

II

Some Newly Identified Roman Temporary Camps in Northumberland and their Relation to the Devil's Causeway

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SUMMARY

Several new Roman temporary camps were recorded by air photography in Northumberland in the 1990s, including three sites on the line of the Devil's Causeway and another in the lower Tweed valley at Mindrum. Transcriptions of these sites are presented here for the first time, and their possible relationship to the Devil's Causeway is discussed.

INTRODUCTION

AERIAL RECONNAISSANCE IN THE TWO exceptionally dry summers of 1994 and 1995 led to the discovery of five certain or probable Roman temporary camps in Northumberland, none of which had been recorded previously. Three of these sites — at West Marlish, Hartburn, and Edlingham (fig. 1, nos. 1–3) — are located on or very close to the Devil's Causeway, the Roman road which branches off Dere Street to the N of Corbridge and then runs diagonally across country for 95 km to its assumed termination at Tweedmouth, on the S bank of the river Tweed. A fourth cropmarked site, at Mindrum, lies on the northern fringes of the Cheviot hills, in the lower Tweed valley, and 6 km to the S of Coldstream (fig. 1, no. 5). The last of these newly identified camps was discovered at Red House near Corbridge (NY 968 653), but because it falls within the orbit of the Hadrian's Wall mapping project currently being undertaken by English Heritage, and because it is geographically separate from the other sites, it will not be considered further here.

While certainly very welcome, the timing of these discoveries was a little unfortunate in that they came just as the long-awaited Royal Commission volume on 'Roman Camps in England' was going through the press. Although it was not possible to include detailed descriptions or plans of any of these sites in the final publication, brief descriptions of the camps at Mindrum and Red House, Corbridge, were noted in an Addendum to the main text (Welfare and Swan 1995, 181).

The purpose of this article is to present the air photographic evidence as it relates to the four first-named sites, three of which lie adjacent to the Devil's Causeway, and more speculatively, to another possible site at East Horton near Chatton (fig. 1, no. 4) that was recorded as a cropmark by Professor Kenneth St Joseph as long ago as 1968. Except in the case of East Horton, where the photographs lack sufficient control for mapping, plans have been drawn using AERIAL 5.29 software generously made available by Dr John Haigh of Bradford

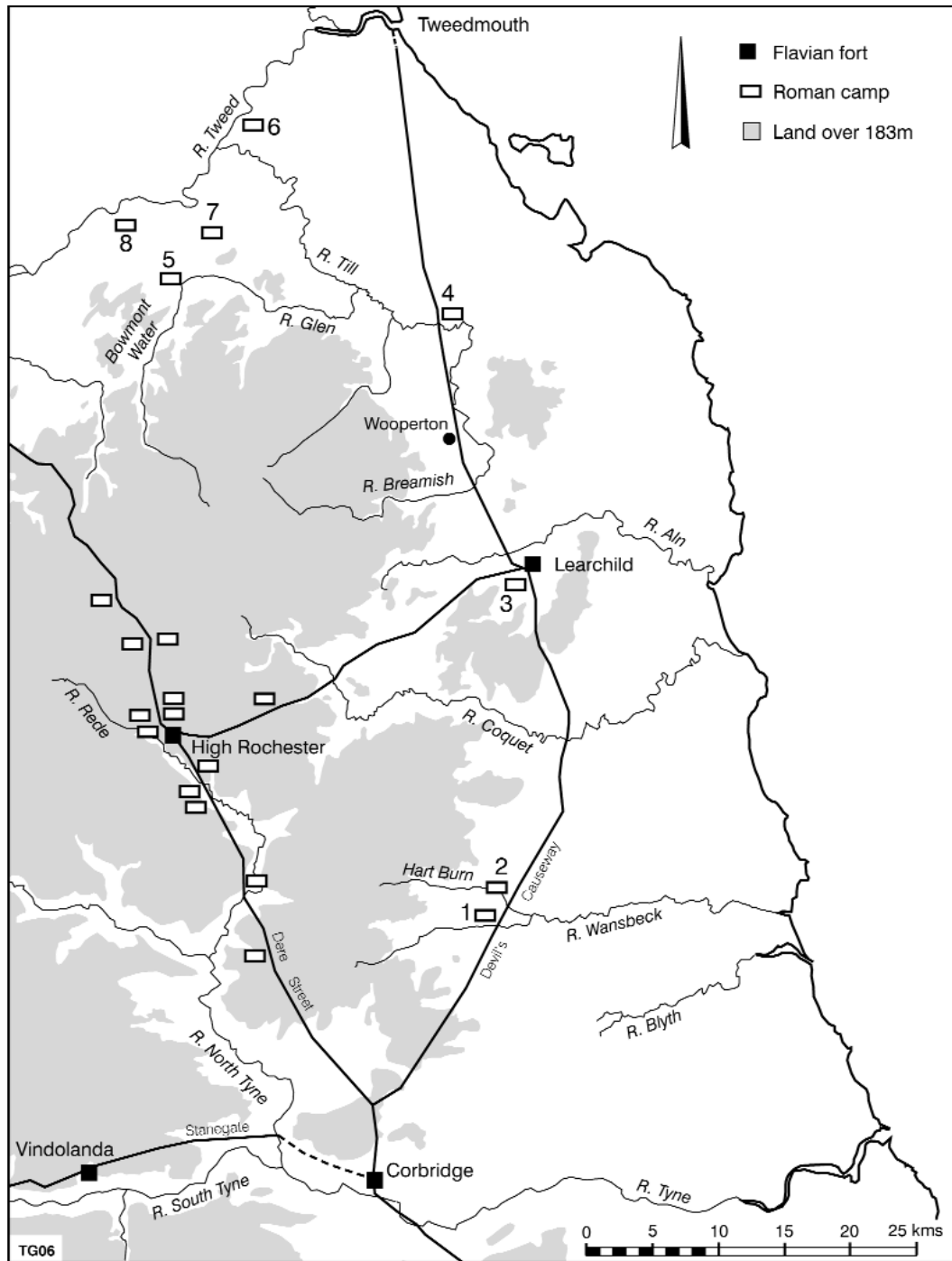


Fig. 1 Roman roads, temporary camps and Flavian forts in Northumberland

University. To assist comparison, all are here reproduced at 1:5,000 scale, using base map information derived from OS landline data. In each case, errors of transcription are estimated to be no greater than 3 m in plan projection.

The authors are pleased to acknowledge the interest and cooperation of all those landowners who readily granted access to their land in the course of fieldwork undertaken for this project. At Mindrum, Mr Tom Fairfax also provided useful information on the extent of flooding in areas adjacent to the site. For helpful discussions on the subject of temporary camps generally, the authors are indebted to Professor Gordon Maxwell and Dr Rebecca Jones of the Royal Commission on the Ancient and Historical Monuments of Scotland. Dr Nick Hodgson has read and made a number of useful comments on a draft version of the text. Dr Graham Piddock, Librarian at the Sackler Library, Oxford, helpfully provided copies of documents in the Richmond Archive relating to Learchild and the Devil's Causeway. At the NMR in Swindon, Graham Deacon checked information on the 'strip map' record for the Devil's Causeway. Dr Stephen Carter of Headland Archaeology Ltd. kindly made available an unpublished report on excavations at the Wooperton gravel quarry. Trevor Pearson re-drew the distribution map for publication and Adam Welfare commented on the supposed Roman quernstone from Berwick.

THE SITES

1. WEST MARLISH

Cropmarks indicating the SW quadrant of a probable Roman temporary camp were photographed near West Marlish farm in July 1994¹. The site is located *c.* 2 km SSW of the village of Hartburn and close to the line of the Devil's Causeway (fig. 1, no. 1). Here, the camp occupies a gentle S-facing slope with wide views across the floodplain of the river Wansbeck and the countryside beyond. The cropmarked portion of the site lies within in a large arable field, centred at NZ 074 850, where the air photographs show two straight lengths of ditch, representing sections of the S and W sides of the camp, which form a relatively sharp corner at an angle of ninety-five degrees (fig. 2). From this corner, the S ditch can be traced diagonally down the S-facing slope for a distance of *c.* 425 m, as far as the modern field boundary. 75 m into the field from the hedge, a break in the ditch marks the position of a gate protected by a *titulus* which is indicated by an external ditch 25 m in length. On the E side of the gate, the perimeter ditch makes a slight but noticeable change in alignment by about six degrees to the N.

On the air photographs, the W ditch can be traced northwards for a distance of *c.* 125 m, crossing over the crest of a slight ridge before disappearing from sight in an unresponsive crop. From this point the camp perimeter must have dipped down into a slight depression, now occupied by the lane joining Middleton with High Angerton, before rising again to climb the slope beyond. On the evidence presently available it is not possible to say how far up this slope the camp extended, nor can its dimensions be even approximately estimated. Certainly there are no earthworks which could be attributed to a Roman camp in any of the adjacent fields most of which have been subjected to medieval or later rig ploughing. Indeed, the whole of the field containing the cropmarked portion of the camp has itself been rig ploughed as evidenced by the pattern of interlocking strips visible on the air photographs.

From a tactical point of view, the site at West Marlish is certainly a favourable one, as it occupies rising ground overlooking the Wansbeck with a commanding view of the point where the Devil's Causeway crosses the river.



Fig. 2 Cropmarks at West Marlish (1:5000). Base mapping © Crown Copyright. 100042056

2. HARTBURN

The case for a temporary camp at Hartburn rests solely on the interpretation of cropmarks recorded by air photography in 1994². These show what are very probably parts of a Roman temporary camp extending over two adjacent fields on the N side of the Hart Burn, 1 km due N of Hartburn village (fig. 1, no. 2). However, as the cropmark evidence that is presently available is suggestive rather than absolutely conclusive, final proof of the site's identity will depend on the results of further flying or ground investigation.

The air photographs taken in 1994 record buried ditches which represent two opposing corners and parts of all four sides of a diamond-shaped enclosure (fig. 3). In the more southerly of the two fields, centred at NZ 0890 8690, the ditch marking the SW side of the enclosure can be traced for a distance of 300 m on a NNW–SSE alignment. At its southern extremity, the ditch turns through an angle of between sixty-five and seventy degrees to the north, forming a smoothly rounded corner. The cropmark is then lost in a confusion of wheel tracks and other cultivation marks at the field's edge. Mid-way across the field, roughly in the centre of the SW side of the enclosure, there is a break in the ditch, *c.* 20 m wide, which may represent a gate. This interpretation is strengthened by hints of a covering *titulus* and also by the fact that the gap corresponds to a slight, but noticeable, change in the alignment of the ditch.

At the S corner of the enclosure, the turn of the ditch would allow for its continuation in a north-easterly direction, running parallel with the SE boundary of the field. Interestingly, this boundary is formed by a 'green' lane named on the 1866 OS six-inch map as 'Harpeth Loaning'. Without begging the question of the identity of the cropmarked ditch as part of a Roman camp, it may well be significant that this lane marks the course of the Devil's Causeway as it was determined by MacLauchlan in the 1850s and later confirmed by Dr Ian Richmond in the 1930s.

At the same time as those described above, further cropmarks were recorded in the next field to the N, centred at NZ 0900 8720. Here, two lengths of ditch approach at an angle of sixty-eight degrees and although their point of convergence is obscured by wheel tracks they could well have formed a rounded corner identical to that already described in the field to the S. The cropmark representing the eastern ditch can be traced south-eastwards for a distance of 375 m, almost as far as the edge of the field whose boundary again follows the line of the Roman road. As will be evident from the plan (fig. 3), there is a change of alignment of about six degrees mid-way along the course of this ditch. So far as it is possible to tell from the air photographs, there is no evidence of a break at this point, which might otherwise match the one already noted on the opposite, SW-facing, side of the enclosure.

As noted above, the cropmark representing the NE side of the enclosure disappears from view a little short of the field boundary which shares the same alignment as Harpeth Lane and likewise marks the line of the Roman road. Although there is no indication of a turn in the ditch as it approaches the edge of the field, this would not rule out the possibility of a corner somewhere a little closer to its point of intersection with the road. If so, it would be possible to envisage the ditch as turning south-west and then running parallel with the fence line as far as the S corner of the putative camp.

Following a similar line of argument, the NW perimeter of the camp would be represented by one straight section of cropmarked ditch which can be traced on the air photographs south-westwards from the N corner for a distance of 150 m. Projected further to the SW, the ditch would then run parallel with the existing field boundary, and a little to the N of it, for



Fig. 3 Cropmarks at Hartburn (1:5000). Base mapping © Crown Copyright. 100042056

another 300 m or so, as far as the SW corner of the field. Logically, the assumed W corner of the camp would then fall just N of the vigorous spring marked on OS maps as the 'Holy Wells'.

Interestingly, that part of the field boundary which coincides with the suspected NW side of the camp is formed by a denuded bank, some 5 m broad and 0.3 m high, which has been augmented in places by a later stone-faced dike. According to the 1866 OS six-inch map, and the West Thornton Tithing Map of c. 1846³, this bank formerly marked the division between the ancient townships of Longwitton and West Thornton. Interestingly, Dr Piers Dixon has shown that a high proportion of medieval township boundaries in Northumberland remained unchanged into the nineteenth century, so that the 1866 OS six-inch map can generally be relied on as an accurate representation of their position (Dixon 1984, I, 79–80). But even if this particular stretch of the township boundary does indeed follow a more ancient earthwork, it does not necessarily follow that it represents an extant section of what we are suggesting is a Roman camp. On the other hand it would not be altogether surprising if the defences of a Roman camp had been re-modelled in the medieval period to form part of the township boundary.

As reconstructed above, the putative temporary camp at Hartburn would have dimensions of the order of 550 m NE–SW by 365 m NW–SE, giving an internal area of about 19 ha. While the diamond-shaped plan is certainly unusual it finds at least one close parallel in Northumberland, at Featherwood West on Dere Street (Welfare and Swan 1995, 99). With an internal area of 15.6 ha., the camp at Featherwood West is smaller than the one proposed at Hartburn but is otherwise remarkably similar on plan.

In its relation to the local topography, the proposed camp at Hartburn enjoys a number of tactical advantages. For example, it occupies high ground on the N bank of the Hart Burn close to the only two possible fording places for some distance up or down stream. Close by to the S, where the Devil's Causeway descends to the river, there is a natural declivity now occupied by a series of hollow ways. On either side of this declivity, steep or even precipitous bluffs which rise to heights of 20 m or more above river level present an almost insurmountable obstacle to any approach from this side. On the other hand, there are some aspects to the site that might not be thought to appeal to the Roman military mind. For example, a slight dip in the ground close to the mid-point on NE side would leave any gateway there overlooked by higher ground on either hand. Also, on the W side, close to the projected W corner of the camp, a narrow and steep-sided gully, some 2 m deep and occupied by the spring-fed stream, runs eastwards for a distance of c. 30 m into the interior. According to the reconstruction offered above, the SW rampart would have had to cross this gully at a point close to the W corner. Although awkward, such an arrangement would not be entirely without precedent, and Dr. Rebecca Jones has drawn my attention to a camp at Arosfa Garreg in Carmarthenshire where two much deeper ravines intrude well within the defences (Davies and Jones, 2006, 103). Neither of these drawbacks constitutes a fatal objection to the identification of the cropmarked enclosure as a Roman temporary camp and its unusual plan could readily be explained by its having been squeezed into a confined space restricted on one side by the river and on another by a pre-existing road.

3. EDLINGHAM

This temporary camp is situated on a northward projecting spur, c. 0.8 km to the NW of the village of Edlingham and centred at NU 1045 0945 (fig. 1, no. 3). The camp is sub-rectangular

on plan and its long axis is oriented NW–SE, following the spine of the ridge. Due to the natural slope, the camp is tilted quite markedly to the N with the result that there is a difference in height of about 15 m between the N and S-facing sides. To the S of the camp, the ground slopes upwards for a distance of *c.* 150 m, rising to a high point at an altitude of 165 m OD where an Ordnance Survey pillar formerly stood close to the existing fence-line. From this elevated and exposed position there are wide views northwards over the vale of Whittingham, and on a clear day even Cheviot itself is visible on the skyline to the NW. 2 kms to the N, the site of the Roman fort at Low Learchild lies in view on the right bank of the Coe Burn, near to the point where the branch road from High Rochester makes its intersection with the Devil's Causeway.

As the air photographs show, the temporary camp extends over five adjacent fields. All of these are now under permanent pasture though it is clear from the air photographs that most if not all of this land has been rig ploughed at some time in the past. The camp was first recorded in August 1995,⁴ at a time of extreme drought, when differential parching of the grass produced a series of vividly contrasting marks. The most striking of these are of geological origin and reflect the presence of thin beds of sedimentary rock close beneath the surface. By contrast, the marks of archaeological interest are much less prominent and include two otherwise unrecorded prehistoric palisaded settlements as well as the temporary camp itself.

The cropmarks recorded in 1995 reveal the NW corner of the camp, as well as most of the E and part of the S sides (fig. 4). Although the plan presented here is incomplete, it is sufficient to show that the site did not conform to a regular rectangle. This is due to the fact that the E side of the camp is not straight but changes its alignment by about six degrees to the W on the N side of a gateway that is placed off centre towards the NE corner of the camp and protected by a *titulus*. A second gateway, again accompanied by a *titulus*, is visible on the N side and this too is displaced towards the NE corner. As the plan shows, there are other gaps in the ditches on both the E and S sides but none of these are fully convincing as entrances. On balance it seems probable that the camp was intended to face N.

Measuring within the ditch, the camp has maximum dimensions of 475 m N–S by between 265 and 282 m E–W, giving an internal area of about 13.0 ha. The asymmetrical plan is not uncommon, and there are, for example, a number of sites in both England and Scotland whose perimeters also change their alignment at one or more of the gateways (*v.* Welfare and Swan, 1995, fig. 6; Maxwell 1981, fig. 1).

The Edlingham camp lies directly on the line of the Devil's Causeway as it was determined by MacLauchlan in the 1850s. Unfortunately, however, neither MacLauchlan, nor any of those who have examined the route after him, succeeded in establishing the exact position of the road where it crosses the ridge to the N of Edlingham village (MacLauchlan 1864; Wright 1940). The precise route in the vicinity of the camp is therefore a matter of conjecture, arrived at by interpolating between the two nearest verified points which lie no closer than 1 km to the S or 0.5 km to the N. On current OS maps, this hypothetical route runs *c.* 70 m to the E of the larger of the two prehistoric palisaded settlements (fig. 4, A) and then passes very close to the SE corner of the camp before diverging progressively further to the E as it continues on its way northwards. Interestingly, the air photographs taken in 1995 show what seem to be a pair of parallel ditches, each about 100 m long and set 15–18 m apart, which lie immediately to the E of the camp and coincide almost precisely with the expected line of the road. While the spacing between these ditches is much greater than the width of the metalled road surface (averaging about 7 m or 21 feet) as it was established in the 1930s by R. P. Wright and others

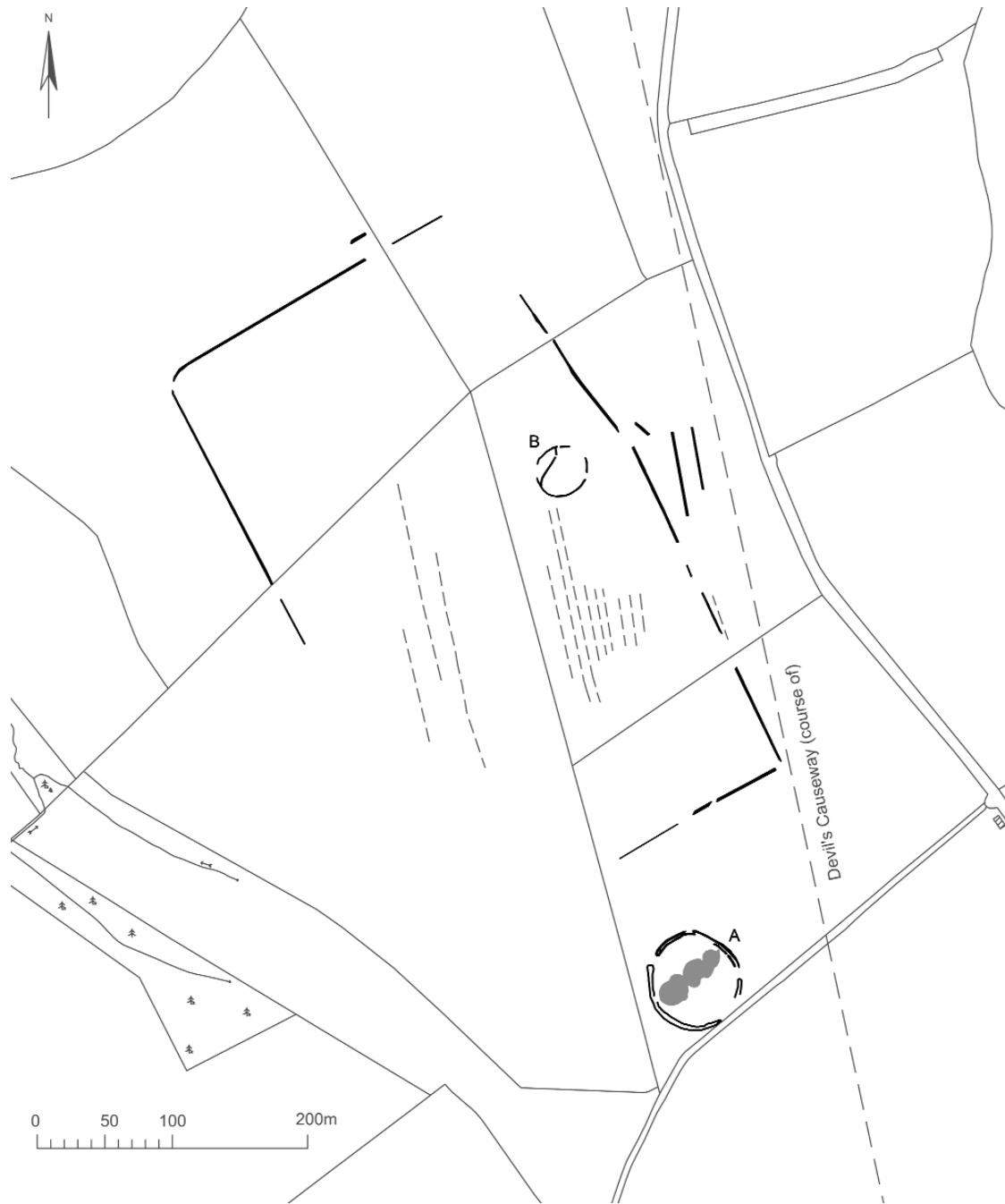


Fig. 4 Cropmarks at Edlingham (1:5000). Base mapping © Crown Copyright. 100042056

(Milburn 1935; Wright 1940; PSAN⁴, 11, 1947, 117–18), it is nevertheless very close to the 20 m spacing between the side ditches of the road as they have recently been recorded at the Wooperton gravel quarry (fig. 1) (Ansell 2004, and below). Be that as it may, at Edlingham there could be some doubt as to whether the features referred to are indeed ditches belonging to the road or simply plough furrows belonging to one or other of the episodes or rig ploughing referred to above. Here the possibility of misidentification is increased by the fact that the direction of the ploughing and the course of the road lie on almost the same NNW–SSE alignment. On the other hand, the spacing between the furrows, at 5.5 to 9.0 m, is significantly narrower than the spacing between the two hypothetical ditches, so that the balance of probability still favours their identification as a separate feature distinct from the narrow rig. And if they are ditches, and do indeed belong to the Roman road, then it will be evident that the road could not be contemporary with the temporary camp, as its line projected to the S would cut across the SE corner of the camp. However, this reading of the evidence can be no more than a likely hypothesis at this stage and the question could only be resolved by further air photography or ground investigation.

To the S of the Roman camp, the larger of the two prehistoric palisaded settlements is visible on the air photographs close to the crest of the ridge and on almost exactly the same spot where the OS pillar formerly stood (fig. 4, A). As shown on the plan, the settlement is almost circular with an overall diameter of 70.0 m and an internal area of 0.4 ha. Two entrances are visible, one opposite the other, in the NW and SE-facing sides. As seen on the air photographs, the perimeter appears to have been formed by two concentric lines of palisade, set *c.* 3.0 m apart, which join together on either side of the two entrances to create paired hairpin ends. In the interior, three, or perhaps four, more or less disc-shaped marks of darker tone which are visible on the air photographs probably represent stances for round timber houses, each having a diameter of about 15 m. As these overlap, it is clear that not all can have been in occupation at the same time. On the ground, the site of these houses is marked by an irregularly-shaped depression measuring *c.* 30 m by 15 m and up to 0.3 m deep. Some patches of nettles and loose stones in the bottom of this hollow suggest there may have been some disturbance here in the recent past, perhaps due to the removal of the OS pillar, but otherwise there are no visible indications of any kind of settlement.

A second palisaded enclosure is located within the Roman camp and is represented on the air photographs by a very narrow trench for the support of a single line of timber uprights (fig. 4, B). The enclosure so formed is sub-circular on plan with a maximum diameter of *c.* 37 m and an internal area of 0.1 ha. On the NW side, and within the perimeter, a sinuous arc may represent an additional length of palisade perhaps indicating that the enclosure was sub-divided at some point in its life or else that it became necessary to carry out a partial repair. In this instance no round houses or other structures are visible in the interior, though this would not preclude the possibility that this too was a settlement rather than, say, simply an enclosure for stock.

Free-standing palisades with curvilinear plans are not uncommon as cropmarks in Northumberland and the Borders Region of Scotland. On the basis of the available radiocarbon dates, settlements of this order were current over a long span of time, extending from as early as the 7th or 8th century B.C. down to the end of the pre-Roman Iron Age. As it happens, this is not the only occasion in Northumberland where a pre-Roman settlement has been revealed by air photography within the perimeter of a Roman camp. At Red House, near Newbrough in the Tyne valley (NY 879 677), for example, a twin palisaded settlement of presumed Iron

Age date has likewise been recorded as a cropmark inside a temporary camp. As, in both cases, a period of several centuries could well have elapsed between the demise of the earlier settlement and the construction of the Roman camp, there is no reason to suppose that these juxtapositions happened other than as a matter of chance.

4. EAST HORTON

The identification of a possible temporary camp situated near East Horton farm in the parish of Chatton rests on the interpretation of a single pair of air photographs taken by Professor J. K. S. St Joseph in July 1968⁵. The site in question lies 1 km SE of the farm buildings on the N side of the Till and within 0.75 km of the point where the Devil's Causeway crosses the river (fig. 1, no. 4). The air photographs show two straight sections of ditch, each about 300 m long, which are aligned at right angles and meet to form a well rounded corner (fig. 5). Although on the photographs the profile of the ditch appears somewhat ragged, it is not impossible that this could be the SE corner of a Roman temporary camp. However, the evidence is not conclusive, and a definitive attribution must wait until such time as further air photographs become available.

Certainly, from a tactical point of view the site is a promising one as it occupies a gentle SE-facing slope with extensive views southwards over the Till valley and is less than 100 m from the point where Devil's Causeway makes a twenty six degree turn to the W shortly after it crosses the river. It may also be significant that the site is situated exactly half way between the camp at Edlingham and the assumed termination of the Devil's Causeway at Tweedmouth (fig. 1 and table 1).

5. MINDRUM

The temporary camp at Mindrum (NT 841 331) first came to notice in June 1994 when a series of vivid cropmarks was observed in fields to the N of the farm (figs. 1, nos. 5 and 6)⁶. These included the whole N side of the Roman camp together with both the NE and NW corners and an intervening gateway covered by a *titulus*. Two years later the SW corner of the camp and a section of the E side also became visible. With the exception of the SE corner, which by extrapolation of the S and E sides is presumed to lie in the garden a little to the E of the main house, enough of the camp has now been recorded to allow its plan to be reconstructed with a fair degree of confidence.

As depicted in fig. 6, the camp is oblong in shape with estimated maximum dimensions of 490 m N-W by 285 m E-W, giving an internal area of *c.* 12.45 ha. The gate already noted in the short N side is placed slightly off centre, being slightly closer to the NW corner than to the NE. On the long W side, there are at least three breaks in the ditch which could qualify as entrances though as none are accompanied by visible *tituli* it is difficult to be certain if any are really genuine. One promising candidate is the gap in the perimeter ditch where there is a change in alignment of about twelve degrees. As we have already seen, gates in similar positions are a feature of the newly identified camps at West Marlish and Edlingham, and possibly Hartburn also. At Mindrum, no gateways can presently be identified in either of the S or E sides, though as only relatively short segments of these are recorded on the air photographs this is hardly surprising. On the evidence available, the camp would appear to have faced N.



Fig. 5 Cropmarks at East Horton. © Cambridge University Collection of Air Photographs (AVZ 98)

The site occupies a tactically advantageous position adjacent to the Bowmont Water, near the point where the river, having broken out from the confines of the high Cheviot massif, turns eastwards and then enters the narrow valley of Glendale which leads downstream to Kirknewton (fig. 1, no. 5). It thus commands an important through route giving access to the Milfield plain from the more open countryside of the Tweed basin lying to the N and W.

The position of the camp has been carefully chosen to take full advantage of what are often quite subtle variations in local topography. For, as ground inspection shows, the camp stands on an almost level terrace of glacially-derived sands and gravels, raised some 2–3 m above the level of the surrounding land and projecting tongue-like into a basin that is almost entirely encircled by hills. Despite the benefit of a tile drainage system, much of this lower lying ground is still liable to flooding in the winter months and the fact that several fields adjacent to the site have names containing the word 'moss' may well indicate that these areas were permanently waterlogged in the not very distant past. If so, this would suggest that the camp occupied what was virtually an island, cut off on three sides by bog or standing water and by the Bowmont Water on the fourth. To secure maximum tactical advantage, the E and W

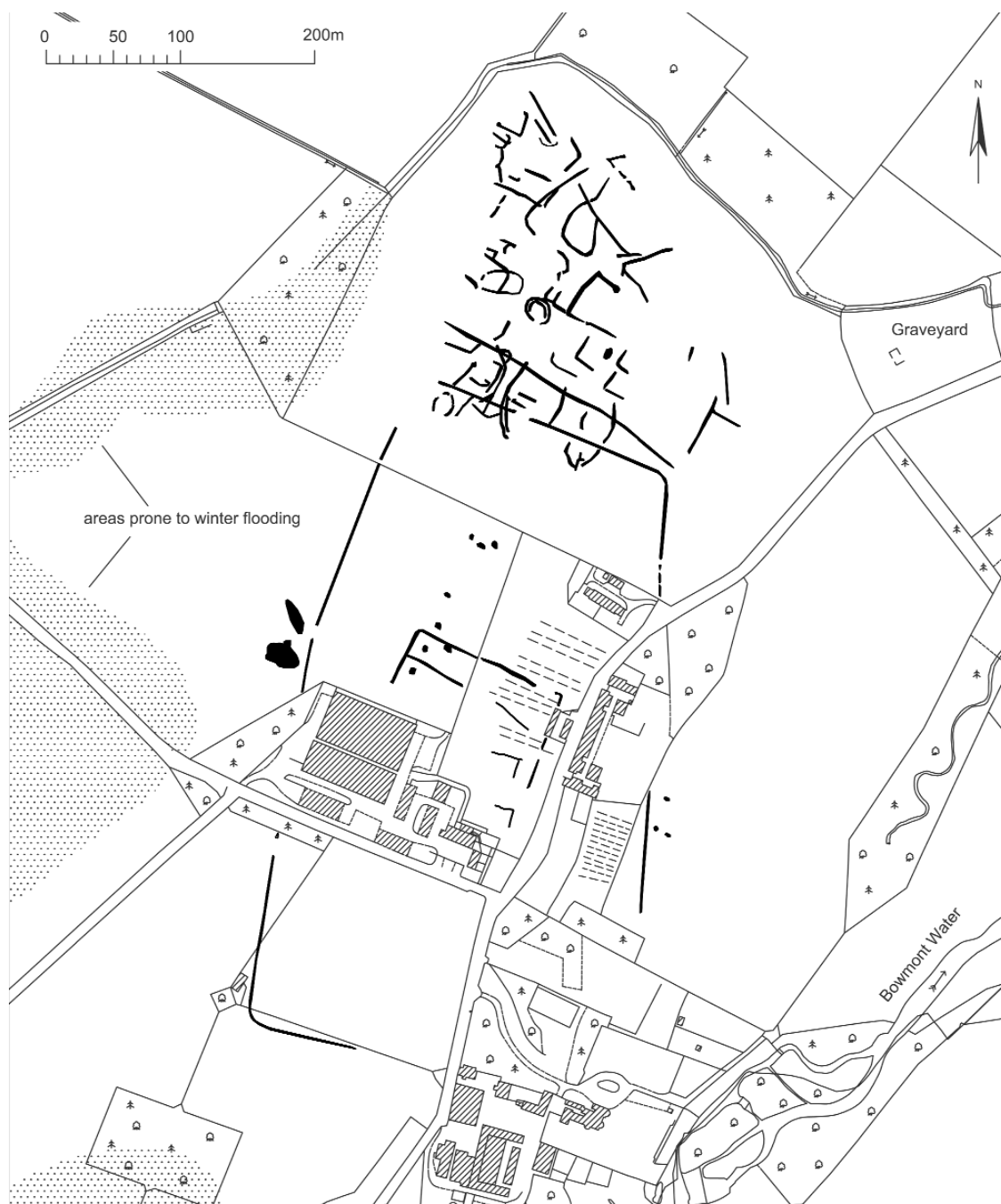


Fig. 6 Cropmarks at Mindrum (1:5000). Base mapping © Crown Copyright. 100042056

ramparts of the camp run more or less parallel with the edge of the gravel terrace and are set back from it by only a short distance, a fact which also helps to explain the slight alteration in the alignment of the W perimeter, as noted above. Furthermore, in order to make the most efficient use of the limited space afforded by the terrace, the SE corner of the camp — whose position, as we have seen, can be inferred by extrapolating the S and E sides — has been pushed as far as possible into the angle formed where an unnamed burn runs into the Bowmont Water, 100 m to the SE of the present farmhouse. Such an arrangement also has tactical advantages, as the corner would then have stood on a bluff, 10 m above the level of the river, with steep downward slopes to the E and S.

Besides those cropmarks attributable to the Roman camp itself, a further large complex exists immediately to the N of it in the large 'Kirky field'. Not all of these other marks are necessarily archaeological in origin however, and the long, almost straight, ditch which runs closest to the N side of the camp is probably a buried field drain. On the other hand, there are some cropmarks which do appear to form ditched enclosures or boundaries, though their date and purpose remain unknown. In considering possible contexts, the existence of a deserted medieval village, of which the only surviving indication is a ruined chapel standing in a small graveyard, has also to be taken into account (fig. 6).

Attention must also be drawn to a rectangular enclosure which occupies a prominent position in the centre of the temporary camp on the highest part of the raised gravel terrace. This enclosure is formed by a series of narrow slots or ditches which might either be interpreted as the foundation trenches for some form of timber fence or stockade, or, less certainly, as part of an enclosure formed by a ditch and bank.

Unfortunately a complete plan of this additional enclosure is not recoverable as part of it underlies the large agricultural sheds to the S. However, as far as can be determined from the air photographs, its dimensions are of the order of 120 m NW–SE by a minimum of 70 m NE–SW, giving an internal area of at least 0.8 ha. If it could be shown that its perimeter was indeed formed by a bank and ditch, the enclosure could perhaps even be accounted for as part of another, much smaller, Roman temporary camp. Alternatively, if it was formed by timber fence or stockade, parallels might be sought among those rectilinear palisaded enclosures which are regularly associated with some of the high status Anglo-Saxon sites in the area, such as Yeavering, Milfield or Sprouston. No doubt other possibilities too might be considered but, given the limited evidence presently available, the true identity of this interesting feature remains for the present a matter for speculation.

In addition to those features which have already been noted, a number of pits are visible on the air photographs, scattered within the perimeter of the Roman camp and outside it to the E. As none of these form any definite pattern, their context and significance are equally unclear.

DISCUSSION

The discovery of any new temporary camp is a noteworthy event, and not less so in Northumberland which already contains more sites of this class than any other county in England (Welfare and Swan 1995, 4–5). In this instance the sites under discussion are the more welcome as they are situated on the line of the Devil's Causeway and in the Tweed valley, and are therefore geographically separated from the main concentrations of temporary camps which are focussed heavily on the Hadrian's Wall corridor and along Dere Street.

In sharp contrast to Dere Street, the Devil's Causeway has long stood out as anomalous due to its apparent lack of associated temporary camps. Thus, on the latest (5th) edition of the *OS Map of Roman Britain*, published in 2001, no temporary camps are shown accompanying this road. Two putative 'fortlets' shown on earlier editions — at Springhill, near Berwick, and at Hartburn (in this case on the S, rather than the N, side of the river) — have long since been reclassified as native Iron Age settlements (Jobey 1973), leaving the fort at Low Learchild as the only recognised Roman military site anywhere on the line of the road (fig. 1).

This evident disparity in the distribution of extant temporary camps in Northumberland is well known and has often been the subject of comment (eg Welfare and Swan 1995, 3–6). Indeed, it was already apparent when MacLauchlan undertook his ground breaking surveys in the 1850s. In the case of the Devil's Causeway, MacLauchlan's failure to identify any sites on or near the line of the road was certainly not due to his lack of familiarity with temporary camps as field monuments. Rather, it can be explained in terms of the generally more benign terrain traversed by this road as opposed to that part of Dere Street, extending northwards from Corbridge to the Scottish Border, where he had previously located several Roman camps. For this other territory, being lower in altitude and therefore better suited to arable agriculture, rendered these, and other, relatively fragile sites especially vulnerable to destruction by the plough, and we must assume that most if not all of them had been levelled at a comparatively early date and certainly well before MacLauchlan's time. Indeed, the fact that former tracts of rig ploughing appear on the air photographs taken at West Marlish, Edlingham and Mindrum supports this view and bears testimony to what was probably a long drawn out process of attrition. At West Marlish, the air photographs also demonstrate that the W side of the camp functioned as a headland between adjacent furlongs suggesting that this part of the site may have survived as an upstanding earthwork into the relatively recent past. If so, the destruction of this camp as a visible field monument may be a relatively modern phenomenon. Indeed, there is a certain irony in the fact that it is only by the continued agency of destructive ploughing that the identification of these sites as cropmarks has been made possible at all.

In areas given over to arable farming, air photography undoubtedly offers the best chance of redressing the evident imbalance in the distribution of Roman temporary camps, and even Roman forts, which is otherwise heavily biased in favour of sites in marginal or upland situations which have remained largely untouched by the plough. This being so, it is perhaps appropriate as a token of things to come that one of the first cropmarked sites discovered in Northumberland, by Kenneth St Joseph at the start of his career as an aerial photographer in July 1945, was in fact the Roman fort at Low Learchild. Thereafter, however, genuine Roman sites on the Devil's Causeway proved most elusive and, with the exception of the two now discredited sites, at Springhill and Hartburn, no other sites of a military nature have been claimed in print in the last five decades, despite regular searches along the road during the summer months in almost every single one of the intervening years. In the case of the possible site at East Horton, recorded by St Joseph in July 1968 and never seen again, the evidence was probably considered insufficient to allow it to be identified as a temporary camp, even on a provisional basis. Indeed, it is only now, when a pattern of camps is at last beginning to emerge, and into which the site at East Horton seems to fit, that it can plausibly be brought into play.

Due to this lack of associated military sites, and the consequent want of data from excavation, worthwhile discussion of the Devil's Causeway, whether in terms of its date of

construction or its period of use, has hardly been possible. Until very recently, the only published excavations directly relevant to the road were those undertaken at Low Learchild, first by Sir Walter Aitchison in 1945–6 and then by Ian Richmond in 1956 (Roman Britain in 1956 1957, 206). Although small scale, these indicated the presence of two successive forts, of which the earliest was defended by two ditches and is said to have measured at least 76 by 40 m (250 by 130 feet). The later fort, defended by a single ditch and clay rampart, was significantly larger, measuring at least 232 m by 76 m. No finds from these excavations are mentioned in Richmond's brief note, though first- and second-century pottery was said to have been recovered from the site by Sir Walter Aitchison in 1946⁷. Unfortunately none of this material is extant but the Museum of Antiquities collection does contain a decorative bronze earflap from a Roman parade helmet which, though not mentioned by Richmond, is believed to have come from Learchild and this too is likely to be of second century date (information Lindsay Allason-Jones).

While the status of the earlier structure investigated by Richmond as a fully fledged fort may be open to question, the general opinion is that both it and its successor are likely to be pre-Hadrianic constructions, and a fort or fortlet of some kind is represented at Low Learchild on most maps showing Flavian dispositions in the N (e.g. Hanson and Maxwell 1983, figs. 2.3 and 2.5). At the same time, it is generally agreed that the Devil's Causeway itself is also of Flavian date and was most probably built within a decade or two of the advance of the Roman army beyond the Tyne. In the absence of any evidence to the contrary, we may also accept as very likely Professor Eric Birley's suggestion that Learchild did not continue in occupation once the Hadrianic frontier system had come into being (Birley 1961, 245). Certainly Richmond's excavations produced no signs of a stone-built fort such as might have been expected had there been a permanent presence on the site later than the 120s. If so, this would also help to explain the complete lack of any inscriptions from this area, for as Lindsay Allason-Jones points out (*pers. comm.*), a garrison which was not expecting to remain for more than a few years might well not consider it worth while to erect temples or set up tombstones. On balance, therefore, the evidence as we have it from Learchild points to a relatively short occupation and early abandonment.

At Wooperton (NU 049 204; and fig. 1), rescue excavations carried out in a gravel quarry over the past ten years also have a direct bearing on the date and possible longevity of the Devil's Causeway. This work has been undertaken by Headland Archaeology Ltd. and we are indebted to Dr. Stephen Carter for making available a copy of the latest interim report ahead of final publication (Ansell 2004). As revealed in these excavations, the road is represented by two parallel ditches, set some 20 m apart and accompanied by a series of associated quarry or ballast pits, presumably for the supply of road metal rather than drainage, which together have been traced over a distance of some 100 m. On the W side of the road, and immediately adjacent to it, a series of narrow ditches or slots are offset at right angles. These extend for over 150 m to the W, beyond the limits of exploration, and if not property boundaries may perhaps represent strip fields or some other kind of land allotment. In the same area a variety of post-defined features were found, including what appears to be at least one rectangular timber-built structure or enclosure, measuring *c.* 27 m by 10 m, together with a corn-drying kiln. The detailed sequencing of these features remains to be determined, but there seems little doubt that some form of Roman settlement, most probably of a military nature, is represented. To date more than 600 sherds of Roman pottery have been recovered, all of which is Flavian or Trajanic in date, i.e. it is pre-Hadrianic. The precise nature of this settlement has yet

to be established, though there is nothing from the excavations or on the aerial photographs that would lead one to suspect the presence of either a Roman fort or a temporary camp anywhere in the vicinity. Amongst various alternatives, a *mansio* or military-run staging post are possibilities. In any event the pottery from Wooperton accords with the suggested date for Learchild and adds support to the idea that the road may have fallen out of use when the Hadrianic frontier was established, if not earlier.

The difficulty of demonstrating a specific chronological relationship between temporary camps and Roman roads, even when they exist in close proximity, is well recognised. In this regard the newly discovered sites along the Devil's Causeway are no exceptions. As we have seen, the reconstructed plans of only two sites — Hartburn and Edlingham — abut directly onto the road and in neither instance is it clear which comes first, the camp or the road. At Edlingham, on the other hand, it has been tentatively suggested that the camp predates a pair of ditches which may be the side ditches of the road but as this point has not been firmly established the question of their relationship must be left open for the time being. In the case of Hartburn, the putative camp has evidently been squeezed into a restricted area immediately to the W of the assumed line of the road which presses hard up against it on the E side. If this interpretation is correct, it would be difficult to explain except on the basis that the road was already in existence before the camp was constructed. Otherwise there seems to be no good reason why the camp could not have been laid out further to the E, thereby achieving a more conventional rectangular plan. On balance, therefore, the camp at Hartburn would seem to be later than the road.

Particularly if the hypothetical camp at East Horton is brought into the equation, there is a fairly regular spacing of certain or possible camps along the Devil's Causeway all the way from Corbridge to Tweedmouth. As table 1 shows, successive sites are spaced at more or less regular distances of about 23 km, which might reasonably be taken as the length of a single day's march. The exceptions are West Marlish and Hartburn which lie only 2.4 km apart.

As indicated on figure 1, Mindrum (fig. 1, no. 5) is one of a small group of temporary camps situated in the same part of the lower Tweed valley on the English side of the Border, the others being a possibly doubtful site at Carham (fig. 1, no. 8), a definite site at East Learmouth (fig. 1, no. 7) and a small site of only 0.5 ha at Norham (fig. 1, no. 6) (Welfare and Swan 1995). As it happens, the distance between Mindrum and the putative camp at East Horton is 20 km as the crow flies and therefore not greatly different from the spacing observed between consecutive camps on the Devil's Causeway itself.

In view of the regularity in the spacing of these camps, one may even be tempted to wonder if they could indicate the line of advance of a single unit in the course of one particular campaign. If so, the most likely occasion would be during the army's initial push forward into unconquered territory N of the Tyne. In the past it has usually been thought that this event took place in

Table 1 Distances between temporary camps on the Devil's causeway

Site	Distance from Corbridge (km.)	Interval (km.)
Tweedmouth	95.8	23.0
East Horton	72.8	22.8
Edlingham	50.0	23.9
Hartburn	26.1	2.4
West Marlish	23.8	23.8
Corbridge	0	

c. 79/80 A.D. under Agricola's generalship. However, as Dr Nick Hodgson points out (pers. comm.), now that it has been established by dendrochronology that Carlisle was founded in 72/3 A.D., the advance across the Tyne could well have taken place somewhat earlier than has hitherto been supposed, and possibly as early c. 73/4–77 A.D. during the governorship of Frontinus. Whatever the truth may be, this need not, of course, imply that every one of the camps now identified along the route of the Devil's Causeway necessarily belongs to this first phase of subjugation, merely that the line of advance once established was likely to be followed on subsequent occasions and eventually became formalised when the road itself was built. If we accept this as a working hypothesis, the next step is to see if any of the camps in this group share characteristics that might lead one to suspect that they had a common origin. The validity of such an approach can be no more than limited at best but the attempt might nevertheless be deemed worthwhile, if only as an exercise on paper.

In our present state of knowledge speculation of this sort is hindered by our lack of complete site plans but it is nevertheless possible to point to some striking similarities between particular sites. Thus, in the case of Edlingham and Mindrum we are dealing with camps that are of roughly the same size, at 13.0 and 12.5 ha, and whose plans are remarkably similar, each having one long side formed by two straight lengths of ditch set at a slight angle and articulated at a gateway. East Learmouth too is comparable in size (13.6 ha) but has a slightly different plan as dictated by the local topography (Welfare and Swan, 1995, 95). At West Marlish, the plan is too fragmentary to allow its internal area to be estimated but, as with Edlingham and Mindrum, here too there is a slight change in the alignment of the perimeter ditch at a gate in one of the long sides.

While comparisons of this sort do not prove that the sites involved are closely related in time, still less that they are the work of a single unit, such possibilities are nevertheless worth bearing in mind. Indeed, speculations along similar lines have recently been entertained by Professor Gordon Maxwell, albeit on the basis of a much larger body of evidence and in a different geographical context where the contextual tramlines are in any case somewhat more tightly drawn (Maxwell 2003). Professor Maxwell has also made interesting calculations about the size of the units that may be involved, taking the area of the camp within the ditch as his guide. Allowing for the space occupied by the rampart, he proposes a figure of 8 sq. *actus* (1.0 ha) as the space necessary to house the six centuries of a quingenary legionary cohort which, depending on whether the unit in question was up to strength, would give a minimum likely figure of around 480 men per hectare. On this basis, the camps at Edlingham and Mindrum might each be expected to have accommodated in the region of 6,000 men, which is to say a force slightly greater than one entire legion. By the same token, the camp at Hartburn, with an estimated internal area of 19.7 ha, could have held almost 9,500 men, or very nearly the equivalent of two whole legions brigaded together. Obviously these figures can be no more than likely estimates and are subject to qualification depending, for example, on the possible presence of auxiliaries who received a less generous allocation of space (Maxwell 2003). Either way, the camp at Hartburn most certainly represents a very much larger battle group than could be accommodated at either Edlingham or Mindrum. If Hartburn does indeed post-date the construction of the Devil's Causeway, as we suspect, this would further reinforce the idea that it belongs in a different, and almost certainly much later, historical context.

To end this discussion all that remains is to make the obvious point that we still do not know what the precise strategic purpose of the Devil's Causeway may have been. This would,

of course, become clearer if we knew more about the nature of the fort or supply base which, it is assumed, lay at the mouth of the Tweed, on either the N or the S side of the river. The fact that no such base has yet been identified most probably means that it was built of turf or timber and, like Learchild, went out of use without having been re-built in stone. Otherwise it would be hard to explain why no trace of it has so far come to light. Nor is the situation made easier by the fact that no finds of Roman material have been reported from this area with the sole exception of what has been claimed to be the bottom stone of a Roman quern. This was found in 1855, at a depth of 3.7 m below ground level on the E side of Berwick, outside the walls and a little to the N of the harbour (Paterson 1863). Unfortunately the quernstone has long since disappeared but at the time it was said to be made of 'trachyte from a quarry on the Rhine'. If so, it probably originated from Mayen, near Koblenz (info. Adam Welfare). However, its potential value as an indicator of a Roman presence at Berwick cannot be taken at face value as querns made of this same material were also imported during the middle ages.

In the absence of any identifiable Roman base at the mouth of the Tweed, only Learmouth could supply the key to an understanding of the Devil's Causeway and here again we are critically hampered by a lack of data from excavation. If the road did indeed go out of use when the Hadrianic frontier was established, as has been suggested, this might imply that the native population inhabiting the coastal lowlands and the major river valleys was not seen as an immediate threat, even though the distribution of native settlements attributable to the pre-Roman and Roman Iron Age is most dense in these same areas. It might also mean that under the new frontier system men and supplies went northwards to Scotland by sea or were diverted further to the W by way of Dere Street. Again, this would support the long-held view that, once the initial conquest phase was over, the native tribes of Northumberland were largely ignored by the Roman military authorities.

Whatever the truth may be, portions of the road seem to have survived in recognisable, if not usable, form well into the historical period. Hence the continued use of such names as Harpeth Lane (or Harpeth Loaning), Cob's Causeway, the Devil's Causeway and the Devil's Dyke which were current in the eighteenth century and in some cases still are (NCH, v. 14, 1935, 68–73). Indeed, contrary to what has sometimes been alleged, John Warburton, the cartographer and antiquary who first drew attention to the road on his *New Map of the County of Northumberland*, published in 1716, never in fact claimed to have christened it himself. Rather, his proud boast was to have discovered 'a very intire military way (vulgarly call'd the Devils Cawsway) 22 foot in breadth and pav'd with stone, to range through this country from north to south' (Warburton 1716).

NOTES

¹ Negative numbers TMG 15964/14–24, 28 July 1994.

² Negative numbers TMG 15964/25–58, 28 July 1994.

³ National Archives, IR 30/25/49

⁴ Negative numbers TMG 16247/11–26, 15 August 1995

⁵ Unit for Landscape Modelling, Cambridge University, negative numbers AVZ 98–99, 27 July 1968.

⁶ Negative numbers TMG 15936/27–56 & 15937/61–65, 30 June 1994; also 16205/1–12, 14 August 1995; 16246/46–9, 15 August 1995; 16650/44–9, 22 July 1996.

⁷ Dr Graham Piddock has kindly provided a copy of the draft text of an unpublished article on the Devil's Causeway, written by Sir Walter Aitchison and evidently intended for publication in the History of the Berwick Naturalists' Club, but left uncompleted at the time of his death in October 1953. This paper was found in the Richmond Archive along with a copy of a letter from Sir Walter to St Joseph describing his (Sir Walter's) trial excavations at Learchild in November 1945. By kind permission of Dr Piddock and Mr David Aitchison a copy of Sir Walter's letter has been deposited with the County SMR.

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