair of towns. In fact the War Dyke, if it ran (as is here suggested) from Chichester to Old Shoreham, would appear to be an extension eastward of Belinus' road.

⁴⁶ *S.A.C.*, LVII., pp. 136-148.

⁴⁷ It will be noticed that this settlement on Camp Hill, like that on Harrow Hill, lies north of the line of the road, whereas the settlement on Rewell Hill lies south of it. This is strong evidence against the theory that the War Dyke was a military "mark."

the earthwork on Harrow Hill, which may be of pre-Roman antiquity. The course of this road eastward from Barpham Hill is possibly to be traced by fences and farm-roads and a very wide holloway, which continue in the required line for a mile further, the last 250 yards marking a parish boundary (Angmering-Clapham Detached, No. 2). This line crosses the lower slope of Harrow Hill about 600 yards south of the earthwork on the summit, pointing straight for the top of Blackpatch Hill.

To the eastern end of the work on Barpham Hill (No. 23) converge a remarkable number of trackways, some coming up from the south-east, the greater number from the north-east. The latter may have some relation to the presence, in Roman times or earlier, of a dense population in the area immediately north of Harrow Hill, of which population the ground bears convincing evidence in the shape of lynchets, earthworks, and abundant pottery.

It may be possible at some future date to find evidence that the trunk line passed eastward for some five miles, perhaps along the valley between Cissbury Hill (S.) and Park Brow (N.) and so by the northern slope of Steep Down (S.) to the Adur⁴⁸ in the vicinity of Botolphs and Coombes. If this were done it would materially strengthen the theory that the work was originally built as a road only, for there must have existed a crossing of the Adur in that locality from the earliest times.

Any one acquainted with the topography of the part of Sussex traversed by the line from Fairmile Bottom to Barpham Hill, will at once agree that there is little to support the theory that the War Dyke and its apparent continuations eastward were designed as

⁴⁸ Covered-ways of smaller size run towards the suggested line from Steep Down, from Park Brow, and from Cissbury Hill. The last-named, greatly mutilated, runs N.-S. across the area of Cissbury Camp, of which the valla and fosse are thrown across it, as also—so Mr. H. S. Toms informs me—across one of the flint-shafts. The reader who is acquainted with the uncertainty attaching to the real age of both camp and shafts at Cissbury, will not draw hence any rash conclusion as to the age of the covered-way.

boundaries either pacific or military. They do not as a rule avail themselves of the *natura loci* as such boundary-lines might be expected to do, avoiding rather than affecting the higher ground and, where most remarkable, showing sections which can hardly be explained as defensive. On the other hand, it is not difficult to understand alike their course and their construction as representing an earlier edition of the later east-and-west Roman thoroughfare between Chichester and Portslade by way of Ford, and the modern Chichester-Brighton road, their peculiar course being conditioned by the then undrained state of the river valleys and the intervening flats of the foreshore. Regarded as roadways they appear again to link up naturally with, and to explain, a number of similar works to north and south of the line, which otherwise remain almost as much mysteries as must the War Dyke itself. Indeed, this attempt to solve the mystery may prove to throw light upon analogous works far beyond the bounds of Sussex; it may lead to a satisfactory explanation of a number of other Dykes and Ditches—the map of Britain shows, or ought to show, scores of miles of them—not excepting the great Black Ditch or Catrail of the North.

If the larger number of the “covered-ways” so assiduously sought and mapped by Messrs. Curwen are found to run transversely across the crests of ridges of high ground, this characteristic is, it would seem, no *proprium quid* of the *genus*—they seem, wherever possible, expressly to avoid the ridges—but merely an accident which has happily resulted in their preservation. On the crests they were, if not altogether safe, at least most safe from the all-levelling plough. On lower slopes few have been spared; in the actual valleys fewer still.

It is worth remark that, with the exception of a few hundred yards near Canada (No. 18) and the 700 feet of the covered-way on Barpham Hill (No. 23), no part of the War Dyke from Fairmile Bottom on the west to Barpham Hill on the east, a total distance of over five

miles, serves as a parish boundary. Considering the great size of the work at every point where it is still visible, this argues it to be either very old or very recent; and as no one who has examined it could well maintain the latter view of its age, it may safely be written down as very old. Its reconstruction as a terrace-way by the Romans on Rewell Hill is proof that at that spot at any rate it is pre-Roman, and not the least of its interest is the illustration therein afforded of the extent to which the Roman road-engineer might go in adopting a pre-existing roadway as an integral portion of his own road-system.