

HADRIAN'S WALL: 1921-1930.

By R. G. COLLINGWOOD.

(Plates II-VI).

I. THE PROBLEM OF METHOD.

Ten years ago I had the honour of laying before this Society a paper in which I attempted to summarise the results of the work done up to that time on the problems of Hadrian's Wall.¹ This work had been done almost exclusively by local antiquaries, amateurs in archaeology and unsupported by any organisation more powerful than their local antiquarian societies. Even when, as had sometimes happened, professional scholars took a hand in the work, they brought little to it but what they carried in their heads: little, I mean, of the aid which might have been given by the great universities and learned societies of the country. It needed an organised staff of trained workers; it needed funds on a scale permitting the systematic

¹ Much of the substance of the present paper is taken from one entitled 'Ten years' work on Hadrian's Wall: 1920-1930,' published in the Cumberland and Westmorland Antiquarian and Archaeological Society's *Transactions*, n.s. (hereinafter referred to as *CW*²), vol. xxxi. That paper, for leave to use parts of which I am indebted to the Society, was delivered as an inaugural address to the members of the decennial Pilgrimage of the Wall in 1930, and intended to bring before them the main outlines of recent research concerning what they were to see in the next few days. The present paper, designed in the first instance for readers not familiar with the actual remains, is essentially a continuation of the article referred to in the text, called 'Hadrian's Wall: a History of the Problem,' in *J.R.S.* xi. That article contains much that I should now alter, because, as is inevitable, later discoveries modify one's reading of texts and facts already known; but I do not propose to offer a second edition of it, only to continue the story where I then laid it down. This paper, therefore, is in no sense a reprint of that in *CW*² xxxi, for, although it deals with the same material, it deals with it from a different point of view. The work on which it is based has for the most part been carried out by two bodies, the North of England Excavation Committee and the Durham University Excavation Committee, with the co-operation of the Society of Antiquaries of Newcastle-upon-Tyne, the Cumberland and Westmorland Antiquarian and Archaeological Society, the Corporations of Newcastle-upon-Tyne and Wallsend, and many owners and tenants of land. Of the men responsible

for directing the work, I must mention first and foremost Mr. F. G. Simpson, who has done more than any other one person to lay down the lines on which archaeological study of the Wall must proceed, and to bring about all the advances which have been made in that study during the present century. Other workers especially deserving of mention, over and above the references made to them in the text, are Mr. Parker Brewis, Lieut.-Col. G. R. B. Spain, Mr. I. A. Richmond, and Mr. E. B. Birley. Sir George Macdonald and Mr. R. C. Bosanquet, though not directing excavation, have been in constant touch with it; and the visits of Professor E. Fabricius, Director of the German Limes Commission, Dr. Kurt Stadel and Professor Behrens established fruitful contacts between this work and German *Limesforschung*. To all these persons I am indebted, through conversation and correspondence, for much that has gone to the making of this paper. My own part in the work has been that of an interested spectator, with whom the workers have always been willing generously and without reserve to discuss their hypotheses, their methods, and their results.

The following abbreviations are used throughout this article:—

AA = *Archaeologia Aeliana*.

CW = *Cumberland and Westmorland Antiquarian and Archaeological Society's Transactions*.

NCH = *Northumberland County History*.

PSAN = *Proceedings of the Society of Antiquaries of Newcastle-upon-Tyne*.

solution of problems as they arose ; and it needed a method of publication by which its results could be presented to the learned world and, through the learned world, to the world at large. Ten years ago, in spite of the few professional scholars to whom I have referred, there was not even the nucleus of an expert staff ; the bulk of the work remained where it had always been, in the hands of the amateur and the local antiquary. The funds employed to carry it on were almost entirely local, and were raised, in great part out of the pockets of the directors themselves, as special emergencies required. And the results were published, or, I might rather say, buried, in local transactions, where it was practically certain that no professional student of Roman history would see them.

In spite of these drawbacks, progress of a remarkable kind had been made by 1921. I am not sure that the drawbacks did not, in a sense, facilitate the progress. The problem to be solved was so peculiar in certain of its features that, if its solution had been undertaken by the methods current among professional archaeologists, the discovery of the right method could only have been delayed. The peculiarity of the problem depended on the fact that the site to be studied was 73 miles long by, say, a quarter of a mile broad. The strongest staff in the world, backed by all the financial resources at the disposal of British archaeology, could never have excavated these sixteen square miles in the way in which the Society of Antiquaries excavated Silchester. The excavation of Silchester took twenty years ; at that rate, to excavate the Wall would have taken two thousand.

It would therefore have been useless to apply the ordinary methods of excavation to the Wall. These methods were applied at Housesteads, when a properly-organised exploration of the fort, under expert direction, was undertaken in the nineties. The result was of the greatest value for our knowledge of Roman fortified sites, and therefore indirectly for our knowledge of the Wall ; but it did not directly advance the peculiar problems of the Wall itself. Later, excavations of the same kind were carried out at Corbridge ; but, once more, the fruits of these did not include, and were not meant to include, any immediate advancement of our knowledge of the Wall. That was progressing all the time ; but it was progressing chiefly through amateur work, which enjoyed no publicity and was able to develop, almost under cover of secrecy, a method adequate to its peculiar problem.

This method consisted in what I may call selective excavation. The whole sixteen square miles of the site were first of all intensively studied on the surface ; much of this study was done by Horsley in the eighteenth century, and Hodgson and MacLauchlan and Bruce in the nineteenth. Tentative theories were then put forward to explain the whole complex of works : and finally these were tested by bringing the problems to a focus at particular points where they

could be solved, or at any rate advanced, by some quite small piece of excavation, planned and supervised and recorded with the utmost care.

The classical instances of this procedure are set forth in Haverfield's reports on the work of the Cumberland Excavation Committee, from 1894 to 1904, illustrated with measured and coloured drawings by Mrs. Hesketh Hodgson. It is chiefly to Haverfield that we owe this method; and, since this is the only method by which the problems of the Wall have ever been or can ever be successfully handled, it is right to record the fact that the ten years' work on which I am now reporting are based upon lessons first taught to the workers by the first President of this Society.

The method of selective excavation is not the method traditionally employed by professional archaeologists. They have generally begun by thinking of a site as a unit that admits of complete excavation, and their ideal is to excavate it completely. While part of a site remains unexplored, they think that their duty to that site remains undone. Therefore, when they look at the digging hitherto done on the Wall, and this they have begun to do oftener in the last ten years, they are offended by its scrappiness, its incompleteness, in a word, its selectiveness. They would prefer, and they have been heard to advise, the complete excavation of some chosen site on the Wall; in order that, in this one instance at least, we should know what the facts in their entirety are.

To this I would reply: the methods here in question are methods intended to increase our knowledge, not of Housesteads or Birdoswald or Chesterholm, but of the Wall. The Wall is our unit; and the Wall is a hundred times the size of Silchester. The only way in which we can hope to solve the problems of a site is to keep steadily before our minds an idea of the site as a whole, and to direct every detail of our work towards that idea. Where a site is so large as this, the difficulty of seeing it as a single unit is correspondingly great; and it is all the more necessary to insist on the idea, and to reject any proposed method of work that is not based upon it. There may be good reasons for taking some single Wall site and excavating it completely; but these reasons cannot include among themselves the advancement of our knowledge of the Wall; and any such undertaking, in so far as it diverts men and money from the study of the Wall by the true method of selective excavation, must directly impede that study.

Ten years ago I spoke of this method, and of the results to which it had led, as if since Haverfield left the Wall in 1904 they had been a monopoly of amateur archaeologists, whose experience and interests were confined to their own home districts. But since then there has grown up a generation of workers trained in Roman history and in the archaeology of the Roman provinces, who have turned to the

Wall as a promising field for specialisation. They accept, as any one must who understands the problems of the Wall, the method of selective excavation; in fact, they delight in it, as a method scientifically superior to that of complete excavation; demanding more constructive thought and, in consequence, yielding a richer return of knowledge in proportion to the expenditure of time and money. In number they are small; but the significant fact is not their numbers but their existence, showing as it does that the study of the Wall has now arrived at a point where professional archaeologists are willing to take it up and make it their chief occupation. That is partly, perhaps, because during the last ten years the Wall has begun to attract a good deal of public notice. But the real reason why it has attracted this notice is that the work done on it during the previous years was so excellent in scientific quality, so well conceived in its methods and so well established in its results, that by degrees it forced itself on the attention of archaeologists and historians outside the north of England. It is because of this growing appreciation of the work done on the Wall, among persons qualified to judge of its merits, that the Wall itself is more talked of and thought about among the public at large; and if there is now general consternation in the country that the Wall is insufficiently protected against wanton destruction, that is a tribute, not to the stones and mortar of its fabric—

ὥς οὐδέν ἐστιν οὔτε πύργος οὔτε ναῦς
 ἔρημος ἀνδρῶν μὴ ξυνοικούντων ἕσω—

but to the labours of the men who have made it a lodging for their thoughts.

2. THE SITUATION IN 1921.

The view which in 1921 appeared most successfully to gather up the entire results of previous work on the Wall, may be stated as follows.¹

When Agricola was in Britain, he probably established a line of forts along the Stanegate, the road leading from Carlisle up the Irthing valley, past Gilsland, and so over Haltwhistle Common to the North Tyne, perhaps bearing northward to Chesters, perhaps running on to Corbridge. On his further advance into Scotland, this line ceased to have any strategic importance; but it came into prominence again when Scotland was lost, an event which was tentatively associated with a military disaster about A.D. 117. It was now found necessary to select a new position for a frontier. The Stanegate was the position selected. Along this line some forts were

¹In the following paragraphs I summarise the view stated in *J.R.S.* xi, 64-66, to which I must refer for all details.

no doubt reconditioned and reoccupied; others were built for the first time. In the latter class fell the two small forts or police-posts of Throp and Haltwhistle Burn, whose pottery and choice of site, combined, proved them earlier, but not very much earlier, than the Wall.

This Stanegate frontier was a temporary expedient, and was followed at once by the creation of the Vallum frontier. This consisted of a chain of forts extending from Burgh-by-Sands to Newcastle, two lying on the Stanegate (Carvoran and Chesterholm), probably on Agricolan sites, while others were new forts, pushed forward from the Stanegate, connected with the Stanegate by branch roads, and connected with each other by an earthwork, the so-called Vallum, intended to serve not as an obstacle but as a permanent and unmistakable mark showing where the sphere of provincial government ceased and occupation of enemy territory began. That this was the purpose of the Vallum, was laid down once for all by Haverfield in the nineties.

These forts were conceived as small structures, quingenary forts, $2\frac{1}{2}$ to 3 acres in extent. They were isolated works, each surrounded by its own ditch-system; and the Vallum was generally deflected from its course in order to pass round to the south of them.

The quingenary garrisons were found too weak to discharge effectively their duty of patrolling the frontier; and accordingly some of the forts were enlarged so as to accommodate a milliary regiment. But even this strengthening of the defensive system proved insufficient; and the new step was taken of building a great stone Wall, linking fort to fort and running out at each end to deep water—Wallsend and Bowness-on-Solway. On the line of this wall, fortlets were built at every mile to accommodate small detachments, and turrets at every third of a mile served as signal-posts and as shelter for sentry-groups patrolling the Wall.

This theory was always open to the objection that it involved a great number of changes, some very considerable, crowded into a relatively small number of years. The *terminus post quem* was the rising dated to the beginning of Hadrian's reign; after this came (a) the Stanegate frontier, (b) the Vallum with small forts, (c) the enlargement of certain forts, (d) the Wall; and the *terminus ante quem* was provided by the inscriptions of Aulus Platorius Nepos, Governor *c.* A.D. 122–127, in the milecastles. Nor was it easy to correlate these four events with any recorded incidents falling in the ten years 117–127. The visit of Hadrian (121¹) would naturally be thought of as leading to the Wall, but in that case (a), (b), and (c) are unpleasantly crowded together; if it led to the Vallum, (c) and (d) are almost more so. But objections of this kind—a *priori* objec-

¹ It is not necessary for the purposes of this paper to discuss the question whether the right date is 120 or 121.

tions, they might be loosely called—were not regarded as fatal to a theory resting on evidence of a more definitely historical character. Their weight, however, increased when it was found, in 1924, that (d) must be subdivided into the planning and partial execution of a wall ten Roman feet thick, the so-called 'broad Wall,' and a change of plan leading to the completion of the structure on a narrower gauge of eight Roman feet ('narrow Wall').

The greater part of the work done in the last ten years has gravitated round two fixed points. First, it was essential to the theory outlined above that the forts should have been originally planned and constructed as isolated works. It was therefore important to settle once for all the question whether this was the case or not. Secondly, no theory of the Wall could be satisfactory which did not explain the Birdoswald turf Wall, described by Mr. F. G. Simpson in 1921 as 'the skeleton at the feast.' The attempt to solve this problem involved a somewhat detailed inquiry into the structure of the Wall itself.

3. THE FORTS AS ISOLATED STRUCTURES.

In 1921, the view that the forts were originally isolated structures belonging to the Vallum frontier and not to the Wall frontier, the Wall itself being an afterthought, seemed to rest on the following evidence :—

(i) At Housesteads, not only did the Wall abut on the rampart of the fort in such a way as to prove it later than the fort—for that alone, as Bruce long ago pointed out,¹ would only prove it later in construction, not later in design—but the north-east corner-tower of the fort had at some time been taken down and re-erected a little to the west, in order to stand at the point where the Wall abutted on the rampart. This is most naturally explained by assuming that the tower was first built before the Wall was planned, and was moved from its original position when the latter was constructed. But the argument is not conclusive, since an irregularity of this kind in the plan of a fort might have been permitted only after a time, when the inconvenience of having the tower anywhere except opposite the end of the Wall had become intolerable.

(ii) At Great Chesters, the four ditches on the west side of the fort ran underneath the Wall, which had collapsed into them. This was taken as proof that the fort had been there before the Wall was planned. But this apparently decisive evidence was overthrown by the discovery that the ditches only ran half-way under the Wall, and

¹ *Roman Wall*, ed. 3, 1867, p. 181 : 'no one can doubt that the station was rendered complete before the Wall was annexed to it; and yet no one who examines the whole subject can fail to see that but for the Wall the station of Borcovicus would never

have existed.' The argument implied in the second sentence is not without foundation; but it is completely met by the theory, accepted below, that a patrol-track ran along the line later followed by the Wall, before this was built.

there stopped short in a regular series of butt-ends (fig. 1). Evidently the fort had been originally planned as part and parcel of the Wall system, but the Wall had been intended to run along a line a few feet farther north than that on which it was finally built.¹

(iii) At Birdoswald, the Wall abuts on the north angles of the fort in a somewhat similar way; and, here too, the fort ditch underlies its foundations. Birdoswald is unique in being associated not only with the stone Wall, abutting on its northern angles, but also with the turf Wall, which abuts on its eastern and western ramparts just south of the *portae principales* (fig. 2); and, even if it was built before the stone Wall was planned, this does not prove that it stood in the same relation to the turf Wall. Here again, therefore, genuine proof of an isolated fort was lacking.

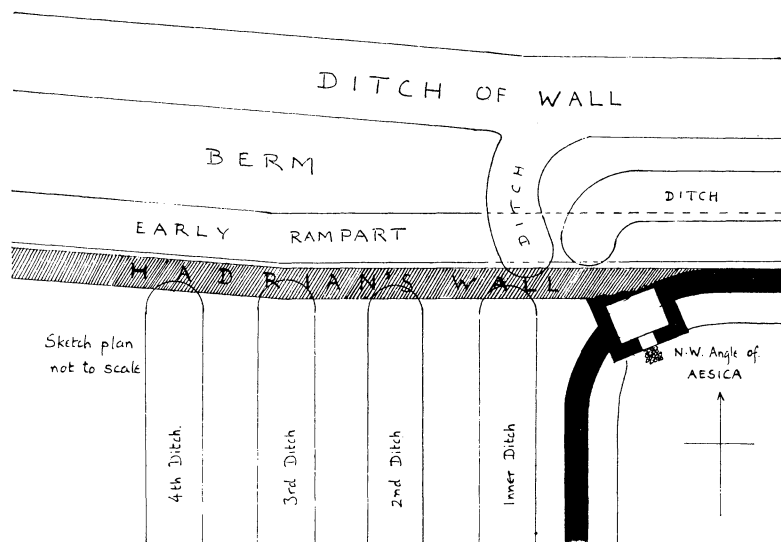


FIG. 1. NORTH-WEST CORNER OF THE FORT AT GREAT CHESTERS.
(Reprinted by kind permission from *Arch. Aeliana*, 4th ser. ii, 198).

On the other hand, there was one fact which told heavily against the hypothesis. At Chesters, Haverfield in 1900 appeared to have found a ditch running across the fort, in line with the ditch of the Wall to east and west; and he inferred that the earliest fort here had been a small one, lying wholly south of the Wall, like Carrawburgh or Great Chesters, later replaced by a large one projecting north of the Wall. This replacement of a supposed quingenary fort by a milliary one lying astride of the Wall he was inclined to connect with Severus.² At that time he was working on the hypothesis, later abandoned by common consent, that Hadrian's Wall had been a turf Wall and that the stone Wall was Severus's work. But in 1921

¹ *AA*⁴, ii, 197 *seqq.* See below, p. 56.

² *AA*², xxiii, 9-21, and *ibid.* 268.

at Chesters are, as any visitor may see, entirely unworn; and at Rudchester, where the Wall abuts on the fort in exactly the same way, it was found in 1924 that these gates had been built up with walls added to the original plan while the sills on which they rested were still in the same condition (pl. II, no. 2). It was suggested that this had been done 'probably simultaneously with the linking up of the forts by the great Wall which stretched from sea to sea.'¹

Forts of this type—milliary forts, about four to five acres in area, oriented to the north, originally designed as isolated structures for the Vallum frontier, but later linked up by the Wall, which abutted on their ramparts just south of the *portae principales*, these being now blocked up—seem to have existed at Benwell (fig. 3), at Rudchester (fig. 4), at Halton Chesters (probably referable to this class in spite of its eccentric L-shaped plan), at Chesters, and at Burgh-by-Sands.² Housesteads would perhaps have conformed to the same pattern, but for the fact that the ridge of rock on which it stands, lying east and west, is so narrow that a north-and-south orientation was impossible, and the fort faces east instead. Birdoswald is a special case (fig. 2), and not even yet altogether intelligible; but it looks as if it had been intended to appear uniform with this series, with the turf Wall abutting on its *portae principales*, although the turf Wall was made before the fort was built, not *vice versa*.

The theory of isolated 'Vallum forts' is thus confirmed by the Chesters evidence, even though the evidence on which it originally rested has proved insufficient. But the theory of an enlargement, by which quingenary forts were replaced by milliary, has been less successful.

This theory rested on two cases: Birdoswald, where the turf wall ditch runs across the fort, and Chesters, where Haverfield, as we have said, believed that he had found a ditch doing the same. If the large fort at Chesters was earlier than the Wall, it was necessary to argue that the original fort, a small one like Great Chesters, had been replaced by a larger one, not in the time of Severus, but before the Wall was built. But why should the Wall have abutted on the fort exactly in line, not with its own northern rampart, but with the northern rampart of an earlier fort now, *ex hypothesi*, destroyed? Nor is the evidence satisfactory. At Birdoswald, the evidence of the turf Wall makes it unsafe to argue from what must always have been a special case; and at Chesters, the presence of a quantity of pre-Hadrianic pottery³ suggests that what Haverfield really found was

¹ *AA*⁴, i, 15. The old view that the building-up of gates was done at a late period, when the *moral* of the army had declined, is definitely exploded. At Chesters, it must be remembered, the 19th-century excavators deliberately removed all masonry which they could recognise as subsequent to the original building of the fort.

² Excavations at Benwell: *AA*⁴, iv, 135-192; v, 46-74. Rudchester: *AA*⁴, i, 93-120. Halton Chesters: *NCH* x, 468. Chesters: *PSAN*³, x, 216-218. Burgh-by-Sands: *CW*², xxiii, 3-12.

³ To which my attention has been called by Mr. E. B. Birley.

EXCAVATIONS AT BENWELL
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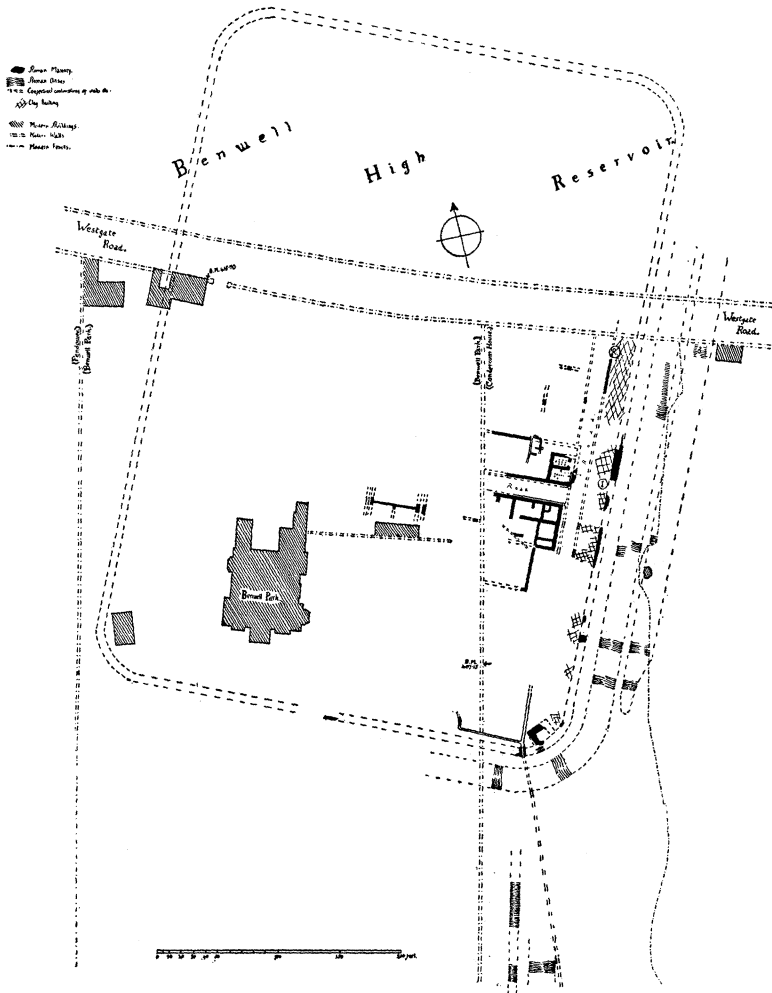


FIG. 3. BENWELL.
(Reprinted by kind permission from *AA*⁴, iv, pl. xxiii.)

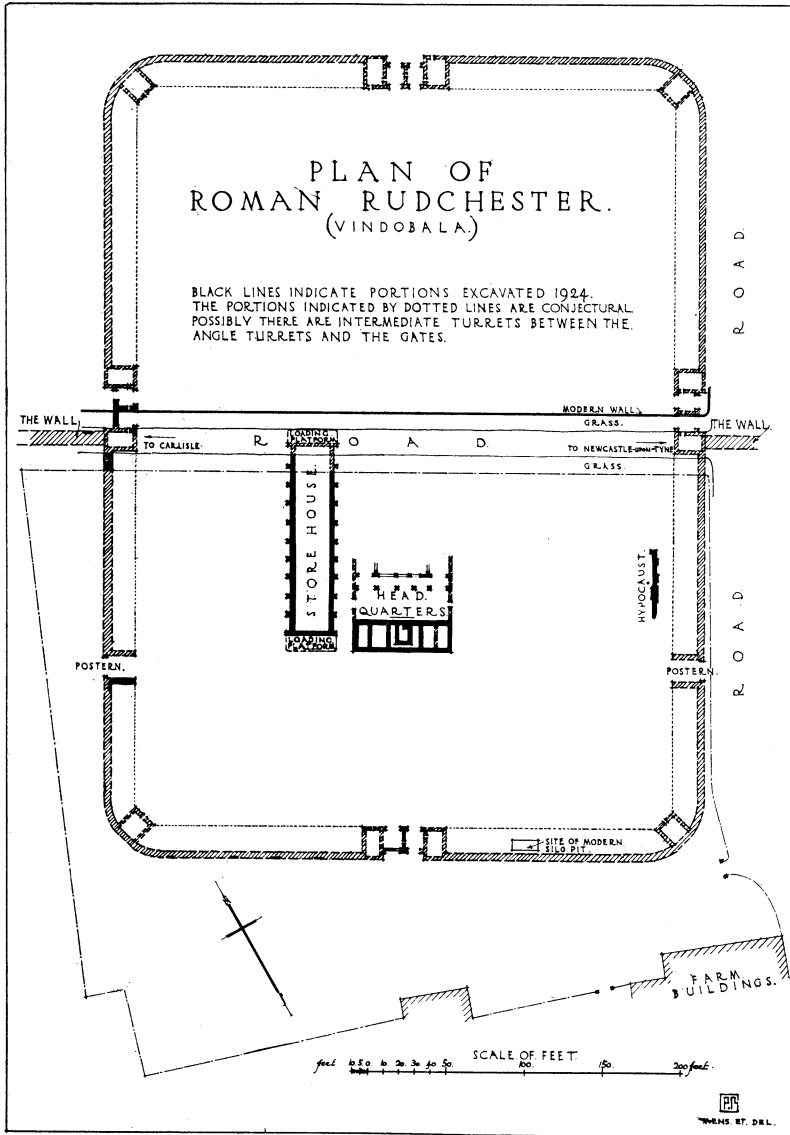


FIG. 4. RUDCHESTER.
(Reprinted by kind permission from *AA*⁴, i, pl. i).

some part of a fort dating from before the earliest Hadrianic frontier-works. It seems, then, that we can simplify the theory by omitting one of the four stages. The original Vallum forts were not quingenary forts, later replaced by milliary: several of them, perhaps almost all that were ever milliary, were milliary from the first. I say 'almost' all, because Birdoswald, and Birdoswald alone, seems an exception. But even at Birdoswald, no evidence has yet been found that a quingenary fort ever actually existed, though it may have been planned.

4. THE STRUCTURE OF THE WALL.

Having recorded the simplification of the theory by the omission of one stage, we must record its complication by the insertion of another. This is the new stage involved in the distinction, mentioned above, between 'broad Wall' and 'narrow Wall.'

In 1923 and 1924 Dr. R. C. Shaw excavated two turrets (48a, 48b) and the east abutment of a bridge carrying the Wall over the

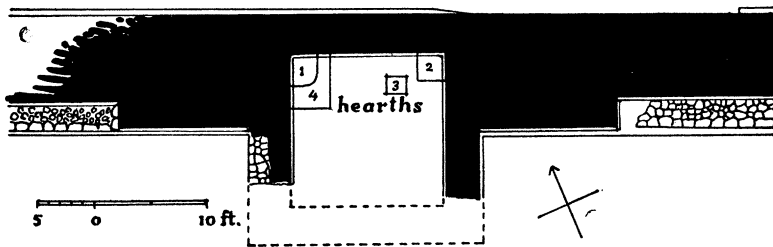


FIG. 5. A TURRET, RECESSED INTO THE BROAD WALL, REDUCED TO NARROW WALL ON EITHER SIDE (WILLOWFORD WEST, 48B).

(Reprinted by kind permission from *CW*², xxvii, 236.)

river Irthing, at Willowford near Gilsland.¹ He especially devoted his attention, during this work, to the relation between the Wall, which is normally about 7 ft. 6 in. thick, and the foundation, about 11 ft. wide, on which it stands (fig. 5). The foundation is obviously much wider than the superstructure demands; and the excess width of this foundation, lying to the south of the Wall, had long ago been recognised at various places, especially in the vicarage garden at Gilsland. Now, previous excavators had noticed that in the immediate neighbourhood of milecastles and turrets the Wall was unusually broad; but that, twelve feet or so to east and west of the milecastle or turret, as the case might be, it was abruptly reduced from about 9 ft. 6 in. to about 7 ft. 6 in., its normal width.² The excavators of the Poltross Burn milecastle (48) discussed these facts, and added:

¹ *CW*², xxvi, 429-506; a correction, *ibid.*

² Plans of Black Carts and Limestone Bank turrets, *AA*³, ix, 56.

‘it might be suggested that the Wall in this neighbourhood was originally designed with a thickness of about 9 feet, but that it was reduced . . . after the foundation work was completed. One thing is clear, that there has been no reconstruction of the Wall from its foundations.’¹

Dr. Shaw put forward a rival theory to that expressed in these words. He pointed out certain general differences between the masonry of the broad Wall and that of the narrow Wall, and argued that the broad Wall was an earth- or turfwork resting on a stone plinth, and that its superstructure was of stone only at milecastles and turrets and for some twelve feet on either side of them. The narrow Wall was simply a narrow stone curtain replacing the earth or turf curtain.

This theory had to face the difficulty of believing that an earth or turf wall had been built, contrary to all analogy, not upon a simple stone foundation like that of the Antonine Wall, but upon a masonry plinth standing in places as much as three or four courses high, that being the height of the ‘broad foundation’ at Gilsland. But more serious than this was the failure to point out in a convincing way the lines and planes which, on such a view, ought to separate the work of the first period from that of the second. If an earth or turf wall stood on a masonry plinth, and was demolished, to be replaced by a stone wall on the same plinth, the upper surface of the plinth ought to be easily recognisable if the whole structure were carefully cut through. When this experiment was tried in 1927, the core of the supposed plinth and that of the supposedly much later superstructure were found to form a single mass, in which no distinction between an earlier and a later period could be detected.²

The true explanation of the facts observed in the Gilsland region came to light as a result of work done farther to the east. At Heddon-on-the-Wall and at Denton Burn, portions of the Wall are still standing to a considerable height. At Heddon, there are seven courses of facing-stones now *in situ* above the foundations, and the core here stands over 6 feet high (fig. 6); at Denton, in 1789, five courses were visible both to north and to south. But at both these places the structure is of the ‘broad Wall’ type, being 9 ft. 7 in. wide at Heddon, and between 9 ft. 1 in. and 9 ft. 5 in. at Denton.³ Here, then, a foundation resembling the Gilsland broad foundation carries, not a stone superstructure too narrow to demand it, still less an earth or turf wall, but precisely what one would expect it to carry—a stone wall ten Roman feet thick. At Heddon, this wall still stands

¹ *CW*², xi, 404.

² *CW*², xxviii, 385, where reference is made to a somewhat extensive series of experiments, of which I have quoted the one most easily quotable. ‘Nearly twenty trenches were dug, including a complete cross-section in the Vicarage garden. This proved

the core of the narrow Wall and that of the foundation below to be a homogeneous mass of mortared rubble, and demonstrated the absence of any interval during construction.’

³ *AA*⁴, iv, 109 *seqq.*

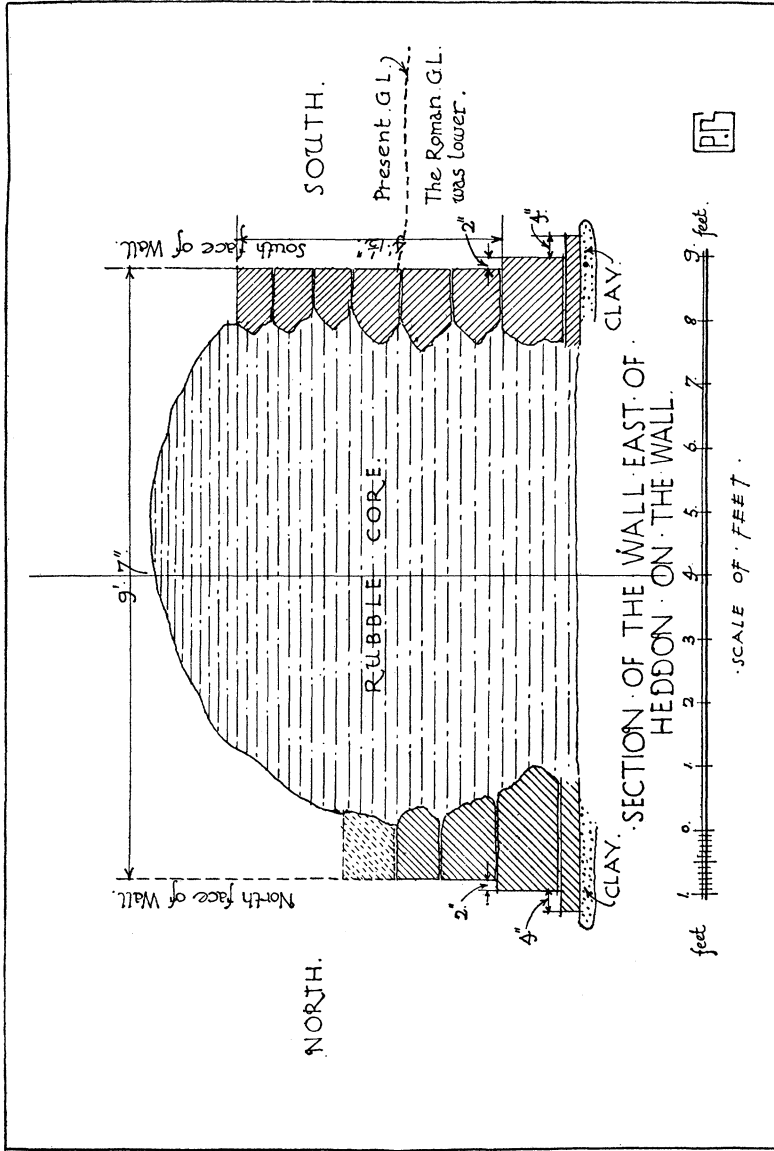


FIG. 6. SECTION OF THE BROAD WALL.
(Reprinted by kind permission from AA⁴, iv, pl. xxia.)

six feet high ; presumably therefore it was built to its full height. It is found both at Denton, about two miles from Newcastle,¹ and and at Heddon, about four miles farther to the west ; presumably therefore it ran continuously from Newcastle, if it began so far east, to Heddon, and indeed as far as Portgate, where the broad Wall was found in July 1930.²

It is clear, then, that the broad foundation was designed to carry a stone Wall—stone as to the faces, with a lime-concrete core—ten Roman feet thick ; that the foundation for this wall was laid from Newcastle, or at any rate from Denton, the whole way to Carlisle, or strictly speaking to Stanwix, except at special places where for special reasons it was left unlaid ; that the ten-foot superstructure was begun at the eastern end and carried through at least as far as Portgate ; that the milecastles and turrets were begun on the same gauge and built far enough upwards at least to commit the builders to completing them on this gauge, and that this process was carried as far west, at least, as the Irthing ; that when matters had reached this stage it was decided to reduce the width of the Wall by 20 per cent., and that the rest was built to a gauge of eight Roman feet.

This certainly adds a complication to the theory ; but it is not an important one, because it involves, so far as we can yet see, no real change in frontier-policy : no change so serious as that involved in the supposed substitution of large forts for small, or the actual substitution of the Wall frontier for the Vallum frontier. What changes then did it involve, if any ?

5. THE GAPS IN THE BROAD FOUNDATION.

First, there are certain places where gaps occur in the broad foundation. We have referred to these above : we must now return to them. They occur along the tops of the precipitous crags west of Housesteads, although, in the low ground between these crags, the broad foundation, together with the ditch in front of the Wall, reappears. Another gap occurs in the Birdoswald region, beginning at Harrow's Scar, on the right bank of the Irthing, and ending, so far as we know, at Banksburn, four miles to the west. In both these places the narrow Wall runs continuously, but the broad foundation is wanting ; although, on the crags, there were isolated turrets along the line later taken by the Wall,³ and, in the Birdoswald sector, the turf Wall, with its ditch, filled the gap (plate III). In both cases the gap occurs where the line of the Wall is, for one reason or another,

¹ I measure from Newcastle because, as we shall see later, there is reason to think that the broad Wall began there, and it is certain that it never extended farther to the east (pp. 53-4).

² *NCH* xiii, 535, note 2 : 'The Wall between

Portgate milecastle, no. 22, and Portgate was proved to be 9 ft. 3 in. thick at a height of five courses.'

³ One such, at least—Walltown Crags West (45 b). But it seems to have been an exception.

especially strong against penetration by raiding-parties. On the crags, this is obvious enough ; the crags themselves place the Wall in a position of such tactical strength that one might think it hardly needed at all. In the Birdoswald sector, the deep gorge of the Irthing lies close behind the line. Now, if the line is a military position, a gorge behind it is a danger : no one likes to fight with a serious obstacle in his immediate rear. But the Wall was more in the nature of a police work than of a military work. It was designed, not to repulse hostile armies, but to keep out raiders and rieviers, the *latrunculi* of Commodus's inscription ;¹ and such persons would not try to cross it at a place where, behind it, there was an almost impassable gorge. These two places, therefore, the Whin Sill crags and the Irthing

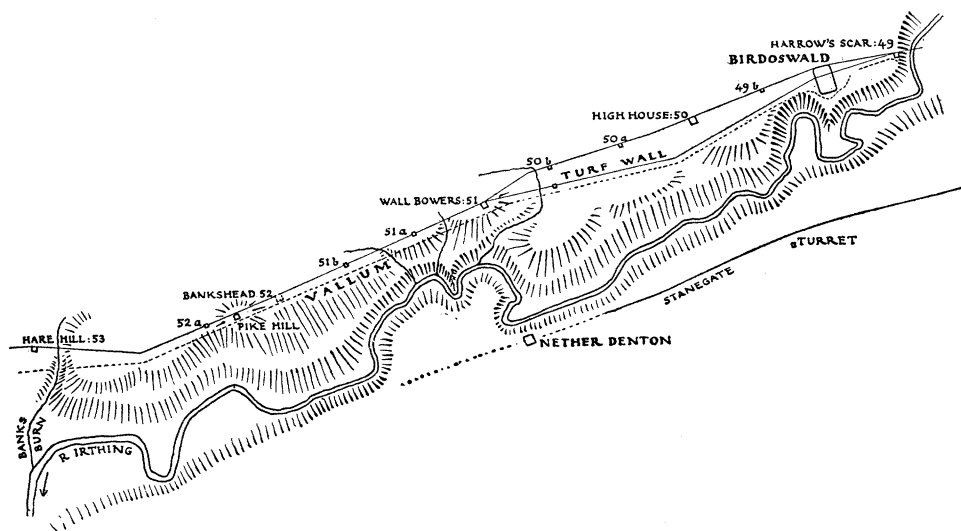


FIG. 7. THE IRTHING GORGE.

The size of milecastles and turrets is exaggerated, and the size and shape of Nether Denton fort are conjectural.

gorge, might be regarded as virtually immune against attack. Accordingly, we have two explanations to choose from. Either it was thought unnecessary to build a stone Wall at all in these places, and it was thought sufficient to defend one with a chain of isolated signal-towers and the other with a cheaper and slighter turf Wall ; or else it was thought less urgent to build a stone Wall here, and it was decided to defend these various places in these simpler ways, as a temporary measure, until the rest of the Wall had been built. At present I think we have no evidence which could enable us to decide

¹ Dessau, *ILS*, 395. I have summarised in *The Archaeology of Roman Britain*, p. 78, the chief arguments which go to show that the Wall was not

a fortification, *i.e.* a work to resist attack by armed forces, but a police work, *i.e.* an obstacle to raiders.

whether, during the 'broad Wall phase,' the gaps in the stone Wall were intended to be permanent or only temporary.

The Irthing gap in the broad foundation, filled by the turf Wall, was at first thought to be only two Roman miles long, from Harrow's Scar milecastle (49) to Wall Bowers milecastle (51). For these two miles the turf Wall forms a loop line to the stone Wall, and it was this that led to its discovery, by Haverfield, in the nineties. We now know that it extended westward for two more Roman miles,

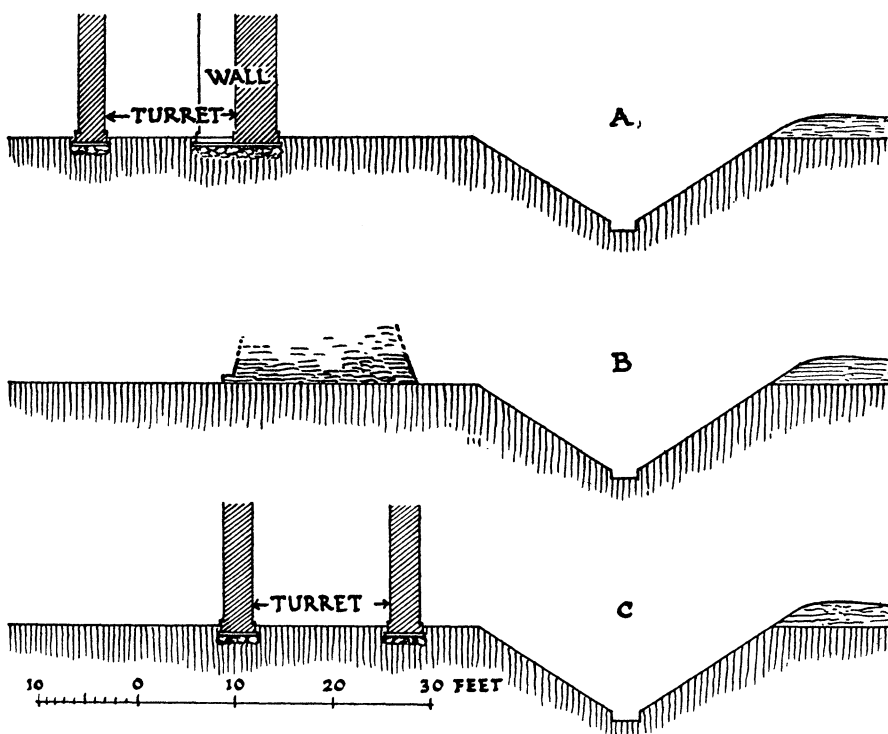


FIG. 8. DIAGRAM TO ILLUSTRATE THE ABNORMAL POSITION OF TURRETS BETWEEN WALL BOWERS AND BANKSBURN. A=NORMAL RELATION OF WALL AND TURRET TO DITCH. B=RELATION OF THE TURF WALL TO DITCH. C=RELATION OF TURRETS 51A, 51B AND 52A TO DITCH.

coinciding in line with the stone Wall (fig. 7). The evidence for this is worth quoting, because the point is not a mere archaeological curiosity but is vital for the understanding of the turf Wall, since, by recognising it as four Roman miles long instead of two, we recognise its coincidence with the Irthing gorge and solve the problem of its purpose.

The Wall has, in general, a berm of about 20 feet intervening between its north face and the south lip of its ditch (fig. 8). This wide berm is due to engineering considerations, not tactical ; it prevents the

weight of the Wall from crushing the lip of the ditch. The turrets of the Wall are incorporated in its structure, of one build with the curtain, their front face flush with the front face of the Wall. The turf Wall does not need a wide berm, because it weighs less, and distributes its weight over a broader area, than the stone Wall; its berm therefore is only 6 feet, while its breadth is 20 feet. It had stone turrets; the turf Wall turret at Appletree (T.W. 50 b) has been excavated, and found to be a stone building some 20 feet square externally, set back 6 feet—normal turf-Wall berm-width—from the ditch. The turf Wall, of course, abuts on the stone turret-walls to east and west. Now, in 1927 search was made for the turrets lying west of Wall Bowers. The next three (Piper Sike, 51 a; Lee Hill, 51 b; Pike Hill, 52 a) were found, not where they ought to have been, 20 feet south of the ditch, but only 6 feet south of it; they were also found to have butt joints connecting them with the Wall on either hand, and to project northwards in front of its face. The explanation is obvious. These were normal turf Wall turrets. The turf Wall between them was dismantled when the narrow stone Wall was built; and, since they had only a six-foot berm, the Wall, for safety, was set back behind the line of their north face. The reason why the stone Wall was built on the line of the turf Wall for half the length of the latter, and on a different line for the other half, is that in the Birdoswald region there have at various times been landslips in the boulder-clay bluffs of the Irthing; a serious fall of this kind would give the builders of the narrow stone Wall a good reason for choosing a line north of that taken here by the turf Wall.

6. THE PROLONGATION OF THE WALL AT ITS ENDS.

The second change, involved in the alteration of the gauge from 10 to 8 feet, was the prolongation of the Wall at either end.

At the Newcastle end, we have seen that the broad Wall ran at least as far east as Denton Burn. It probably ran as far as Newcastle. The Roman name for Newcastle is Pons Aelius;¹ the site there is plainly a Hadrianic foundation, and the fact that the first milecastle west of the site is a Roman mile from the north abutment of the bridge, whereas those to the east, between Newcastle and Wallsend, are all spaced abnormally, so as to divide into approximately equal parts a length of Wall not an integral number of miles long, shows that the milecastles were laid out from Newcastle, not Wallsend, as their eastern terminus.² It is evidence in the same direction,

¹ Bosanquet points out that this is the correct form: *NCH*, xiii, 507; what follows is based, on the article cited, viz. 'The Roman Wall from Wallsend to Rudchester Burn,' by G. R. B. Spain and

F. G. Simpson, with 'The Roman Bridge at Newcastle-upon-Tyne,' by R. C. Bosanquet.

² *NCH* xiii, 502.

though not in itself conclusive, that in extensive recent trenching on the line of the Wall no foundations have come to light in the western part of Newcastle, though they have been found several times in the eastern. This may be explained by the fact that the broad Wall was built in a shallow foundation-trench upon a foundation consisting of a simple flag-course laid in clay: the narrow Wall in a somewhat deeper trench, in which the flag-course rested upon a mass of clay and cobbles. In the western part of Newcastle, west of Hadrian's bridge, the people who at various times used the Wall as a quarry for building-stone tore it down to its foundations, took up the flags, and left nothing behind. East of the bridge, after doing the same, they left the clay and cobbles, and these are what have been found.¹

Newcastle, then, was the terminal station of the broad Wall on the east. But when the narrow Wall was substituted for the broad, an eastward extension was made to Wallsend. The fort at this place was a new one, built for the purpose; and accordingly it turns out to be of one build with the Wall,² instead of forming the usual butt joint (pl. iv). The site was chosen on account of its natural advantages—a gently rising hill-top with a good view down the final reach of the Tyne; and, because the distance hence to Newcastle was definitely short of four Roman miles, the milecastles were spaced at abnormally short intervals.

At the western end, the broad foundation stops at Stanwix, where the Wall reaches the Eden.³ Whether it was intended to stop here, or whether the gangs working on the foundation had only reached this point when the order came to alter the gauge of the Wall, is not known; but the former is the more natural hypothesis, for otherwise it would be a remarkable coincidence that the order for the change came at the exact time when the work had reached the river Eden, where the Wall might very well have ended. In that case Stanwix is the western bridge-head terminus of the broad Wall, corresponding to Newcastle on the east. Like Newcastle, it appears to have been a new foundation: for Benwell was the terminal fort of the Vallum system on the east,⁴ and new discoveries, reported to me while I write, suggest that there was a Vallum fort on the Castle Hill of Carlisle, which implies that Stanwix was first built in connexion with the Wall. When the change was made to the narrow gauge, it was decided to prolong the Wall westwards for at least seven Roman miles, to Watch Hill, west of Burgh-by-Sands, where the Wall disappears in Burgh Marsh. Its original western end has been swallowed up by the sea; for when it emerges on the other side of the Marsh, at

¹ I owe this point to Mr. F. G. Simpson, in conversation.

² *NCH* xiii, 488.

³ It is absent where the Wall traverses the northern parts of Carlisle: MacLauchlan, *Memoir*

written during a Survey of the Roman Wall, p. 75. It is still absent farther west, at Beaumont: excavation by the writer.

⁴ *NCH* xiii, 516–521.

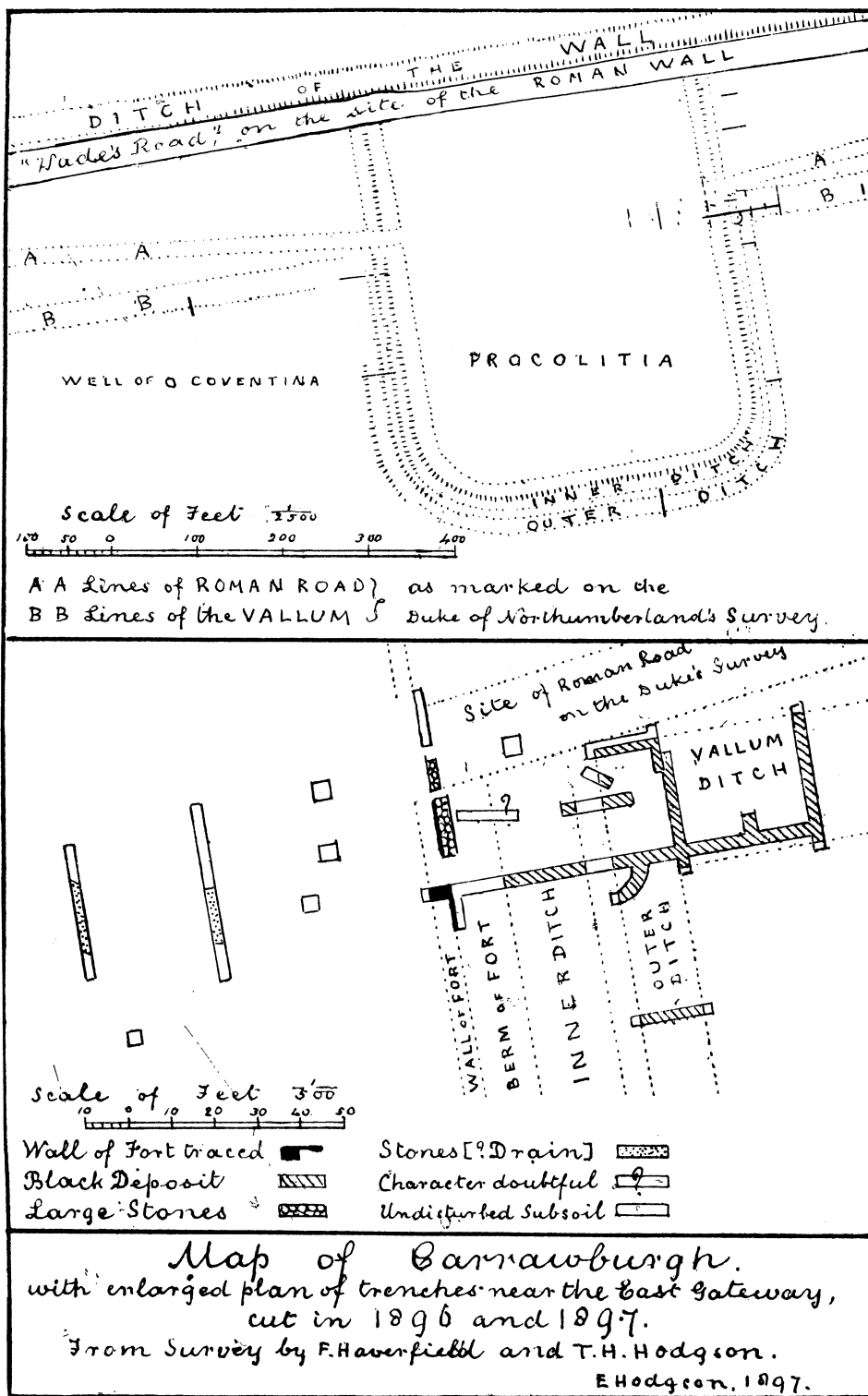


FIG. 9. CARRAWBURGH AND THE VALLUM.
(Reprinted, by kind permission, from *CW*¹, xv, pl. ii, facing p. 176.)

Drumburgh, it has undergone a change. It is now neither ten nor eight Roman feet thick, but nine; and recent work by Mr. E. B. Birley suggests that this western extremity of the Wall as we know it, is an addition of the Antonine period.¹

7. NEW FORTS ADDED WHEN THE WALL WAS BUILT.

It has already been observed that the ditches of the fort at Great Chesters underlie the narrow wall but terminate in butt ends short of the broad foundation (p. 42). This can only mean that the fort, with its ditches, was laid out as part and parcel of the broad Wall system; that its ditches were dug simultaneously with the digging of the Wall ditch; and that when the change was made from broad Wall to narrow Wall the ditches had been dug, but the building of the fort had not yet been begun. The fact is betrayed by the unusual relation of the narrow Wall to the broad foundation, which here lies not underneath it, but parallel to it on the north. The reason for this is, no doubt, that the Wall is here overlooked by high ground at short range in front. It was therefore an unusually dangerous sector of the line, and it would be wise to put up a temporary breast-work on the broad foundation, behind which work could proceed on the narrow Wall and on the superstructure of the fort, which is of one build with it.²

What is true of Great Chesters may also be true of Carrawburgh. These two are alike in being small (quingenary) forts, and also in being appended to the south side of the Wall, like the forts of the Antonine Wall. If Great Chesters is known to be contemporary with the Wall, there is a presumption that Carrawburgh is the same. Haverfield claimed to have found the ditch of the Vallum swerving to the south so as to avoid Carrawburgh, but there is some reason to think he was mistaken. First, the nature of the swerve as plotted by him³ is unique (fig. 9): the Vallum ditch is shown as running right up to the fort, and then turning at right angles so as to form a second ditch to the southern part of the fort, whereas in every other case the swerve begins at a distance from the fort and the Vallum remains quite distinct from the fort ditches. Secondly, Haverfield's attempt to show that the Vallum ditch was absent from the interior of the fort does not carry conviction: he dug into what was probably the ditch itself, filled with stones.⁴

It appears therefore that when the broad Wall was laid out, four new forts were laid out with it: Newcastle and Stanwix at its two ends, Carrawburgh in the long interval between Chesters and Housesteads, and Great Chesters in that between Housesteads and

¹ To be published in *CW*², xxxi.

² *AA*⁴, ii, 197 *seqq.*

³ *CW*¹, xiv, 417-420.

⁴ *CW*¹, xv, 176.

Carvoran, to take the place of the little Stanegate fort of Haltwhistle Burn. When the broad Wall was changed to narrow, a fifth new fort was added at Wallsend ; and still later, when the extreme western end was built, we may tentatively place the building of Drumburgh and Bowness-on-Solway.

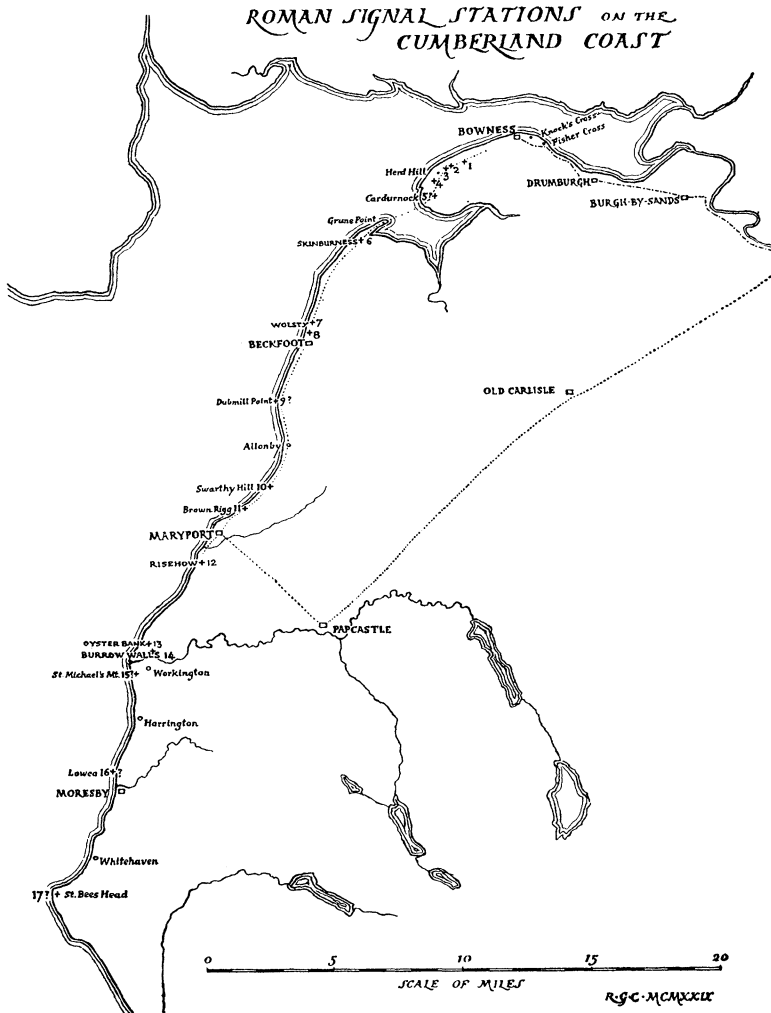


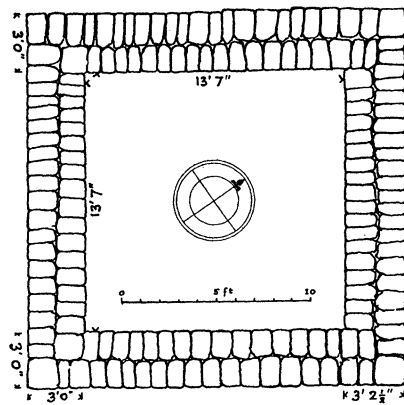
FIG. 10.

(Reprinted by kind permission from *CW*², xxix, 151.)

8. COASTAL SIGNAL-STATIONS IN CUMBERLAND.

One other fact of importance has come to light concerning the Wall as a whole. Its designers have often been criticised for leaving the Cumberland coast relatively undefended ; for here, where

raiders could land in a boat after a short and easy passage from the opposite Scottish coast, they did indeed plant a few forts—Beckfoot, Maryport, Moresby—but neglected, it was thought, to provide any more complete coastguard system. It has now been ascertained that the whole of this coast, as far south as Workington, perhaps as far as St. Bees Head, is closely studded with the remains of signal-stations (fig. 10), exactly like what the turrets of the Wall would be if they were detached from the curtain (fig. 11). It is clear, then, that the system of sentry-posts did not end at Burgh Marsh, or even at Bowness-on-Solway, but was continued for 30 or 40 miles along the coast. On the east coast, south of the Tyne, no such system is known; and it does not seem to have been needed.¹



ROMAN SIGNAL STATION: RISEHOW.
(after Lloyd Wilson, *Trans. O.S.V.*, 1880)

FIG. 11.

(Reprinted by kind permission from *CW*², xxix, 144.)

9. SUMMARY.

The present position of our knowledge, with regard to the origin of Hadrian's frontier, may now be summarised as follows.

There was, first, a concentration on the line of the Stanegate, involving the reoccupation of some forts and the building of others: in the second class fall Throp and Haltwhistle Burn. But this may have been earlier than the accession of Hadrian. There is Trajanic material at Nether Denton and Chesters, which may well date from after this concentration; and the Haltwhistle Burn pottery, in the view of Mr. E. B. Birley, who is now at work on this subject, is rather Trajanic than early Hadrianic.

Then comes the Vallum frontier. This involved a number of large new stone forts—Benwell, Rudchester, Halton Chesters, probably

¹ *CW*², xxix, 138 *seqq.*

Housesteads, Burgh-by-Sands—and also forts, whose size and character is less certain, at Birdoswald, Castlesteads, and apparently Carlisle. These were linked up by the Vallum, marking the limit of the province, and by a patrol-track following more or less exactly the line afterwards taken by the Wall. Of this patrol-track we have evidence of three kinds. First, the bridges that carried the Wall over the North Tyne at Chesters and over the Irthing at Willowford stood on the site of earlier bridges that carried a narrow road designed for light traffic: these are intelligible on the theory that they carried the patrol-track, but hardly on any other hypothesis.¹ Secondly, there is at least one fortlet on the Wall which formed no part of the mile-castle-and-turret scheme, had rounded corners to the north, which suggests that it was a detached work, and occupied a commanding position precisely on the line of the supposed patrol-track.² Thirdly, it is well known that the Vallum almost everywhere chooses ground lacking in northern outlook, and has the air of avoiding something that occupied the higher ground immediately to the north of it (p. II, no. I). The number of occasions on which the Vallum appears laid out with the express purpose of skirting round the southern side of a hill is most impressive. Sometimes, as at Down Hill, it goes to the length of making a definite angle for this purpose (pl. vi). What is it avoiding? Bruce thought it was the Wall; but it might equally well have been the patrol-track and its fortlets.

The view that the Vallum is older than the Wall rests at present only on circumstantial evidence, but this evidence³ is so formidable both in quantity and in quality that no other view is at present held by any student. The interval of time separating the two works was short, for, in the first place, no Trajanic remains have been found in any Vallum fort—I except the relics of a probable pre-Vallum fort at Chesters—and, secondly, botanical evidence from Birdoswald is interpreted as proving that the Vallum ditch was open only for 'a year or two' before being filled up to prepare for the building of the fort which was either associated with, or later than, the turf Wall.⁴ This is borne out by the fact that the gateways of the Vallum forts which were built up when the Wall was added are found to show no signs of wear. Recent work at Housesteads north gate proves that, in what ought probably to be considered a case of the same kind, the gate was actually unfinished when the decision was made to close it. It seems probable, therefore, that the Vallum frontier was constructed about the beginning of Hadrian's reign.

The addition of the Wall now takes its natural place as the result of Hadrian's visit to Britain in 121: *in qua multa correxit, murumque*

¹ I owe this point to Mr. F. G. Simpson, in correspondence.

² Pike Hill, between 52 and 52a; *CW*², xxix, 304.

³ Summarised by the writer in the forthcoming paper (*CW*², xxxi) mentioned in the first footnote, above (p. 36).

⁴ *CW*², xxix, 308-309.

per lxxx millia passuum primus duxit, qui Romanos barbarosque divideret (*SHA*, Hadrian § 11). This Wall was originally planned to run from a new bridge and fort at Newcastle, along the line of the patrol-track, to end at another new fort, Stanwix on the Eden. Other new forts were added at Great Chesters and probably Carrawburgh. It was to be ten Roman feet thick. When the foundations were complete, except in a few places where local conditions made the work less urgent, and when the superstructure was already built for 18 miles or more from Newcastle, the plan was modified. The Wall was pushed out at either end to a new fort at Wallsend and to the western end of the Vallum, on Burgh Marsh; and its thickness was reduced by one-fifth. The Cumberland coastal signal-stations were presumably planned in connexion with the original scheme; and the same may perhaps be said of the crossings which were made in the Vallum at regular intervals, for the transport of stone from the quarries to the Wall; although these crossings were not completed until they were required for the building of the narrow Wall.¹ The part of the Wall lying west of Burgh Marsh, with the fort of Drumburgh and perhaps also Bowness-on-Solway, may represent an addition of the Antonine period.

10. LATER HISTORY OF THE FRONTIER.

Twenty years ago it was argued² that the three periods into which the history of the Wall was divided should be dated as follows: I, Hadrian to *c.* 180; II, to *c.* 270; III, ending in milecastles *c.* 330, but in forts lasting later. The two inscriptions found at Birdoswald³ in 1929, together with other evidence found there and elsewhere, have enabled us to revise this dating (pl. v).

The first period closes, not with the disaster in the reign of Commodus, to which it has hitherto been referred, but with the inroad of the Maeatae while Clodius Albinus was absent in Gaul and left Britain denuded of troops.⁴ The Maeatae were at leisure, since no one opposed them; and they could wreck everything from the Antonine Wall to the fortresses of York and Chester with extraordinary thoroughness. Hadrian's Wall they destroyed so effectively that Severus could be justly regarded as its second builder.

The second period opens with the restoration by Severus, and

¹ This is the original theory of the crossings, printed (*CW*², xxii, 420-426) in 1922. Since then only one alternative theory has appeared (Honeyman, *PSAN*⁴, iv, 158-163: 1930); this I have criticised, with a restatement of the grounds for the original theory, in *CW*², xxxi (forthcoming).

² *CW*², xi, 436-438, 458-460.

³ The important excavations carried on at and near Birdoswald since 1927, and reported on by Messrs. F. G. Simpson, I. A. Richmond and E. B. Birley, in *CW*², xxviii, xxix, xxx, and xxxi (forth-

coming) have been less mentioned than they deserve in the course of the present paper, partly because they have, up till now, thrown more light on the later history of the Wall than on its origin; partly because they must be further developed before their results are ripe for inclusion in a summary of this kind.

⁴ Dio, lxxv, 5. This solves the problem with which the writer was unsuccessfully grappling in an article on 'The British Frontier in the Reign of Severus,' *J.R.S.* xiii.

closes a little before the end of the third century, presumably when Allectus was preparing to resist Constantius Chlorus and left the Wall once more undefended. But the phrase in the Birdoswald inscription, *praetorium humo copertum et in labe conlabsum*, suggests that some at least of the buildings put up by Severus had fallen into an advanced state of decay before that event.

The third period opens with a restoration by Constantius Chlorus, and ends with the great Pictish war of 367. It is now certain that the milecastles were not abandoned during this period; remains of the late fourth century are found in them.

A fourth period is now well established, opening with a restoration presumably by Theodosius about 370 and lasting no very long time: it probably ends with an evacuation by order of Magnus Maximus in 383.¹

II. CONCLUSION.

This throws completely new light on the question of the adequacy of the Wall to discharge its proper function, and the competence of the men who designed it. During a history of 260 years, between its first construction and its final voluntary abandonment, it suffered three disasters. The first and second occurred when usurpers withdrew its garrison to serve their own ends, and left it unguarded. The third was due to a combined inroad of Picts, Scots, Attacotti, and presumably Saxons and Franks (Amm. Marc. xxvii, 5) which took the whole line in flank and rear and made it impossible to defend. Except on these three occasions, we have no evidence that enemy action ever inflicted any damage whatever upon the Wall. In other words, it never fell in fair fight, and when properly manned it was always perfectly able to do the work for which it was designed.

It is much that we should have arrived in this way at a truer estimate of the Wall as a well-planned and efficient frontier defence; but if that had been the only fruit of ten years' work, it might have been doubted whether the work was worth doing. Perhaps, therefore, it is desirable to explain why so elaborate a tissue of archaeological minutiae has been allowed to engage the writer's attention for ten more years.

First, the history of the Roman Empire is the history of the most important experiment known to us in conscious political co-operation among peoples widely differing in race, language, traditions and civilisations. At the present crisis in the history of the world, it concerns us to know how such an experiment succeeded and how it failed. But the Romans were always better at doing things than at talking about them. Their books tell us less about what they were

¹ The evidence for this new scheme of dating is set forth in *CW*², xxx, 198-204, and *AA*⁴, vii, 164-174, by Mr. E. B. Birley. The inscriptions from Birdoswald are repeated in *J.R.S.* xix, 214.

doing than their inscriptions; and, in some departments of their work, even inscriptions tell us little until supplemented by the kind of evidence that archaeology provides. The problems raised by the question how the Roman provinces were civilised and defended can be answered by no other means. Accurate knowledge of things like Hadrian's Wall is necessary to a comprehensive view of Roman history.

Secondly, if history is to be pursued at all—and that is not a question that can be raised here—it must be so pursued as to win respect by the solidity of its logical structure. It is not so much useless as mischievous to practise history in so slipshod a manner that any alleged fact may be slightly wrong. By a combination of slight errors, the general character and significance of the whole are certain to be distorted; and the general sense of an historical narrative may easily be changed, by a distortion of this kind, into the very opposite of the truth. This danger, which increasingly besets history in proportion as history deals with more interesting and important subjects, can only be averted by the discovery and application of the most rigidly scientific methods: methods not borrowed from other sciences, but worked out with strict reference to the special problems and characteristics of history itself. A single highly complex problem, like that of Hadrian's Wall, just because of its richness in apparently pointless and fruitless minutiae of evidence and interpretation, offers a perfect field for that experimental work without which no scientific method can be devised.

Thirdly, all science and all history depend, for their very possibility, on the assumption that 'the real is the rational and the rational is the real.' If the facts of nature and of human history are nonsense facts, obeying no law, forming no intelligible whole, connected by no rational relations, then scientific and historical thought are folly, and their ideals of method and of truth are delusions. The real service which natural science does to the human mind lies in the assurance which it gives, by the forward march of its discoveries, that no part of nature can remain finally impenetrable to human understanding. Science achieves this result by taking a special portion of nature and thinking about it until the object becomes, as it were, incandescent in the flame of thought, and is revealed as wholly intelligible. If there is any residue of unintelligibility left over at the end of the process, when science has done all it can, the whole process is in vain. In the same way, history can only demonstrate its own right to exist by demonstrating the rationality of its subject-matter; and this it must do, not by showing that certain points or tracts, scattered here and there in the abyss of time, shine with the light of rationality, but by showing that any tangle of human facts, patiently unravelled, makes sense. If the real is rational, it is possible, by intense and methodical thought, to see the mass of facts accumulated by the blind or half-blind industry of generations

of archaeologists, as a luminous whole, out of which rises the truth. The more tedious the detail, the more apparently irrelevant the facts are to each other and to the whole, the more important it is to show that here, and not only in the visible symmetry of classical Greece or the intellectual glory of the Renaissance, reason still reigns ; there is still a thread, if one can find it ; there is not chaos, but order and intelligibility. It is only by the determined attempt to make sense of a collection of historical data which at first seem nonsense, that we can discover whether we are right, as historians, to assume that the real is rational and the rational real, or whether the story of human affairs is ' a tale told by an idiot, full of sound and fury, signifying nothing.'

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- Spain, G. R. B. 'Roman Newcastle.' *PSAN*⁴, iii (1928), 243-247, 272-280.
- 'The treasure vault of the Roman fort at Benwell.' *AA*⁴, vii (1930), 126-130.
- Simpson, F. G., and Bosanquet, R. C. 'The R. frontier from Wallsend to Rudchester Burn.' *NCH*, xiii (1930), 484-565.

NOTE.

We are indebted to the Controller of His Majesty's Stationery Office, and to the Director-General of the Ordnance Survey, for permission to reproduce the air-photograph from which plate vi has been made.



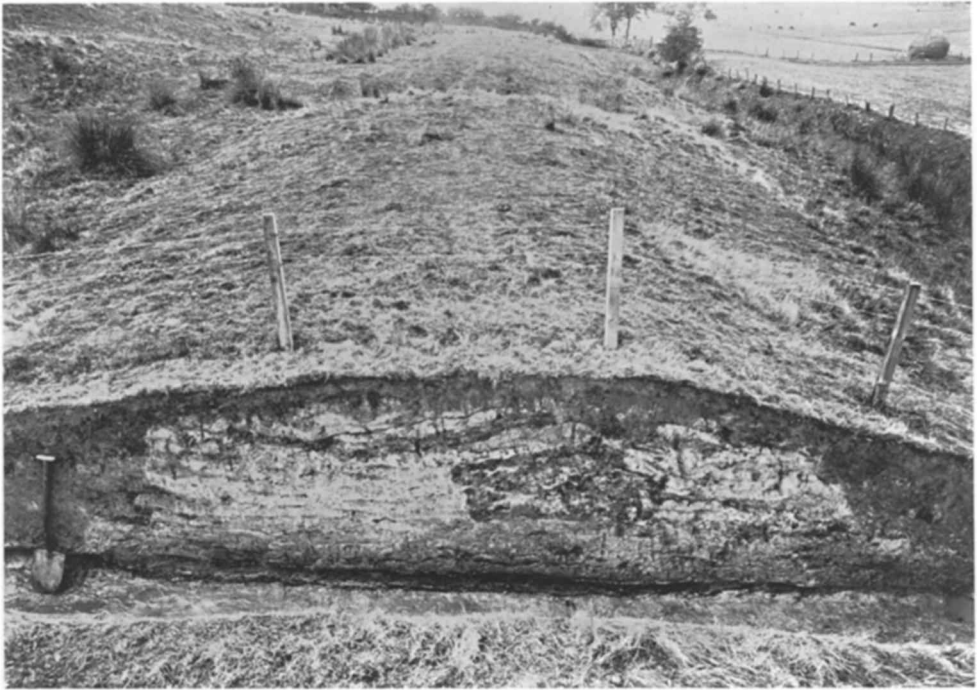
NO. I. CAWFIELDS, LOOKING EAST. THE VALLUM RUNS IN LOW GROUND ON THE SOUTH :
THE WALL ALONG THE CRAGS NORTH OF IT. (See p. 59).

(Reprinted, by kind permission, from *The Book of the Pilgrimage*, July 1st-4th, 1930, fig. 20).



NO. 2. RUDCHESTER. BUILDING-UP MASONRY IN THE PORTA PRINCIPALIS
SINISTRA, RESTING ON THE UNWORN SILL-STONE. (See p. 44.)

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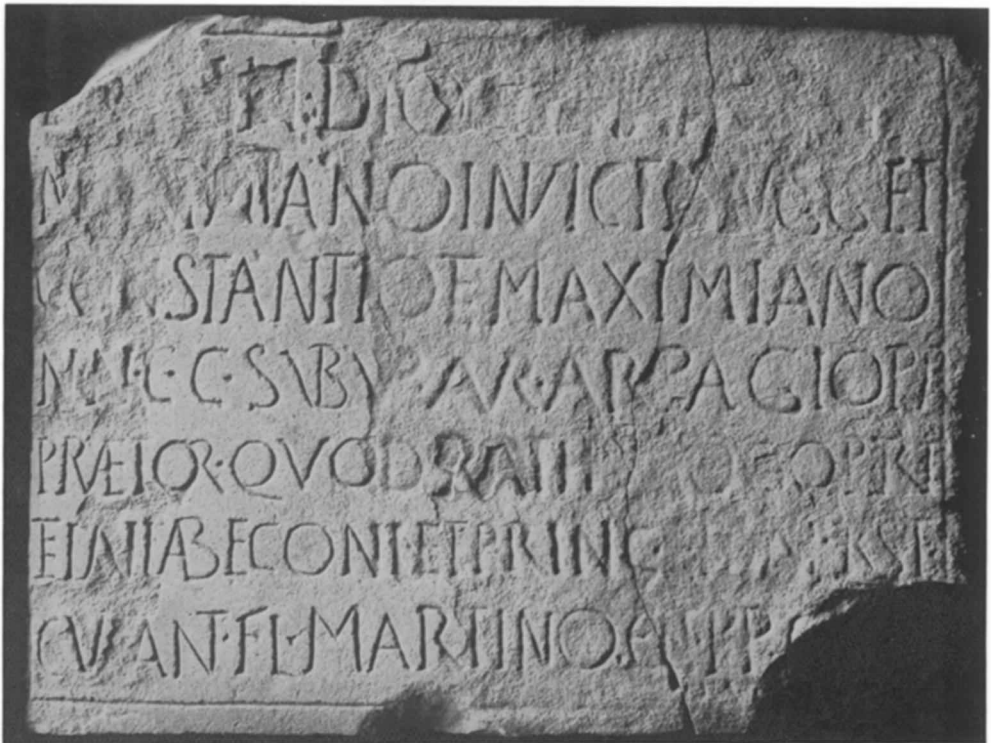


THE TURF WALL, AT HIGH HOUSE, LOOKING WEST. ON THE RIGHT ITS DITCH IS SEEN ; THE VALLUM IS TO THE LEFT. THE LAMINATED STRUCTURE OF THE TURFWORK IS VISIBLE IN THE SIDE OF THE TRENCH IN THE FOREGROUND. (See p. 50).

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WALLSEND. FOUNDATION AND LOWEST COURSE OF THE WALL ; AT THE END OF THE TUNNEL IS SEEN THE JAMB OF THE FORT GATEWAY, OF ONE BUILD WITH THE WALL. (See p. 54).
(Reprinted, by kind permission, from the *Nor:umberland County History* xiii. fig. 7).



INSCRIPTIONS : (1) OF SEVERUS AND HIS SONS, (2) OF DIOCLETIAN AND HIS COLLEAGUES, FROM BIRDOSWALD. (See p. 60).

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THE VALLUM AT DOWN HILL (see p. 59).

The road runs on the line of the Wall. The Vallum (destroyed on the left by quarrying) swerves to avoid the hill-top, marked by the wood.

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