

IV

Barcombe B, A Second Roman "Signal" Tower on Barcombe Hill

D. J. Woolliscroft, S. A. M. Swain and N. J. Lockett

AS PART of a programme of research into signalling on Hadrian's Wall, excavations were carried out on the suggested Roman "signal" tower, designated Barcombe B,¹ at Birkshaw on the western flank of Barcombe Hill, Northumberland (NY773657). The work was undertaken by student diggers, under the direction of the first writer, with the kind permission of Mr M. Robson, owner of the land.

Background

In 1986/7, survey work by the first writer² produced evidence for a comprehensive signalling system in the initial layout of Hadrian's Wall in which every milecastle and turret, on the Wall sector studied,³ was directly linked to one of the Stanegate installations to the rear, and longer range strategic communications linked up the Stanegate system itself. The survey also revealed, however, that once the main frontier forces moved up from the Stanegate to the Wall forts, this system appeared to break down. Local communications remained largely intact in the modified system, and most of the Wall forts could be linked together by relay stations, but there were no known installations able to link the central sector forts of Great Chesters, Housesteads and Vindolanda. This meant that the strategic, inter-fort signalling chain was broken at this point, which in turn could mean that the Wall itself would cease to perform as a single unified system under emergency conditions. As this situation was too dangerous to have been permitted by the system's designers, it was assumed that the apparent break was the result of a gap in our

knowledge and a search was instituted for a hitherto undiscovered installation which may have served to link the area together.

The one installation which could have provided communications between these forts was the long known tower on Barcombe Hill (Barcombe A), east of Vindolanda, but excavations have shown⁴ that this site may have been abandoned even before Hadrian's Wall was built, and can certainly not have remained in use for long thereafter. Nevertheless, the tower's position was ideal for the signalling needs of the area, and the search for a new tower was concentrated in its vicinity. During the course of this search, our attention was drawn to the site of Barcombe B by Mr R. E. Birley.

The Site

The site was initially dismissed as a possible candidate because of its position. It consists of a distinct mound c. 600 m to the south of Vindolanda, on the westernmost spur of Barcombe Hill (fig. 1) and occupies an area of flat ground at the top of the steep sided valley of the Chainley Burn, well below the summit of the hill. This means that although it has superb views to its south and west and a magnificent view of Vindolanda, it has a very limited view to the east and north east, so that from ground level its view towards Housesteads is completely blocked by the main bulk of Barcombe Hill. Furthermore, a resistivity survey of the site produced no signs of structure. Nevertheless, no preferable candidates came to light and experiments with an elevated camera showed that from the full height of an 8–10 m tower Housesteads would have been just visible from

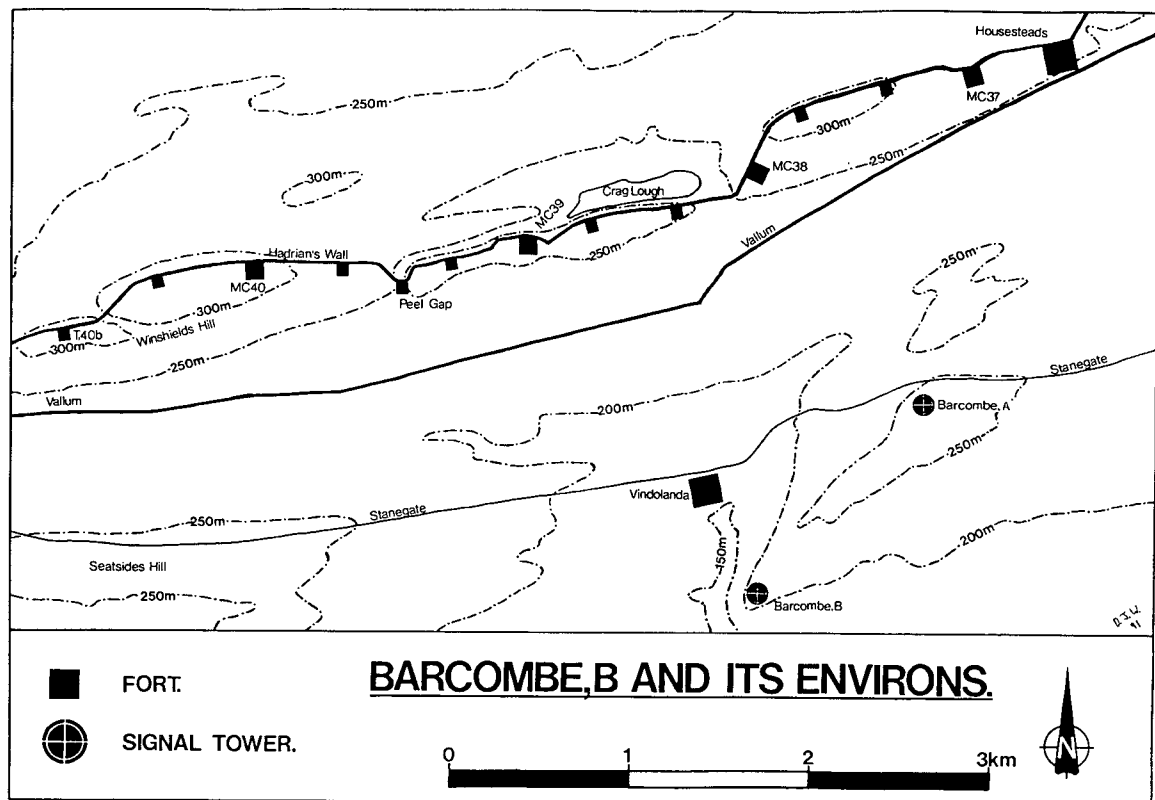


Fig. 1

the site, as would Wall turret T,40b on Winshields, which could have linked the site to Great Chesters, and thus complete the strategic link. Such a tower would also have improved local communications on the Wall because from full height it would have been intervisible with every milecastle and turret between Housesteads and T,40b, including the recently discovered extra turret at Peel Gap, which is not visible from Barcombe A. For this reason the site was thought worthy of mention in the first writer's report on the Wall's signalling system and of trial excavation.

The Excavations

To our considerable surprise, the mound, which was initially assumed to be a barrow, or

rubble mound, was found to be a natural outcrop. The bedrock lies directly under a thin layer of topsoil, only 6–15 cm deep, which would explain the poor resistivity results, and in places outcrops at the surface. Nevertheless, the site has been heavily ploughed, not least, according to the land owner, during the last War, and in places the hard bedrock is badly plough scarred. Only slight archaeological traces had survived this activity and their condition was poor.

In all, four trenches were dug on the site of which only two (T's 1 & 2) yielded evidence of structure (fig. 2). Trench 1 (4 m × 4.5 m) produced the very battered remains of stone wall foundations including an almost perfectly right angled corner. The foundations consisted of small, rough stones, set in clay, with larger, more regular stones on the faces. Preservation

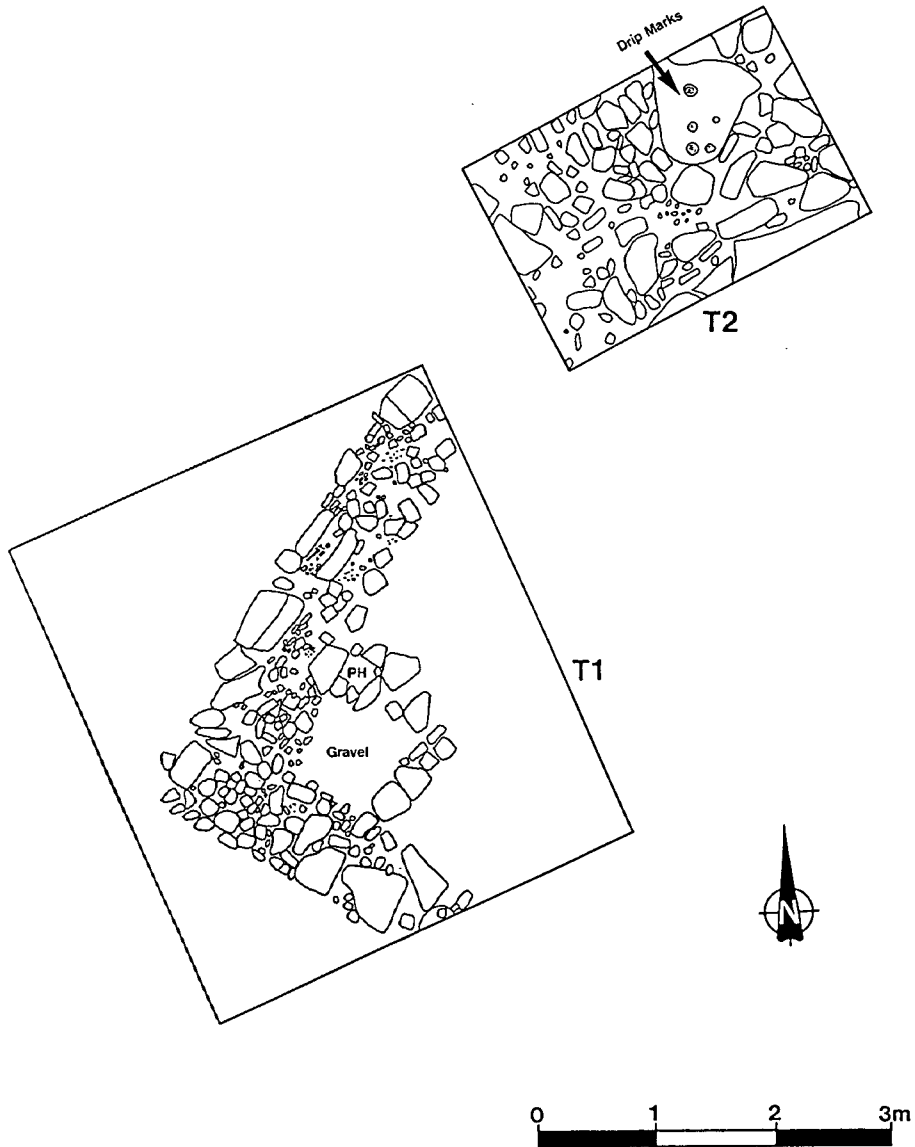


Fig. 2 *Barcombe B, as excavated*

was best at the corner and became increasingly tenuous towards the trench sides. On the few occasions where facers had survived on both sides of the wall, the foundations averaged 96 cm thick, identical to Wall turret T,45a, which was itself originally a free standing tow-

er. No traces of a foundation trench had survived the plough, but at the corner, what remained of the foundations were set in a locating slot in the bedrock c. 4 cm deep, to whose protection they almost certainly owed even this limited state of preservation. Con-

siderable quantities (several kg) of a badly weathered white mortar were found in association with this wall, along with a few badly degraded fragments of tile. The mortar, which was not used in the construction of the foundations, presumably came from the superstructure.

Inside the corner lay the remains of a platform consisting of a c. (85 cm)² area of fine pea gravel (particle size c. 1 cm), contained within a light wall, one stone thick, which appeared to be of one build with the foundations of the main wall. This internal wall had been distorted by plough action, but lay in a natural dip in the bedrock which had given it some slight protection, so that most of the bottom course survived. In all, the platform measures c. 1 m (e-w) × 1.19 m (n-s). At the NW corner of this platform, hard against the inside face of the main wall, lay a square, stone packed and bottomed post hole 29 cm (1 Roman foot) across, the bottom 11 cm of which were well preserved. Unfortunately the platform's NE corner had been totally destroyed by the plough and no trace remained of a second post hole, but it seems likely that the feature represents the usual internal ladder platform of a tower. No other internal details survived, only plough scarred bedrock.

The usual size for a free standing Roman tower in this area is 20'–21' (6.096 m–6.44 m) square and an attempt was made to locate a further corner of the structure. At the surveyed positions of the NE and SE corners the mound had been damaged by small scale quarrying, but a small trench, T2 (2 m × 3 m), was dug at the likely position of the NW corner. This revealed a jumble of stones, at the projected corner position, similar to those used in the construction of the foundations in T1, but none appeared to be in situ. They had simply been ploughed up against two raised projections of the bedrock. A fragment of a square sectioned, Roman glass bottle of late first or second century date was found amongst this rubble⁵ and mortar was again found in quantity, but no location slot could be seen in the badly plough scarred bedrock. One feature was noteworthy, however, for 30 cm outside the projected

course of the "tower's" north wall lay the larger of the two rocky projections already mentioned. The outcrop was heavily plough scarred, but its top surface still bore five substantial cup marks, obviously caused by water dripping onto it from a considerable height. One of these marks is 5 cm deep, in hard rock, so the water action must have continued over a prolonged period of time, and the formation of such clearly defined marks is far more consistent with water dripping from a fixed structure, such as the roof of a building, than from a more mobile source such as the branches of a tree. The plough scarring had damaged these marks, meaning that the ploughing took place after the water action had stopped, but this, is of little help as the final plough damage need be no later than the Second World War in date.

Trench 2 was later extended both to the north and south, but revealed only plough scarred bedrock, although a few more scattered stones and further quantities of mortar were found in the southern extension.

Trenches to the north and south of the tower's assumed dimensions found no sign of a surrounding ditch, but this need occasion no surprise as many of the free standing towers in the area lack a ditch, especially those such as T,45a which were built, like Barcombe B, on shallow soil and hard rock. No further datable finds were made.

Interpretation

The poor state of preservation of the remains makes interpretation difficult and sadly the shallow rock cut locating slot which helped protect the one surviving corner, did not occur elsewhere, so that it is doubtful whether further excavation would serve much purpose. The best that can be said is that nothing on the site is other than consistent with a Roman tower of standard dimensions, containing the usual internal ladder platform. The presence of Roman glass in context with the building would support this conclusion, as would the presence of tile fragments, because although these are too badly degraded to be dated, such is the

tradition of stone building in the area that only Roman and modern buildings can be expected to contain tile; and no building has existed on this site within the period of coverage of the Ordnance Survey. Certainly the thickness of the foundations and the quantity of mortar found associated with them suggest that they once carried a considerable superstructure.

Further evidence for a tower may be drawn from the orientation of the site, for the NW wall is oriented towards a true heading of 69° west and thus faces exactly towards Wall turret T,40b, whilst the projected NE wall would face to within 3° of Housesteads. T,40b is the only installation able to link Barcombe B with the fort of Great Chesters and occupies a superb signalling position on Winshields Hill at the western edge of the tower's field of vision. Interestingly, it is also the only site capable of linking Barcombe A with Haltwhistle Burn and was recently put forward by the first writer as a possible Stanegate period tower, later incorporated into the Wall⁶ in the manner of Pike Hill and T,45a.

Finally, the siting of a tower at Barcombe B requires comment, for it seems an unlikely choice when compared to the dominating position of Barcombe A. Certainly, Barcombe B would have had very little value in a purely Stanegate context, except perhaps as a south facing observation post for Vindolanda. But once the Wall forts were in operation, such a tower would have had a number of advantages over Barcombe A, despite the latter's more extensive field of view.

Communication towers serving the Wall-fort and Stanegate systems in this area had different operational requirements. The primary need of a Stanegate tower was for a good view east to link Vindolanda with its eastern neighbours. Vindolanda's own view east is completely blocked by Barcombe Hill, and the only position able to command such a view, while still retaining visual contact with the fort, is the site of Barcombe A on the hilltop itself. A Wall-fort period tower, on the other hand, needed no view east. Its needs were to reinforce Vindolanda's link with Great Chesters, via T,40b,⁷ to facilitate local communications

between the forts and Wall installations and, most importantly, to link Vindolanda with Housesteads. This gave such a tower greater flexibility of location, because Housesteads is intervisible with its own eastern neighbour at Carrawburgh and lies on higher ground, well to the north-east of Vindolanda, on a bearing not obscured by Barcombe Hill.⁸ Barcombe B, could, thus, be sited away from the hill top, and was free to exploit any advantages which alternative positions could present.

In a visual signalling system, there are great advantages in siting installations at low altitude. Indeed, contrary to popular belief, the obvious high points are not necessarily the best signalling positions, simply because, in poor weather, such sites are the first to disappear into low cloud. Barcombe B is actually set at the lowest altitude possible to fulfil its function and is also built on the furthest site possible from Hadrian's Wall. Had the tower been more than a few metres further south it would have lost contact with Housesteads even from its full height, yet as actually sited the installation's distance from the frontier line carried the dual advantage of acting as a safety feature, protecting an important relay site, and of greatly enhancing the tower's view south.⁹ The site is also much closer to Vindolanda than Barcombe A, which might be considered useful for safety and logistic, as well as signalling, reasons. Its lower position means that, unlike Barcombe A, its signals would not have been visible north of the Wall.¹⁰ Its view of the Wall installations under its supervision is actually superior to Barcombe A's, despite its lower position, and its inability to see any installation outside its immediate sphere of responsibility lessens the danger of it causing confusion in a moment of stress by inappropriately initiating or responding to signals outside its sector. In short, first impressions are misleading, for within the context of its particular operational needs, Barcombe B lies on a superb signalling position which has been skilfully chosen.

NOTES

¹D. J. Woolliscroft, *Arch Ael* (5), XVII (1989), Appendix 2, p. 17ff.

²Ibid. p. 5ff.

³Currently MC30 MC64.

⁴P. Woodfield, *Arch Ael* (4), (1966), p. 71ff and G. Jobey *Arch Ael* (4), (1969), p. 183ff. The excavations found only Flavian material. This, however, underlay a thick layer of clay and as it seems unlikely that such trouble would be taken to level a site which was to be abandoned, some later occupation may be inferred.

⁵The fragment is a corner sherd in dark green glass probably of Isings type 50, possibly 62 or 84.

See C. Isings, *Roman Glass From Dated Finds*, Groningen, 1957, p. 63ff, p. 81 and p. 100. See also D. Charlesworth, "Roman Glass in Northern Britain", *Arch Ael* (4), 37, (1959) Plate III.2. Our thanks to Frau B. Hoffmann (University of Freiburg) for her identification of this material.

⁶D. J. Woolliscroft, op. cit. nl, p. 6.

⁷Although the fort can actually see the turret itself.

⁸Vindolanda's low lying position still prevents the forts enjoying direct intervisibility.

⁹Barcombe A has no view south, whilst that of Barcombe B is superb.

¹⁰Although this may not be quite the advantage it first seems. See D. J. Woolliscroft, op. cit. nl, p. 9.