

X.—THE ROMAN WORKS AT CHEW GREEN, COQUETDALEHEAD.

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The work described below was undertaken by the two writers on behalf of the North of England Excavation Committee, in preparation for the Roman chapter in volume xv of the *Northumberland County History*. The difficulties of organizing an exploration of so remote a site had proved insuperable in 1935. This year, we were fortunate in securing the active assistance of Mr. Leonard Atkinson, divisional county surveyor, and Mr. E. J. Clarkson, surveyor to the Rothbury R.D.C., who put three men at our disposal. The problem of accommodation was solved by the great kindness with which our appeals were met by Mr. and Mrs. Cowens, of Philhope, where three extra folk were accepted in a busy household as if their presence caused no burden, and by Mr. and Mrs. Cook, of Makendon, where the fourth found kindly hospitality. Only the weather was left to chance, and followed most extremes possible in a fickle summer. Little time, however, was lost. Trial-trenches established the main characteristics of the site, and a new survey (pl. xx) was executed. In the levelling, we were particularly grateful for the assistance of Mr. K. St. Joseph, whose help in this respect enabled the supervision of digging to proceed without interruption. In studying the material recovered, we were also most grateful for Mr. Eric Birley's views upon the Roman pottery, and for Mr. Charlton's

specially interesting contribution upon the medieval sherds, contained in appendix II. Dr. Raistrick, whose work upon the pollen-analyses proved so useful at High Rochester, has once again provided an invaluable record from this site. Thus we begin to build up knowledge of the Roman landscape.

Introductory. The presence of Roman remains at Chew Green, on the farm of Makendon, is governed by the engineering of Dere Street. This great Roman highway across the Cheviots, deserting modern routes at High Rochester (642 feet), climbs gently up the valley of the Sills Burn to Featherwood farm (1056 feet), attains the watershed at Foulplay Head (1510 feet) and keeps to it until, at Harden Edge (1674 feet), the Coquet valley cuts clean across its course. There is no avoiding this obstacle; and a very steep descent, to about 1201 feet, is negotiated by a couple of well-designed zigzags, skirting the east side of Percy's Cleugh.¹ An equally steep though shorter climb follows, to the head of the Chew Sike gorge (1450 feet), where the road turns sharply eastwards, and surmounts Brownhart Law by a gently-graded oblique course. The watershed is regained at 1572 feet, and the northward passage of the road is beset by no further difficulty. The Coquet valley is thus the key-position from which to control either repairs or traffic on the road. Accordingly, it is not surprising to find in this wild spot both the temporary camps of working-parties and the permanent fortlets of patrol-guards, elbowing one another for room on the sole available site which the valley affords; a narrow plateau (1450 feet) or spur between Chew Sike and Chimney Sike, northern affluents of the infant Coquet.

The Roman name of the place is unknown, though Bertram's forged *Ad Fines* lingers on maps. Nor do we know the name in use during the earlier Middle Ages,

¹ This name appears upon a map by Robert Tate, dated July, 1810, now at Alnwick castle. No other name is on record.

when Kelso abbey owned² pastures and tithes in Redesdale, and a little wayside chapel³ was planted within the Roman entrenchments. A small village, whose potsherds are known to us and notably confirm the literary records (see appendix II), then grew up and decayed, after which, in 1550, the place was known⁴ as "Kemylpethe . . . where there is a litle parcell of ground in which there hath bene houses builded in tymes past called Kemylpethe Walls." This was the trysting-place between Scots and the men of the Middle March. The land was debatable land, and is so marked upon Armstrong's *Map of Northumberland* (1769). But by this time, when settled life had followed the Union of the Kingdoms, a farm called Chew Green was established on the east side of the Chew Sike, and served for a tavern of ill repute. The farmstead gave its name to the camps in all early descriptions, and, although it has now disappeared, the name has been retained here. The lands are now on the farm of Maken-don, a mile distant down the valley, and this name also has been used⁵ for the camps by Bosanquet.

Four Roman works are to be seen, and a fifth is buried from view (pl. xx). The whole plateau is embraced by the *south marching-camp*, an almost square camp, 895 by 917 feet over the rampart-crests. The north end of this work is overlapped by the *north marching-camp*, 982 by 625 feet. The south marching-camp also contains in its western area a *semi-permanent camp*, 567 by 496 feet in size; while much of its east side and its south-east angle are covered by a permanent *fortlet*, with two enclosures to south. Finally, excavation has revealed an *earlier fortlet* below the later one, making a total of two temporary works,

² The grant of pasturage is dated to 1227, the tithes were much older. See *Liber S. Marie de Calchou*, Bannatyne Club, vol. ii, pp. 261-5.

³ On the chapel, excavated by C. C. Hodges in 1883, see Bosanquet, *Berwickshire Naturalists' Club History*, xxv, 68.

⁴ Hodgson, *Hist. Northumberland*, III, ii, 208.

⁵ *Berwickshire Naturalists' Club History*, xxv, 59. This is the most recent account of the camps, and the best; cf. *The Antiquary*, xli, 185-8, 207-12 for a bad one.

one semi-permanent work, and two permanent fortlets. The elements are simple, their relationship complicated. Few visible Roman entrenchments in Britain rival these in complexity; neither Ardoch nor Cawthorn, for example, surpass them.

Former studies of the remains may be noted, only to observe that the inaccessibility of the site has always rendered visits short and surveys somewhat cursory. By working on the spot day by day, much in rain or thick mist, one is led to admire how much was achieved by General Roy. His personal work, of 1774, now at the Society of Antiquaries of London, has been published⁶ by Sir George Macdonald; and it far surpasses in accuracy the published plan, edited posthumously from work which the General had discarded. The earliest Ordnance Survey plan,⁷ of 1861-3, to the six-inch scale, is very much better than the revised versions of 1896 and 1924, and is surpassed in accuracy by MacLauchlan's fine work⁸ at one-thousandth scale, in 1864. Unfortunately, MacLauchlan failed to distinguish from the Roman work the medieval garths which overlie and tend to obscure it. The medieval fields are, on the other hand, well reproduced in an original drawing,⁹ preserved at Alnwick castle, by Robert Tate, of July 1810. Mackenzie's plan,¹⁰ of 1825, is based almost entirely upon Roy's, with the interesting addition of the house at Chew Green. No feature in these plans, however, justifies their

⁶ Sir George Macdonald, *Archæologia*, lxxviii, 167-8, has shown that the first plan of Chew Green (now in the British Museum) was probably made in 1752, and was not Roy's work (see Roy, *Military Antiquities*, 117, note). The plan belonging to the Society of Antiquaries of London, dated 20 Sept. 1774, is Roy's work (see Macdonald, *op. cit.*, 202, 205) and the two were garbled by an editorial committee to make the published plate xxii in Roy's posthumous *Military Antiquities*.

⁷ Ordnance Map.

⁸ MacLauchlan, *The Watling Street*, sheet vi.

⁹ Alnwick Castle MS.

¹⁰ *Historical and descriptive view of the county of Northumberland*, ii, 101. The plate is dedicated to John Smart of Trehwhitt House, who was the first to describe the Roman road between High Rochester and Thrunton.

réproduction here, and a new survey is offered.

The *south marching-camp* (see pl. xx) seems to have been the earliest work on the site, since all the other fortifications impinge upon it or obliterate it, as will appear when their relations are discussed. About 250 feet of the east end of the south rampart, and some 540 feet of the south end of the east rampart are now hidden. Otherwise, the whole circuit is intact and has been little disturbed since the day it was constructed. The north side measures 895 feet in length and the west side 917 feet; but the angles are not quite true right-angles, and there is a change of direction in the north rampart, at about 320 feet west of the north-east angle. Both northern angles seem to have about the same radius, of fifty feet on the rampart-crests: the south-west angle has a sharper curve, of about thirty feet radius. The disposition of the work is not entirely happy. The northern two-thirds of the area occupy level ground, except at the north-west, where the angle drops away into a marsh and is much overgrown by invading bog. The southern third occupies a steep slope towards the Coquet. To have placed the work further northwards, however, would have plunged the north-western area further into the bog, which the later builders of the north camp only avoided by making their work long and narrow. On the whole, the *metatores* made the best of a difficult site, where the awkward features are by no means instantly apparent.

The rampart of the camp (fig. 1) is derived from a small ditch, 8 feet 3 inches wide from lip to lip, and 3 feet 9 inches deep, including a little channel, seven inches deep, at the base. These proportions are a little larger than the minimum "five-by-three" ditch of the *de munitionibus castrorum*.¹¹ The upcast from this ditch, soft broken rock or "brash," is arranged in a rampart 10 feet wide. The width is greater than might be expected, but is to be accounted for by the employment of another material in

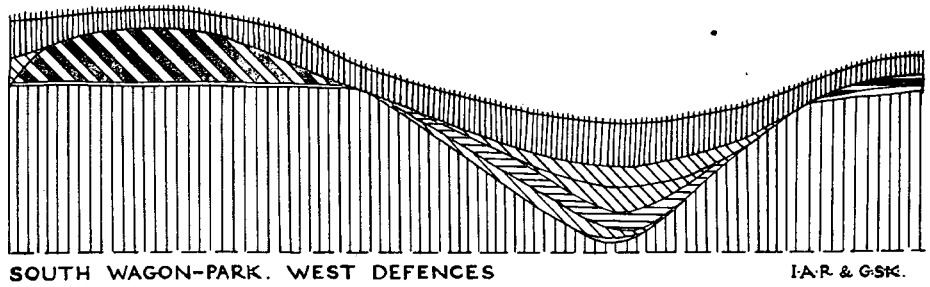
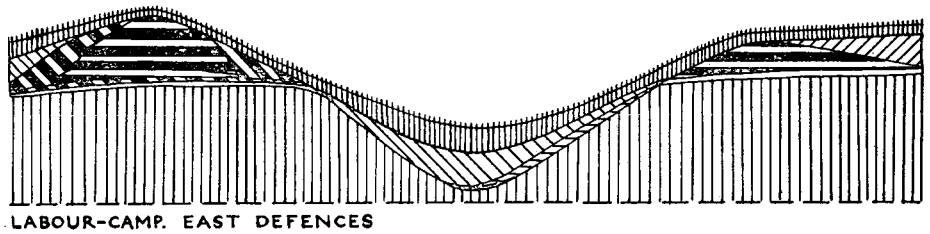
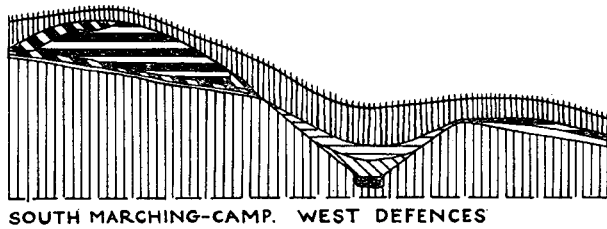
¹¹ *De mun. castrorum*, 49, *latitudo dari debeat ad minimum pedum quinque; altum pedes tres.*

addition to the upcast. In order to prevent the foot of the rampart from spreading, the turf from the area occupied by the ditch has been laid in one thickness as a bed below the rampart-mass, and used in a little kerb at the front of the rampart; turf is also spread over the back of the mound, now three feet high, in a thin layer, which retains its grip by means of a step cut in the upcast. The type of structure is an interesting one, and was no doubt more common than the few sections of temporary Roman ramparts¹² allow us to record. Its remains suggest that the rampart as now existing has suffered very little from erosion: if the small amount of slipped material which lies in the ditch-bottom is replaced on the front of the rampart, creating a rather sharper slope, we may suppose that we have restored the same proportions as in Roman times.

The west gate of the camp is clearly visible, just outside that of the semi-permanent camp. Surface indications suggested that no traverse, or *tutulus*, had covered the opening. The alternative internal *clavicula* was therefore sought, although only its heel could be expected to have survived the levelling operations at the gate of the semi-permanent camp. A heel 10 feet wide was found in the requisite position, bedded upon an extra thickness of turf, as in the main rampart. Time did not permit a full examination of any other gate; but at the north gate a trial-trench revealed the presence of laid turf at the position of the internal *clavicula*, confirming the existence of the device at a second point. The situation of the gates leaves little doubt as to the planning adopted. Two-thirds of the area lie to west behind the north gate, showing that the camp faced on to Dere Street. The north gate will therefore be the *porta principalis sinistra*, while the west will be the *porta decumana*. The other two gates are now obliterated.

If it is asked what kind of troops used the camp, it may be noted that its size closely approximates to that of Rey-

¹² cf. Cawthorn A as modified, *Arch. Journ.* lxxxix, 25, fig. 5; and Haltwhistle Burn marching-camp I, *Arch. Ael.*³ v, pl. iv, section Y-Z.



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- LAID TURF
- UPCAST
- SILT
- ROCK UPCAST
- SUBSOIL
- FALLEN TURF
- FALLEN UPCAST
- MODERN GRASS

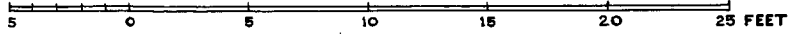


FIG. I. CHEW GREEN: SECTIONS OF DEFENCES.

cross¹³ on Stainmore, which is planned to hold a legion; and that the first troops at Chew Green were also legionaries is in itself more than likely, whether they came to fight or to build¹⁴ the road. The larger camp at Birdhope,¹⁵ six miles to the south, has been of much the same dimensions, though it is much less well preserved.

The north marching-camp (pl. xx) is a smaller and slighter work than that just described, measuring 982 feet by 625 feet over the centres of its ramparts. Its whole circuit is visible, though the central portion of the west rampart, sunk deep in the bog, is best recognized by the persistent growth of dry bent grass upon it. The curve of the south-west angle is uncommonly sharp, with a radius of about 12 feet on the rampart-crest. The east angles have a radius of 30 feet, the north-west angle of 37 feet. The site is not a good one; indeed, the choice can only be explained on the assumption that the central plateau was deliberately avoided, either because it was occupied already, or because the intention was to place something there. The north end of the camp lies on a sharp rise, easy to rush; the west side is boggy; the central area is ill drained; the south end overlaps the north-eastern area of the south marching-camp. It is worth noting that the second occupants of the overlapping area made no attempt to erase the main lines of the earlier rampart.¹⁶ Each rampart still stands equally high, much as it was left by its constructors. Trenching at the north-east intersection, however, quickly showed that the ditch of the north marching-camp had been cut through the rampart of the south marching-camp. The northern work was thus secondary.

Turning now to the defences (fig. 1) themselves, the

¹³ *Cumberland & Westmorland Antiquarian Society Trans.*, xxxiv, 55.

¹⁴ Wheeler, *Royal Comm. Hist. Mon., Westmorland*, p. xxxvii, connects the camps more closely with the road, or its intended course, than we were inclined to do. Neither view is susceptible of formal proof.

¹⁵ MacLauchlan, *The Watling Street*, sheet vi.

¹⁶ *ibid.*

ditch proved to be strictly V-shaped, 7 feet 6 inches wide from lip to lip, and 3 feet deep. The rampart is of rock upcast, held in place by a large turf kerb in front, and by a very small one at the back: the crest of the rampart is thus pushed forward, to present a steeper front. The thickness of the whole rampart is 8 feet 6 inches, and its height 2 feet. Very little material has fallen back into the ditch, but some allowance must be made for shrinkage of turf. The width agrees well enough with the minimum 8-foot rampart of the *de munitionibus castrorum*,¹⁷ but it does not appear likely that the height ever reached the same source's minimum of 6 feet.

Five gateways are now to be seen. The north and south gates, the northern east gate and the southern west gate, are 27 feet wide, and all but the south gate are covered by a traverse lying 27 feet in front of them. The northern west gate is engulfed in bog and disturbed by open drains: but traces of a gap in the rampart appears opposite the corresponding east gate. The absence of a traverse at the south gate was proved by trenching, and is doubtless to be explained by the proximity of the semi-permanent camp, whose stronger fortifications effectively cover this front. The relation of these two camps, considered below, suggests that the marching-camp faced southwards, a point upon which the arrangement of the gates permits no conclusive decision.

The semi-permanent camp (pl. xx) is much smaller than either marching-camp, measuring 567 by 496 feet over the crests of its ramparts. It occupies a fine position on the crown of the spur, and the only disadvantage, which it shares with the south marching-camp, is a steep fall to southward. The setting-out of the work is not rectangular, nor are the sides set out in one straight line. Either the calculations were unusually careless, or the builders were trying to suit the orientation of both marching-camps. Again, the radius of the angles varies: the north-east and

¹⁷ *De mun. castrorum*, 50, *sufficit latum pedes viii, altum pedes vi.*

south-west angles have a radius of 50 feet, the north-west angle of 40 feet and the south-east angle of 30 feet, over rampart-crests.

The defences (fig. 1, pl. XXI) are remarkably imposing. The great ditch is 10 feet wide at the lips, by 4 feet 4 inches deep, and is interrupted only by bold causeways of undisturbed subsoil at the four gates. Not all the upcast from the ditch has been used in the rampart, for some of it is seen to be spread in a low mound on the glacis. Even without using all the available material, the rampart seems to have given its builders trouble, because of the instability of the rock upcast. In order to contain it, a large turf kerb is used at the front, while the whole of the back slope is capped in turf; and sods are also laid across the middle of the mound in a thin band. No doubt the builders would have preferred a timber framing, as at Cawthorn,¹⁸ had good trees been available: but Dr. Raistrick's pollen-analyses, both here (see appendix 1) and at High Rochester,¹⁹ tell us that the Cheviot was in Roman times as bare of trees as to-day. The rampart therefore was a mere breastwork, 12 feet wide, and 3 feet 3 inches high.

There are four gateways, the east 30 feet wide and the rest 20 feet. All have internal *claviculae*. The west gate has also a traverse, 37 feet in front of its opening. At the north gate the traverse-mound is placed exceptionally far forward, to cover the ditch of the north marching-camp, no less than 73 feet away. Medieval dyking at the south gate, and Roman works at the east gate, prevent us from seeing whether traverses were provided there. The planning of the gates leaves no doubt as to the disposition of the camp. Three-fifths of the area lie to the west behind the north and south gates. The camp therefore faced eastwards, and the fact that the east gate was the *porta praetoria* explains its larger size. Access to this gate, however, is now hindered by the north-west angle of the

¹⁸ *Arch. Journ.* lxxxix, 28.

¹⁹ *Arch. Ael.*⁴ xiii, 197.

permanent fortlet, whose triple ditches follow an undeviating curve less than 30 feet away (see pl. xx).

There are evident signs that just as the defences of the semi-permanent camp are stronger than those of the marching-camps, so its occupation was longer; thus according with the scale of the defences, and justifying the name which has been given to it. The back of the rampart has been strengthened on the north-west side with rounded platforms, occurring at 60 feet west of the north gate, and at a point midway between there and the north-west angle. Since the rampart was not a high one, these can hardly be *ascensus*: they are more likely to be *ballistaria*, as at Cawthorn.²⁰ In other respects also analogies are to be found between Cawthorn and Chew Green. Behind and parallel with the west rampart, a solidly laid 18-foot road was uncovered at two points. Its line is marked upon the surface by a low mound; and similar mounds betray main streets, from the west gate eastwards and between the north and south gates. Numerous rectangular and round pits also occur within the area. Two of these, members of a group of three bordering the west to east road, were found to be deeply cut in the rock, the rectangular pit being 6 feet square, with a 3-foot square entrance at the back, exactly in the style of the Cawthorn²¹ dug-outs. The round pit was 5 feet 6 inches in diameter. Both Cawthorn and Chew Green are bleak, inhospitable sites, and the rectangular pits on each doubtless served the same purpose, as officers' shelters. Such preparations indicate a stay of some duration, but they are completely different from those associated with permanent residence.

The relation of the three camps so far described may now be considered. As already shown, the north marching-camp is later than the south marching-camp; the ditch of the former cuts the rampart of the latter at their north-east junction. The semi-permanent camp also follows the south

²⁰ *Arch. Journ.* lxxxix, pls. xii, xx; p. 57, fig. 11.

²¹ *Arch. Journ.* lxxxix, 66, fig. 17.

marching-camp. The traverse at its west gate still blocks, as in Roman times, the west gate of the marching-camp. The *clavicula* of the marching-camp, on the other hand, has been demolished to allow free access to the semi-permanent camp. Finally, the upcast mound from the ditch of the semi-permanent camp increasingly over-rides the rampart of the marching-camp between this gate and the south-west angle of the semi-permanent work. The relation between the two works is thus defined at three points.

The relation of the north marching-camp and semi-permanent camp, which both follow the south marching-camp, is defined by two further points (pl. xx). The south gate of the north marching-camp has no traverse, and is covered by the defences of the semi-permanent camp: while the north gate of the semi-permanent camp exhibits a traverse-mound placed exceptionally far north, in order to lie on the outer lip of the marching-camp's ditch. There can thus be no doubt that the marching-camp was already there when the defences of the semi-permanent work were constructed. It is, on the other hand, equally certain that the builders of the marching-camp make allowance for the presence of the semi-permanent work. The two works were evidently constructed in close connexion with one another, and this leaves no doubt as to their order. The constructors of the marching-camp came there to build the semi-permanent work, reserving for it the better site. Such double entrenchments are not unknown. At Cawthorn²² in Yorkshire, Roman troops twice lived in one camp and built another hard by. At Gellygaer²³ in South Wales, adjacent works are explained in the same way. A similar arrangement is shown in one of the typical scenes on Trajan's Column.²⁴

²² *Arch. Journ.* lxxxix, 21, fig. 3; also p. 75.

²³ Ward, *Roman fort at Gellygaer*, 1903, plan: Collingwood, *Archæology of Roman Britain*, fig. 6.

²⁴ Cichorius, *Die Reliefs der Traianssäule*, scenes xv-xvii; cf. Tacitus, *Ann.* xxii, 38, *praefectum castrorum et legionarias cohortes extruendis apud Silures praesidiis relictas*.

The permanent fortlet (pl. xx) is a little work, about 215 feet square over the centres of its ramparts. Its builders have chosen the best position available, on the crown of the spur, just west of Dere Street. The finished work is beautifully symmetrical, but its making must have given much trouble, for at this point the hard Silurian green slate comes to the surface. Thus the ditch-system, except the south side, had to be cut in solid rock; and there were three ditches (pl. xxi), separated by two narrow mid-ribs about 4 feet wide. There was great difficulty in cutting satisfactory profiles owing to the almost vertical bedding of the strata, and the ditches as cut tend to be basin-shaped rather than V-shaped. The outermost ditch is 14 feet 6 inches wide by 3 feet 8 inches deep; the middle ditch is 10 feet 6 inches wide by 3 feet 10 inches deep; the inner ditch is 9 feet 9 inches wide by 3 feet 4 inches deep. The rocky upcast is arranged in a bold sharp mound outside the outer ditch, except on the west side adjoining the labour-camp, where it is carefully levelled. The triple ditch-system did not continue round the whole circuit, as usually supposed. At the south-east angle the ditches close in upon one another, and excavation shows them to merge, continuing along the south side as one ditch only, of which the course is invisible. This side is covered by the south enclosure and therefore demands less defence. At the south-west angle the treatment of the ditches is not clear. The triple ditches cease, and must have merged with the double ditches of the southern enclosure. An 18-foot rampart lay behind the ditches and an 8-foot berm. The material composing it was not, however, homogeneous. That which was used in the core, at the base of the rampart, was of dense black colour, and was linked by a thin spread of the same material with the black filling of an earlier rock-cut ditch behind the rampart: and Dr. Raistrick's analysis shows this to be a mass of heath-covered turf, of which the most heathery portion was used in the ditch, while the lower layer, from immediately above

the subsoil, was used in the rampart-core (see appendix I, samples 1, 2). Even beyond the black core the material was by no means uniform. Blocks of turf, associated with clear vegetable-lines, were combined with clods of sticky clay which had clearly been cut nearer the rock-surface. The result was nevertheless a strong rampart, which stands up very boldly on the site to-day, though its regularity in relation to the ditches is considerably obscured by the post-Roman boundary-bank which crowns it.

A single gateway at the east side gave access from Dere Street, and no attempt was made to examine its structure. On the south side, a gap in the rampart raises the suspicion that there may have been a gateway there, providing an entrance to the wagon-park. But a trial-trench revealed both the standing turf of a rampart and the fact that the ditch was uninterrupted. It may therefore be accepted that the east gate was in fact the only entrance. The triple ditches are here interrupted and return on each side of the entrance, as at Lyne.²⁵

Within the area trial-trenches revealed a single well-defined occupation-layer, containing burnt wood and covered in places with wattle-and-daub: much broken rubble also lay about. Bearing in mind the local absence of suitable stone for squared masonry and the difficulty of founding timbers in the rock, it will be easy to imagine that the buildings had been half-timbered structures, set on rubble sills. At one point a small fragment of clay-and-stone pitching was noted without exploring its area: for our trial-trenches were intended to prove the presence of buildings rather than their plan. Relics were few but distinctive. A fragment of a small Samian cup, of Dragen-dorff's shape 33, in second-century style, was associated with the burnt timber, and covered by a layer of wattle-and-daub. The side of a coarse black platter, the slightly carinated base of a second, a fragment of cooking-pot with

²⁵ *Proc. Soc. Ant. Scot.*, xxv, 174, fig. 11.

lattice decoration neither close nor wide, and a worn Samian base of Dragendorff's shape 31, complete the impression of a single Antonine occupation; while habitation lasting well on into the century is attested by a fragmentary bowl of Dragendorff's shape 44, somewhat uncommon in the north, but well known, for example, in the Newstead²⁶ collection. This last-named piece was found in the inner south enclosure, behind its south rampart. One piece of cooking-pot, in hard grey fabric with softer orange-coloured inner surface, seemed to speak of an earlier occupation and is considered below.

The inner and outer south enclosures (pl. xx) have long provided one of the most puzzling features of the complicated site, partly because their outlines are obscured by the medieval boundary-banks that cover them. The inner enclosure is a right-lined quadrangle, attached to the south side of the permanent fortlet. Its irregular plan is accounted for by the steep slope on which it is set. Its defences consist of a single rampart of turf, 11 feet wide, with almost vertical back, standing to the height of over a foot; and the rampart in turn is fronted by a 15-foot berm and two ditches, the inner 15 feet wide, the outer a little larger. These defences turn the south-west angle in a bold curve round, and the outer ditch is joined by the single ditch of the second enclosure. At the south-east angle a similar curve is followed, the inner ditch being greatly obscured by a medieval bank. The ditch of the second enclosure does not here join the inner system; a gap is left which forms the sole entrance to the second work. On the east front a third ditch is added, and terminates at a gap between this triple ditch-system and that of the permanent fortlet. This gap forms the entrance to the inner enclosure. At the north-west angle, the arrangement is less clear. The double ditch of the enclosure has somehow to make contact with the triple ditches

²⁶ *A Roman frontier post*, 198, pl. XL, no. 20.

of the fortlet, in a manner not now plain. The broken lines on the plan seem the most obvious suggestion, but must not be taken as definitive.

The second enclosure (pl. xx) is a simple appendage to the south end of the first. It has a well-laid turf rampart (see appendix 1, sample '3), 9 feet 6 inches thick, and a 17-foot ditch, 5 feet 7 inches deep, of V-shaped section. The rampart stops at the edge of the ditch-system of the first enclosure at the north-west angle; it has already been noted that the gap left at the north-east angle forms the only entrance.

The missing details at the north-west angle of the first enclosure need not hinder an interpretation of the whole complex, whose plan (pl. xx) exhibits some striking features. It is evident that the enclosures were not only independent of one another, but also entirely independent of the fortlet, if sheltered by it. This self-sufficiency is not surprising. So small a post in so bleak a spot was unlikely to attract dependents living in annexes bigger than itself; nor could its little garrison be expected to defend an extensive circuit from attack. To explain the enclosures, it is here necessary to look for a factor outside the immediate requirements of the garrison; and the nearest and most important external factor is undoubtedly the never-ceasing yet irregular stream of traffic which Dere Street must have carried, and towards which the entrances face. The design of the enclosures is at once explained if they are considered as entrenched camping-grounds or wagon-parks at the service of any passing convoy that might be benighted at the difficult Coquet inclines. A convoy was responsible for its own safety: and the size of the enclosures has relation to the volume of traffic, one enclosure being adequate for normal occasions, while the second offered accommodation in times of unusual pressure, or when two convoys met and encamped together. The need for a resting-place and a little garrison here is also explained by the relation of these factors to the nature of

the terrain. The horse-drawn traffic of Dere Street was here confronted by the steepest inclines in its whole course. Not only would rest be required at this stage, but the Roman economy²⁷ made provision for an extra supply of draught-animals for bad conditions, in order to expedite official traffic. Modern locomotive engines have virtually overcome such difficulties; yet all but the youngest generation will recall the engine-sheds at Tebay or Beattock Summit for dealing with the heavy traffic on the steep inclines of Shap and Beattock. In the fortlet at Chew Green may be recognized the equivalent provision of the only administration which ever previously organized traffic in these islands. The post cannot have been an enviable one, and it would be interesting to know how the service was rendered tolerable at all. An obvious guess would be that the little garrison was periodically relieved, and perhaps entirely controlled, from the fort of High Rochester, six miles away to the south.

The earlier fortlet. It was soon to appear that the need for such a post as has been described had impressed itself upon an earlier age than the Antonine. The triple-ditched fortlet covers the demolished remains of an earlier fortlet (pl. xx), placed at a different angle. The first clue to its presence was a rock-cut V-shaped ditch (pl. xxi), and 5 feet 6 inches deep by 8 feet 8 inches wide, situated 4 feet behind the west rampart of the permanent fortlet. As already noted, the ditch had been filled with dense black peaty material, including much heath, which was also spread outside it and used as the core of the later rampart (see appendix 1, samples 2, 3). The filling had been covered with a coating of stones and clay; but it had contracted much in decaying, and a considerable depression had therefore developed on the site of the buried ditch. Owing to this, the line of the ditch can be recognized turning behind the north-west angle of the later fortlet and running

²⁷ *Cod. Theod.*, viii, 5, 8, *octo mularum iungantur ad redam aestivo videlicet tempore, hiemali decem.*

behind the rampart all along the northern front. On the east and south sides it is lost to view.

The outline of the work thus discovered was verified by trenches on the north side and at the north-east angle; also on the south, where it is less closely in contact with the later work, but lies further north, and is closely followed by the boundary-dyke of the medieval enclosure. When the lines are plotted, the result (pl. xx) is a small oblong post, about 170 feet by 130 feet over its ramparts; and it may be assumed that the entrance was placed centrally in the east side. The rampart, though now entirely demolished, was not a small one; its material not only filled the ditch, but served to form a large part of the core of the later rampart.

The dating of this earthwork follows in part from its position. It is natural to assume that a permanent work, buried below an Antonine fortlet, must belong to the earlier occupation of Dere Street, initiated by Agricola; and this assumption wins strong support from the occurrence on the site of a typically Flavian sherd of hard grey ware with orange-coloured inner surface.

Again, although its form is simpler than that of the later fortlet, its function was doubtless the same. It is, then, also interesting to observe that this little post does not appear to have been the only one of its kind on Dere Street. South of Riding Mill, where the steep incline of Whittonstall calls for a reinforcement of power, Horsley long ago noted²⁸ a similar work, at the turn in the road south of Apperley Dene. Since his day, the plough has obliterated its sharper features: but the ditch and the boldly swelling mound of the rampart are still visible, defining an earthwork about 100 feet square over the rampart-crests, with a single gateway in the side nearest the street. The simple form of the work suggests that it is best compared with the earlier fortlet at Chew Green rather

²⁸ *Britannia Romana*, 398: MacLauchlan, *Memoir on a survey of Watling Street*, 18.

than with the later; but it is the correspondence in purpose rather than in date that is to be stressed here. Another striking analogy is the little post²⁹ of Castleshaw II, on the important road between Chester and York.

The order of the three temporary works on the site has already been established, and it remains to define their relation to the two permanent fortlets. The Flavian sherd found within the earlier fortlet shows it to be one of the earliest structures on the site, while its position connects it closely with the south marching-camp, to which the first place is given in the sequence of temporary works. Thus, both works can be placed early; and, although our evidence does not entitle us to go further, it would be natural to assume that the temporary works came first and the permanent fortlet second. The south marching-camp is then followed by the north marching-camp, whose occupants built a labour-camp, to house a small force engaged for some time upon structural work. The task in question may have been road-making or bridge-building; but the size and concentration of the force suggests something more specialized. It is now time to take into account the peculiar relation between the later fortlet and the labour-camp, as revealed by the cross-section (pl. XXI) through their defences. The upcast from the rock-cut ditches of the fortlet is usually disposed in a bold narrow mound just beyond the outermost ditch. On the west side, where the two works approach one another, this practice is not followed. The upcast is there arranged in a carefully spread level mound, covering the upcast mound of the labour-camp and providing flat ground just outside it. This is best explained by assuming that the labour-camp,

²⁹ For the definition of this site, see *Lancashire and Cheshire Antiquarian Society Trans.*, xl, 154-62; also *Huddersfield in Roman Times*, 49, fig. 29. The little fortlet at Llanfaircaereinion, Montgomeryshire, is worth recalling. It measures about 120 by 144 feet over its rampart-crests, and has produced Samian ware and flue-tiles. A piece of Trajanic Samian ware is figured. See *Anc. Mon. Comm. Inventory, Montgomeryshire*, p. 83, no. 419, fig. 26a.

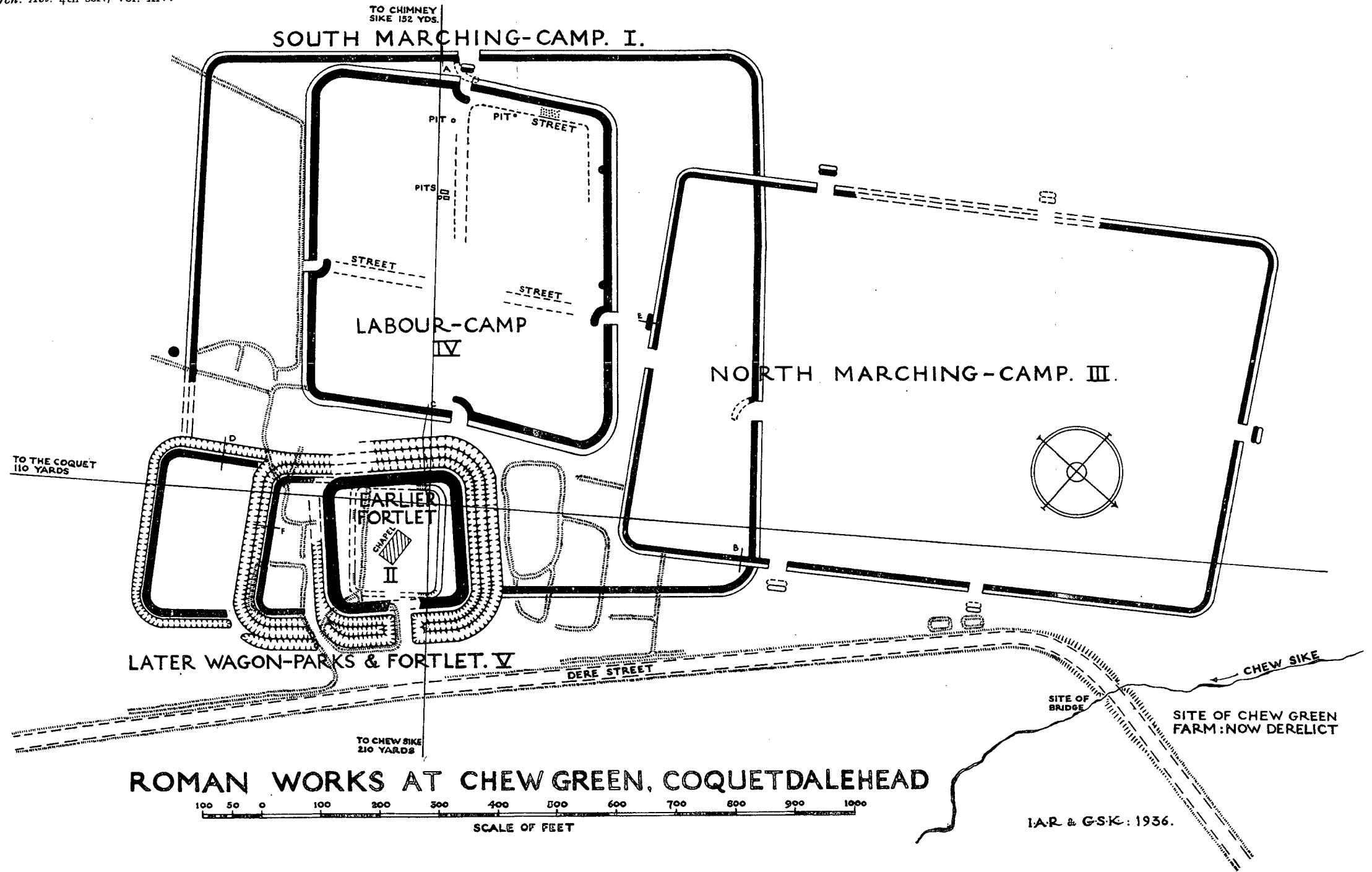
though built first, was still in use, and that the ground immediately outside it had to be kept level for traffic. The connexion between the labour-camp and the fortlet would then be as close as that between the north marching-camp and the labour-camp. All three works would belong to the same sequence, representing the secondary occupation of the site. The date of this operation is given by the pottery from the fortlet, which is distinctively Antonine. Thus, in both the Antonine and Flavian periods, the site is occupied by temporary and permanent works complementary to one another. When this phase was over, the history of the site came to an end. There is no reason to suppose a third-century occupation, still less the fourth-century work so strongly attested at High Rochester. The fact is not without its bearing upon Roman activity in the Cheviots in those later times. During the third century, the *exploratores Bremenienses* from High Rochester must at least have been using the road for their patrol-work and intelligence-services among the frontier tribes. Merchants also must have passed northwards in no small numbers. But these men took their lives in their own hands. The official traffic of couriers and administrators, of stores and pay-rolls, for whose expedition the road and its convoy-posts had been constructed, had now entirely ceased. The engineers of the Roman government had no further interest in Chew Green as an occupied site.

APPENDIX I.

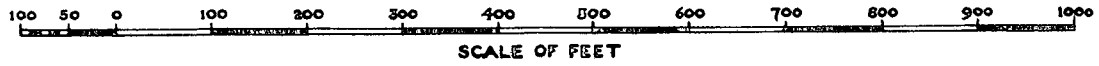
Report upon geological samples, by A. Raistrick, M.A., Ph.D.

1. Material from the earlier fortlet's west ditch.

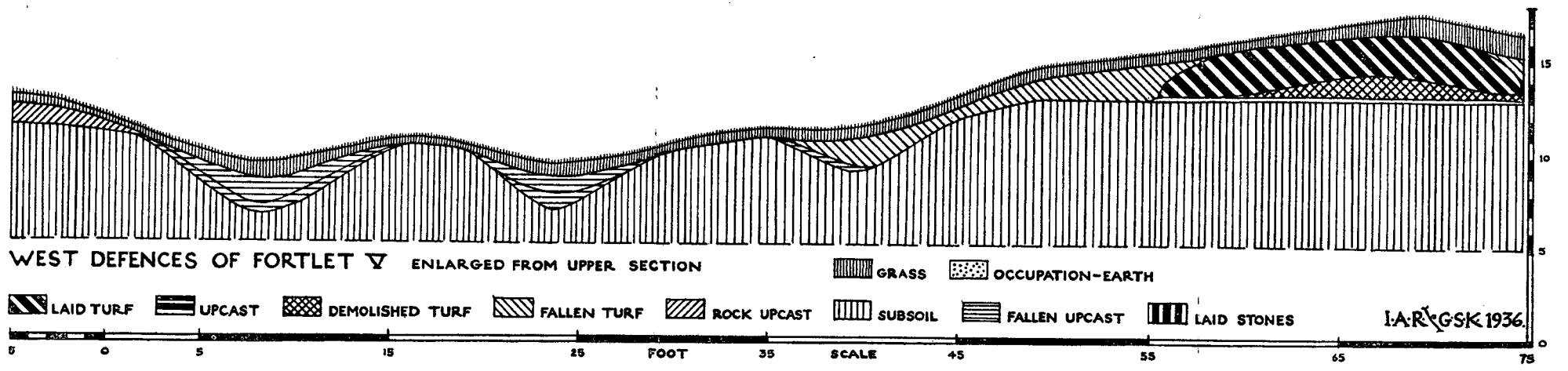
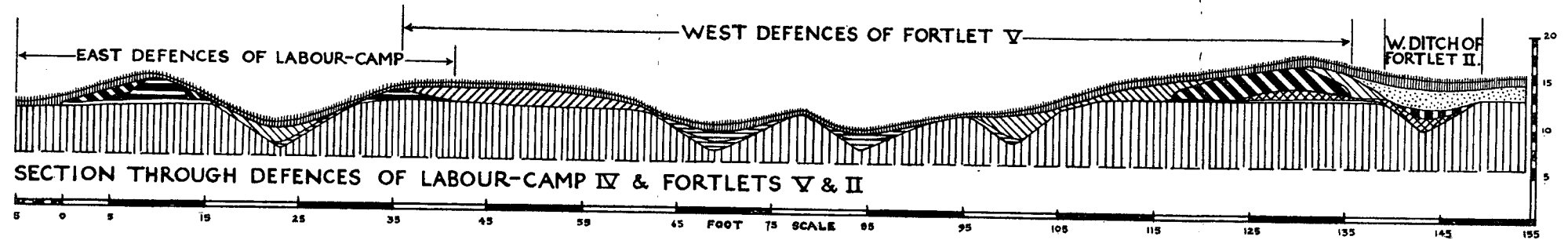
A good black peat, with practically no silt content. Rootlets and numerous stems of heather are present all through the mass. The basis is pure-grained partly humified peat, with the broken stem material making a felt all through it, suggesting heather or brushwood filling of the ditch.



ROMAN WORKS AT CHEW GREEN, COQUETDALEHEAD



I.A.R. & G.S.K.: 1936.



CHEW GREEN : SECTIONS OF DEFENCES.

Analysis for pollen content gives the following qualitative results:

HEATHS, or ericoids, in extraordinary abundance.

GRASS SPORES, few.

HAZEL, very scarce.

2. Black material in core of rampart of later fortlet, continuous with the mass represented by sample 1.

The material is very earthy turf, with a large proportion of fragmentary rock material, exhibiting sharp angular cleavage. The main body contains a little clay, very little or no silt, and abundant gravelly soil. It is heavily leached, and there is iron "pan" present. It has all the characteristics of a heath soil of rather stony type.

Pollen-analysis:

HEATHS, or ericoids, most abundant.

GRASS SPORES, present.

HAZEL, scarce.

BIRCH, one grain.

3. Turf from west rampart of south annexe.

This material is fine rubbly soil, strongly leached, exhibiting small patches of iron pan and of peaty material. There are small angular fragments of rock, namely, Silurian green slate and grit. There is no silt fraction.

Pollen-analysis: HEATHS, or ericoids, common. Nothing else noted.

All three samples give the same picture of dominant heather moor, with a little grass or brushwood, growing upon poor rubbly clay soil.

APPENDIX II.

Report upon fragments of medieval pottery from Chew Green by John Charlton.

Most of the eleven fragments submitted to me are from glazed pitchers, and may be roughly bracketed between the dates A.D. 1250 and 1450. As befits their site, they resemble other medieval pottery from the Border and neighbourhood, though most of them were probably made to north of it.

Apparently the earliest piece is a rim fragment of dirty buff ware, with a smooth texture despite an admixture of particles of grit. It is unusual in having traces of thin brown paint or slip on

its exterior. The rim-section is of a type which persisted for a century or more, and can be matched at several sites; for example, Wigtown in Scotland, a thirteenth-century site near Wetherby in England, and further afield at Dyserth castle, Wales, occupied in A.D. 1243-63. In addition there may be noted a pot with similar rim-section from Pennycuik, which contained early fourteenth-century coins and belongs to the so-called sepulchral class, having been pierced in several places to allow its use as a kind of incense-cup. The Chew Green sherd is probably of the thirteenth century.

Three pieces probably belong to the first half of the fourteenth century. These are a rim-fragment with brown surface, green glaze and traces of a handle, typical of the tall pitcher of the period; and two fragments of the sides of similar vessels, with portions of handles.

Two small glazed sherds belong probably to the middle of the fourteenth century, one of them exhibiting the slight corrugations common in Scottish wares. Another sherd of the same type would appear to be a little later in date, while its smooth grey fabric and rather yellowish-green glaze suggest a Northumbrian rather than a Scottish origin.

A final group may be placed in the late fourteenth or fifteenth century. Two of these are handles of circular section, the first a large one from a bulbous pitcher, the second probably a smaller edition of the same thing, but just possibly one of several ornamental handles from a large pitcher. The third fragment is part of the side and rim of a small pitcher.

The eleventh fragment is difficult to date and identify. It seems to be part of a candle-stick or oil-lamp, and is probably early rather than late-medieval.

The sherds themselves were surface finds, mostly in the vicinity of the chapel and garths which occupy or obliterate the later fortlet. They had been deposited in the position where they were found by agricultural operations, and no importance can attach to their exact find-spot, which is not therefore here recorded. They represented sherds strewn about, which nevertheless give us a horizon for the medieval occupation according remarkably well with the literary sources, quoted above (see p. 131).