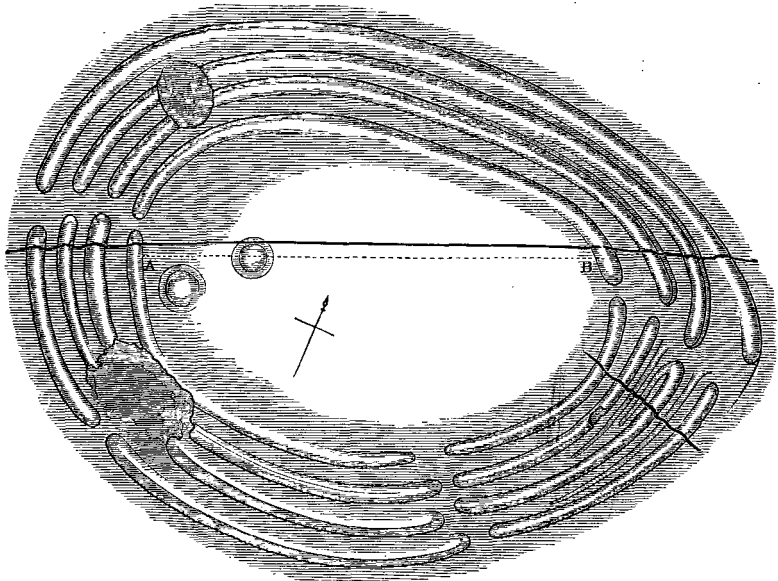


## II.

NOTICE OF A CAMP ON THE MIDHILL-HEAD, ON THE ESTATE OF BORTHWICK HALL, IN THE PARISH OF HERIOT, MIDLOTHIAN, THE PROPERTY OF D. J. MACFIE, Esq. By W. GALLOWAY, Esq., ARCHITECT, CORR. MEM. S.A. SCOT.

The Midhill is so named from the position it occupies in the range of elevated ground, bounding on the south the lower course of the Heriot, previous to its entering the more expansive vale where flows the infant Gala. This elevated ground forming an eastern outlier of the Moorfoots, covers an area of about 3 miles in length by half a mile in breadth. At



Scale 0 50 100 150 200 250 300 Feet

Ground Plan of Camp on Midhill-Head.

its western extremity it attains in the Dod-law, an elevation of 1550 feet above the sea-level, and after a depression of over 300 feet rises again in

the Midhill to a height of about 1300 feet,<sup>1</sup> and from thence rapidly declines eastward, until lost in the valley of the Gala.

The camp forming the immediate subject of notice occupies the entire summit of the Midhill, its outline being that of an irregular oval, with the major axis east and west. This form is directly due to the natural conformation of the hill, which elongated in the general direction of the range of which it forms a component part, rapidly declines on the north and south, toward the deep lateral valleys where flow the Heriot, and its affluent the Corsehope Burn. This point is specially illustrated by the longitudinal and transverse sections through the camp shown on the plan. Taking as our data the summit-level, and the extreme limit of the entrenchments in each direction respectively, it will be found that toward the east and west, there is no appreciable difference in the gradients, the fall either way being at the rate of 1 foot in 29, while on the north within the same limits, the fall is 1 foot in 7, and on the south 1 foot in 9. The declination of the ground on the north is thus more than four times, and on the south more than three times as great as it is toward the east and west.<sup>2</sup>

This strict adherence to the natural formation of the ground, combined in several points with a careful adaptation of its special features, clearly indicates that to whomsoever, or to whatever period the origin of the camp may be attributed, beyond the necessity of enclosing a given area on a selected site, with fortified lines, its constructors were guided by no more formal or preconceived principles of castrametation.

<sup>1</sup> In the Ordnance Survey Maps of Midlothian, the Midhill is marked as the site of a trigonometrical station, but the total height is not stated. There is, however, a contour line given at 1250 feet, and from the position it occupies in relation to the camp, the summit level cannot be much under the figure stated.

<sup>2</sup> The 1250 feet contour line describes, of course, an oval of much more elongated form than the camp, the dimensions being 2150 feet from east to west, by 850 feet from north to south, the length being thus fully two and a half times greater than the breadth. This discrepancy between the outlines of the two ovals leads to a considerable deviation in point of horizontality in the entrenching lines. Thus, while the western crest is only 1 foot 11 inches, and the eastern crest 5 feet 7 inches, below the summit level, the northern crest of the inner line, is 6 feet 9 inches, and the southern crest 13 feet below it.

The outline of the camp and its disposition on the summit of the hill has been accurately determined by triangulation at 50 feet chain lengths, on a central line carried along the summit-level. From the plan it will be seen that by this line the camp is divided into two unequal halves, so that while fully occupying whatever of level space on the north the top of the hill affords, from the more favourable lie of the ground the area of the camp trends chiefly toward the south, or rather the south-east.

The space thus enclosed from crest to crest of the inner line of entrenchments measures 410 feet in extreme length from east to west, and 284 feet from north to south, and over the extreme limit of the entrenchments, the dimensions are from east to west 656 feet, and from north to south 474 feet.

The entrenchments are four in number; and as the outline of the camp is determined to a great extent by the natural formation of the hill, so, within certain limits, these entrenchments exhibit the same characteristics as contour lines, contracting where the gradient is steep, expanding where it is more gentle. On the north accordingly, where we found the declination to be greatest, the distance from crest to crest of the outer and inner entrenchment ranges from 75 to 80 feet, and the entire space covered from 85 to 90 feet in breadth. On the south and west the distance from the outer to the inner crests ranges from 90 to 95 feet, and the total space from 100 to 106 feet. Toward the east, where from reasons to be afterwards mentioned, the expansion is quite exceptional, the extreme distance from the outer to the inner crests is 117 feet, and the total space covered over 130 feet.

The entrenchments are in general still very distinct, the greatest obliteration being on the north side or that facing Borthwick Hall. On the east side generally, and especially toward the north-east, the various entrenching lines are very sharp and well defined. At this point, indeed, the several escarpments attain their maximum height of from 4 to 5 feet, and exhibit the most perfect preservation. One noticeable feature is that at the base of the two central escarpments there runs a supplementary trench or slight cutting averaging from 3 to 4 feet in breadth, and from 1 foot to 18

inches in depth, so giving additional height to the escarpment. The remainder of the fosse, acting as a kind of banquette, is comparatively level, or with a gradual inclination toward the next outward crest. This formation gradually dies away into the obliterated lines on the north, and is a peculiarity to be observed only in this part of the entrenchments.

The various lines of entrenchment have been at several places more or less partially broken in upon for the purpose of quarrying stones, probably to aid in building the adjoining dykes ; but they are specially interrupted only at three points,—on the east, south, and west. Of these interruptions the most important is that toward the east, and from the peculiar manner in which the entrenchments themselves are arranged in relation to the several breaks, we may assume it to have formed the principal entrance to the camp.

Commencing with the inner line of entrenchment, there is a very distinct opening or break 9 feet in width, leading to an expansion of the intermediate space or fosse broadened out to at least double its usual width. This opening is covered directly in front by a prolongation of the second line of entrenchment, the break in which occurs more to the eastward than in the previous one. The intermediate space here is extremely contracted, and the opening is again covered by a prolongation of the third line of entrenchment, the break in which occurs still further to the east, the width, 13 feet, being rather greater than the first two. This break opens directly into a very considerable expansion of the fosse or space intermediate between the third and fourth entrenching lines. The opening in this case is not covered as previously by any prolongation, but directly fronts the break in the fourth entrenching line, which is of considerable width, or from 28 to 30 feet.

In this case, however, there is one peculiarity, viz., that the line of entrenchment itself is discontinuous, and if the lines on either side of the opening were prolonged, they would not meet but overlap. This peculiarity arises from the outermost entrenching line on the northeast being run out, so as not only to include a large expansion of the intermediate space or fosse, but also to overlap the corresponding line on the

east. Access could thus be obtained to the central area only by a very devious approach ; and the ingenious manner in which the various openings and lines are enfolded and overlapped, seem to me peculiarly to suggest a carefully-arranged system of defence. This idea is still further strengthened by an examination of the entrenchments on the southern side of what we have designated the principal approach to the camp. We here find that in the spaces between the three outer lines of entrenchment, there are intermediate or supplementary mounds, much smaller in their dimensions than the main lines, but forming, nevertheless, a marked and unmistakable feature in this part of the earthworks.

From the plan it will be noticed that in the space or fosse between the two outer entrenchments, there is such an intermediate mound merging at its northern extremity in the elevated approach leading to the camp, and after running on between the two entrenchments for about 170 feet, gradually loses itself in the ordinary level of the fosse. In the space between the second and third lines, there are two intermediate mounds, one of them nearly 150 feet in length, and the other about 60 feet, connected at its northern extremity with the entrenchment immediately in advance of it. Through the kindness of Mr Macfie, a cutting was made through this most interesting portion of the earthwork. The object of the cutting was to determine the exact outline of the undisturbed soil, which was easily distinguished from the comparatively thin layer of black mould forming the surface accumulation. It was found that this accumulation is pretty equable, inclining, however, to be thinner on the crests, and deeper in the hollows, in all their main features the entrenching lines and intermediate mounds presenting no change save in their outlines being sharper and more definite.

This series of mounds occurring only in the two outer fosses toward the south-east, and corresponding with the banquettes noticed in the same fosses on the north-east, both flanking to a considerable distance what we cannot but regard as having been the main approach to the camp form certainly a very striking and significant feature, and must in all probability have served a common purpose. I trust it is not trenching too far on the for

bidden ground of theory to suggest that, in the event of an attack being directed against this the main entrance to the camp, these mounds and banquettes were designed to give greater facility to the defenders in the discharge of missile weapons. We assume, of course, that the lines as we now see them formed the mere bases for a series of stockades occupying their crests, and rising to some height above them. In this case the advantage of an elevation to the defenders within the fosses is evident. But it may be asked, Why change the formation? Why have banquettes on the one side, and mounds on the other? To me this change seems entirely due to the varying gradients of the ground. To the north-east, where the fall is rapid, the steep slope required little more than to be scarped, to the south-east where the fall is much more gentle the entrenching lines required a more artificial formation.

The second point at which the lines of entrenchment are interrupted is on the south. We find here a break in the first line of about 25 feet width, and with very slight deviation, succeeding ones, respectively 9, 11, and 12 or 13 feet in width.

There is no such marked intricacy of arrangement as occurs in the approach just noticed. The deviation from a direct line is comparatively slight, and the only feature casting doubt on its modern formation is the discontinuity to a certain extent of one or two of the entrenching lines.

The late Provost Lawson, while proprietor of the estate, certainly did use this break in the lines as a means of crossing the hill. The carriage road formed by him, leading down towards New Corsehope, starts at this very point; but whether this was a mere adaptation to an old approach, or involved the cutting of a new one, I do not know.

The third interruption occurs on the west side, and in this case there is certainly no feature to interfere with the idea of its being entirely modern. It lies in the direct line of the principal approach by road to the camp from the west, and in connection with the road just mentioned was used by Provost Lawson as a carriage drive. These roads, and also the dry stone dyke fencing in the summit of the hill, are all of recent origin,

having been constructed by Provost Lawson, and form part of the improvements effected during his tenure of the estate.

I am also informed that, in company with the late Sir J. Y. Simpson, excavations were made by him within the area of the camp, but never, so far as I could learn, with any result in the way of discovery. Towards the western extremity there are two circular depressions as indicated on the plan ; but it is impossible to determine what they may have been.