

ART. XVI.—*Report of the Cumberland Excavation  
Committee for 1933.*

EXCAVATIONS ON HADRIAN'S WALL.

I. BIRDOSWALD.

By F. G. SIMPSON, M.A., Hon. F.S.A.Scot., and  
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IN 1932, three phases of occupation preceding the Stone Fort at Birdoswald were distinguished and related to the Vallum and to the ditch-system of the Stone Fort. The first phase was represented by a polygonal stockaded enclosure, with a double ditch, cutting off the high spit south of the Stone Fort. This was presently cut through by the Vallum-ditch, and, later still, by the Stone Fort's ditch-system. The chief feature of the second phase was a monumental causeway leading across the Vallum-ditch and guarded by an earth fort on the north, the south rampart of this fort being partly covered by that of the Stone Fort. The third phase was of wooden shacks, covering the obliterated mounds and ditch of the Vallum and destroyed in turn when the Stone Fort's ditches were dug. Other details were left for further examination; in particular, a quadrangular enclosure which had come to light within the area of the polygonal stockade, and a complex series of sleeper-trenches belonging to the wooden buildings of phase III. The investigation of these features, now to be described, rounds off the study of this area.

Phase I. The quadrangular enclosure being stripped, two levels were revealed, one associated with the enclosure, the other containing the wooden buildings of phase III. The enclosure was found to be cut by a transverse runnel,

about two feet wide and deep, nearly parallel to the front and cutting off about one third of the internal area. This runnel sloped rapidly down towards its east ditch, the actual junction being destroyed by the Vallum ditch, and, opposite the east side of the entrance (see plan), it ran out to nothing, leaving a free passage to the hinder part of the enclosure. The forecourt thus defined had been paved with river-cobbles. The paving also petered out with the runnel, because the crest of the hillock had been shaved off to provide a platform for the timber buildings of phase III, while the eastward slope had been levelled up then with a spread of clean boulder-clay, lying on top of the grey silt amongst the cobbles. The same silver-grey silt filled the runnel, of which the top was sealed by the boulder-clay. South of the runnel, the removal of the crest seemed to have extended all over the area, where there remained only the bare natural boulder-clay, cut by the sleeper-trenches of phase III. Thus, the later buildings in wood had destroyed the possibility of finding surface relics of the first occupation, except on the cobbled forecourt and in the runnel which bordered it, and these were subjected to the most careful scrutiny. The cobbled surface yielded nothing: the runnel was full of silt washed from that surface, and the silt covered, towards the bottom of the channel, both pottery and window-glass. The silt ceased abruptly where the Vallum-ditch cut it; thus, the runnel had certainly been cut through by the Vallum, as had the ditch of the quadrangle; and the position of the runnel in relation to the quadrangle demonstrated them to be contemporary. Finally the position of the pottery in the runnel showed that it had got there while the runnel was open and working, being a group thus contemporary with the quadrangle and the first stratified deposit of Roman relics earlier than the Vallum. This pottery will be considered in a later Report, when further relics of the early occupation have been secured.

In addition to the runnel, a late drainage-ditch was found, which pierced the boulder-clay layer and yielded Antonine pottery. There were also various pits, all placed later by their contents or position. But the excavation of one of these, not far south of the runnel, revealed a thin occupation-layer below the spread boulder-clay, visible as a line cut by the north side of the pit. This, being followed, led down into an extensive hollow, on the very lip of the Vallum-ditch, covered with thin slime and filled up with very clean boulder-clay. In the slime lay fragments of a late-Trajanic decorated Samian vessel, shape 37, a carinated bowl with deeply reeded rim, and some native sherds. The stratigraphical position of this pit may be defined as follows. It certainly preceded the buildings of phase III, which lie on a spread of boulder-clay above it. It is difficult to believe that anyone dug it while the Vallum ditch existed. The inference seems to be that it was there before the Vallum. On the other hand, it is impossible to say whether it was filled when the Vallum-ditch was dug or when the platform was prepared for the buildings of phase III. The sherds may therefore have been thrown into the pit at any time before phase III, and the evidence does not entitle us to assume, as in the case of the runnel, that they got there before the Vallum was made.

The native sherds, however, seemed sufficiently numerous and distinctive to suggest a native occupation of the promontory, and further evidence for this shortly emerged. In examining the central group of the southern range of wooden buildings of phase III, a small pit was found, containing some broken pottery, of which the true nature was hardly revealed until Mr. James McIntyre had pieced the fragments together, to form the remarkable pair of vessels here illustrated (fig. 1). These had been tumbled into the pit, together with ashes from an adjacent heavily burnt hearth, on which were found scraps of a



FIG. 1.—NATIVE VESSELS FROM COOK-HOLE, phase I; scale,  $\frac{1}{4}$ .



FIG. 2.—RECONSTRUCTION OF GREAT WALL ACROSS DITCH AT N.W. ANGLE; showing south face with culvert at footing-course and foundation of re-used channel-stones.

*Facing p. 122.*

*dolium* and a Roman jar. The hearth was screened by a little wall of rough clay and stones; but a careful search, conducted by Miss K. S. Hodgson and the second writer, revealed no further structural remains. The relation of the pit to other phases of occupation was as follows. It was earlier than phase III, for one of the wooden shack walls sliced through the back of the screen, so near the fire as to render it unsafe to use. Again, had the fire-place been built against the Vallum mound (wherever that mound exactly lay), it would have faced northwards, not, as actually, towards the west. Accordingly, it must precede the Vallum, and may be taken to represent a native using his own pottery and living on the site in native fashion. Had this find stood alone, it would be difficult to envisage in what circumstances this occupation took place, granting the occurrence of native ware in so completely Roman a place as Haltwhistle Burn Fort.\* But the numerous native pots represented by the collection of sweepings described above, seem to vouch for a distinct native occupation of the promontory. If so, the association of Roman sherds with this occupation, as on native sites elsewhere, shows that it did not long precede the Roman works: indeed, it would be comprehensible that the natives were driven away by the coming of the Romans. These considerations at once raise the question what was the relation of the native phase to the polygonal enclosure. It is tempting at first sight to give to the Romans the quadrangle and to the natives the polygonal, the latter forming, on this hypothesis, a promontory fort such as the Romans† found at Inchtuthil and Channelkirk. On the other side of the account is to be put the absence of native relics from the ditches of the polygonal work, coupled with the presence of Roman ware:

\* These are the coarse black pots figured in *Arch. Ael.*, Ser. 3, vol. v, pl. v, 18, 19.

† Inchtuthil, *P.S.A.Scot.*, xxxvi, 207, 231; Channelkirk, *ibid.*, lxiv, 325, and fig. 2.

the use of a stockade\* rather than a rampart: the insufficiency of the defences of the quadrangle as an isolated element. A final explanation must perhaps await evidence from the other parts of the site. Meanwhile, an indubitably Roman element preceding the Vallum is provided by the quadrangular enclosure, with its pottery and window-glass: and the situation of the little place shows its purpose, even though the buildings which it once held are beyond recovery. It was intended to signal thence back to the line of the Stanegate.

Phase II. The only operation related to this phase was trenching to find whether any early ditch existed between the south gate and south-west angle of the Stone Fort. Within that length, the rampart of phase II must have turned northwards, together with any ditch there might have been. An exhaustive examination of the subsoil showed that on this side at least no ditch existed. This discovery induced a re-consideration of the oblique foundation unearthed behind the *principia* of the Stone Fort in 1930. While then considering whether this structure could be a rampart-base, we had rejected it because no ditch was found with it. A fresh trial cut quickly established the similarity of the body of the foundation, which consisted of the same freshly-quarried chippings as the south foundation, though their surface was here a little worn by treading when embodied in the road of the later Stone Fort. The feature was then reserved for full examination.

Phase III. In this phase, we tried to recover all we could of the wooden buildings. The thin spread of boulder-clay above the early cobbling in the quadrangle revealed at least two sets of these, the later represented by

\* It is not impossible that the stockade, of which only the foot remained, may have been fixed in a rampart which was entirely removed when the demolition of these defences took place. But the thorough character of the demolition has left only the stockade as an element of which the existence can be demonstrated.

the heels of stone-lined post-holes, the earlier by sleeper-trenches forming at least four large sheds, the angle of one being reconstructed or enlarged. The roughness of all was marked by the irregularity of both the tracks and their junctions. On the surface associated with this area was a mint *denarius* of Trajan, Cos. vi (Cohen, 372, A.D. 112-117), lying so that it might have been dropped at any time. Six pits were also discovered, of which three gave no clue to their age, two (C and D) yielded fourth-century pottery, a sixth (G) went with the wooden buildings and yielded two fine *mortaria*.

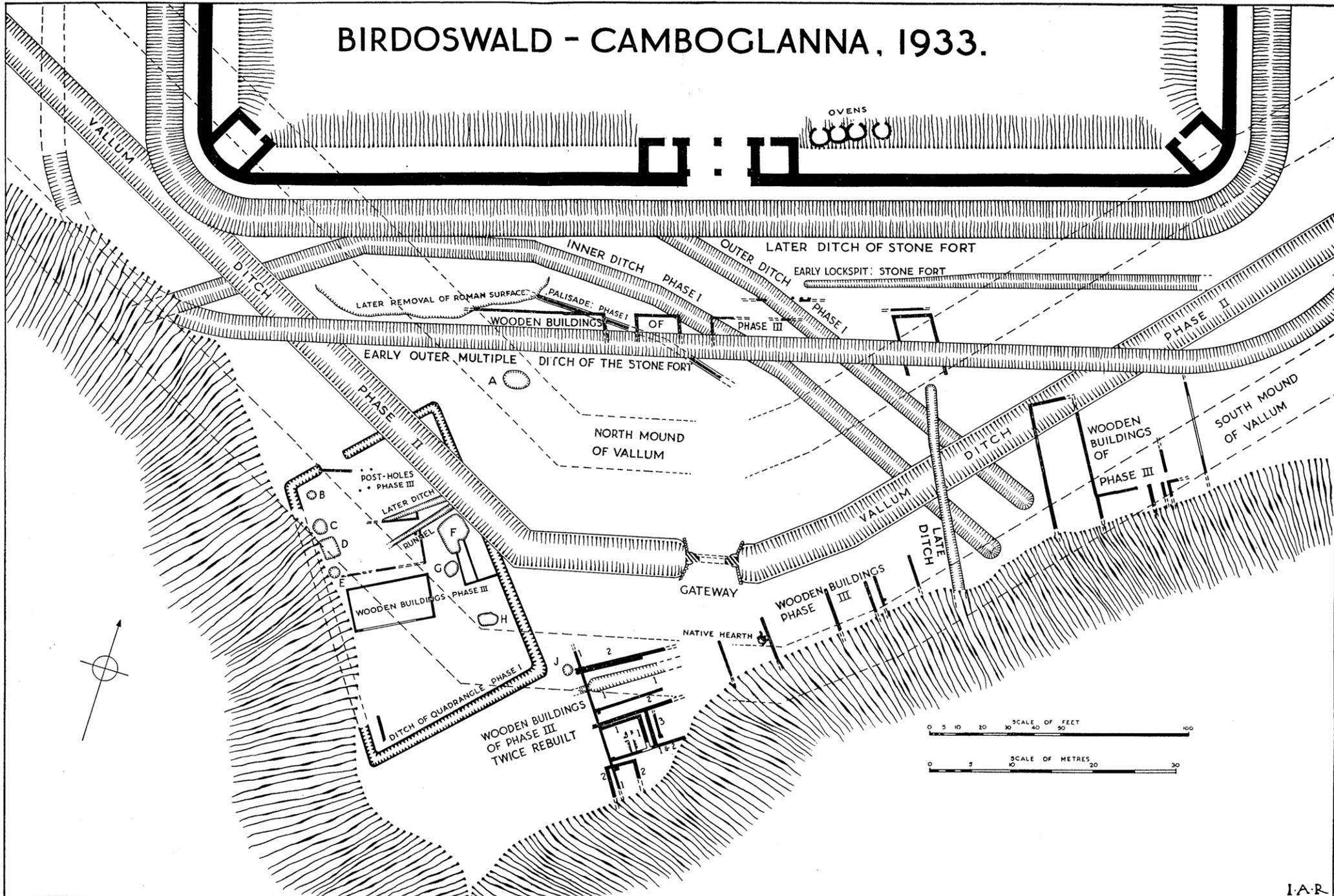
The central group of sleeper-trenches, at the edge of the cliff, worked out as a row of open-ended sheds, not unlike that first discovered in 1928. Their backs had vanished in a land slide.

The remains of the southern building, though fragmentary, proved to belong to different subphases of phase III. The first trenches were packed with stones and dirty boulder-clay and distorted by digging the timbers out of them. They had formed (see plan) a large building, subdivided into at least four bays running east and west, with presumed eastward entrances, where no sleeper trench was found. A square room was cut off from the third bay to the south, with a floor ventilated by a T-shaped shaft, edged with rough stones and paved with thin flagging. The existence of wooden walls and the complete absence of burning showed that the shaft was for ventilation: and, while it is remarkable that such a feature survived, its rough build usefully bears out the suggestion of the timbering, that these were temporary buildings. In a second period, the building was subdivided afresh, if not completely rebuilt, with a new set of timber frames, including the stout double framing on the north (discovered last year). On the south, the area of the ventilated room was abandoned, together with the south bay, on which was planted a shed running north-and-

south, now partly removed by a landslide. Later still, stone-lined post-holes were drilled through the site, one being associated with a very shallow sleeper-trench, at a new level and position. The stone linings are thin flags on end, often slipped down against the side of a beam-track, where they would not be needed if the beam was still *in situ*: they also rise well above the top of the beam-tracks and certainly belong to a higher level. It is evident that these post-holes, of a very distinctive type, represent a third phase in the history of these buildings whose main features have been obliterated by the plough. The occurrence of one post-hole of the kind in the area of the quadrangle suggests the same sequence there. In short, while most of the wooden buildings remained simple, this particular group had a complicated history. This year's work has, however, amply confirmed the previous estimate of their temporary character. It is now evident that the bulk of them were totally unlike barracks or *canabae*, and the explanation of them as rough storage-sheds becomes more cogent than before. It seems that, as the work for which they were run up altered or was finished, they were remodelled or dismantled, exactly as contractors change their temporary equipment according to need. The very distinctive post-holes of the final period suggest, indeed, that one set of sheds was completely removed to make way for another. But only the general lines of the story are clear; the details are now beyond recovery.

At this stage, however, it seemed desirable to know in exactly what relation to the Stone Fort and Stone Wall these wooden buildings stood. It had been ascertained in 1928 that the wooden buildings were cut through by the outer multiple ditch of the Stone Fort, and were therefore demolished by the time the Stone Fort was ready. But the relation of the Stone Fort to the Turf Wall and the Stone Wall required to be elucidated. Did the Vallum-fort continue to serve as the fort of the Turf Wall, though

# BIRDOSWALD - CAMBOGLANNA, 1933.



not in actual contact with it, as Carvoran always served for the Stone Wall? Or was the Stone Fort designed to fit the Turf Wall, with a *praetentura* projecting beyond it, as at so many other forts along the Wall? These questions could be determined by the relation of the multiple ditch to both Walls, and a more exact dating for the obliteration of the contractors' buildings would so be obtained. The first matter to be tested was the relation of the outer multiple ditch to the Turf Wall and its ditch at the east *porta principalis*. It was found (fig. 3) that the outer multiple ditch, fully dug, ran straight into the Turf-Wall ditch on the north, as if contemporary with it: that is, it was not dug in a mass of solid filling as if it were crossing that ditch when obliterated. On the berm of the Turf Wall there was no multiple ditch; and, coming from the south, the multiple ditch was found as a well-defined lockspit, ending abruptly 50 feet south of the middle of the gate. In short, the outer multiple ditch had been cut in association with the open Turf-Wall ditch, and had been intermitted so as to leave a gap for the Wall to pass through and link up with the south tower of the Stone Fort's east gate. The Wall then visualised, however, was hardly the Turf Wall: for, in relation to the ditch, the south tower is planned to suit a fifteen-foot berm (fig. 3) and could not have been used with the Turf Wall unless the line of the latter was modified. It would seem that the builders of the Stone Fort had already visualised the coming of the Stone Wall, and had planned as usual, to make use of the Turf-Wall ditch, joining the Wall to the main lateral gate of their Fort.

The second matter to be tested was the relation of the multiple ditch to the Stone Wall as actually built, at the northern angles of the Fort. On the east, the ditch was found to exist immediately behind the line of the Stone Wall, but the actual point of junction lay below the modern road, and could not be conveniently examined.

At the north-west angle, no ditch demonstrably belonging to the multiple system had been dug. A small ditch, however, was found running through under the Stone

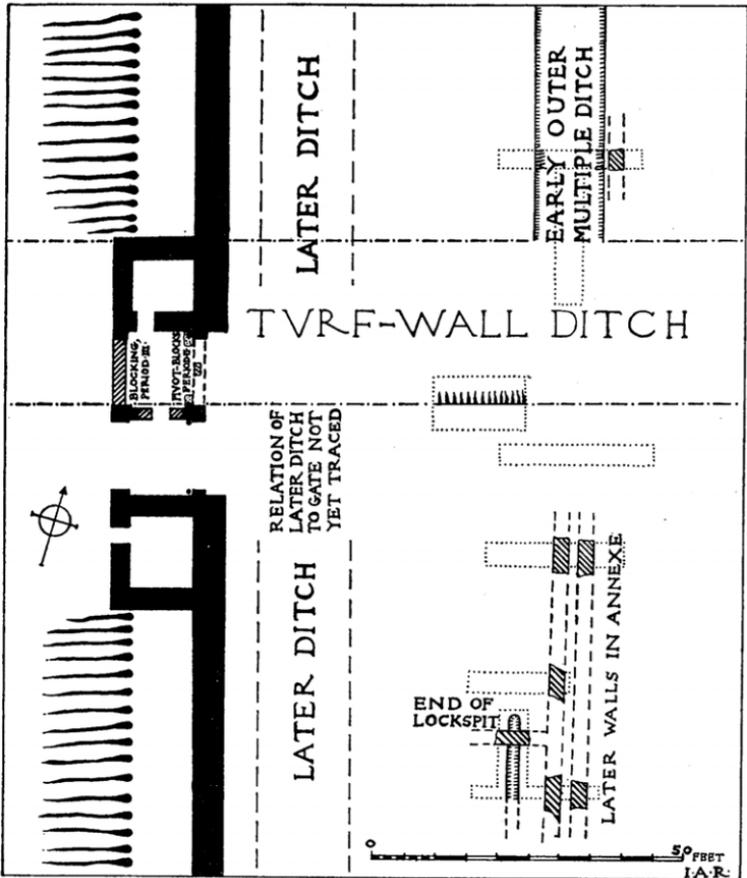


FIG. 3.

Wall, 28 feet west of the junction with the fort-wall. It was very evident that the Great Wall had been clumsily rebuilt at this point where crossing the ditch, and at ground-level a conduit had been inserted to take away

flood-water from the ditch. This re-building (fig. 2) was of the fourth century, for below the re-used masonry\* were found several pieces of a typical early fourth-century cooking-pot at the bottom of the ditch. Thus, although this discovery gave an interesting picture of an epoch when it would almost seem that the fort had been freed from the Wall in the manner described so vividly by Rudyard Kipling,† it did not shed light upon the point at issue. The main question, however, may well be considered sufficiently illumined by the information gained at the east gate: for the discoveries there show that the Stone Fort was apparently designed to fit the Stone Wall coming on the Turf Wall's line. In other words, the Turf Wall was not long to continue in existence, if to exist at all, after the small sector of it blotted out by the Stone Fort had been demolished. It was evidently thought, during the main phase of the Turf Wall's existence, that the Vallum-fort would serve, and the Turf Wall was made to run past in front of it, as the Stone Wall passes Carvoran or the Antonine Wall passes Bar Hill. Very soon, as shown (*Trans.* N.S. xxviii, 380) by the examination of the Turf-Wall ditch below the Stone Fort in 1927, a new fort of standard type was supplied in the place of the Vallum-fort. To this activity and no later belong the builders' sheds erected on the promontory behind the Vallum-fort: for when the Stone Fort was ready its ditch-system was partly dug and the sheds were dismantled.

One small point in connexion with the multiple ditch-system still invited inquiry. In 1928, we had thought to detect traces of the lockspit cut for the third ditch on the south side of the Fort. Later, it became evident that, to west of the south gate at least, this presumed lockspit was really part of the inner polygonal ditch. Eight sections

\* The re-used stones consisted of a couple of channelled gutters or slotted bases serving as plinths for the masonry built in the ditch. The pottery was found underneath them.

† *Puck of Pook's Hill, The Winged Hats*, pocket edition, 221.

were therefore made to substantiate the character of the feature east of the gate. Here it emerged most definitely as a lockspit (see plan), ending abruptly twenty feet east of the south gate, and extending to the south-east angle, beyond which we did not trace it. The whole system, as mentioned in a previous report (*Trans. N.S.*, xxix, 311), was allowed to silt up gradually, and it is of some interest to note that near the east gate the outer ditch was used as a rubbish tip, while the builders of the annexe-buildings brought them as near its eastern lip as they dared. Incidentally, it was found that the great mounds outside the east gate do, in fact, cover annexe-buildings, with at least three well-defined levels. Only the north-to-south heap north of the gate is an excavator's dump, presumably from Glasford Potter's work in 1850.

## 2. NEW TURRET-SITES ON THE LINE OF THE TURF WALL, AND THE TYPE OF STONE WALL LATER ASSOCIATED WITH THEM.

By F. G. SIMPSON, MISS K. S. HODGSON and  
I. A. RICHMOND.

During the spring of 1933 excavations were conducted by Miss K. S. Hodgson, with the assistance of Mr. F. G. Simpson, to determine the sites and general type of turrets west of Craggle Hill turret, 53*b*.

*Garthside Turret, 54a*, was quickly located, 544 yards west of Randylands milecastle, 54. It presented such complications as to invite thorough exploration later in the season, as described below in section 3. It was at first normally planned, on the narrow berm associated with the Turf-Wall turrets thus far westwards: it was designed for plinths, as shown by the extra thickness of its north and south walls, and was built entirely of red sandstone.

*Howgill Turret, 54b*, was found 535 yards west of Turret 54a. Four courses of good red sandstone masonry were seen, projecting 2 feet 6 inches north of the Great Wall, here containing some yellow sandstone and abutting on the turret, which had deeper foundations. Laminated turf from the Turf Wall was noted to the east of the turret, eight feet north of the Great Wall. This turret, therefore, is a Turf-Wall turret, built before the Stone Wall.

*Dovecote Turret, 55a*, was found 528 yards west of Low Wall milecastle, 55. Its north wall, though leaning northwards, is in fair preservation. The others are much robbed and nothing could be made of the points of junction with the Great Wall. The position of this turret, in front of the line of the Stone Wall, shows it to be a Turf-Wall turret; but the exact projection could not be measured owing to the ruined junctions.

*Townhead Croft Turret, 55b*, was sought in vain. At the measured position three lines of lamination belonging to the Turf Wall were seen, just south of the Great Wall. Further trenching did not disclose the turret, but showed a remarkable variation in the width of berm allowed for the Great Wall. At the east end of Townhead Croft, the berm was narrow; towards the village, it becomes fully twenty feet wide (*Transactions*, N.S. iii, 346). The same wide berm appears in the Walton-Sandysike-Cambeck sector.

*Sandysike Turret, 56a*, was not located. The Great Wall approaching the sike from the west was founded upon a massive substructure of large sandstone blocks, stepping boldly downhill. This will repay further examination. It may well be that the failure to hit upon a turret here at anywhere near the measured position is due to a discrepancy in the placing of Walton milecastle, 56. Over thirty years ago the Committee failed to find the site of this milecastle in the field east of the Black Bull Inn, known as Bendle's Croft (*Ibid*, N.S. i, 82; ii, 391; iii,

346-7). This year's trenches, cut west of the Inn and across the road in the little garth and cottage garden, were equally unsuccessful. Walton is an exceptionally commanding position, and it is possible that an abnormality dissociated from the normal milecastle system may have occurred here: but this hypothesis must rank as a counsel of desperation rather than a final opinion.

*Cambeck Turret, 56b*, was found 2138 yards west of turret 55a. It projected 2 feet 9 inches in front of the line of the Great Wall. Its south and east walls were entirely removed and the rest was reduced to its clay-and-cobble foundation. It measured 20 feet 9 inches across, with north wall thickened for a plinth. The Turf Wall also had here run upon a wide berm, for the turret was seventeen feet south of the lip of the ditch. At thirty-five feet from the lip a dump of turf shovelled back from the Turf Wall was noted: this was mixed and freckled rather than laminated, with only the faintest scraps of oxidised lines. Its dissociation from the Stone Wall proves this turret also to be a Turf-Wall turret.

*Beck Turret, 57a*, was located 1115 yards west of turret 56b, the exact position of Cambeckhill milecastle, 57, being yet unknown. It measures 20 feet 3 inches from north to south and 23 feet from east to west, with north wall thickened as usual for the plinth. Its red sandstone masonry and its mortar are much better than those of the Great Wall, and at the east junction its cobble foundation underlay the Great Wall, thus proving priority of construction. The turret stands on the narrow berm, but the Wall running westwards soon reverts to the wide berm. Much pottery was found, including large parts of a Samian bowl, shape 37, in the style of Cinnamus, as Mr. Birley informs us; also a second brass of Hadrian.

*The Great Wall.* The standard of construction is uniform throughout the sector, consisting of the usual flag-footing. The flags cover a foundation of varying

depth: in the low ground at the east of Townhead Croft they rest on a deep clay-and-cobble layer, but between Sandysike and the Cambeck its depth was very much reduced. At the few points where masonry above the flags remains, the Wall was not further reduced by offsets. It will be noted that this construction is uniform with that throughout the Harrow's Scar, 49—Banks Burn, 53, sector (*Ibid.*, n.s. xiii, 301; xxxiii, 268). There is, however, a definite change in the width of the flag footing. From Banks Burn milecastle, 53, to Beck turret, 57*a*, there is an increase in width of from six to twelve inches.\* This width compares with that of 8 feet 10 inches at the Carlisle Sewage Works (*Ibid.*, n.s., xxxii, 150), about nine feet at Beaumont, 9 feet 6 inches at Drumburgh (*Ibid.*, o.s., xvi, 85) and 9 feet 3 inches near Bowness (*Ibid.*, n.s. xxxi, 145). Thus, the so-called Intermediate Wall, thicker than the Narrow Wall of 7 feet 6 inches (see fig. 12; *cf. Trans.* n.s. xiii, 301) and thinner than the Broad Wall of 9 feet 6 inches (*Arch. Ael.* 4, iv, III, 120), is not confined to the west end of the Great Wall beyond the Eden but already begins to appear. In other words, the building-gangs who replaced the Turf Wall west of Banks Burn by a stone Wall did not adopt the same standard as those who originally built the central sector of Hadrian's Wall to the narrow standard.

Two general points of great importance are now clear. The turrets of the Turf Wall are now proved to extend as far as 57*a* (Beck). The elimination of the Broad Foundation upon Hare Hill (*Trans.* n.s., xxxiii, 266) carries with

\* For example, Banks Burn milecastle, 9 feet (*Trans.* n.s. xxxiii, 268); Hare Hill, 8 feet 11 inches; Randylands milecastle, 9 feet 3 inches; Garthside turret, 9 feet 3 inches; west of Walton, 9 feet 8 inches (*Trans.* n.s. ii, 391); Cambeck turret, 9 feet 4 inches to 9 feet 6 inches; Beck turret, 9 feet 6 inches. It is to be noted that the measurement quoted for the Carlisle Sewage Works is more reliable than that given at Willowholme by MacLauchlan, *Memoir*, 75, on the authority of Mr. Mackie; for the position of the south face is conjectural in that diagram. We owe the information from Beaumont to our President.

it the disappearance of the Broad Wall as the standard of construction at every known point west of Willowford Bridge. These facts call for the statement of a new hypothesis concerning the Turf Wall and its relation to the original design of Hadrian's Wall. According to the hypothesis now disproved, the Turf Wall, supposedly terminating at Banks Burn, was either a local variant of the Broad Wall, or a temporary structure on the line prepared for that Wall (*Ibid.*, N.S. xxxi, 104). With the discovery of stone turrets on the Turf Wall in 1927, it became evident that the first of these alternatives was the more probable. When, however, these turrets are found to continue westwards, and the Broad Wall fails to reappear, the Turf Wall can no longer be a local variant, but becomes the counterpart, from Willowford Bridge to the Solway, of the Stone Wall originally designed\* to run from Willowford Bridge to Newcastle-upon-Tyne. The stone turrets give to the new hypothesis a great advantage over the old Turf-Wall theory. Its future confirmation by the spade appears to depend solely upon the standard of construction of the turrets west of 57*a*; for it may be safely inferred that the Turf Wall continued as far west as the turrets are found to follow the standard of the ten Turf-Wall turrets, already discovered.

If, then, the Turf Wall continued westwards as the designed counterpart of the Broad Wall, a new reason must be found for the use of turf instead of stone; for this matter also has been considered on the assumption that the work was either transitory or confined to the Birdoswald sector. It may now be suggested that the clue to the solution of this important question is provided by the geological facts to which attention was first drawn during the excavation of Craggle Hill turret, 53*b*. That turret was found to be of red sandstone, while the Great Wall was of yellow sandstone: but by the time Randylands mile-

\* *Northumberland County History*, xiii, 537.

castle, 54, is reached, the Great Wall is also of red sandstone, and continues to be built in general of this material, so far as is known, for the rest of its course to Bowness. But supplies of good red sandstone are not to be had on the line of the Wall, and it is known that, in the Severan age at least, soldiers were quarrying the excellent beds in the Gelt valley. Yet our recent investigations do not suggest that the stone used at first came from so far afield. The Wall at Sandysike was constructed of inferior red sandstone, which had weathered badly and fretted away in powder at the touch. At Cambeck turret, 56*b*, the blocks of stone could be cut with the spade as easily as cheese. These are the characteristics of the local beds, as visible in the banks of the Cambeck, which has cut deeply through them: and the correspondence lends colour to the discovery made at Bleatarn, during the original campaigns of this Committee, where it was found that the beds of inferior stone, just behind the line of the Wall, had been extensively quarried for its construction (*Trans. o.s.*, xiv, 405-7). Thus, the available facts would suggest that the difficulty in relation to supplies of stone, on which stress has been laid in the past, was rather of quality than quantity. There was manifestly enough stone of a sort, though perhaps not so accessible as east of the Irthing. But anyone who has studied the many extant portions of the Great Wall which no longer retain their face, will recall how large a part in its construction is played by the lime, which sets the whole core in an almost indestructible mass, no less important than the faces themselves. Not much stress has been laid upon this point hitherto, but it is intimately bound up with the geology of Cumberland and the well-known Red Rock Fault, which crosses the line of the Wall between turret 53*a* and milecastle 54, at Hayton Gate. East of that fault, the Wall is attended by local supplies of limestone in abundance: west of it, not a single source of supply

exists for miles north or south of the line. Thus, all the lime required for grouting the Wall must have been burnt and carted from east of the Red Rock Fault. It will be readily conceded that so radical a change in the availability of materials must have enforced a completely different scheme of work in the western third of the Great Wall, constituting a serious bar to progress. Is it not this point above all others that must have swayed the decision to build in turf? Turf is, on the other hand, the local material, in which the mosses of Cumberland abound. Nor is a change of construction in accordance with local materials without parallel. A not dissimilar factor has been postulated by Sir George Macdonald\* to explain the difference of material in the eastern third of the Antonine Wall. There, on the open heather moors, the Wall was built of turf: in the eastern, forest-clad plains, clay was used in its construction. The elements are different, but the adaptability which rang the changes upon them is the same, whether by Forth or Irthing.

It is, however, already clear that the planning of both the Turf Wall and the Stone Wall which succeeded it, does not observe the uniformity apparent in the sector from Harrow's Scar milecastle, 49, to Banks East turret, 52*a*. In that sector, so far as is known, the Turf Wall does not vary from the narrow berm (6-8 feet), while the Stone Wall, from Wallbowers milecastle, 51, to Banks East turret, 52*a*, is also running on a narrow berm (8-10 feet). But at Banks Burn milecastle, 53, remains of the Turf Wall were found on a berm-width of about thirty five feet, and the very wide forty-foot berm of the Stone Wall at Randylands milecastle, 54, would suggest that it was following a similar arrangement here. Again, Cambeck turret, 56*b*, lies on a seventeen-foot berm, quite different from the narrow berm so common further east.

Not only the Turf Wall but also the Stone Wall shows

\* *P.S.A.Scot.*, lix, 282-4.

variations. This is, however, not the Narrow Wall but the Intermediate Wall described above. The fact was clearly established at Beck turret, 57*a*, that this Wall, after running up to join the turret close behind its north face, reverts very soon to the wide berm. That is the obvious explanation of the change from narrow berm to wide berm in Townhead Croft (see p. 131); while the observation that the wide berm appears normal between Walton and Cambeck turret, 56*b*, is evidently to be connected with the same type of planning. Where the Turf-Wall turrets had been normally planned, the builders of the Intermediate Wall had decided not to risk putting the main lengths of their Wall so near the ditch as had the builders of the Wallbowers—Banks sector; and it is evident that even the Turf-Wall builders had shrunk from maintaining the standard at such points as Cambeck turret, 56*b*. To include milecastles in this generalisation is tempting, in view of the wide berms at Banks Burn and Randylands; but we are not yet in a position to exclude a structural explanation, perhaps contingent upon the earthwork milecastles (see below) of which so little is known up to date. Thus, the milecastles are better left out of the picture.

The cause of this odd behaviour, in both Turf and Intermediate Walls, is undoubtedly the treacherous nature of the subsoil, which appears to have caused trouble at Dovecote turret, 5*a*, and certainly demanded complete reconstruction at Garthside turret, 54*a*. Thus, the new geological conditions encountered in Cumberland would seem not only to have dictated a change in material, from stone to turf, but later to have conditioned a departure from uniform planning, which, though logical in itself, constitutes an entirely new variety in the history of the Walls.

## 3. GARTHSIDE TURRETS, 54a.

By F. G. SIMPSON, I. A. RICHMOND and JAMES MCINTYRE.

In the general search for turrets west of Craggle Hill, the site of 54a was quickly found, but the remains, seeming to project further than usual from the Stone Wall, demanded further work. As a result, two independent stone turrets (figs. 4, 5 and 6) were found, one immediately behind the other, the rear one later included in the Stone Wall, the front one standing by itself at the normal distance from the Turf-Wall ditch, here revealed by trenching. The immediate reason for the existence of the two turrets was plain: the lip of the ditch had collapsed, carrying with it the front wall of the first turret, after which the second turret had been built upon the firmer crest of the hill. The ultimate cause of the collapse was revealed by the Geological Map: the turret stood on bad ground, where a fault of running sand split the boulder-clay, invisible to all except the skilled geologist and unknown to the Roman engineers.

The first turret was found to be a normal Turf-Wall turret, twenty feet square, with north and south walls thickened to allow for the plinth. There was little trace of the Turf Wall to each side, only a few oxidised grass faces being visible, with the bleached original surface clear below them. The threshold of the doorway, at the west end of the south wall, was well worn, and the floor, of which rather more than half remained intact, was heavily burnt and once re-made, each level yielding second-century pottery. The hearth-stone at the lower level was made of a dressed slab chamfered on three sides, turned upside down. Collectively, this evidence betokens an occupation of some length. The front wall of the turret had broken off from the west wall, and, pivoting on the east wall, had swung bodily forward into the ditch.

On making a section of the Turf-Wall ditch, in line with



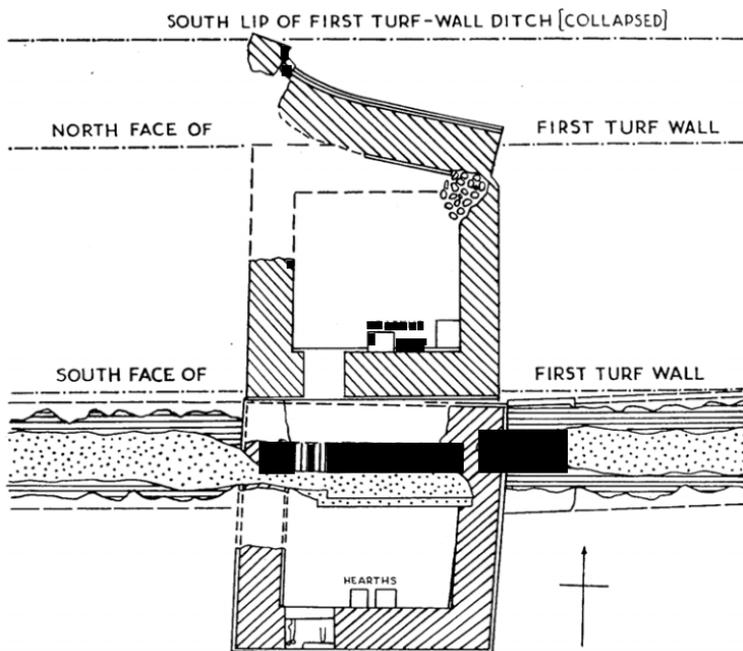
*Facing p. 138.*

FIG. 4.—GARTHSTIDE TURRETS, 54a, from the north.

NORTH FACE OF SECOND TURF WALL

NORTH LIP OF FIRST TURF-WALL DITCH

SOUTH FACE OF SECOND TURF WALL



- |   |   |
|---|---|
|  FIRST TURF-WALL TURRET  |  ORIGINAL STONE WALL |
|  LATER TURF-WALL TURRET  |  REBUILT STONE WALL  |
|  EARTH-FILLING IN REBUILT STONE WALL FILLING THE RECESS OF THE RUINED TURRET |   |

### GARTHSIDE TURRETS, 54A



FIG. 6.

the west wall of the turret, the Turf Wall and turret-masonry were found collapsed into the ditch. A second section, 35 feet east of the turret, showed that the ditch, after the subsidence, had been filled with mixed clay, probably representing upcast returned from the glacia, and covering, at the very bottom of the ditch, more than a foot of black silt. This confirmed the inference drawn from the turret's floors that some time elapsed before the accident took place. Unexpectedly, a continuation of this section, on the glacia beyond the ditch, disclosed laid turf (fig. 10), and further tests on the line of the first section revealed this as a second Turf Wall, replacing that which had collapsed. It now became clear that a new ditch, substituting that which had given way, was also dug at the foot of the slope, in the bed of the water-course found there; and some of the consolidated slime\* from the stream-bed was actually built in cut blocks into the base of the new Turf Wall. The older ditch is everywhere filled up: it is the newer ditch which is now visible, slowly returning to the original line on the west, and running down the watercourse to the east, where it joins the original line some 220 yards eastward, in a bold artificial curve like a *clavicula*.

The newer Turf Wall did not embody a new turret, for it was built on a slope which had already proved itself treacherous. Accordingly, the new turret, II, was built independently, behind the Wall, on the crest of the hill. This is the turret which the Stone Wall presently embodied but which began as an independent tower, twenty feet square, with walls of uniform thickness. Its foundations were somewhat irregularly laid, especially on the east, and are built right up against the back wall of turret I, which was not robbed away but left in position as a foundation

\* Dr. Kathleen Blackburn, of Armstrong College, reporting upon a sample, observes, "It was pond-bottom accumulation . . . as it contained a large proportion of fine mineral particles in addition to the organic material which gave it the dark colour."



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FIG. 5.—GARTHSIDE TURRETS, 54a, from the south; the men are standing in the later ditch.

Facing p. 140.

buttress at this point. The turret foundations, slicing at the south-east corner through occupation-earth from turret I, also go deeper by one course than those of the Stone Wall, which are red sandstone slabs laid up against the turret but not bonded into it. The Stone Wall also is set flush with the front of the turret, partly because that front had no plinth, and therefore no offset, and partly because the turret was far away from the ditch out of danger of collapse. Inside the turret there was one level with twin hearths against the south wall, associated with nothing but second-century pottery. It had a fine monolithic threshold of sandstone, so soft that the pivot-hole for the door had been moved to a new position.

It is now clear that the second-century occupation at Garthside was divided into three distinct phases. The first saw the building of Turret I and Turf Wall I, and lasted long enough to induce wear on the turret threshold, to require a making-up of the floor and to deposit a foot of silt in the ditch. It is impossible to set an exact term to such evidence, but it may safely be taken to speak for some few years. The second phase is marked by Turf Wall II and the first state of Turret II, as an independent tower. We have no evidence to show how long this phase lasted, but it is highly remarkable that it should occur at all. It shows that in this sector the Turf Wall had a longer life than had ever yet been proved. Finally, Turf Wall II was demolished, and the Intermediate Stone Wall came running up to join Turret II, flush with its north face.

If this was the end of the story, its narration would clearly raise the ghost of the equation "Turf Wall: Hadrian=Stone Wall: Severus," so effectively demonstrated false by the discoveries of 1911 in turrets 49*b*, 50*a* and *b* and milecastle 50 (*Trans.* N.S. xiii, 344). But our second turret had yet another fact to teach. Neither the second-century floor nor the ground outside the turret

yielded a scrap of third-century pottery. Further, no floor-level succeeded that of the second century. Immediately on top of that floor, across the recess in the line of the Stone Wall, ran a blocking-wall, built with a hard clay core faced by stones resting upon a bold footing, all mortared with very good hard white mortar, in contrast to the light brown mortar of poor quality found in the original Wall (fig. 7). This secondary work ran right across the east wall of the turret, reduced to one course in height, and embodied a cracked fragment of the west wall, seven courses high, as part of its core. The rest of the turret was demolished to two courses in height or less. This suggests that the builders of the blocking-wall, while embodying the front wall of the turret, had already found it so ruined as to be hardly worth re-construction. It was further noted that the almost total re-construction of the Great Wall, marked by the characteristic white mortar, extended for nearly three hundred yards eastwards down to Burtholme Beck. The period of this re-construction cannot be in doubt: it is the Severan age; and the re-construction chimes in with the total re-building of the Wall at Steelrigg\* and with evidence elsewhere, as at Birdoswald and the north gates† of milecastles 37, 39, 40 and 48, of drastic repairs after ruinous destruction at that time. The barbarians believed that they were destroying the hated barrier once and for all, an indirect but eloquent testimony to its efficiency. In particular, the obliteration of the turret is matched by the building-up of turrets‡ 19a (Matfen Piers), 39a (Peel Crag), 39b (Steelrigg) and 50a (High House); but, although this procedure has always been taken to be part of a systematic operation, its date has been a matter of some doubt. At

\* *Arch. Ael.* ser. 4, viii, 316, pl.lviii, fig. 1.; cf. *Transactions*, xiii, 307-308 for description.

† Cf. *Trans.* n.s. xiii, 318, figs. 15 (Poltross Burn), 16 (Winshields).

‡ 19a, *Arch. Ael.* ser. 4, x, 98; 39a and b, *Proc. Soc. Ant. Newcastle*, ser. 3, v, 132, and *Trans.* n.s. xiii, 306, pl. iv, 5 (39a) and 6 (39b); 50a, *op. cit.*, pl. iii, and 307.

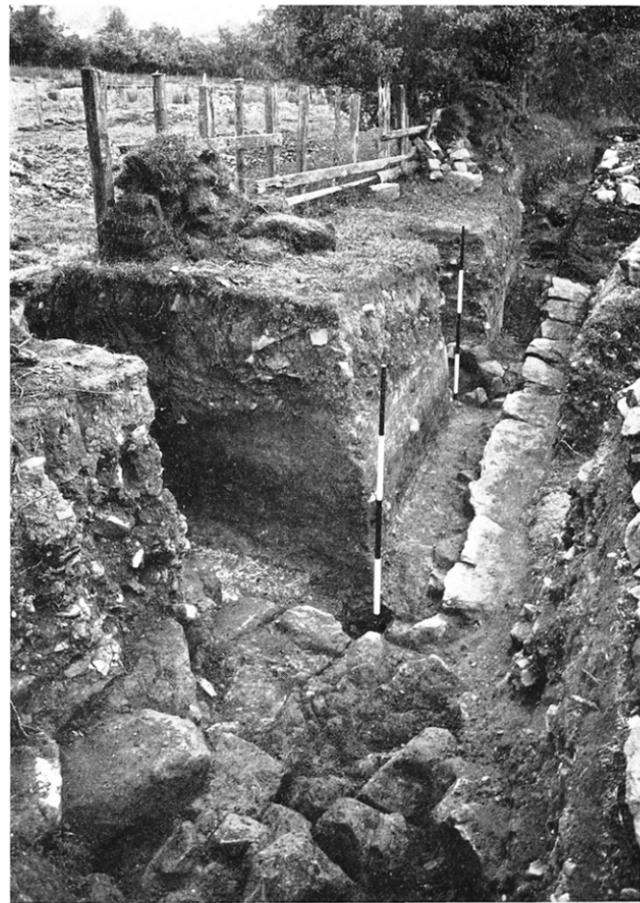


FIG. 7.—GARTHSIDE TURRETS, 54a, looking west along the centre-line of the Stone Wall. Facing p. 142.

—RANDYLANDS MILECASTLE, 54, N.E. internal corner; early post-holes and beaten clay bank cut by foundation-trenches of Stone-Wall milecastle.

19a, as at Garthside, the pottery recovered was entirely of second-century type, and was taken to imply a Severan obliteration of the turret. It may now be stated that the entire collections of pottery from turrets 39a, 39b and 50a, recently re-examined with this point in view, do not contain a single sherd to be dated later than Severus. Thus, a Severan date for the re-construction that obliterated these five turrets may be taken as established. It is not certain, however, that the disuse of the turrets stands for a reduction of the garrison of the Wall as a whole. The evidence from Birdoswald (*Trans.*, N.S. xxx, 199; xxxi, 128) is for an increase at that time. Thus, the reform may have affected disposition rather than strength; and one hesitates to base any conclusion upon five out of a computed total of one hundred and fifty-eight turrets.

Returning now to the length of life of the Turf Wall at Garthside, it will be seen that sound proof is available for a pre-Severan date of the Stone Wall in this sector, since the re-construction of that Wall can be dated to Severus. Side by side with that conclusion must be put the original evidence for the sector Birdoswald-Wallbowers, in which three turrets and one milecastle of the Stone Wall yielded distinctively Hadrianic pottery, as early in type as any other Wall-deposit (*Ibid.*, N.S. xiii, 346, 350, 352, 357), while turret 49b produced coin-deposits to which it is difficult to deny a Hadrianic date (*Ibid.*, N.S. xiii, 335). It seems unshakably true that the Turf Wall was very soon rendered obsolete from Harrow's Scar to Wallbowers, as would fit the evidence from Turf-Wall turret 50b, where the finds suggested no prolonged use of the turret. But it would be easy to suggest that this particular change, which was not only a conversion from turf to stone, but a change of position resulting in a worse line for the Wall, was made to guard against the tendency to landslide at Birdoswald: and it is not necessary to assume, against the evidence from Garthside, that the Stone Wall was on

that occasion carried beyond Wallbowers, the natural point, as the disposition of the mosses dictates, to rejoin the older line. In default of an inscription, it is hopeless to essay an exact definition of the length of life of the Turf Wall west of Wallbowers. But an attempt has already been made (p. 135) to answer from materials the question why the Wall was built in turf west of the Irthing: and if this answer correctly asserts that the Stone Wall was delayed owing to lack of lime, it becomes obvious that its eventual building may well have been always leisurely, and not necessarily carried out all at once. If all the milecastles of the Turf Wall, however, were entirely re-constructed to suit the Stone Wall, as is true of Nos. 51, 52, 53 and 54, it is almost certain that either a Turf-Wall level or a Stone-Wall first level will yield, sooner or later, satisfactory evidence for a time-limit to their existence.

#### 4. MILECASTLES ON THE LINE OF THE TURF WALL.

By F. G. SIMPSON, I. A. RICHMOND and JAMES McINTYRE.

(1). *Randylands*, 54. The abnormally wide berm, associated with remains of the Turf Wall at Banks Burn milecastle, 53, repeated itself at Randylands, where more open ground seemed to offer a chance of elucidating the cause. The stone milecastle was first planned (fig. 9). It was attached to the Wall with a T-junction, as are all milecastles thus far west of Harrow's Scar, 49. Only the stone filling of the foundation-trenches of Wall and milecastle, however, remained at the junction, forming one homogeneous mass. Thus, Wall and milecastle were undoubtedly contemporary, but the evidence regarding the order of building the superstructure, available at milecastles 50, 51, 52 and 53,\* was here lacking. The west junction of Wall and milecastle had been entirely

\* *Ibid.*, n.s. xxxiii, p. 269.



FIG. 10.—GARTHSIDE TURRETS, 54a; trial-hole in second Turf Wall (west section).



FIG. 11.—RANDYLANDS MILECASTLE, 54; second-period reducing-walls of south gate, from the north.

robbed away, but the line of the Wall was found at two points further west, showing that a change of direction had been planned to take place at the north gateway. This gate was entirely robbed away; but the south gate, though robbed of all original worked stone, was of type III, as at High House, 50 (*Trans. N.S.*, xiii, 330, pl. xiii).

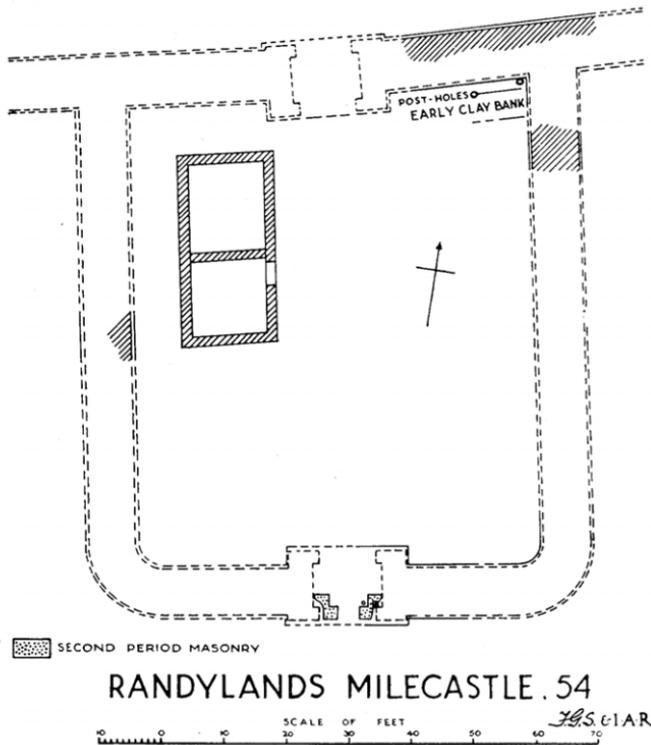


FIG. 9.

It contained road-levels Ia and Ib, the east pivot-stone at Ib matching Poltross Burn, 48 (*Ibid.*, n.s. xi, 428, pl. ii). In Period II, the gate had been reduced to a single doorway (fig. 11), as at High House, and on the road just outside it lay a coin of Gallienus (Cohen, 276, A.D. 260-68). The size of the milecastle was 77 feet 6 inches by 64 feet

3 inches internally, and contained at least one detached block of stone buildings, from above which typical pieces of late fourth-century cooking-pots were forthcoming. The milecastle had evidently been occupied until after A.D. 369, despite the early obliteration of turret 54*a* (Garthside II). The same can be said of milecastle 55 (Low Wall), whence Mrs. Hodgson recovered and drew a typical early fourth-century cooking-pot.

A careful examination of the berm in front of the milecastle revealed a thin cobbling just in front of the gate, as at High House, but a surface otherwise devoid of occupation. Behind the Great Wall, however, east of the gate, there remained, presumably once embodied in the staircase, a fragment of beaten clay rampart, which had been sliced away perpendicularly by the foundation-trench for the Stone Wall: in the actual earthwork half a posthole remained, continued as a stone-lined hole below ground, and a second stone-lined posthole came to light in line with it at the junction of the Stone Wall and milecastle wall. It is important to note that these postholes were both half overlaid by the foundation of the Stone Wall, so as to render them useless and attest their association with an earlier structure (fig. 8).

This valuable discovery must be associated somehow with an earthwork milecastle, and gives a provisional answer to an outstanding question, by showing that the Turf Wall did not have stone milecastles, but earthworks unsuited to embodiment in the Stone Wall. That would explain why, west of Wallbowers milecastle 51, the stone turrets precede the Stone Wall, while the milecastles are added with it, from Harrow's Scar, 49, at least as far as this site. Once the discovery was made, however, it was felt that Randylands was not the site upon which to recover details of an earthwork milecastle; and our activities in this regard were transferred to the site on the Turf Wall corresponding to High House, 50, where must

exist the only Turf-Wall milecastle entirely dissociated from the Stone Wall.

(2). *Bankshead, 52.* The approaching highway reconstruction at Bankshead induced us to examine, while there was yet time, the remains in the public road there. The west wall of the milecastle was found below the accommodation road leading to Bankshead farm, and petered out fifty feet south of the Great Wall. The junction here was found to be of the T-type, with the milecastle wall abutting upon the Great Wall, as at milecastles 50, 51 and 53. Eastwards, three culverts occurred in the north wall, like those at High House, 50, and the gateway was of type III. The east wall of the milecastle was then found by measurement from the middle of the gateway. The astonishing result was an internal width of 90 feet 3 inches. An attempt to find the south-east angle of the milecastle failed, owing to robbery of the walls; so the north-to-south dimension remains unestablished. Provisionally, it might be guessed that the proximity of the Vallum had induced the builders of the milecastle to put it lengthwise against the Wall, in the manner of the fort at Housesteads. Pending further research, the matter remains enigmatic.

(3). *High House Turf-Wall Milecastle, 50 TW.* When work at Randylands, 54, as recorded above, revealed apparent traces of an earthwork milecastle associated with the Turf Wall, it seemed unwise to study such remains for the first time where they were overlaid by the Stone-Wall milecastle. Recourse was had to High House, where should exist the sole known example of a Turf-Wall milecastle entirely dissociated from the Stone Wall. Search at the measured position had already proved fruitless, when the eye rested upon a smooth platform somewhat to the west, seeming to impinge slightly upon the line of the Vallum. Trial trenching at this spot quickly disclosed a roadway, cobbled foundations,

second-century pottery and a small temporary oven. The site was then reserved for complete examination, which promises to be of exceptional interest.

### V. BANKS EAST TURRET, 52a.

By F. G. SIMPSON and I. A. RICHMOND.

In 1927, this exceptionally fine turret was identified as independent of the Stone Wall and furnished with a plinth on the north side (*Trans.*, N.S. xxviii, 383, fig. 2). This year, pending permanent road-repairs, the Cumberland County Council generously allowed the road to be temporarily diverted, as at the sites between Birdoswald and Appletree in 1911, to permit a complete examination of the turret. In this way the front wall of the turret and its junctions with the Stone Wall were exposed, giving the first picture of a well-preserved Turf-Wall turret from the front (fig. 13). Comparing this elevation with the Turf Wall itself, as discovered at High House in 1927, it is probable that the plinth marked the point where the front of that Wall must have begun to slope (*Ibid.*, N.S. xxviii, 379, fig. i). Meanwhile, the road surface and field-wall were removed from above the turret, and operations inside the building began (fig. 12).

The stratified floor-layers appeared about six inches below the modern roadway. The fourth-century levels had already gone, with the cap of fallen masonry which must once have covered them, for Constantian cooking-pots and a fragment of Huntcliff ware occurred immediately below the road-metal. There still existed, however, the footings of a very rough blocking wall (fig. 14), running across the turret in line with the back of the Great Wall and embodying a Roman hearth. This suggests that, without disusing the turret, the rampart-walk of the Great Wall had been carried across it; as if, in fact, the tower then had no top floor but was reduced



FIG. 13.—BANKS EAST TURRET, 52a, from the north.



FIG. 14.—BANKS EAST TURRET, 52a, from the west; showing late walling  
in line with the south face of the Stone Wall.

*Facing p. 148.*

to a pent-house against the back of the Wall. This is the more possible, since the Pike Hill signal-tower, only 250 yards away, was still occupied in the second half of the fourth century (*Ibid.*, N.S., xxxiii, 272), and obviated the need for full use of Banks East turret. This blocking wall differed totally from all hitherto discovered, both in level and in build: and, as if to emphasise the difference,

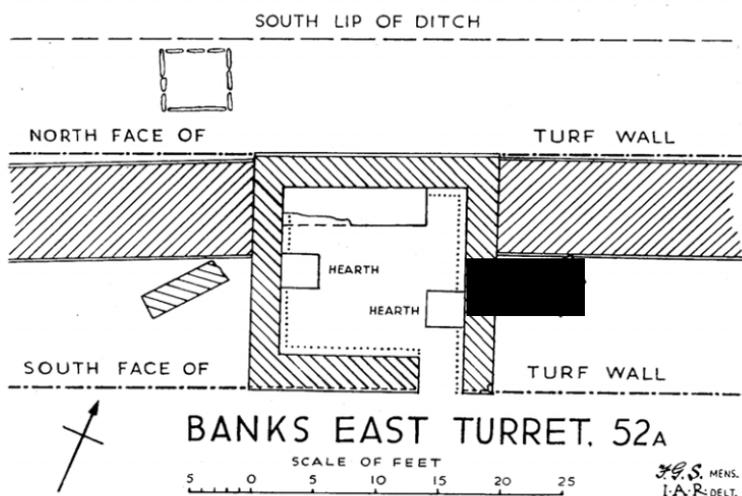


FIG. 12.

underneath and beyond it were fragments of a third-century *mortarium* (*cf. Ibid.*, N.S., xi, 452, pl. iv, 10) resting upon the top of three successive accretions of a second-period stratum, yielding in all a representative collection of third-century wares to be considered, with associated relics, in a later Report.

The third-century stratum rested upon a mass of fallen stones (fig. 15), representing the destruction of A.D. 196. On removing these, two more layers were found, with a third pocket, containing a mason's iron hammer, at the

back of the turret, where the original surface of soft grey soil was sloping rapidly southwards. There were two distinct levels of hearths against the west wall, and one just inside the doorway,\* as at Pike Hill signal-tower; but it was very evident that the levels represented phases of one occupation, as at Garthside I and II. Some pottery from the later first-period layer fitted with sherds from above the fallen masonry, showing that the vessels in question were in use when the building was destroyed. Otherwise, these levels yielded nothing of note. The walls of the turret has been built, without projecting foundation, against the outer side of a wide foundation-trench, packed inside the tower with masons' chippings and mortar. At the front of the chamber, three quarters of the length from west to east was taken up by a broad stone platform, of which three thin courses at most remained (*cf.* fig. 18). This naturally recalls the staircase flights along the back wall of turrets associated with the Stone Wall (e.g. 18a, *Arch. Ael.* 4, ix, pls. xlii and xlvii); but its build and position differ radically from these, and the remains themselves might equally well belong to a bench or bed. The staircase arrangements of a Turf-Wall turret are not solved by this discovery.

North-west of the turret, on the berm, was a rectangular tank-like structure of rough stone slabs, of uncertain purpose. The external aspect of the north wall of the turret has already been reviewed. The south wall, containing a doorway at the east end (*cf.* 53a, but not 54a: the difference has been noted further east, *Arch. Ael.* 4, ix, p. 257), was badly robbed on the outer face, but excellent mortar secured twelve courses of the inner face (fig. 17). One corner-stone of the plinth-course remains, at the south-east corner, crowning seven courses of masonry, as

\* *Trans.* n.s., xxxiii, fig. 26, 273. It is worth noting that the use and presence of the hearth was clearly indicated by the occurrence of a triangle of burning on the masonry of the wall behind it, a criterion worth bearing in mind for use when floors have disappeared.



FIG. 15.—BANKS EAST TURRET, 52a; debris of first disaster, A.D. 196.



FIG. 16.—BANKS EAST TURRET, 52a, from the west.

*Facing p. 150.*



FIG. 17.—BANKS EAST TURRET, 52a, from the south-east.



FIG. 18.—BANKS EAST TURRET, 52a, from the east.

*Facing p. 151.*

against two at Hare Hill, 53*a*. The west wall, thirteen courses high and well built (fig. 16), had developed a crack just behind the line of the Great Wall,\* matched by one further north on the east wall. The inner face of the east wall, where thirteen courses were also preserved, was well built, but much hard black clay was substituted for mortar in the core and the outer facing stones were both badly trimmed and irregularly bedded (fig 18). Since this was one mass and not a re-construction, it was plain that the builders put less good work into the face to be covered by the Turf Wall. Against the outer face, at foundation-level, occurred a fresh *dupondius* of Hadrian† (Cohen, 1470 A.D. 119-121), dropped either as the Turf Wall was abuilding or when it was removed. There was little trace of the Turf Wall itself, beyond disturbed turfy material to east and west: and this was covered by much fallen masonry, including two faced fragments. That on the east lies on its face still: the west fragment is of a narrow wall, one inch less than that of the turret, whence it may therefore come: otherwise, it would be part of the Great Wall's front parapet, rearward parapets being unknown in Roman fortifications.

When the whole turret was thus finally exposed, it was felt by all parties concerned and by the many unsolicited visitors of all classes, that so fine and instructive an example of a Roman Wall turret should not be covered up again, but should be adequately preserved to the public eye. Except at Brunton, 26*b*, Black Carts, 29*a*, and Mucklebank, 44*b*, no good example of a turret has been available for public inspection; and this one has the advantage of being a Turf-Wall turret, illustrating two distinct periods in the Wall's history. Moved by these considerations, Lady Cecilia Roberts and Mrs. W.

\* It will be noted that the line of the Great Wall is not quite straight. This is due to a change in direction, and not to the change in width of berm noted in the Intermediate Wall further west.

† We are indebted for the identification to Mr. Percy Hedley.

Nicholson, landowners on each side of the roadway, eagerly presented the turret site to the Nation, and sufficient land for the road-diversion to the Cumberland County Council. The County Council unanimously assumed responsibility for constructing the new road, while H.M. Office of Works expressed their willingness to accept custody of the turret as a National Monument. This is the first site on Hadrian's Wall to come under their charge, and the hope may be expressed that this action is the prelude to more active interest in this unique and precious monument.

## VI. NETHER DENTON.

By F. G. SIMPSON and KENNETH ST. JOSEPH.

The earliest discoveries recorded at Nether Denton were coins and Flavian-Trajanic pottery found during the building of the rectory in 1868 (*Trans.* o.s. i, 88), on the south side of the hill occupied by the church and glebe farm. This was followed by the finding of Trajanic Samian ware in field 105,\* south of the main road, in 1911 (*ibid.*, n.s., xiii, 385-6), when the site was brought into connexion with the Stanegate forts of Haltwhistle Burn and Throp though seemingly more intensively occupied than they. The impression of an extensive occupation was heightened by the record (*ibid.*, n.s., xiii, 386) of cremation burials at High Nook, nearly half a mile to the west along the Stanegate. The overdue corroboration of these chance discoveries† is now achieved (fig. 19).

Random trenching upon the hill-top, in field 540 and the rectory plantation, revealed nothing Roman except a little much-worn pottery. In field 540a, fragmentary

\* C. XII, 15. Ordnance Survey Map, 25 inch scale, edition 1925-6, of Cumberland (C).

† One may add two coins of Domitian (A.D. 81-96), given by the tenant of the glebe farm to the rector, and shown by him to us. One is an illegible *as*, the other a *dupondius* of A.D. 87 (Cohen, 127), identified by Mr. Percy Hedley.

walling was found, but this was mostly modern or possibly late-medieval, the only piece that might be Roman occurring in the south-west corner of the field, just north of the churchyard wall. East of the rectory, in field 539, a road running west from the angle in the main road appeared more definitely ancient. Operations in field 105,

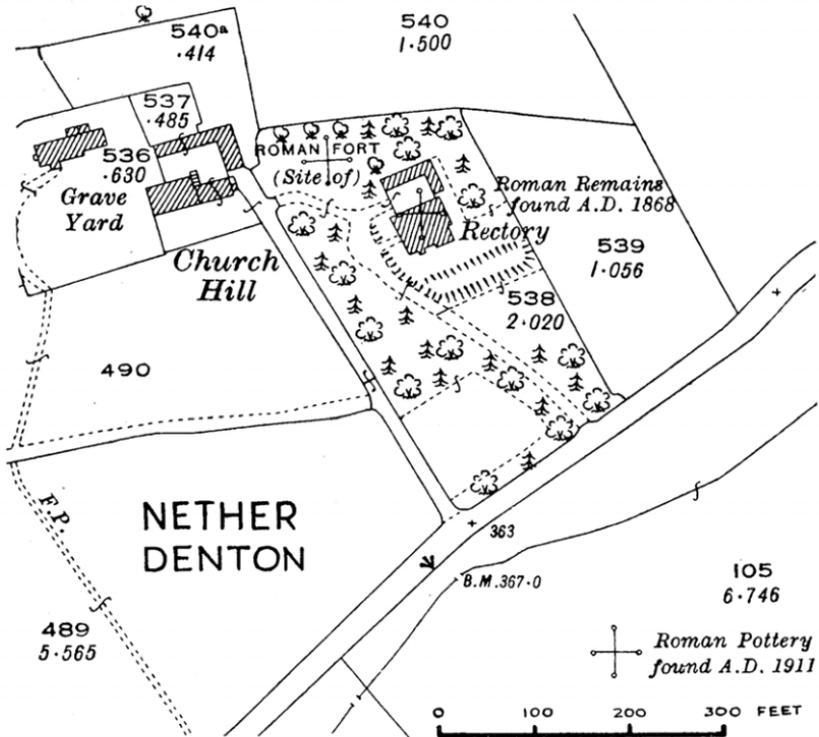


FIG. 19.

Reproduced from the Ordnance Survey Map with the sanction of the Controller of H. M. Stationery Office.

south of the main road, were confined to one long trench. This revealed, sixty yards south of the field-gate from the main road and twenty-five yards east of the west fence, a patch of Roman occupied ground, with later walling above it. In the same trench, occupation was very thick about ten yards from the road, near the runner, or open field-drain; indeed, it was here rather than at the point

marked on the Ordnance map, where the pottery was found in 1911.

North of the main road, a series of trial-holes was carried across fields 489 and 490, about ten yards west of the lane leading to the farm. Thickly occupied ground was noted across field 489, with many tiles in the middle trial-hole. In field 490, twenty yards north of the south fence, morticed timbers appeared, six feet below the modern level, resting upon soft dark earth resembling ditch-filling. The pottery discovered hereabouts was decayed Samian ware and coarse wares of pre-Hadrianic type, including large flat-rimmed mortars of soft yellow clay. Twelve yards further north laid turf-work appeared, taking shape as a turf rampart nearly thirty feet thick at the base and still standing five feet high. This was traced by trial-holes running westwards for sixty yards, swinging slightly northwards as it neared the shoulder of the hill, where it may be expected that there was an angle. Thus, the trial trenches not only confirm the evidence for an intensive military occupation of Nether Denton in pre-Hadrianic times, but reveal that the defences were of remarkably massive character. Further work should disclose the size of the fort thus substantiated and the character of its ditch-system.

## VII. BOOTHBY, CASTLE HILL.

By F. G. SIMPSON.

The chance of work at Nether Denton and the approach of our mural explorations towards Castlesteads naturally turned attention to the well-known gap in our knowledge about the Stanegate and its forts between these two points. Examination of the ground between Boothby and Great Easby was not illuminating; but a table conversation with Mr. Charles Roberts, of Boothby, revealed the presence on an old estate-map of a field named Castle Hill.

This field (no. 189, C. xviii, 1) lies on the edge of the scar commanding the Irthing and in sight of Nether Denton and Castlesteads. A trench here disclosed a seventeen-foot ditch, five to six feet deep: and behind the ditch appeared the remains of a beaten clay rampart. In the ditch-filling were fragments of a *dolium* and a jug-handle, while the bottom yielded a decayed piece of a Samian bowl, of shape 37, exhibiting late South-Gaulish decoration. An early date for the earthwork, consonant with its use during the intensive occupation of the Stanegate, is thus assured; and it is easy to see how the little hillock upon which it stands could have held a three-quarter-acre fort resembling Throp (*Trans.*, N.S., xiii, 365). The spot is 650 yards west-by-north of Boothby Manor House, and about 600 yards east-north-east of Great Easby.

### VIII. THE VALLUM AT STANWIX.

By F. G. SIMPSON.

As reported last year (*Trans.* N.S., xxxiii, 275), the Vallum was found at Whiteclosegate, at the east end of field no. 511.\* Further work has now traced the Ditch through this field, on a course slightly different from that marked on the Ordnance Map. It proves to run straight on from the east, nearly to the west end of this field, where it turns rather more sharply southwards than had been supposed, through about seven degrees, to run westwards through the long narrow field, no. 155, and straight on across Knowefield Nurseries, nos. 153 and 169. Its course was extensively examined in the adjacent field, no. 170,† to the west, for traces of causeways connected with the system of temporary crossings, with entirely negative result. It was then traced across the garden of Homeacres, into that of Barn Close, and had been

\* C. xvi, 16.

† C. xxiii, 4.

gradually swinging southwards from the conjectural line, the divergence here amounting to about forty yards. In the garden of Barn Close it bent somewhat further southwards, passing into the garden of Stanwix House, running under Brampton Road and entering Rickerby Park 80 yards south-east of Stanwix Church. Just at the south entrance to Stanwix House the Ditch was interrupted by an original causeway some thirty feet wide. This was of solid ground, unrevetted in stone, and thus differing from the stone-faced causeways of Benwell (*Arch. Ael.* ser. 4, xi, forthcoming), Housesteads (*ibid.*) and Birdoswald (*Trans.*, n.s., xxxiii, 250). Just within Rickerby Park occurred another permanent causeway, similarly unrevetted, at least forty feet wide. When a permanent causeway occurs in the Vallum elsewhere, it is taken to imply the presence of a fort of the Vallum series, lying immediately north of the earthwork to defend the crossing; and this pair of causeways no doubt has to do with the fort at Stanwix. But the duplication is not to be explained by any fact in our possession; and the explanation must await further digging.

The Vallum-ditch was then traced across Rickerby Park, having turned slightly northwards, parallel with the Great Wall. At the west end of the Park, forty yards east of the wicket-gate opposite the west end of Albert Place, it was found that a change of direction had taken place. Search was first made towards the south, upon the assumption that it might have taken the traditional line,\* crossing the river Eden near Eden Bridge and running behind the fortified hill of Carlisle Castle. These trenches revealed the small V-shaped ditch of an earlier curving earthwork, already disused before Roman objects came to bestrew the surface above it, and terminating in a butt-end about 35 yards south of the Vallum-ditch. Among the objects from the Roman layer above it was the decorated

\* cf. Maclauchlan, *Memoir*, 75-79; and Ferguson, *Trans.* o.s. ix, 168, map.

segment of a bronze torque, of the type illustrated by the perfect example\* found in English Street, Carlisle, in 1881, and since dated to the second century A.D. by the Lamberton Moor Hoard.† Further trenching, however, failed to disclose the slightest trace of a southward turn in the Vallum, and the line was actually picked up once more by trenching to the north-west. The Ditch had, in fact, turned northwards, through about seventeen degrees, thus keeping parallel to the course followed by the Great Wall. It may be expected that it held to this line, running under Stanwix Bank and Cavendish Terrace, to cross the Eden behind the cricket pavilion; but, whatever the exact course may prove to be, the northward turn now established seems to eliminate the traditional line. It may now be regarded as certain that the Roman site at Carlisle had no intimate connexion with the course and planning of the Vallum, and that this travelling earthwork, like the Wall which superseded it, crossed the river at the convenient bend below Stanwix, avoiding thus the long marshy crossing by Eden Bridge which older maps‡ of Carlisle reveal as extending far beyond the limits of the modern controlled river-bed. The fortified post connected with the Vallum may be expected to reveal itself at Stanwix, and ought to be connected with the permanent crossings of that earthwork now for the first time discovered. The cost of this work at Stanwix was borne, as previously, by the Carlisle Corporation.

The warmest thanks of the Committee are offered to the landowners: The Earl of Carlisle at Randylands, Lady Cecilia Roberts and Mrs. W. Nicholson at Banks and Bankshead, Lady Cecilia Roberts and Mr. Charles Roberts at Boothby, Garthside and Howgill, the Reverend H. W.

\* *Trans. o.s.* vi, 196.

† *Proc. Soc. Ant. Scot.*, 1931-2, 364, fig. 38.

‡ cf. the survey of 1684-5, reproduced in *Trans. o.s.* xiii, 172.

Joyce at Nether Denton, Mrs. Johnson at Cambeck and Beck, Mrs. Brown at Walton, The Misses Burns at Walton, Alderman Charlton at Nether Denton, Mr. H. P. Heep at Townhead Croft, Walton and Sandysike, Mr. Kennedy at Walton, Mr. Brown at Low Dovecote, Mr. Johnson at High Dovecote, Mr. G. Graham at High House and Mr. Irwin A. Wright at Birdoswald—and to the tenants, for permission to excavate, also to Mr. W. James, Agent for the Naworth Estate and Mr. S. Walton, Agent for the Boothby Estate.