

III.

THE WATER-SUPPLY OF THE ROMAN FORT AT LYNE.

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The Roman fort at Lyne occupies one of the most striking naturally defensive positions in Scotland. Indeed, the fact that it has yielded first-century pottery¹ inevitably calls to mind the reputation which Agricola won by his eye for *opportunitates locorum*. The choice is certainly not unworthy of the great general (fig. 1). The Lyne Water, protecting two sides of the plateau on which the fort stands, runs in the bottom of a valley over 100 feet deep, formed by glacial melt-water. The plateau itself is formed of hard compacted gravel and is almost completely separated from the hills which flank the valley by a marshy trough containing a prominent moraine. Connection with higher ground is provided by a narrow neck of land (fig. 1) projecting from the north-west corner of the plateau. In many respects the position is not unlike that of Fendoch, which stands² upon an isolated glacial hummock at the head of a dry valley; and in one particular there must have been a very striking resemblance. Both sites lie high above the water-table in their valleys, and impossibly deep well-digging would be required to reach any good supply. Accordingly, it might be expected that at Lyne, as at Fendoch, water would be brought into the fort by an aqueduct or underground pipe-line, thereby ensuring a constant supply of the vital commodity.

The war-time archæologist cannot dig in order to answer such a question, and in the peaceful valley of the Lyne Water no chance excavation, as for air-raid shelters, is likely to occur on the lonely plateau. But the fort was excavated by this Society in August 1901 (*Proceedings*, vol. xxxv. pp. 154-86), and the remains found were planned with the ability and precision so conspicuous in Scottish archæological work of the period. It is clear to-day, however, that the excavators were not altogether

¹ Macdonald, *Proc. Class. Assoc.*, xxix. 16.

² *Proc. Soc. Ant. Scot.*, lxxiii. 112, fig. 1.

successful in disentangling some of the more complicated details which they found; and, as Professor Collingwood observed,¹ it is evident that the complex is best explained by assuming that there were two forts, of

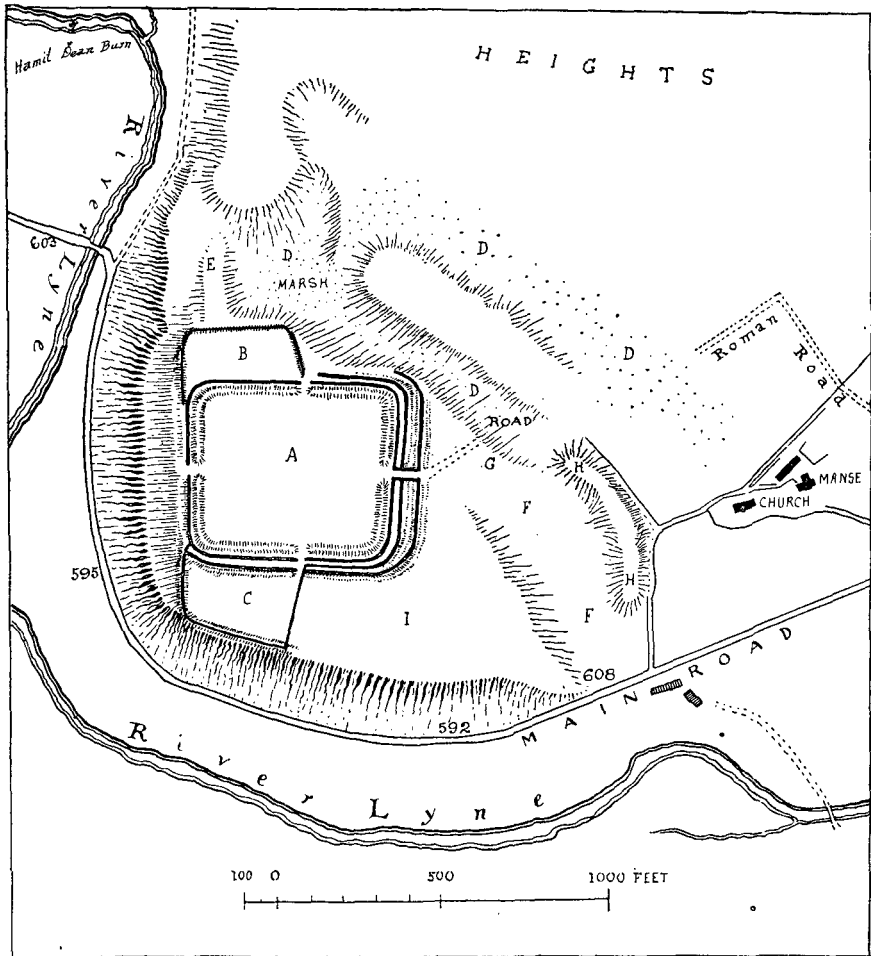


Fig. 1. Roman fort at Lyne, Peebleshire, general plan of site. The neck of land by which an aqueduct would most conveniently pass is marked as *E*.

Flavian and Antonine dates, planted almost one on top of the other. This point is worth considering further, but meanwhile we may return to the question of the water-supply. The record of the previous excavations (fig. 2) enables us to identify some of its features without delay. Immediately in front of the building correctly identified as the headquarters

¹ *Trans. Cumberland and Westmorland Antiq. Soc.*, series 2, xxxv. 284: Professor Collingwood has amplified the point there made in conversation with the writer.

LYNE ROMAN CAMP
PEEBLESHIRE

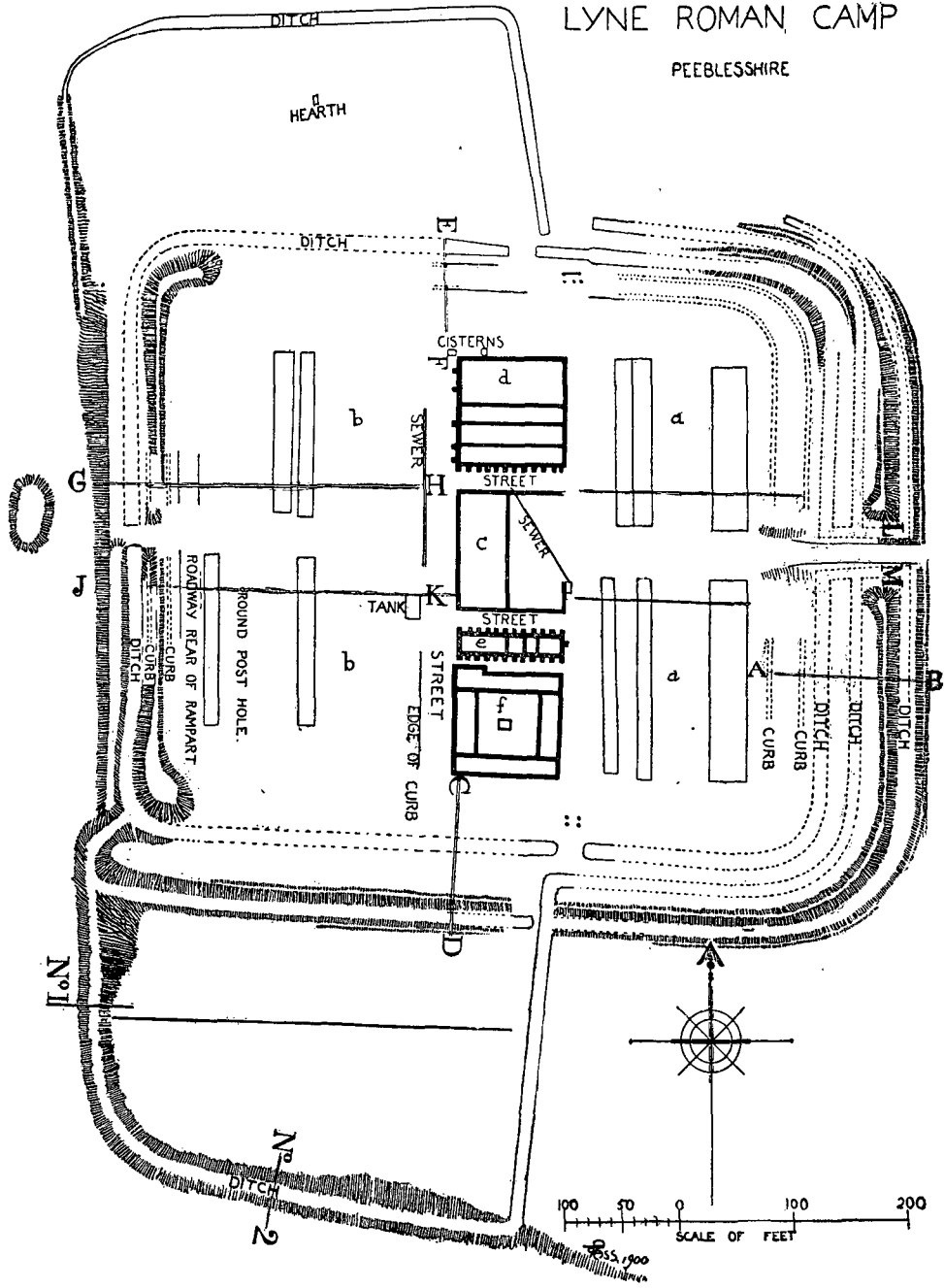


Fig. 2. Roman fort at Lyne, Peebleshire. Plan of fort showing tanks, cisterns and sewers, explicable as part of the water-supply.

the excavators found (*op. cit.*, 179) that a "small drain or sewer, close below the surface, crossed the forecourt obliquely, discharging into a rectangular 'cess-pool,' just outside the wall, in the *Via Principalis*." A little later, another tank behind the headquarters building is mentioned (*ibid.*, 182), and its arrangement is described as "a sewer which seems to have discharged into a tank 20 feet long, 12 feet wide, and at least 10 feet deep, cut in the hard gravel, the sides of which stood like a wall of concrete, after the filling was removed." By way of comment it may be observed at once that there is an evident hesitation on the part of the excavators when describing the function of the system: their definition halts between "drain" and "sewer" and they take the precaution of placing "cess-pool" in inverted commas, as indicating that they were not altogether happy about their identifications. To-day, we should have no hesitation in saying that although latrine-trenches and soak-pits were not unknown¹ to the Roman military engineer in temporary work, no such pits would ever be associated with the main front of the *principia*. On the contrary, we can turn to High Rochester² and to Fendoch³ for water-tanks in exactly this position, the Fendoch example being cut in gravel subsoil with vertical sides once encased in timber. There need be no doubt that the parallel is in fact very exact, and that we are dealing with a water-tank at Lyne. But whereas at Fendoch the tanks were fed by wooden pipe-lines of which only the trenches remained, the Lyne feed-channels were of stone. One passed obliquely across the *principia*, aiming for the junction of the *via quintana* with the *intervallum*. The second, supplying the much larger tank, is seen to be a conduit passing along the west side of the *via quintana*. There can be no doubt that we are here dealing with a system exactly comparable with that at Corbridge⁴ or at Birrens,⁵ where an aqueduct fed a number of water-basins at ground-level, into which men could dip buckets as if at a well. One more point may be observed. Both these sets of drains and tanks are associated with the *retentura* of the fort, and are fed from the direction of its north-west end. It is precisely at this point where the plateau is connected with the main system of hills by the narrow neck of land already mentioned, which provides a natural bridge to be used by the makers of the pipe-line. Springs are available on the hillside about a mile distant.

It is difficult to say whether the arrangements of which we have detected traces within the fort are all of one period. That portion which is associated with the *principia* looks as if it were coeval with the building and therefore presumably Antonine: but we can be much less certain as

¹ *Arch. Journal*, lxxxix. 68.

³ *Proc. Soc. Ant. Scot.*, lxxiii. 124.

⁵ *Proc. Soc. Ant. Scot.*, lxxii. 307.

² *Northumberland County History*, xv. 94.

⁴ *Archæologia Eliana*, series 4, xv. 253-4.

to the tank and conduit in the *via quintana*. There can be little doubt that in the *retentura* and *praetentura*, where the excavators found only timber buildings, the Flavian buildings were touched. In particular it will be observed that in the south-east end of the fort the building nearest the Antonine rampart seems to be much too near it, as if it were contemporary rather with the Flavian rampart farther out. If, then, Flavian buildings were reached, so may also have been disclosed part of the Flavian water-system. For the problem of bringing water to the site was as urgent in one age as the other, and nature dictates that it must always have been brought by the same narrow neck of land into the