

VI.

FURTHER DISCOVERIES ON THE LINE OF THE ANTONINE WALL.

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In February 1915 I gave the Society an account of the results of a series of investigations which, with the aid of a Research Grant from the Carnegie Trust for the Universities of Scotland, I had been carrying on along the line of the Antonine Wall in odd moments of leisure.¹ The work I had mapped out for myself was then still in progress, and I was hopeful that within a comparatively brief period I should be able to complete it. Ten years have elapsed, but it is not yet finished. Much to my regret, there seems little prospect of its being resumed in the immediate future. It may therefore be well that, so long as my recollection remains sufficiently fresh to give form and substance to the material which my rough notes provide, I should endeavour to unravel the tangled skein, and combine into an intelligible whole the main items of fresh information that have been acquired in the interval.

It is a pleasure to make cordial acknowledgment of the generous assistance I have received. The renewed help of the Carnegie Trust was, of course, indispensable. And the same is true of the facilities so readily granted me by proprietors like Mr H. M. Cadell of Grange, the late Mr Forbes of Callendar and his son Mr Charles Forbes, as well as by tenant-farmers and occupiers everywhere. The list of those to whom I am in various ways indebted includes the names of Mr A. O. Curle, Mr John M'Intosh of the Gartshore Estate, Mr John Mathieson, formerly of the Ordnance Survey, Mr T. Douglas Wallace, and Mr James W. Young, now of Bishop Burton Estates, Yorkshire. Finally, I would mention *honoris et pietatis causa* three who are no longer alive to receive the special thanks that would have been their due—the Rev. Robert Gardner of Bo'ness and Mr James Smith of Mumrills, both cut off in their prime, and the veteran Mr Mungo Buchanan of Falkirk, who survived long enough to be gratified by the news that the end of the Wall had been found, although the infirmities of old age prevented him from seeing it with his own eyes.

I. FROM INVERAVON TO BRIDGENESS. (Plates I. and II.)

The long delay that has taken place has been due not to one but to several causes. The continuance of the War made it at first

¹ *Proceedings*, xlix. pp. 93 ff.

difficult and then impossible to obtain the necessary labour. After the Armistice my own duties increased so much in complexity that it became less and less easy to snatch an occasional afternoon of freedom. Above all, however, the problem that most urgently called for solution—a determination of the exact line which the Wall had followed between its crossing of the River Avon and the sea—proved far more difficult than might have been anticipated. Again and again the trail was lost, and sometimes it was not recovered until much time had been spent in the fruitless pursuit of clues that turned out to be misleading. That the track has at last been laid down on the Ordnance Map with approximate correctness is due in no small measure to the knowledge of soils possessed by the experienced workman who did the digging under my direction, Mr William Gibson, drainer, Laurieston. Although we had to feel our way now in one direction, now in another, and had frequently to retrace our steps, it will be convenient to make the description of our progress continuous. Further, in the account I am going to give, I propose to begin at the Avon and advance eastwards. No doubt the builders of the Wall followed the opposite course, but for our immediate purpose it will be less confusing to adopt the traditional convention.

In the paper to which I have already referred I described the rapid descent of the great Ditch from Polmonthill to the west bank of the Avon, indicating that its appearance there still justifies the language used of it long ago by Dr John Buchanan, when he spoke of it as “an immense slice cut out of the breast of the *brae*, with well-preserved edges.” On the opposite side of the river, and for a considerable distance beyond, no trace of it is now visible. The plough has been busy in these fields for generations, and, moreover, the level ground near the bank must often have been inundated by the overflow of the stream. Indeed, there is no certainty that in Roman times the course of the Avon at this particular point was identical with that which it follows to-day—a circumstance which makes it peculiarly hazardous to offer any conjecture as to the precise position of the *castellum* which we may presume to have been located somewhere in the immediate neighbourhood. Nevertheless, on the facts as at present known, I am disposed to suggest that the Roman fort of Inveravon stood somewhere on the slope that climbs up to the old Tower, rather than on the plateau that lies farther to the east.

My reason for this conclusion is twofold. In the first place, in trenching for the Ditch near the river, and again at the top of the field, we laid bare, at a depth of about 2 feet below the present surface, a number of stones that had clearly been placed, where they

still lie, by human hands. The tenant, Mr Taylor, had previously been puzzled to find them exposed when a drain was being cut, and it was in consequence of the information he supplied that we opened them up again, hoping they would prove to be the foundation of the Wall.¹ In this expectation we were disappointed. The hypothesis was ruled out by the manner in which they were arranged. Yet no alternative explanation occurred either to Mr Curle (who paid a special visit to Inveravon to examine them) or to myself. The most that can be said of them is that they bear witness to occupation of some sort. Their date, like their purpose, remains problematical, although it is perhaps not without significance that I picked up among them a fragment of pottery that had almost certainly belonged to a second-century red *mortarium*. Such a fragment would, indeed, be a slender basis on which to rear so imposing a structure as a Roman *castellum*. But the second of the two considerations of which I spoke must also be taken account of. As I shall show presently, the points at which Wall and Ditch left the east bank of the Avon were not exactly opposite those at which they touched it on the west; they were about 140 feet lower down the stream. There is nothing in the configuration of the ground which would have prevented exact correspondence. On the other hand, the thrust northwards becomes readily intelligible if we suppose that it was prompted by a desire to leave room for a small fort in the rear of the Wall. And a small fort was all that was needed here, because (as we shall see by and by) Mumrills, its immediate neighbour on the west, was in all probability much larger and more strongly garrisoned than any of the other *castella* on the isthmus. Inveravon, then, may not have been even as large as Rough Castle.

To quit speculation and turn to the actual results of digging, our survey can most conveniently start from a point on the right bank of the mill-lade (shown on Plate I.), about 20 yards below the sluice. This would represent the middle of the great Ditch. Exploratory trenches proved that from here the *limes* had run straight towards the north-east for rather more than 100 yards, when it took a decided swing towards the right. The discovery of its exact course was due, in the first instance, to a hint given me by the tenant, who told me of a line where the corn was wont to grow taller in dry summers. The hatched markings which appear at the top of the field on the Ordnance Survey Map of 1898 are thus inaccurate. Still more so, as I pointed out in 1911, are the "Remains of the Wall of Antoninus Pius," which are there shown passing along the front of the wooded plateau

¹ It seems not improbable that it was some part of this stonework which was noted in 1870 (*Proceedings*, ix. p. 48).

that overlooks the Carse. As a matter of fact, the little cottage by the roadside is built on the north bank of the Roman Ditch. Cracks and rents in the west gable, especially towards its southern end, tell their own tale quite plainly.

Attempts to ascertain what happened on the farther side of the road were unsuccessful. The ground on and about the wooded knoll where the Tower stands has been much terraced and altered. This, combined with the work of the trees, rendered our efforts fruitless. But there can have been little or no considerable deviation until 40 or 50 yards from the front of the farm-house of Inveravon. In my *Roman Wall in Scotland*¹ I suggested that the line had passed through the farm-buildings and had then "traversed the fields beyond them, making across the high ground straight for the bridge over the North British Railway." I went on to indicate that "when the opportunity for excavation does arise, the Ditch might be looked for, in the first instance, 30 or 40 yards to the left of the road that runs past Inveravon on the south." So far as the farm-buildings are concerned, I was right. For the rest, excavation has shown that I was wrong. Very marked subsidences in the side wall of the dwelling-house and again in the steading enabled us to follow the Ditch as it once more made a pronounced swing towards the right, apparently in order to reach the high ground as rapidly as possible. The decided "elbow" which results reflects to a certain extent the configuration of the steep bank of the river. The ploughman's cottage probably lies astride of the site of the Wall. Excavation proved that the Ditch had crossed the hedge into the road a little way to the east of it, and that for the next 500 yards or so it had run fairly straight, partly under the modern road but often very largely in the fields to the south of it. In one of our cuttings we found, 20 feet in the rear, stones that may have been the remnants of the foundation of the Wall, torn up apparently as recently as 1842.²

Shortly after reaching the top of the hill and just before beginning the actual descent into the little valley which affords a passage for the railway, the road takes a turn to the right, only to resume its former course presently. About the same point the *limes* must also have turned slightly in the same direction. As one goes down the hill towards the White Bridge, the hollow of the Ditch is distinctly discernible on the slope of the opposite bank. Although the hatched markings on the Survey Map of 1898 are roughly accurate, they do not quite correspond to the facts. They suggest, for instance, that in Field No. 650 the Ditch ran to the south of the hedge. This is not so. About 100 yards

¹ Pp. 142 f.

² *Ibid.*

beyond the Bridge its line passes underneath the line of the road. Thereafter, for more than half a mile eastwards, road and Ditch keep such close company that we may safely postulate a real connection between them: the course of the later construction has originally been determined by that of the earlier. Trenching made it clear that they seldom, if ever, coincided exactly. But there was no doubt as to their general agreement. Further proof was forthcoming in the shape of numerous traces of the foundation of the Wall, which invariably occurred in the fields on the south side of the hedge. Sometimes its line was plainly indicated by a band of clay, glistening white amid the freshly turned-up soil of a ploughed expanse. Sometimes stray kerbstones had been brought to the surface and tossed on one side by the ploughman, isolated survivors of the uprooting which took place in 1861 and earlier.

In reproducing Mr A. S. R. Learmonth's account of this uprooting,¹ I ventured to question his impression that it was the Roman road which he had encountered. I said it was much more likely to have been the foundation of the Roman Wall. My diagnosis has been satisfactorily confirmed. Writing some fifty years after the event, Mr Learmonth stated that the "causeway" which he removed was in the Easter Wellacres field—the fourth field on the right-hand side after crossing the railway—and that it was "about 20 or 30 yards west of that part of the road leading to Upper Kinniel known as 'The Stey Step,' and *about the same distance to the south of the road to Nether Kinniel.*" I have italicised the significant words. Now, in following the indications I have described above, we struck a fairly well-preserved section of the stone base of the Wall in the narrow strip of untilled ground that separates the Easter Wellacres field (No. 643) from "The Stey Step." Where the section was exposed on the inner side of the hedge, the south kerb and the greater part of the centre were still *in situ*, the former being 54 feet south of the road to Nether Kinniel. On the outer side the north kerb was intact, enabling us to fix the original breadth of the whole at 16 feet. There was no sign of lamination in the earth that rested upon it. Clay, however, was present in abundance. The coincidence between the 54 feet and Mr Learmonth's "20 or 30 yards" is remarkable, particularly if it be borne in mind that, by the time the hedge is reached, the Wall has already begun to assume the northerly trend that characterises the next 300 yards of its course.

Crossing "The Stey Step," we noted, projecting from the bank, some of the stones that had belonged to the base of the Wall. After it

¹ *Roman Wall in Scotland*, p. 144.

enters the Summerhouse Park (Field No. 674), the line heads almost straight for the Old Quarry (see Plate I.). In 1911, accepting a hint conveyed to me by Mr Learmonth, I adopted the view that this was at first its general direction. Investigation with the spade in 1915 proved that so far I was justified. But it also proved that for some distance beyond I had gone completely astray. My account of the next three-quarters of a mile requires to be entirely rewritten. After a weary search, we were driven to the conclusion that Mr Learmonth was wrong in his suggestion as to the further course of the Ditch. There was no such doubling back southwards, as he had supposed. We therefore returned to the hollow in which we had verified its presence, and were then able, by trenching at short intervals, to carry the line to the edge of the steep bank that overhangs the road. There it seemed to stop abruptly. The road is called the Cowbank Road, and I was at once reminded of what Maitland says¹ as to the beginning—or, as Gordon and Horsley would have put it—the end of “Graham’s Dike.”

“This Wall began on the southern coast of the frith of Forth, about a mile to the westward of the town of Borrowstouness, at the brow of a steep hill called the Cowbank, near the pavilion or summer-house at the north-western corner of Kinniel-park, a little to the eastward of the village of Kinniel; as is manifest by the eastern end of the ditch’s being plainly to be seen at the precipice of the Cowbank, adjoining to the road leading to the town of Borrowstouness.”

Maitland’s description of what he saw is obviously accurate. But his idea that the Ditch began—or ended—here was quite erroneous, as was conclusively demonstrated by our investigations of 1915. For the next couple of hundred yards it must have run along the face of the Cowbank, with the Wall on the high ground immediately above it. Indeed, now that we know where to look for it, its track seems at some points plainly discernible. Nevertheless, at first we should have been altogether nonplussed, had we not laid hold of a definitely ascertained point much farther east and then worked back westwards to establish the line. This we were able to do in the most satisfactory fashion by uncovering the remnants of the stone foundation at two points in the wood to the north of the large reservoir (No. 676). About 65 feet east of the gate into the Summerhouse Park we found the south kerb 2 feet below the present surface. The centre was also well preserved, but the north kerb had been torn away, thus reducing the total width to 12 feet 6 inches. Clay was much in evidence, rising at one place in a solid mass for 7 inches. At a distance of 23 feet farther

¹ *History of Scotland*, i. p. 171.

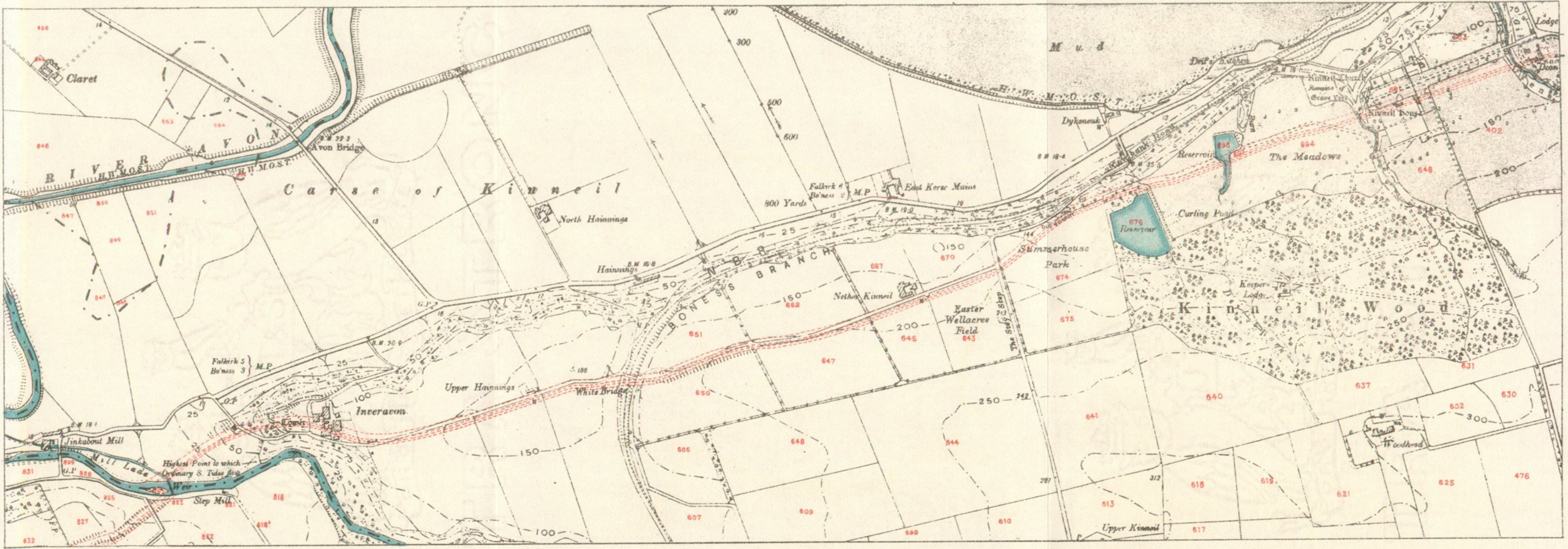
east we exposed a second section consisting of 15 feet of the north kerb with a considerable portion of the centre. In the first case there was an interval of about 40 feet between the northern edge of the stone foundation and the modern wall that runs along the top of the bank.

After quitting the wood above the larger reservoir the course of Wall and Ditch runs almost perfectly straight for well over two miles. It traverses the small reservoir (No. 698) about midway between its northern and southern ends, and continues through the Meadows, as the large park is called, in the direction of Kinneil House. The park contains several conspicuous hollows, which were regarded by the Ordnance Surveyors of 1898 as the remains of the Roman Ditch. In 1911 I expressed the opinion that the identification was erroneous. That opinion must now be retracted, or at any rate very seriously qualified. There is no doubt that the hollow to the west does actually represent the Ditch. Farther east it is different. The surface there has been considerably altered since Roman times, apparently by the construction of a "gallop" for horses, with the result that what now looks like the Ditch is at various points something much more modern. The line as I have laid it down was arrived at by trenching at short intervals from end to end of the Meadows, and it may be taken as approximately accurate. Not far from the eastern extremity we found a small remnant of the stone base of the Wall about 22 inches beneath the present surface. It was about 12 feet broad, with a neat kerb on the south side, the kerb on the north having been entirely removed. As usual, there was a good deal of whitish clay above it. This fragment was of special interest, because (so far as I was able to determine) it is the most easterly that still survives.

Crossing the little streamlet at the east end of the Meadows, the line passes close to Kinneil House, so close that the outer wall of the south wing of the building must run almost along what was once the north lip of the Ditch. Proof that this was actually the course which the Ditch followed is furnished by the condition of the north wall of the garden towards its eastern end. Despite the fact that on its outer or northern face it is shored up by stone buttresses, the wall exhibits marked signs of collapse.¹ Cracks in the front wall of the building to the east tell the same story. The subsidences are, of course, due to the fact that the heavy masonry rests on the "made up" soil with which the great hollow of the Ditch is now filled. Field No. 402 is

¹ When I first noted these, in 1915, they were completely concealed from ordinary view by a clump of rhododendrons. Since the grounds of Kinneil House passed under the control of Bo'ness Town Council, the shrubs have been cleared away, leaving the wall and buttresses uncovered.

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entered very near its north-western corner. At this point the middle of the Ditch is about 30 feet south of the main avenue leading to the mansion-house: the handwriting on the boundary wall is plain to see. By the time the little glen through which the Gil Burn flows is reached, the distance has increased to 70 or 80 feet. From the margin of the field a "sheugh" runs down the bank towards the stream. This appears to represent the most easterly remnant of the Roman Ditch that is still traceable upon the surface.

Here it may be of interest to turn back for a moment, and glance at the nature and extent of the error involved in my former suggestion as to the course which the *limes* had followed in and about the policies of Kinneil House. At the point where the deviation from the true line has turned out to be greatest, the difference amounts to as much as 200 yards. My earlier view, it will be remembered, was based partly on a personal recollection of Mr Learmonth's, partly on statements made by Sir Robert Sibbald and the Anonymous Traveller of 1697.¹ Mr Learmonth, however, was assuming (as I did) that, when Sibbald wrote that the Wall passed through "Kinieil Wood," he was speaking of the wood which is now known by that name and which lies on the south of the Meadows, whereas there seems to be no reason why the words should not cover also the belt of trees on the north, within which the remains of the stone foundation were actually laid bare in 1915. The statement of the Anonymous Traveller to the effect that the Roman Wall was "within a bowshoott" to the south of Kinneil House is perhaps less easy to account for. But, however the discrepancy is to be explained, it cannot be regarded as in any way weakening the new evidence. The spade, as Professor Haverfield used to say, is mightier than the pen.

It should be added that the error brought with it a compensating advantage. Pursuit of the false scent led to the discovery of what may fairly be assumed to have been traces of the Military Way. The most considerable of these was a section of kerbing, about 10 feet long, which we uncovered, inside the wood, 16 feet or 17 feet south of the gate near the south-east corner of the Summerhouse Park. The others were more fragmentary, and consisted of accumulations of stones, which were noted at intervals throughout the wood, along a line running eastwards, and which were specially conspicuous wherever there was a small watercourse. The same phenomenon was very observable, much nearer the Wall itself, on both sides of the streamlet that trickles past Kinneil House on the west. If these indications are to be relied upon, then the Military Way, in its journey through the wood, must have

¹ *Roman Wall in Scotland*, pp. 145 ff.

kept at an abnormally long distance to the south of Ditch and Wall. And that is precisely what might be expected from the character of the terrain. In Roman times the intervening ground, now represented by the Meadows, was in all probability full of marshy hollows; even to-day it contains two reservoirs and a curling-pond. The engineers of a road on which there was to be continuous and important traffic would have good reason to avoid it.

The effect of such a divergence would be to give the whole *limes* at this point the appearance of a tightly-strung bow, the place of the string being occupied by Wall and Ditch and that of the bow itself by the Military Way. As already indicated, the latter would seem almost to have resumed its normal distance by the time it crossed the streamlet close to Kinneil House. The course which it followed farther east is very possibly marked by a line of scattered stones which can still be seen running down the west bank of the Gil Burn. The line is too far to the south of the "sheugh," of which I have spoken, to represent the remains of the base of the Wall. And the possibility first suggested is supported by evidence obtained in the field immediately adjoining. Trenches dug opposite the end of the line, 15 feet and 30 feet out from the fence, revealed, at depths of 1 foot and 2 feet respectively, stones which, in the second case at least, had been carefully laid and covered with packed gravel. They had been too much disturbed to admit of any estimate being formed of the width over which they had originally extended. A peculiar feature was the appearance in the second trench of a good deal of decayed vegetable matter; at one point a layer of it rested directly on the stones.

Immediately beyond the Gil Burn stands the old dower-house of Kinneil, now known as The Dean. It has been built right astride of the line of Wall and Ditch. Here or hereabouts must be the site of the Roman *castellum* which considerations of distance would lead us to look for at or near this point. But the building of the house and the making of the garden have involved so much levelling and cutting away of the ground that it would be idle to search for indications of it now in this particular spot. Some might possibly be found by careful digging in the field to the east. Certainly it would be difficult to hit upon a situation more suitable than the slope enclosed within the angle which the Gil Burn forms at The Dean. And it is perhaps worth pointing out that on this *limes* almost all of the forts which lay near streams or rivers (as many of them did) were on the east (or south) bank. Obvious instances are Rough Castle, Castlecary, Cadder, Balmuildy, and Duntocher. No doubt in some cases, as at Rough Castle and Duntocher, the ground on that side was peculiarly well adapted for the purpose,

just as it was at the Gil Burn. But there was another reason. Agricola, by whom the sites seem to have been originally selected, in all probability advanced from Forth to Clyde, and it would be only natural that he should plant his *castella* on the hither side of the streams he had to cross.

In 1911, on the strength of evidence which need not be recapitulated here, I suggested that, beyond The Dean, Rampart and Ditch must "have run not very far from the modern high road."¹ This view was fully confirmed by the investigations of 1915 and following years. We found the Ditch just before it passed out of The Dean garden, when its direction showed that the modern road to Bo'ness was at first laid over its northern half. In point of fact, for nearly two miles the coincidence is more or less complete. This we were able to establish partly by positive and partly by negative evidence. Near The Dean, and again about 950 yards farther east, trenching in the fields immediately to the south revealed forced soil close to the boundary wall, sometimes to a depth of fully 4 feet. On the other hand, the great cutting made for the quarry, midway between, betrays no trace of an earlier disturbance of the ground. Presumably, therefore, the highway must provide an almost complete covering. It is, of course, proverbially difficult to prove a negative, but the results of a series of exhaustive searches seem to be conclusive. Wherever a divergence from the direct line of the road appeared possible, holes were dug at intervals of a few feet for distances of as much as 100 yards north or south. In none of these was any sign of the Ditch discernible. The obvious inference may, I think, be quite safely accepted.

We are thus brought to the villa called "Graham's Dyke," the name of which—derived as it is from a far older group of cottages that have now disappeared—we are justified in regarding as a trustworthy landmark. When the name was originally bestowed on the cottages, some remains of the Ditch were in all likelihood still visible close at hand. It is hardly necessary to repeat that the markings entered in this neighbourhood on the Survey Map of 1898 are misleading; the bank which they indicate is natural, and has had nothing to do with the Wall.² But it was no easy matter to determine what the true course of the *limes* beyond Graham's Dyke Villa had been. Ultimately by dint of much trenching, carried as far east as the farm of Drum and even beyond it, we satisfied ourselves that Horsley must have been speaking of what he actually saw when he wrote that "the remains near the Grange house, make a turn, and quit the most advantageous ground for a rampart." This can only mean that they swerve towards the

¹ *Roman Wall in Scotland*, p. 149.

² *Ibid.*, p. 150.

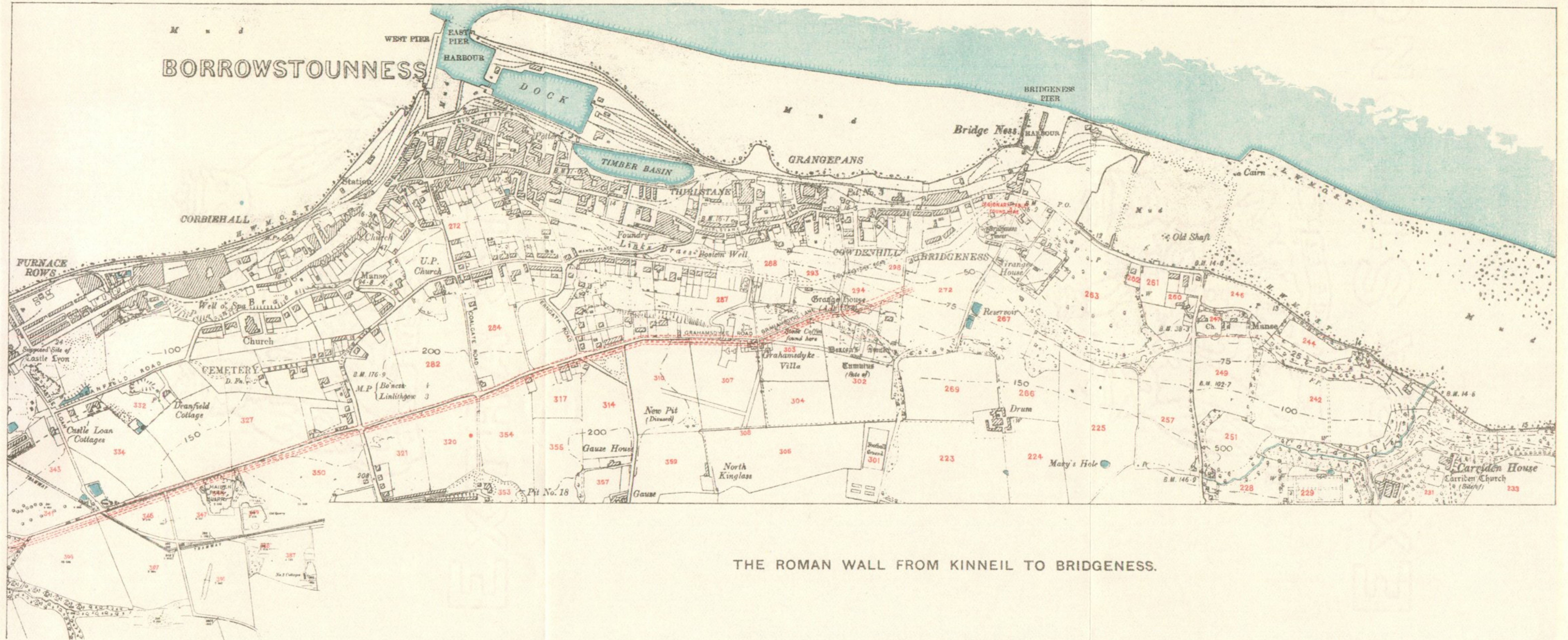
north, descending the hill in the direction of the sea. The reference is, as I have explained elsewhere,¹ to the original House of Grange, built in 1564 and demolished about 1905.

The fields to the north and to the south of Graham's Dyke Villa were methodically searched, but always without result. In the end we were driven to the conclusion that the line of the Ditch must be represented by the narrow road called Graham's Dyke Lane, which leaves the main highway almost opposite the Villa and follows a more northerly direction, thus quitting at once "the most advantageous ground for a rampart." We did not, of course, attempt to open up the Lane itself. But a hole dug on its southern margin, close to the hedge, yielded forced soil to a depth of 18 inches lower than the level at which the till could be reached, only 2 feet or 3 feet away, in the immediately adjoining field. This suggested a slope representing the lip of the Ditch, and, in view of the comparative narrowness of the Lane, we were encouraged to hope that we should find more decisive evidence in the allotments on its northern side. Disappointment awaited us, for confusion had been introduced here by the deposit of masses of quarry rubbish. Further down the hill, however, we obtained the desired confirmation. Trenching the garden of the most easterly house in Grange Terrace, at a point not very far from the northern edge of the Lane, we encountered a considerable depth of "free" soil, intermingled with the usual tell-tale fragments of decayed vegetable matter.

Just beyond the point in question Graham's Dyke Lane terminates, running out into a road which descends the slope more directly from the south. On the other side of this road is a large new school with its playground. If the hypothesis on which we had been proceeding was correct, it was clear that the school must be built across the line of the Ditch. Endeavours to find it in the playground outside were fruitless, but the conditions there are far from favourable. On the other hand, a little more towards the east is a field (No. 272) whose surface has since Roman times been ruffled only by the plough. A series of holes was dug along its western edge. In most of them yellow clay was reached after the first few spadefuls of earth had been thrown up, and I began to fear that we had once more gone seriously astray. The apprehension proved groundless. Exactly at what turned out, when laid down upon the map, to be the right spot, we found ourselves able

¹ *Roman Wall in Scotland*, p. 151. I am, however, doubtful whether I was justified in there citing Stuart in support of a downward turn, unless indeed his "south-east" be a misprint for "north-east." If there is no misprint, the south-easterly turn which he has in view is the turn which the Ditch *would* have taken here or hereabouts if he had been right in locating the terminal fort at Carriden House, as he seems to have done.

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to go a long way down into "free" soil intermingled with particles of decayed vegetable matter. At a depth of 5 feet 9 inches we were still apparently some distance from the bottom. Further search revealed the sloping edges of the Ditch, and its general direction was verified by a cut made farther eastwards. That was the last point at which we opened it up. There could no longer be any doubt that the great distance-slab discovered at Bridgeness in 1868 had really marked the end of the *limes*.

Given more leisure and better weather conditions, we might have been able to fix the position of the terminal fort as definitely as had been done eight years before at Old Kilpatrick.¹ As it was, we had to content ourselves with surmise. Some part of it at least must, I think, have lain within the limits of what is now Field No. 272. In estimating the probabilities, we have got to bear in mind the modification that the coast-line here has undergone since Roman times. Through the deposit of sand and silt the land has gained considerably at the expense of the sea—a process which has recently been sedulously encouraged by artificial means. Mr H. M. Cadell, whose expert knowledge and intimate acquaintance with the locality enable him to speak with authority on the subject, was good enough to put on the map for me a rough outline of the beach as the Romans probably knew it. This shows a promontory projecting into the Firth with bays sweeping back behind it on the east and on the west. The bay on the west penetrates to within less than 100 yards of the northern boundary of Field No. 272. Incidentally the full significance of the original site of the distance-slab becomes apparent. It must be remembered that it was not found at the spot where the tablet recording its discovery now stands, but immediately in front of the northern face of the rocky knoll on which Bridgeness Tower has been built. Clearly it was set up just where it would be certain to catch the eye of all who approached the eastern end of the Wall by sea.

II. THE STRUCTURE OF THE VALLUM.

Prior to the publication of the paper which I read to the Society in 1915, it had been taken for granted that the structure of the Vallum had been uniform from the one side of the isthmus to the other. The investigations of the Glasgow Archæological Society proved, beyond possibility of question, that in the west it had been built of sods which rested on a stone foundation, and it was only natural to assume that the same had been the case in the east. The observations made during

¹ See *Proceedings*, xlix. p. 105.

my survey of the stretch between Falkirk and Inveravon led me to a different conclusion. The stone foundation had indeed been continuous. But there was no trace of the lamination—the dark bands of decayed grass and heather—so characteristic of “cæspiticious” ramparts. Instead, clay was much in evidence, and I suggested the possibility, “that, after the stone foundation was laid, two mounds of clay had been piled up on either edge of it and used to support a wholly earthen rampart.”¹ It will not have escaped notice that my experience between Inveravon and Bridgeness was similar. Clay was noted over and over again, the black lines nowhere. Sometimes the clay had even survived the complete destruction of the stone foundation. But there was confirmation still more striking, which deserves to be put on record.

In the account of certain discoveries made at Mumrills, which was communicated to the Society in 1915,² an attempt was made to reconstruct the outline of the fort, the result giving an enclosure of approximately $4\frac{3}{4}$ acres—an area considerably exceeding the average of the other known forts on the Wall. Almost exactly a year later it was proved that this was an underestimate. I had assumed that the course of the ditches on the west was indicated by the deep cutting through which the cross-road known as the Sandy Loan passes. Digging had failed to reveal any definite remains of a rampart to the east of the cutting, but I concluded that it had been ploughed up and that its former whereabouts was betrayed by a line of stones about 15 feet broad, which had the appearance of being a disturbed foundation. In February 1916, however, the late Mr James Smith, to whose keenness and initiative we owed most of the information that we had previously gleaned, wrote to me that he thought he had found the west rampart of the fort in the field beyond the Sandy Loan, and that he would like me to come out and verify his impression. It was clear at a glance that he was right. There was no mistaking the meaning of the carefully laid stone base that he had uncovered.

It was interesting to learn that the finding of the rampart was not due to a happy chance. When the field was in crop, Mr Smith had observed a line of exceptionally luxuriant growth running north and south, and had rightly inferred that it must represent the track of a ditch or ditches. Measuring an appropriate distance back, he had dug down until he struck the foundation. The immediate result of the new knowledge thus gained was to increase the estimated size of the *castellum* from $4\frac{3}{4}$ acres to nearly 7, and so to emphasise its importance greatly. As in the case of the ramparts on the other three sides, the soil lying above the stones showed no sign of lamina-

¹ *Proceedings*, xlix. p. 121.

² *Ibid.*, pp. 116 ff.

tion. It was plain that the superstructure had not been of turf, and no less plain that it had not been of stone. On the other hand, as before, traces of clay were apparent everywhere. Without doubt it had been very extensively used. Indeed, the possibility that the entire body of the rampart had been of this material is not to be excluded, particularly in view of the fact that, when the ditch immediately in front was examined in the winter of 1923-4, it proved to be full of clay, almost from top to bottom. It is not, however, the rampart of the fort that concerns us at the moment. It is the great Vallum itself. After determining the point of junction between the two, we followed the course of the latter towards the west, through Field No. 2095, by digging trenches across it at frequent intervals. The stone foundation was some distance beneath the modern surface, and was perfectly preserved. In none of the sections were the black lines visible, whereas clay was always more or less abundant, sometimes so abundant as to suggest that it may originally have formed the whole superstructure. In one case the whitish mass actually rose to a height of 3 feet 3 inches above the stones.

In any event, therefore, the general proposition as to a difference in structure between east and west may be regarded as established. The reason for it can only be guessed. In 1915 I suggested that in the middle of the second century of our era "the ground through which the eastern portion of the Wall ran was thickly wooded, so that suitable sods would not be readily procurable; whereas to the west of Falkirk the country was, as it is to some extent to-day, a moorland where thick grass and heather flourished."¹ No more probable explanation has been put forward in the interval. Fresh light has, however, been thrown on the different, though closely related, problem of the precise point at which the transition from sods to earth and clay took place. It was not, as the quotation given above might seem to indicate, at Falkirk itself, but considerably farther west. The evidence for this statement may be summarised briefly.

During the summer of 1916 some attempt was made to identify the site of the fort which is supposed to have stood at Falkirk.² The effort met with no success. The conditions were, and must always be, so unfavourable that the search was never anything but a forlorn hope. Only here and there in the wilderness of streets and houses and gardens was there a spot where trenching for so unwonted a purpose was practicable. Once or twice we seemed to catch a momentary glimpse of a clue, but always it turned out to be a will-o'-the-wisp. The most definite impressions I carried away were, firstly, that from

¹ *Proceedings*, xlix. p. 123.

² *Roman Wall in Scotland*, pp. 237 ff.

Rosehall westwards through the town the conjectural line laid down on the Ordnance Survey Map of 1898 is approximately correct; secondly, that the most likely situation for the *castellum* to have occupied is the high part of Arnot Hill, overlooking the hollow through which the now concealed West Burn once ran; and, thirdly, that it was probably not a large fort. As to the last point, a small fort here would be amply sufficient, in view of the exceptional size of Mumrills, its nearest neighbour on the east, to say nothing of the extra protection that would be ensured by the proximity of Camelon on the north. It is perhaps worth adding that, if my surmise as to its position be correct, the Falkirk *castellum*, standing (as it would do) on the right bank of the stream, supplies another illustration of what we have already observed to have been the general rule on this particular line.¹

Although we had drawn a blank at Falkirk, compensation awaited us when we moved westwards. Bantaskine House was at this time in military occupation, and I had no difficulty in obtaining leave from the officer in charge to make such excavations as I desired. The track of the Ditch is fairly plain within the policies and afterwards through the grounds of Glenfuir House, right up to the point where it is interrupted by the series of basins which descends from the south to the well-known "Lock Sixteen" on the Forth and Clyde Canal. Beginning immediately to the east of the road called "Maggie Wood's Loan," we cut various sections across the course of the Wall. As a rule, the stone foundation was very easy to find, being only a little way beneath the surface. It was usually in tolerable preservation, although it generally turned out that one or other of the kerbs had been removed in laying out the park. Of the superstructure enough remained to satisfy us that it had been at least partly composed of clay, while nothing suggestive of sods could be detected anywhere. Plainly the Vallum had not yet become "cæspiticious." A feature deserving of remark here was the seemingly abnormal narrowness of the "berm."

Next year (1917) we carried the search beyond "Lock Sixteen." For three or four hundred yards beyond the basins the Ditch survives in exceptionally fine condition. Nowhere along the isthmus can one get a better idea of what it must have been like in its original state. On the other hand, the fields to the south are in cultivation, so that there is no mound left to indicate the whereabouts of the Wall. Digging, however, showed that the wire fence, which forms the northern boundary of the arable land, runs very nearly above the north kerb. We opened up the latter in one or two places, and noted wrought clay lying upon the stones and also spreading for some distance outwards.

¹ See *supra*, p. 278.

Once again there was a complete absence of lamination. By this time we were close to Watling Lodge, the site and garden of which lie directly athwart the Roman line. To the west of the garden is a small enclosure of uncultivated ground (Ordnance No. 1728), within which the remains of the Wall are sufficiently prominent to catch the eye at once. Leave to make a cut across them was readily granted, and the section provided us with the clue we had been seeking. There was no clay. But both faces of the cutting were pencilled with the "ineffaceable parallel dark lines," to which attention was first drawn by the *Glasgow Report*. It was clear that we were now in the region of sod construction—a region which extends continuously from this point to the Clyde. It was no less clear that the line of demarcation between the two systems must have been the trunk road which passed northwards through the Wall towards Camelon and Ardoch. Thirty or forty years ago, before Watling Lodge was built, this road could be seen quite plainly, crossing the Ditch,¹ and there is evidence to show that (as might have been anticipated) it was protected by a guard-house.²

III. ROUGH CASTLE FORT (Plate III.).

In June 1920, with the kind permission of Mr Charles Forbes, I spent two or three days digging at Rough Castle, and obtained some fresh information which deserves to be put on record. I was fortunate enough to have the co-operation of Mr Mungo Buchanan and Mr A. O. Curle, the former of whom was present throughout and took the necessary measurements. The drawing reproduced on the accompanying Plate III. is Mr Buchanan's handiwork. Our principal object was to make a careful examination of the contents of one of the defensive pits or *lilia*, only a proportion of which had been disturbed during the excavations of 1903-5. We were anxious to determine the stratification as accurately as possible, and we were not unhopeful that the finding of stray pottery might confirm once for all the first-century date that I had suggested for the *lilia*. Our hopes in the latter respect proved illusory, and the date still awaits confirmation. On the other hand, the evidence supplied by the stratification was full of interest. It enables the phenomena recorded by the earlier excavators to be interpreted with a degree of certainty that was previously unattainable. We are now in a position to follow the fortunes of the Antonine fort with a real approach to confidence. The inferences drawn fifteen years ago from a study of the plan are shown by the stratification to have been well warranted.

The particular pit selected for examination was one belonging to

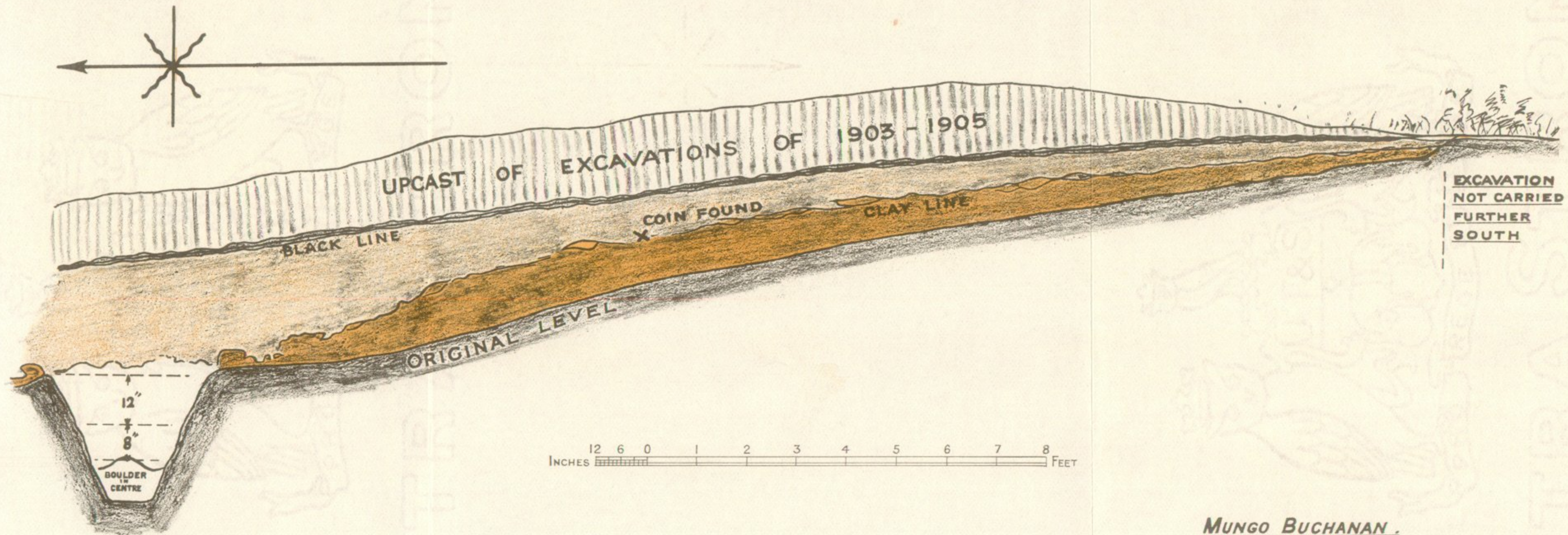
¹ *Roman Wall in Scotland*, pl. xiii. 2.

² *Ibid.*, pp. 247 ff.

the most southerly of the ten parallel rows that are known to have existed. It turned out to be 6 feet long, a little over 3 feet broad, and slightly more than 2 feet 6 inches deep. In the bottom was a boulder projecting from the ground and obviously *in situ*. The pit had not been opened in 1903-5, but it was immediately adjacent, on the east, to those that had been cleared out in this row then. Consequently most, if not all, of the superincumbent material had already been removed, with the result that the original stratification had to be ascertained partly by exposing the face of the wall of earth that rose to a height of 3 feet or 4 feet on the east, but mainly and more definitely by cutting a trench for 25 feet due south into the heart of the "Outer Mound." Mr Buchanan's drawing speaks for itself, and greatly simplifies the task of description. It was destined to be the last of the many valuable contributions which his skilful pencil has made to our knowledge of the Antonine Wall.

The pit itself contained some fragments of coarse pottery. They were not numerous, and all of them appeared to be of Antonine date. The lowest was found close to the top of the boulder. Above the level of the original Roman surface three perfectly distinct layers of soil were observable, all of them abundantly interspersed with pieces of broken pottery, large or small, Samian as well as coarse ware. The uppermost layer had a fairly uniform thickness of about 1 foot 6 inches until it began to tail off towards the south at a distance of about 20 feet from the lip of the pit. It undoubtedly represented the upcast of the excavations of twenty years ago, for the black line dividing it from the layer below yielded stems of bracken and the like, whose disintegration had little more than begun. This line proved that prior to 1903 the gradient of the surface had been more pronounced than it is to-day, the sharpest rise being then about 1 foot in 9. Directly above the pit the intermediate layer had been nearly 2 feet 6 inches thick. Our trench showed that it tapered towards the south, rapidly at first but afterwards with more deliberation. Its lower limit was indicated by a narrow band of clay, which was revealed very clearly in the section and which had been carried right over the pit and beyond it, thus sealing it effectually. Beneath the band of clay was the lowest layer of all, consisting of soil of a slightly different colour and (as it seemed) of a somewhat coarser grain. With less variation, its thickness had a maximum of rather more than 1 foot. It rested upon the original Roman surface, the gradient of which had been somewhat steeper—at the steepest 1 foot in 5. So far as could be judged, the pottery shards were all of the second century, from whichever of the three layers they came. A much worn *denarius* of Mark Antony was

EXCAVATION AT ROUGHCASTLE (ROMAN FORT) NEAR FALKIRK, 1920.



MUNGO BUCHANAN .
FALKIRK .

found embedded in the side of the trench at a point marked upon the Plate.

Thus much for the facts. It remains to register the more obvious conclusions. To begin with, the Outer Mound opposite Rough Castle is not composed of the earth that was thrown out when the great Ditch was dug; to a large extent, at least, it is natural. In the second place, if (as seems probable from their alignment) the *lilia* have no direct connection with the *castellum* of Lollius Urbicus but once formed part of the defences of an Agricolan fort, the earlier fort occupied a natural rising ground and had no ditch along its northern front, the place of the ditch or ditches being taken by the *lilia*. In view of the character of the terrain this would be a very natural arrangement: the area within which they were cut is a flat, platform-like expanse, itself protected on the north and on the west by an unusually steep declivity, well calculated to check the speed of the most impetuous rush. Finally, after the great Ditch had been dug and the Antonine fort built and garrisoned, the huge trench was twice allowed to become so choked up with debris that its value as an obstacle must have been almost, if not altogether, destroyed. On each occasion it was systematically cleared and made serviceable again, the accumulated rubbish being conveyed to the brow of the little hill in front and spread more or less evenly down the slope. The covering of clay, which was laid over the whole on the earlier of the two occasions, is perhaps indicative of less haste and of the application of more careful methods. Is it not self-evident that the successive accumulations represent two periods during which the Antonine fort lay waste after being temporarily abandoned under hostile pressure? In 1911 I argued from the plan which the excavators had produced, as well as from the structural appearances, that one complete reconstruction was certain and that another was possible or probable. Both are now fully vouched for by the testimony of the stratification I have been describing. I was disposed to think that the later restoration had been more hasty or more careless than the earlier, and some support for that view may conceivably be found in the fact that the covering of clay was not repeated. A new point of interest is suggested by the relative thickness of the strata. The later accumulation of debris appears to have been more considerable than the earlier. This does not necessarily mean that the second period of desolation was longer than the first. But it unquestionably means that the interval between the original construction of the fort and its first restoration was shorter than the time which elapsed between the first restoration and the second.

IV. CROY HILL FORT.

Writing in 1911, I summarised the evidence in favour of the current opinion that a *castellum* had existed on Croy Hill. It was all circumstantial, but it appeared to be none the less conclusive. Direct proof was, however, desirable, and two days' digging in September, 1920, was sufficient to secure it. Leave to excavate was courteously granted by the Directors of Carron Company, who now own the site, and an indication was given that any objects found would be handed over to the National Museum. Mr John M'Intosh, who knew every foot of the ground, readily agreed to supervise the workmen, and Mr Alexander Park, factor for Gartshore, most kindly put the necessary labour at my disposal. Apart from the establishment of the main fact we had set out to prove, and despite the cursory nature of our investigation, we were rewarded by an unlooked-for discovery: the defences of the fort had seemingly been constructed on a system entirely different from any of those known to have been employed elsewhere on the line of the Wall. To put the matter beyond doubt, further exploration is eminently desirable. Until that has been carried out, the short account that follows must be regarded as tentative. The enterprise would not be a costly one, partly because the area involved is comparatively small, and partly because the rock is within a foot or two of the surface almost everywhere, so that the quantity of soil to be moved would be much below the average. Pottery would probably be fairly plentiful. During our two days' work quite a number of shards were turned up, as well as no fewer than fourteen *ballista* balls. Our concern here, however, is with the fortifications.

The *castellum* stood on the "flat, shelf-like expanse," where I located it conjecturally in 1911.¹ At a distance of about 170 feet west of the solitary cottage now left upon the hill we struck a stretch of cobble foundation, both ends of which proved to be broken. When we first encountered it, it was running—as it did for the greater part of its length—at right angles to the *limes*. At a point about 146 feet south from the lip of the Ditch, which is here distinctly visible, it was interrupted by a gap some 18 feet wide. On either side of the gap it was carefully finished, not ragged as at the broken ends, and the inference that this was an entrance would have been irresistible, even had the Military Way not been plainly visible passing through it. For 85 feet further south the foundation followed a perfectly straight course. Thereafter it curved for about 23 feet, evidently heading for the east.

¹ *Roman Wall in Scotland*, pp. 125 f. The doubt which I subsequently expressed (*Proceedings*, lii. p. 223) was unfounded.

Presumably it had continued in that direction, but unfortunately it had here been completely destroyed. A puzzling feature of what had obviously been the rounded corner of the fort was the occurrence of a ditch or drain running from the interior, but having no apparent outlet. Possibly it had belonged to an earlier "lay out" of the *castellum*.

The foundation I have been describing was not more than 3 feet broad. A wall as narrow as is thus suggested would hardly have admitted of a rampart-walk on its top, and it is therefore difficult to believe that it can have stood alone. Yet it cannot have served as the outer facing of an earthen mound, for directly behind it, sheltering in its lee from the prevailing westerly winds, there were several hearths. No sign of a second wall at a suitable distance in front was detected. Otherwise one might have found an analogy at Gellygaer, where the fort was defended by a rampart of earth, supported before and behind by a wall of stone. Was the rampart at Croy Hill constructed of sods (or of earth) with a backing, instead of a base, of stone? And is the absence of a stone base to be explained by the thinness of the covering of soil that separates the surface from the solid rock? These are questions which it must be left for the future excavator to answer. But one piece of evidence that appeared significant should be recorded now. Outside of the rounded corner, and arranged so as to conform to it in shape, lay a number of stones which seemed from their character and position to have been placed where they were in order to serve as a foundation. The superstructure must have been of considerable size, as the stones extended for at least 10 feet or 12 feet beyond the outer edge of the cobbling. They were not a mere line, but covered the whole of the space involved. One naturally thinks of an angle tower, having its front flush with the face of the rampart, or of a platform for a *ballista*.

No trace of a ditch or ditches was observed. It may be that our exploratory trenches were not carried sufficiently far out from the cobbling. But it is at least equally likely that at Croy Hill, or at all events on the western face of the *castellum*, this familiar type of obstacle was dispensed with altogether, as it seems to have been on at least two sides of the fort at Hardknott.¹ At Croy Hill there would have been good reasons for so unusual an omission. On the one hand, the position was very strong by nature. On the other, to dig a ditch of any depth would have meant a hewing away of the solid rock. As to this I am tempted to quote what I have written elsewhere² regarding the great Ditch itself: "Only those who have examined the spot for themselves can realise how immense must have been the labour

¹ *Cumb. and Westm. Trans.*, xii. (1893), p. 394.
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² *Journ. of Roman Studies*, xi. pp. 22 f.
19

involved in cutting the Ditch over Croy Hill. No such task would be attempted to-day without the help of high explosives. Almost as soon as they had stripped off the innocent-looking turf, the legionaries would find themselves faced by the stern, pitiless hardness of an unbroken sheet of basalt. At one point they had to make a frank admission of defeat. Nearly opposite the site of the *castellum* the Ditch is blocked for a space of 50 or 60 feet by the intrusion of a huge doleritic mass, which towers high above the surrounding level. Even the highly disciplined Roman workmen shrank from any endeavour to cope with an obstacle so formidable. It was left severely alone."

To those who approach this remarkable break in the Ditch from the south—as well as to those who owe their knowledge of it to the Glasgow Society's *Report*,¹ where it is described (with perfect correctness) as "a narrow hog-backed bank of doleritic rock, with . . . a flattish top" which "must have been near the level of the natural surface of the ground"—the language used of it above may well seem to be exaggerated. Let them approach it from the east, as the legionaries did, and it will give them a different impression. It is quite possible that it may have been utilised to carry a road across the Ditch, as has more than once been suggested. But, if so, the road can hardly have issued directly from the northern gate of the fort; for this to be so, the "bridge" is too far to the east of that part of the remains of the rampart which has now been identified. Standing on the "flattish top" one cannot but feel that it would have made an ideal signalling station: the view is most extensive in almost every direction. Two final points have still to be mentioned. In the first place, the *castellum* was relatively small. In the second place, the abundance of Roman building material that can still be observed in the dykes and among the ruins of the cottages suggests that here the barracks, as well as the principia and the commandant's house, must have been constructed of stone. That is exactly what we might have expected. Suitable stone was plentiful, and to fix wooden sleepers or wooden posts in the rocky surface would have been a most laborious business.

V. KIRKINTILLOCH FORT.

Ever since people began to write about the Antonine Wall, it has been generally taken for granted that Kirkintilloch was the site of one of its forts. Indeed, so long as the remains of the Peel were believed to be Roman, no other opinion was possible. As soon as it was recognised that in character and origin they were not Roman but

¹ Pp. 59 f.

Norman, cautious critics began to demand that evidence of a different and more trustworthy sort should be produced. In 1911 I examined the question in the light of all the information then at my disposal, and reached the conclusion that, after the testimony of the Peel had been ruled out as irrelevant and inadmissible, the balance of probability still favoured the traditional view.¹ It is not necessary to recapitulate here the various considerations of which account was taken. It must suffice to say that they ranged from the extreme suitability of the position to the fragments of an amphora, and that nothing was accepted as authentic which did not seem satisfactorily vouched for. Despite it all, the late Professor Haverfield was left unconvinced. His verdict was, as always, tersely expressed: "*Nec vestigia castelli supersunt, nec tituli prodierunt; sed locus praesidio peridoneus, nomen eius pristinum, priore parte castellum significans (Cairpentaloch), amphora una Romana, nonnulli nummi Macdonaldo persuaserunt ut castellum admitteret. Nihilominus res incerta est.*"²

This challenge, published in 1913, was too definite to be disregarded, and I suggested that the matter should be probed further on the earliest possible occasion. An opportunity presented itself in the end of July 1914, when the Town Council of Kirkintilloch were good enough to sanction the cutting of a few trenches in the Public Park, within whose limits the Peel is now included. Mr John M'Intosh was luckily able to take charge of the workmen—an arrangement which secured that nothing of importance would be inadvertently missed. Although the outbreak of the War prevented the operations from being carried as far as could have been wished, the results obtained were, I think, sufficiently decisive. But, before attempting to describe them, I should like to place on record a few facts which have come to my knowledge since 1911, and which, had I been able to cite them at the time, would certainly have strengthened the case I then endeavoured to make out.

The first was brought to my notice by Professor Haverfield himself. Looking through an old notebook, he was reminded that he had seen in the Museum at Durham two building-stones, which seemed to be Roman and which were said to have come from the Peel of Kirkintilloch. At my request he communicated with Canon Fowler, who wrote that he had himself picked them up in the moat of the Peel in July 1877, and carried them off to Durham. "What made them take my fancy," he added, "was that they were such fine examples of cross-hatching. One is a perfect facing-stone, narrowed from the front in the usual way, the other is a broken irregular stone, but both show

¹ *Roman Wall in Scotland*, pp. 174 ff.

² *Ephem. Epigr.*, ix. p. 626.

the cross-hatching on the faces extremely well." Professor Haverfield was not disposed to question their Romanity seriously, but he suggested the possibility of their having been brought from some neighbouring *castellum*, say Auchendavy, when the Peel was being built. The suggestion was typical of Haverfield's reluctance to be content with anything that fell short of exact and absolute proof. But it appeared to me improbable; Auchendavy is nearly two miles away, and its buildings were in all likelihood completely demolished long before the Comyns erected their stronghold of Kirkintilloch Castle, with which the Peel may be presumed to be identical.¹

In 1914 my doubts were confirmed by an examination of the wall that separates the Public Park from an avenue on the west. A number of the stones in this seemed obviously Roman; one on the western face, in particular, showed the cross-hatching very distinctly, and there were others. These may be supposed to have come from the Peel, after it had fallen into decay, just as the material used in the Peel itself may be supposed to have been obtained, at least in part, from the ruins of the Roman fort that had preceded it. That would fully explain what we are told by Horsley, who saw the work of destruction going on. One of the grounds on which he believed the Peel to be Roman was that some of the stones which were being removed from it were "chequered."²

Again, a portion of an unquestionably Roman quern, now in the Hunterian Museum as a gift from Dr John Buchanan, is specifically stated in the notice of the donation to have been found at the Peel of Kirkintilloch. Another item of fresh information is supplied by a manuscript note on the margin of Dr Buchanan's copy of the second edition of Stuart's *Caledonia Romana* (p. 325), where there is a record of "a large Brass Coin of the Emperor Galba found a few years ago near the Peel of Kirkintilloch." Two similar notes, though perhaps less relevant to our immediate purpose, may appropriately be cited here. One of them (p. 323) refers to the "bar of lead," of which Stuart speaks, and the inscription on which was (he says) "not sufficiently legible to enable us to present the reader with a copy." The marginal comment is: "The letters on this bar of lead were *CCLXX*. I saw them distinctly in 1826, when I first visited the place, and marked them

¹ I am, of course, well aware that (as was convincingly proved by the late Dr George Neilson) a "peel" was essentially a wooden structure. But in popular parlance the name was transferred to castles of stone at a fairly early period. I have been unable to discover, or to hear of, any ancient reference to the Peel of Kirkintilloch; it is always the *Castle*. Mr W. M. Mackenzie suggests to me that the oldest is Gordon's *Itinerarium Septentrionale*, p. 54, and that accords with my own observations. In any event, Horsley's description proves that this Peel was of stone.

² *Britannia Romana*, p. 168.

down in my notebook." The other (p. 324) describes the ultimate fate of the "stone, having sculptured on it, in bold relief, the head of a bull with distended nostrils and a fillet across the forehead," which had passed into Dr Buchanan's collection. It runs: "This stone was placed by me in the walled back-garden of Slatefield House, eastern suburbs of Glasgow, our old family property, and it remained there many years; but since this volume was published, the stone was accidentally destroyed and split up, in my absence, by an ignorant mason, in making some repairs, to my great regret."

Turning now to the work done in 1914, I may begin by recalling the persistent belief that the Roman fort of Kirkintilloch stood on the north, or Caledonian, side of the Wall. Horsley calls it "the common opinion and tradition," but is evidently more than a little doubtful as to whether it ought to be accepted. He thought that the idea might have originated in a confusion between the Military Way and the Wall at a time when the former, but not the latter, was still visible in the immediate neighbourhood.¹ He makes it plain that before his own day both had completely disappeared. In point of fact the mistake—for that it is a mistake seems certain—is in all probability due simply to the erroneous identification of the remains of the Peel with the remains of the Roman *castellum*. Roy's positive statement that the Wall "passed to the southward of the fort, called the Peel, situated just in front of it"² is shown, by reference to his plan, to be a mere deduction from the line which the Wall was following at the nearest point where he could trace it approaching the Peel from the west. It never occurred to him, any more than it had done to Horsley, to suspect the Roman origin of the Peel, and the conclusion seemed therefore irresistible. Horsley, on the other hand, justified his doubts by casting his glance farther eastwards. Beyond the Peel there was a blank stretch of fully half a mile within which no sign of the Wall could be discovered. But "when it first appears again, the line seems to point towards [the north rampart of the station]."³ By "the station," of course, he means the Peel.

Before beginning operations in the Public Park, we decided to examine as carefully as possible the blank stretch which Horsley and his contemporaries had encountered. It is represented by the northern part of the town of Kirkintilloch, the growth of which has inevitably entailed the destruction of the Wall. Mr M'Intosh went over the ground repeatedly alone, and more than once in my company. No digging was attempted. Instead, we scanned the walls of houses and other buildings in the hope of finding subsidences which would indicate

¹ *Op. cit.*, p. 169.

² *Milit. Ant.*, p. 159.

³ *Brit. Rom.*, l.c.

the track of the long-buried Ditch. Starting from the bank of the Canal, on the farther side of which (in Horsley's words) "it appears again" running towards Auchendavy,¹ we tried to work back—that is, westwards—towards the Peel. Though our conclusions must be regarded as entirely tentative, it may be worth while stating them. If digging would be difficult, it would not be quite impracticable, and a few trenches cut, say, near the left bank of the Luggie might speedily show whether we were right or wrong. I had planned an exploration of the sort for the latter part of 1914. But, like many much more important undertakings, it was nipped in the bud by the War. Meanwhile, therefore, we must rest content with conjecture.

It seemed to us, then, that on leaving the Canal bank to descend into the valley of the Luggie the line did not run straight on towards the north rampart of the Peel, as Horsley had supposed, but swerved slightly to the south and, after crossing Canal Street and the Luggie, passed not far from the Lion Foundry. If a subsidence in the wall of the school building in Union Street and another in that of the vestry of the Roman Catholic Chapel can be accepted as trustworthy indications, it must have turned sharply to the north somewhere to the west of the Cowgate, and must then have climbed the rising-ground on which the Peel stands, not by the familiar Peel Brae, but along the southern slope. This, again, would involve an almost rectangular bend at the top, in order to meet that portion of the Wall which is shown on Roy's plan advancing from the west. Further, it would open up the interesting possibility (suggested to me by Mr M'Intosh) that the Wall may have formed not only the northern but also the eastern rampart of the Kirkintilloch *castellum*.

So far, however, the *castellum* has been in the air. I think it may be claimed that our work in the Public Park, despite the fact that it had to be left unfinished, has definitely brought it down to solid earth. A trench dug from south to north for the whole length of the Park yielded no information of any value. On the other hand, a similar trench, cut transversely from about the middle of the western edge of the Park, revealed the remains of a road or street some 2 feet below the surface. What was left of this road or street was about 11 feet wide. Its western kerb had been torn away, but its eastern one was intact for about 20 feet. Three hearths were also uncovered, one of them large and the other two small. In the large one were found some pieces of coarse pottery and a small portion of the rim of a mortarium of red ware. The whole site had clearly been much disturbed, but the evidence of occupation in Roman times seemed to be

¹ The line is accurately shown on the Ordnance Survey Map of 1898.

conclusive. Thus, fragments of tiles, which had all the appearance of being Roman, were fairly numerous, some of them being flanged. Had we been fortunate enough to cut through the line of a ditch or ditches it would have been much more satisfactory. As it was, we were able only to note a marked subsidence in the gable of a house to the west of the Park. This may conceivably provide a useful clue in the event of further search becoming feasible. Meanwhile it should not be stressed too strongly.

It will be seen that the testimony I have collected is somewhat disjointed. But the case is one in which here a little and there a little may well be accepted as all that need be asked for or required. The thronging feet of the men of the Middle Ages who built the Peel, and dwelt in and around it, could not but obliterate many of the traces left by those who occupied the ground in earlier days. No doubt the single strands of evidence are slender enough. But in the circumstances the wonder perhaps is that so many of them have survived. Taken together—"chequered" stones, stray finds, the road, the tiles and other marks of occupation—they form a cord sufficiently strong to support the view that the Roman fort of Kirkintilloch is much more than a mere figment of the antiquary's imagination.