

## Excavations at Woden Law, 1950

by the late Sir Ian Richmond and Professor J K S St Joseph\*

*Editorial Note.* This paper was prepared for publication by Sir Ian Richmond before his death in 1965 from an original draft partly by him and partly by J K St Joseph and it was subsequently lodged in the Ashmolean Museum, Oxford. Professor S S Frere has, with the generous consent of the Committee of the Ashmolean Library, kindly forwarded the paper for publication. Figure 1 is reproduced with the permission of the Royal Commission on the Ancient and Historical Monuments of Scotland, who also kindly provided copies of figs 2 and 3. The aerial photographs pls 19–20 are from the Cambridge University Collection and are reproduced by permission of the Committee for Aerial Photography. The photographs reproduced as plates pls 21–22 were taken by I A Richmond.

Woden Law, 1388 feet high, is the southern lobe of a high and prominent westward spur of the Cheviot Hills. Its very steep west slope overlooks the infant Kale Water; its south end looks down into White Hope (pl 19a); its east side joins at a lower level the main mass of hills by means of the narrow neck separating White Hope from Twise Hope, while its north side is connected at the same lower level to the northern lobe by a second neck. Since the whole north-westward slope of the Cheviot range is deeply eroded by steep-sided valleys, the necks associated with Woden Law offer one of the best lines of ascent to the main backbone of the range, and lead on to a transverse watershed route, broken only by the headwaters of the Coquet, which is unmatched for convenience at any other point on the range. This was the line chosen by Agricola's engineers for the trunk road between York and the Forth, later known as Dere Street, and it may be suspected that it was already in use as a native traffic route.

The rocky summit of Woden Law (NT 768 125) is crowned by a small native hillfort (fig 1; pls 19–20), which overlooks the natural traffic-route in much the same way as the hillfort on Penchrise Pen watches the pass between the basins of the Teviot and the Liddel. It was at no time a large stronghold and cannot be compared with such fortresses as Hownam Law or the Eildon; its area is little more than an acre in size. Its defences, however, comprise a formidable series of four ramparts, described in detail below. These defences, which branch out into a pair of annexes at the south end of the fort, are enclosed on all slopes except the west and the steeper part of the north, by a remarkable quintuple earthwork, laid out in point to point sectors, which is situated at an even distance of some 70 feet from the fort defences and actually embodies the south rampart of the outermost annexe. This elaborate earthwork is in turn, as it were, enveloped by outer lines, made up of three independent earthworks, sometimes double and sometimes single, of which one runs across the southern and two across the eastern face of the hill, so that the first cuts the inner of the two at right-angles. Where the works cut one another it seems that the eastern work is the earlier, since it is over-ridden by the southern.

In contrast with the defences which they envelop, all these investing works (pls 19–20), to

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use a convenient blanket definition, exhibit manifest traces of incompleteness and of having been erected in short sectors. The outer eastern work is doubled at the south end only; towards its north end it is broken by a long gap; its mounds are untidy and its ditches are discontinuous and frequently interrupted by narrow gaps or baulks marking the unjoined ends of adjacent sectors. The inner eastern work and the south work exhibit comparable features. The quintuple work, except for two short gaps, both original, is unbroken, but its mounds are not everywhere evenly formed (see especially pl 19b) and its ditches, in particular the outermost, are frequently interrupted by the narrow baulks of undisturbed subsoil already noted (pl 22). In planning and execution these works are so different from the native defences and so unlike any outworks normally associated with native hillforts as to raise the question whether they may not have been a series of investing works erected with hostile intention. They do in fact cut off all easy access to the hillfort and at a first glance might well be regarded as successive stages in an investment which pressed ever more closely towards its objective. No assessment of this suggestion can, however, be made without an examination of the several works.

### THE HILLFORT DEFENCES (figs 1-2)

(a) The *innermost line* of defence is a dry-built rubble wall, 9 feet thick, edged by large blocks of the volcanic rock which outcrops at the summit. The blocks are sometimes so large as to form orthostats. Between the outer faces the wall is packed with earth and broken fragments of rubble. This type of wall has everything in common with the enclosure walls of Romano-British and Dark-Age villages: Traprain Law (Cruden 1940, 52 fig 3); Birdhope and Woolaw (Richmond 1940, 78-9); Gunnar Peak (Hall 1882). The quarry for its stones is visible as a low, flat excavation extending for some 18 feet into the face of the hill immediately behind it. The igneous rock has here been exploited by breaking it off on its horizontal joints. Almost immediately below the innermost line of defence, just described, the side of the hill is broken by a second quarry, of which the face has been eroded and buried in loose debris and wash from the hillside above it, an accumulation in due course covered by growth. This growth-line passes below the innermost rampart. The quarry is thus established as much older than the rampart in question.

As might be expected, the rampart (pl 21) for which the half-obliterated quarry supplied the material lies below it. It is now a tumbled mass of stones 11 feet wide; the ruin of a wall which has been later robbed or taken down rather than overturned, for there is no marked scatter of debris at its foot. The stones employed are large and the interstices between them are filled with very black soil.

The next stage is represented by a rampart of rubble, originally packed behind a standing face of dry-built masonry, the whole some nine feet wide. But only a gap once occupied by the face appears. The face itself has been pulled away and now lies tumbled in a large rock-cut ditch, 17 feet wide and 4 feet deep. This ditch is cut in the softer sedimentary rock, a sandy shale, which forms the main mass of Woden Law, in contrast with the hard igneous rock which forms its summit. The presence of the softer rock has determined the structure of the rampart, having provided the material for the rubble core, while the face of dry-stone masonry was largely composed of igneous rock, derived from the spolia of the earlier rampart behind it. The position and character of the later rampart are thus determined less by a desire to enclose more of the slope than by the situation of the softer rock in which the ditch could be dug. The igneous rock could only be quarried by splitting it off along its almost horizontal joints, and it would be excessively difficult to cut a ditch in it.

In further contrast with the earlier rampart this later rampart had been deliberately destroyed, and this event had taken place not long after the making of the ditch, which had only received a little silt when the mass of debris from the rampart was shot down into it.

The earth upcast from the surface on the site of the ditch and fine sandy brash which lay below it have been used to make an outer rampart, 12 feet wide at the base, with a frontal revetment in timber. This cannot have been a very formidable obstacle, but it would be sufficient to hold up attackers and to expose them to missiles hurled from the rampart behind the ditch at the most telling range.

This striking series of defences exhibits so many different structural conceptions that it cannot be regarded as either homogeneous or contemporary. Indeed, the relationship between the two innermost ramparts has already become apparent. Of these, the outer member is much the older, and of the inner member it may be said that it is not only typologically the latest form of native rampart known on the hill, but, consonantly, the one which is still in the best condition. It is therefore fair to conclude that it is the last of the series. The typological relation between the older rampart and the outermost pair is also clear. The older rampart, unaccompanied by a ditch and built in dry-stone masonry of igneous rock in which core and face are not distinct units (pl 21), belongs to the first manifestations of Iron Age defence works in the area (Piggott 1950, 117-8, fig 3, pl xi, 2). The outermost pair, of which the inner is constructed systematically (in part with the spoil of the old rampart, used for the face, and in part with rubble from a well-cut ditch, used for the core), while the outer is built from the earth and fine sandy brash with a timber front, displays the technique of the later Iron Age, and a highly intelligent use of material. The demolition of these ramparts can hardly be dissociated from the Roman use of Woden Law as the natural ramp by which Dere Street descended from the Cheviot Hills to the Tweed basin. The presence of a native stronghold in such a position would be intolerable, and there is no reason to suppose that the hill was again occupied until the Roman occupation was over. The rampart which later crowned the hill may be thought to belong to the 3rd or 4th century, or even later (Hogg 1951, 207).

### THE INVESTING WORKS (figs 1 and 3)

(a) *The outermost investing work* (W-W-W on plan) was examined at the southern end of its northernmost sector (fig 3, section 1=fig 1, section 4). The 8½-foot rampart, on the uphill side of the ditch, is held firm at the back against slipping by a 3-foot cheek of turf cut from the ditch, which is a blunt V-shaped ditch, 11 feet wide and 3 feet deep, without a bottom channel. Beyond the turf-built cheek the upcast is piled into a mound 5½ feet wide and now 1 foot high. At the furthest edge the upcast comprises larger fragments of rock which will have come out last, as the ditch reached its full depth. The order of the material thus follows the geological sequence.

The ditch exhibits traces of gang-work, in the form of three narrow baulks of undisturbed subsoil which divide the southern half of its length into four 30-foot digging sectors. The northern half appears to be continuous.

A gap of about 250 feet separates this end of the earthwork from the principal length, which begins with a short isolated piece and then continues for about 850 feet through marshy ground. Finally there comes a section 200 feet long, in which the work takes the form of a double ditch, with a rather irregular mound between, as if the workers, having reached the south end of their work, had turned back and begun to double it from that end, without finishing tidily the task in hand.

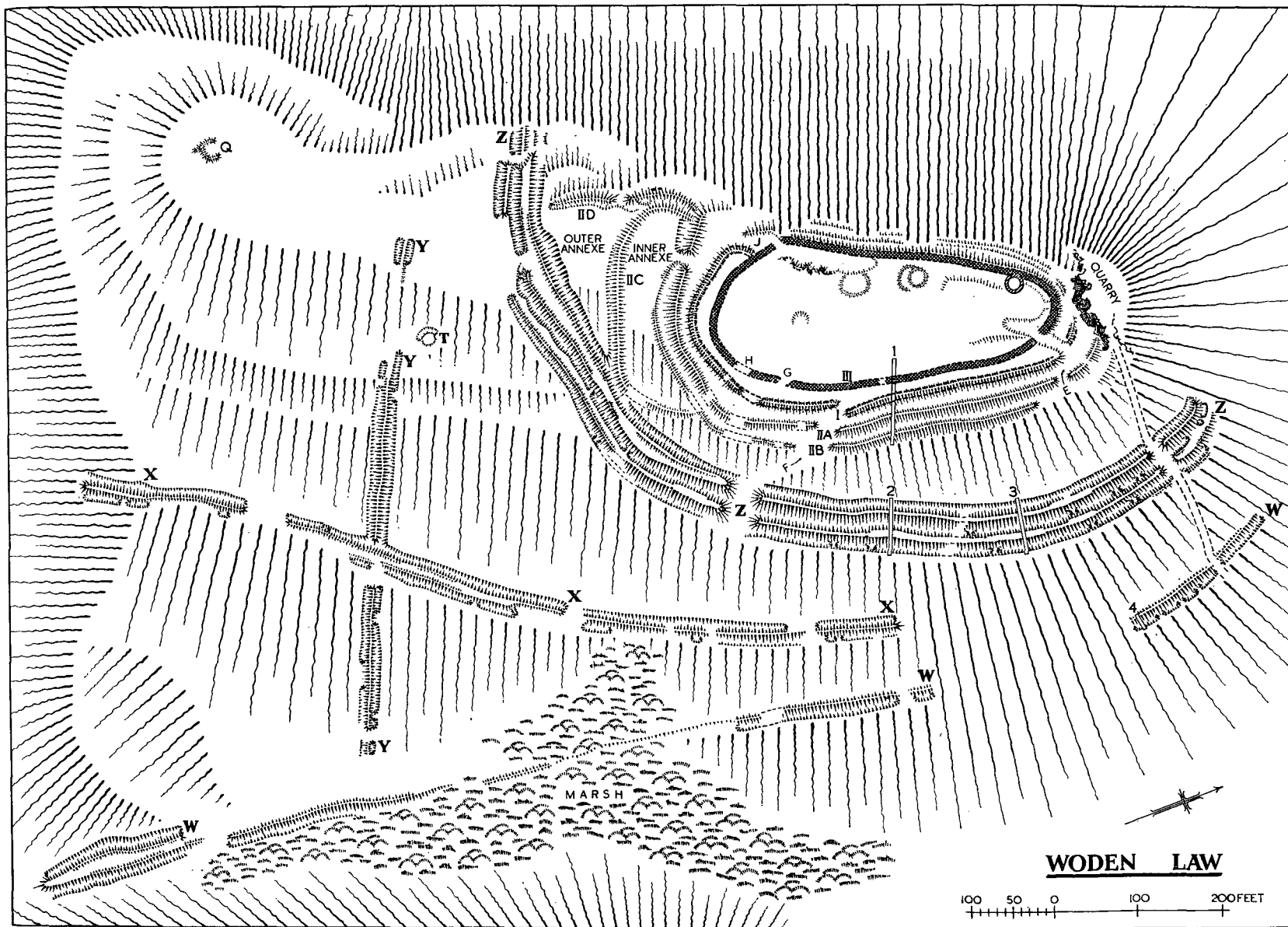


FIG 1 Woden Law, plan. (Reproduced by permission of the Royal Commission on the Ancient and Historical Monuments of Scotland)

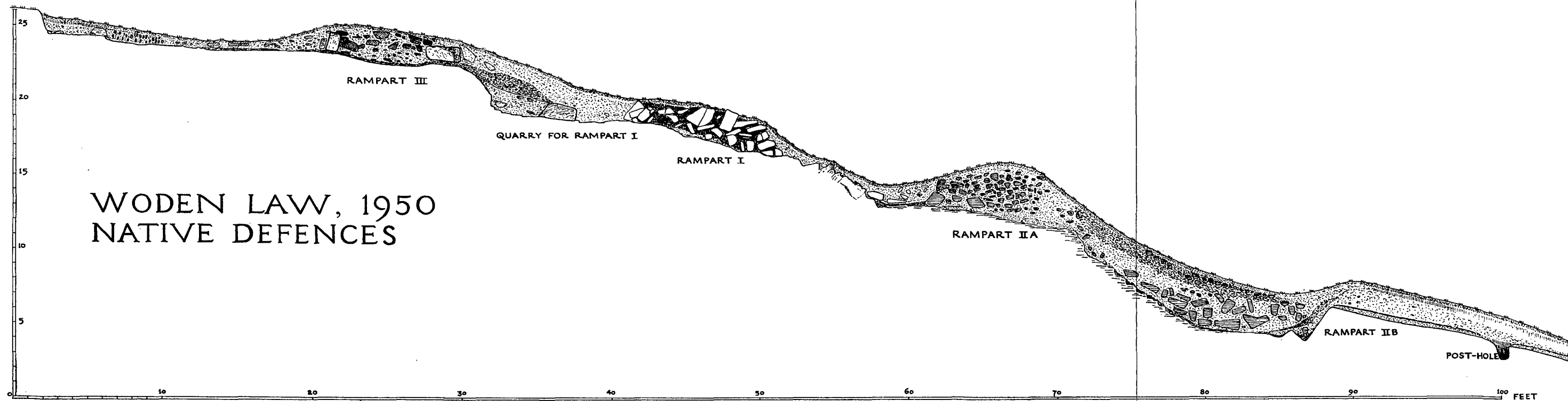


FIG 2 Section through the native defences (drawn by I A Richmond)

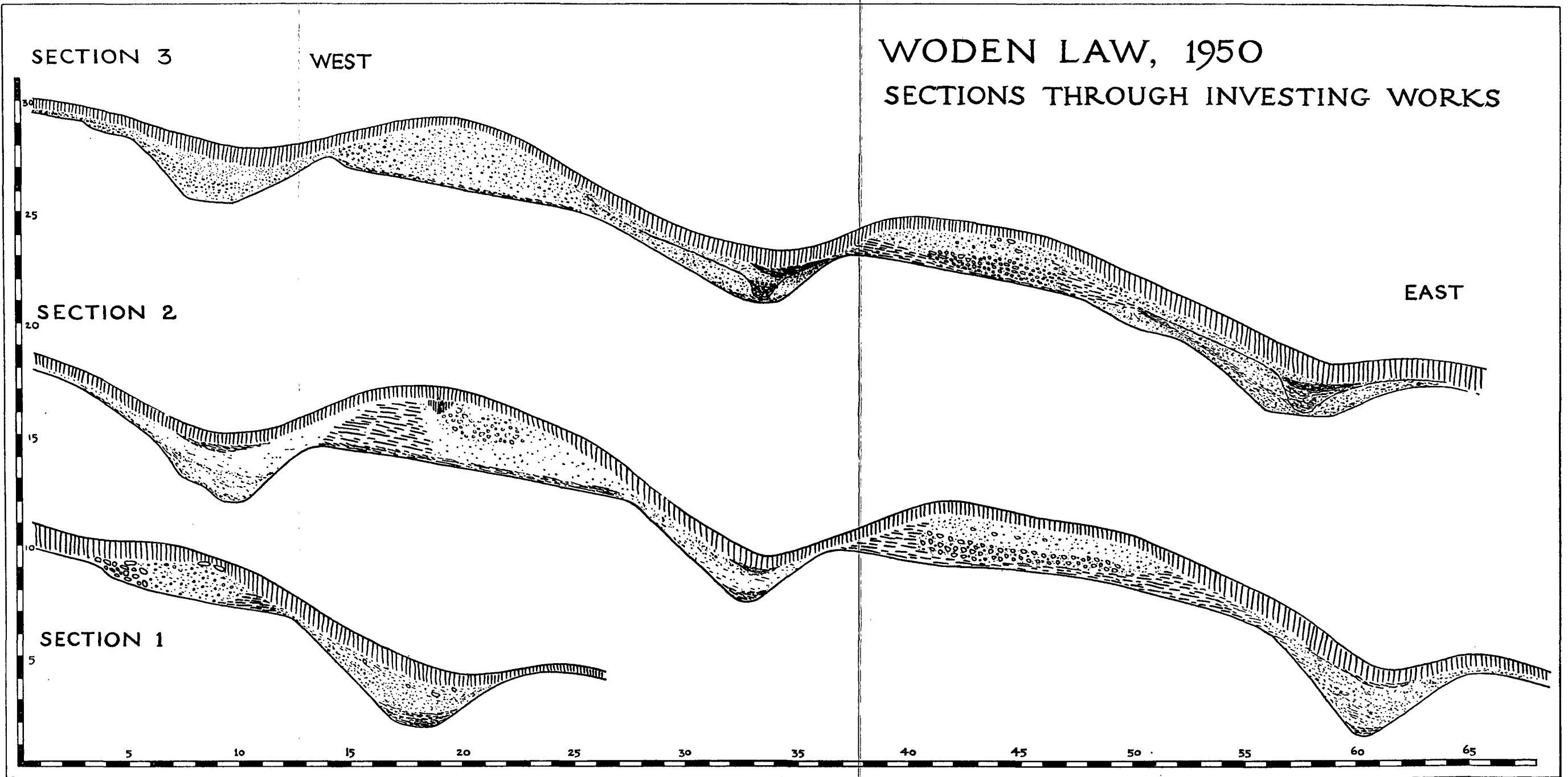


FIG 3 Sections through the investing works (drawn by I A Richmond)

(b) *The middle investing work* (X-X-X on plan) is of exactly the same character as the south end of the outermost work, just described. Its western ditch has been completed, except for three substantial gaps, but the eastern ditch is manifestly incomplete and exhibits three short digging units, and five somewhat less short ones, in addition to longer continuous sectors.

(c) *The transverse investing work* (Y-Y-Y) resembles the pair already described not only in design, but also in the manifold signs of incompleteness which it exhibits. As it climbs the eastern slope of the hill it is more or less continuous, though its eastern terminus comprises a short isolated digging sector, while similar short sectors occur here and there in both ditches. But its course across the saddle is marked by a solitary 30-foot sector, separated by a gap 100 feet wide from the nearest length to the east.

(d) *The traverse* (T on plan) is an isolated work lying about 40 feet north-west of the west end of the main portion of the transverse work Y-Y-Y. It comprises a ditch of lunate plan, enfolding an almost circular mound, which very closely resembles the well-known traverses called the Three Brethren in the north front of the Roman siege-camp at Birrenswark (Christison *et al* 1899, pl iii). The Birrenswark traverses were built with reinforced fronts and were ballasted to serve as emplacements for siege-engines (Christison *et al* pl vi, fig 7). Traverses of rather similar plan, but of different purpose, also occur in the Roman temporary camp of Reycross, in Westmorland (Richmond and MacIntyre 1934, 53).

(e) *The innermost investing work* (Z-Z-Z) enfolds the south end and east side of the hillfort at an average distance of 70 feet from its defences, that is, just beyond killing-range of a hand-thrown missile. It is a quintuple work, comprising two mounds between three ditches and representing in effect a combination of the double and single types of earthwork already described. The outermost and middle ditches of the northern half exhibit numerous examples of the narrow baulks of undisturbed subsoil, indicating gang-work, and a test made upon a pair of these in the outermost ditch, at a point south of section 2, revealed them as undisturbed necks of soft rock between fully dug sectors of ditch (pl 22). Another striking feature, typical of this half of the work, is the differing profile of the outer mound, which is for long stretches deliberately widened and flattened.

Both ends of the work appear to be unfinished. The north end terminates irregularly, with unfinished middle and outer ditches and hummocky outer mound. At the west end a long sector of the outer ditch remains undug and there is an awkward half-closed gap in the middle ditch.

Two sections were cut across the quintuple work at points where it remained in good condition. The first section (fig 3, section 2) disclosed an innermost ditch cut to a rather irregular shallow V-shape, 10½ feet wide and 4 feet deep, the irregularity being caused by the difficulty in accommodating the profile of the ditch to the geological strata of the soft rock through which it was cut. Behind the ditch comes a rampart 14 feet wide and now 3 feet high. The front of this rampart is built to full height as a cheek of turfwork 5 feet wide at the base, behind which the upcast from the ditch is piled upon a ballasting of three or four courses of turfwork. The upcast employed is for the most part light fine-grained brash, but the middle portion of the top is occupied by a mass of much stonier material, associated with a dark hole, as if it had been the seating for an object in timber.

The middle ditch, 9 feet wide by 3 feet deep, has much more regular proportions. It is backed by a flat-topped mound 19 feet wide at the base and two feet high, retained by turf cheeks at back and front and ballasted throughout upon a triple layer of turfwork. The disposition of the upcast between the two turf cheeks calls, however, for special notice, since the material is arranged systematically as a thick layer of stony upcast, covered by a layer of finer material. It should be noted that this order is the reverse of that in which the material was derived from the

ditches: it thus implies a deliberate selection and rearrangement of material for the purpose of ballasting the mound. Finally, the outermost ditch measures 10 feet wide by  $3\frac{1}{2}$  feet deep and is as well cut as the middle one. The spoil from all these ditches is fully accounted for by the material in the mounds and the easternmost ditch at least must be regarded as dug primarily for the purpose of providing the material in question.

The second section (fig 3, section 3) exhibits an innermost ditch, inner mound, and middle ditch of much the same proportions as in section 2. But the inner mound has neither turf cheek nor packing nor ballasting of larger stones. It is, however, ballasted upon a double or triple layer of turf, beneath which the old surface has been first deliberately stripped away, presumably to supply material for the works in the form of soft brash. There is a suggestion that this treatment has also been accorded to the site of the innermost ditch. The outer mound, with turf cheeks at back and front, turf ballasting, and upcast filling, disposed with stony material at the bottom and lighter material at the top, is strikingly like the outer mound in section 2; and it exhibits the same reversal of geological sequence in its disposition. The sole difference is that the western or inner turf cheek is not quite so high and serves to carry the upper layer of fine ballasting rather than to contain it. The outermost ditch is twelve feet wide and flat-bottomed.

The middle and outermost ditches in section 3, however, exhibit a remarkable feature which does not occur in section 2. At a time when both were choked with a substantial amount of wash, they were re-cut to a shallower profile, the recut ditches being provided at the bottom with a squarish drainage channel of substantial size (pl 22b). Their sides are coated and defined by a thin layer of iron pan, such as might well form upon a surface of washed silt newly cut and exposed to the weather. The works were thus at this point used anew after they had been for a considerable time abandoned.

#### *(f) Interpretation*

The general impression conveyed by the sections just described is of purposive and systematic engineering with a special end in view. Not only does the structure of the works themselves differ profoundly from that of the native defences already described, but their design can hardly be considered appropriate to works of defence. The broad ballasted platforms, which form the outer mound in each section, cannot in any sense be viewed as works of defence and they certainly look uphill, not downhill. The inner mound, with ditch once more facing uphill, could, on the other hand, be regarded as a defensive forework, protecting the platforms behind it. The works would then emerge as investing works, an interpretation of purpose which carries with it an immediate explanation of the ballasted mounds as platforms or emplacements to carry siege engines. Nor can it leave any doubt as to the authors of such works, granted the systematic field-engineering shown to have been involved in building them. The stripping of surface material, the ballasting and retaining in turfwork, the selective disposition of upcast are operations which, like the very works of investment themselves, are associated in ancient north-western Europe with the Roman army alone.

This, however, is not the end of the matter. If the works were associated with warfare conducted by a Roman army their planning raises serious difficulties. As investing works, they do not encircle the hillfort, but leave an inconvenient gap at the north end, even supposing that a mobile force patrolled the west front, which is so steep as to make a circumvallation here unsuitable. Further, if the outer works are viewed as part of a military operation—that is, as successive stages in cutting off access to the hill in preparation for the construction of the quintuple lines—why are all of them unfinished and broken by wide gaps, and why does one pair intersect? Why, again, is there no sign of quarters for the besieging forces, which should have erected camps, as at Numantia



(Schulten 1931), Alesia (Napoleon III 1865, 316 ff, pls 27 and 28), Birrenswark (Christison *et al* 1899; RCAHMS 1920, 94–101; Collingwood 1926, 46–58; Jobey 1978, 81–2) and Masada (Schulten 1933; Hawkes 1929; Richmond 1962). Finally, the hillfort itself seems neither big enough nor sufficiently impregnable to demand siege-works. Solemnly to beleaguer so insignificant a hillfort, which a determined assault would have overwhelmed in a matter of hours, argues a failure in appreciation so strange as to invite some other explanation.

How, then, are the various investing works, their nature at least being undeniable, to be interpreted? Another view seems to be prompted by the unfinished character common to them all. It may be suggested that they are not real siege-works, the product of warfare in earnest, but practice works, the product of military training. Such works were as much a feature of Roman army engineering as the serious works of active service (CIL VIII 2532; Appian, *Iberica*, 86; Tacitus, *Annals*, xiii, 35; Vegetius, i, 25). It may further be remarked that if it were desired to select a suitable native site, adjacent to the main trunk road of northern Britain, in a district apt to promote the hardening processes of military training, it would be difficult to match Woden Law for convenience of position or beat it for toughness of climate. The very effort involved in moving *ballistae* to the spot would itself be an impressively toughening preliminary. Again, if the works were erected in course of training, the problem of camping no longer presents difficulty. There is an excellent camping ground, a mile north-west of the hill, and this is occupied by the three large Roman camps at Pennymuir (Roy 1793, pl xxii; see now RCAHMS 1956, 375–7). Two of these camps, which are among the most striking entrenchments on Dere Street, are not the slight earthworks of a force in rapid transit, but the massive structures of a large force encamped for some time and occupying the spot at least twice, on the second occasion in reduced numbers. The camps at Pennymuir and the investing works at Woden Law may thus be recognized as complementary. In the camps may be seen the field-quarters of the troops in training who built the investing works, while the investing works in turn provide the reason for existence of these camps, two of which are exceptionally massive. It is worth noting also that both Woden Law and Pennymuir were used at least twice in succession.

No less convincing grounds for relating the Woden Law earthworks to training, as opposed to actual warfare, are to be found in the character of the work themselves. The intermittent construction of the outer works, and the subdivision of their ditches into individual sectors which were never properly linked, has no relation to the realities of war. But it is a procedure readily understandable in conditions of training, when it is desirable to keep the work of individual units distinct, in order that the quality of their work might be judged, and mistakes corrected. Again, the construction of an isolated traverse, devoid of purpose in immediate relation to warfare, is readily explicable in terms of drill or training. The division of the labour into widely separated sectors, each of which was itself subdivided among gangs, defies tactical explanation but finds a ready answer in the exigencies of field-training, as every engineer-officer knows: and the apparent illogicality with which one unfinished work is abandoned for another corresponds exactly to the day-to-day transfer of squads in field-training from one operation to another, repetitive or different. All the tactical objections to which the Woden Law investing works lie open when considered in relation to real warfare are transmuted into positively cogent points in the case for field exercise. One point may be repeated in conclusion. Woden Law is a rigorous spot, windswept and chilly, ideal for stimulating hard work and promoting rude health. To camp there would be a grim necessity indeed, and yet this is what the maintenance of true siege-works would have required: Pennymuir could not have served the stern realities of warfare on Woden Law. Only in relation to daily exercise tasks, daily abandoned as the long summer shadows fell

across the adjacent hills, are the Pennymuir camps explicable as an element in the picture, and only they give to the picture the unity of a logical composition.

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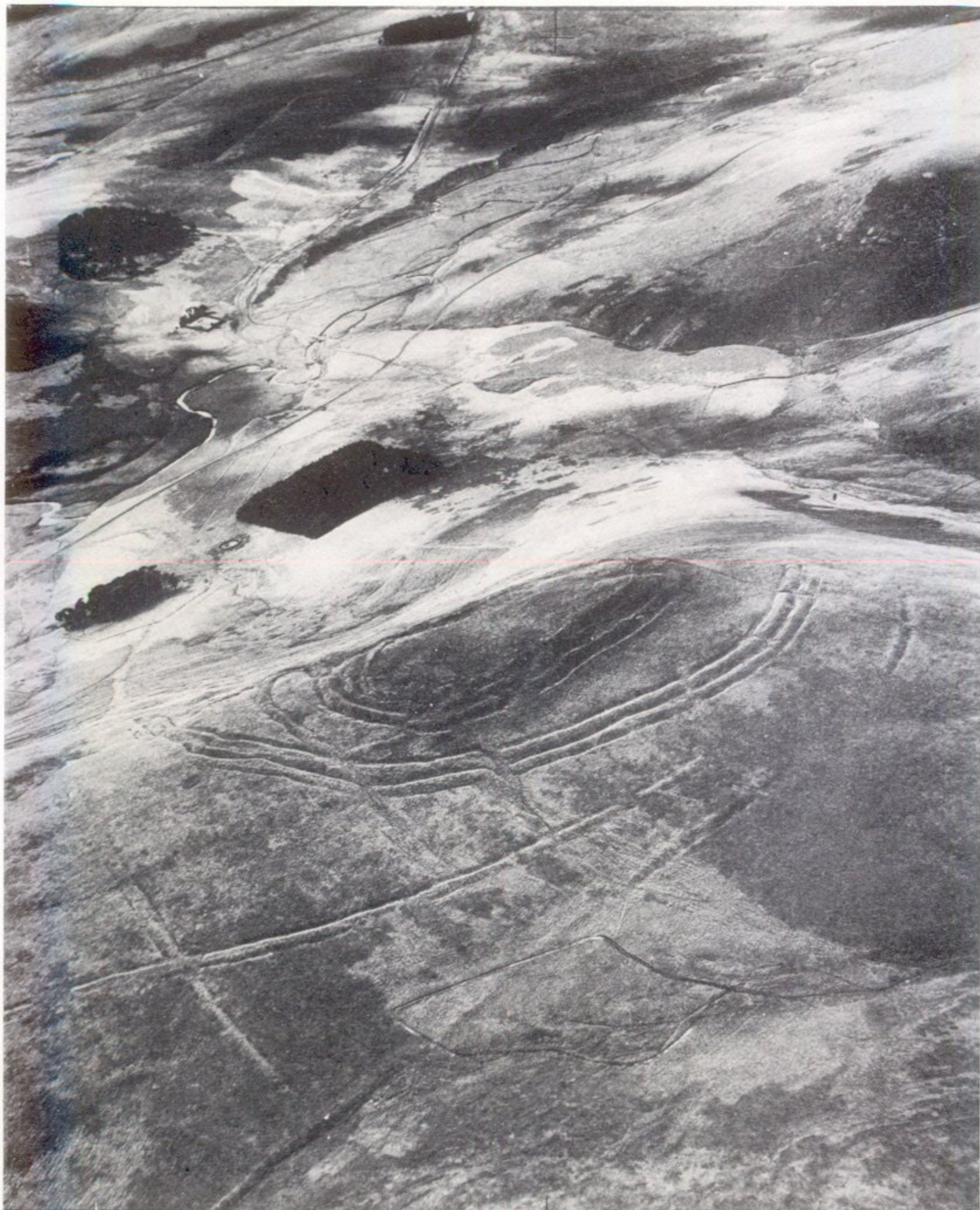
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a Woden Law, oblique aerial photograph looking NW. 25 July 1967



b Woden Law looking NE. The earthworks are picked out by the long shadows of evening sunlight. 5 January 1970



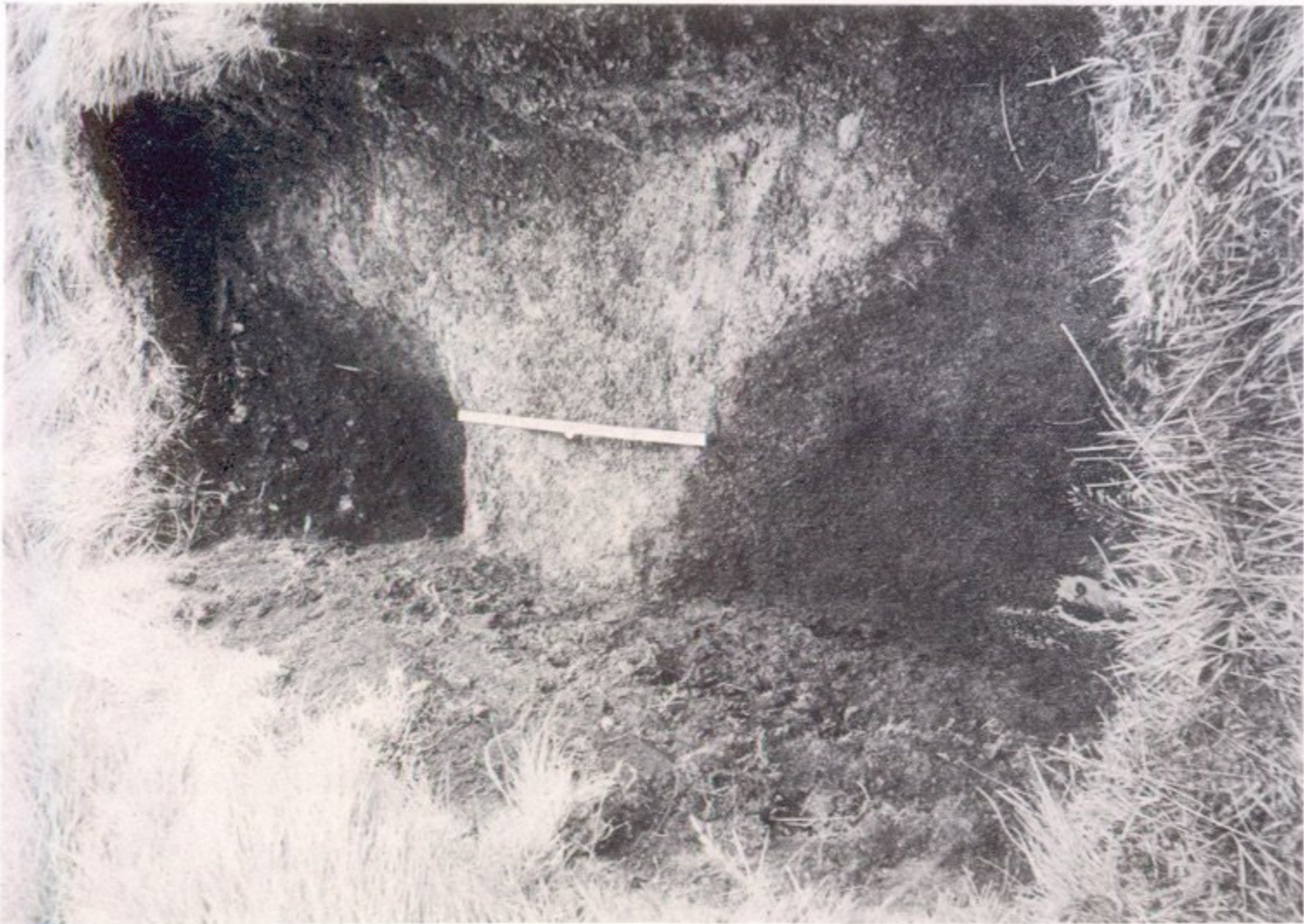
Panorama looking N Wover Woden Law across the valley of the Kale water to the Roman camps at Pennymuir which lie to W of Dere Street, between the two most distant plantations. 22 July 1947



Section through the native defences looking W: the tumbled mass of stones of rampart I, with rampart III on the skyline



b Second baulk of undisturbed subsoil; outermost ditch of inner investing work, looking S. The section at the far end of the trench shows part of the profile of the recut ditch: scale a 2-foot rule



a Baulk of undisturbed subsoil in the outermost ditch of the inner investing work, S of section 2, looking S: scale a 2-foot rule