

The placing of the forts on Hadrian's Wall

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SUMMARY

The reasons for the spacing of the forts on Hadrian's Wall by Ian Richmond and Charles Daniels on the one hand and Brenda Swinbank and John Spaul on the other are compared and reviewed. It is argued that the spacing between the forts related to the length of the Wall and half the distance a Roman force normally marched each day, with the exact location of each fort then being determined by the local topographical conditions. These conditions may have included a requirement to consider possible military deployment to the north as much as defence of the province. The role of water in the location of forts is also considered, as is the relationship between the different roles of the forts and the smaller installations along the Wall. The strength of the military cordon across the Tyne-Solway isthmus is emphasised and compared to earlier and later military deployment, underlining the unique nature of the Hadrianic arrangements.

INTRODUCTION

IN 1951 BRENDA SWINBANK AND JOHN SPAUL offered a rationale for the spacing of the forts on Hadrian's Wall. The forts were classified by date, the 'primary' forts identified and a theoretical spacing of either $7\frac{2}{3}$ or $7\frac{1}{3}$ Wall miles between these forts proposed (all 'miles' cited in this paper are Roman miles). Reasons were offered for those forts which were not exactly in their 'correct' position, the main one being that the fort was moved to guard a particular point. Thus, Chesters was moved a mile to the east to guard the crossing of the North Tyne and Stanwix a mile to the west to guard the crossing of the river Eden. In other places configurations of the ground were offered as explanations for the location of a fort: Halton Chesters avoided the awkward slope of Down Hill while Housesteads occupied high ground rather than a gap.

This analysis has held the field ever since. Yet, at the same time a rather different perspective is present in other publications on the Wall. They are explicit in the various editions of the *Handbook to the Roman Wall* published between 1947 and 1978. In the 10th edition, Ian Richmond wrote of the location of Halton Chesters, 'the site ... commands a natural ridge by which men could steal round the marshy headwaters of the Pont, north of the Wall', and the wording continued into the 13th edition, with the excision of the word 'natural'. Chesters was placed to guard '*the west side of the bridge across the North Tyne*' (my italics). In the 12th edition, Rudchester 'guards the valley of the March Burn to the west and an ancient route southwards to the Tyne at Newburn', repeated in the 13th edition.

There seems to be a conflict between the argument of Swinbank and Spaul that locations were based on regular spacing, to which relatively minor and explainable modifications to the distances were made, and the tactical reasons offered by Richmond, and accepted by Daniels, even after the 1951 hypothesis had been advanced. The aim of this paper is to re-examine the Swinbank and Spaul analysis and consider the explanations for specific locations offered by Richmond and Daniels in the light of later research (fig. 1).

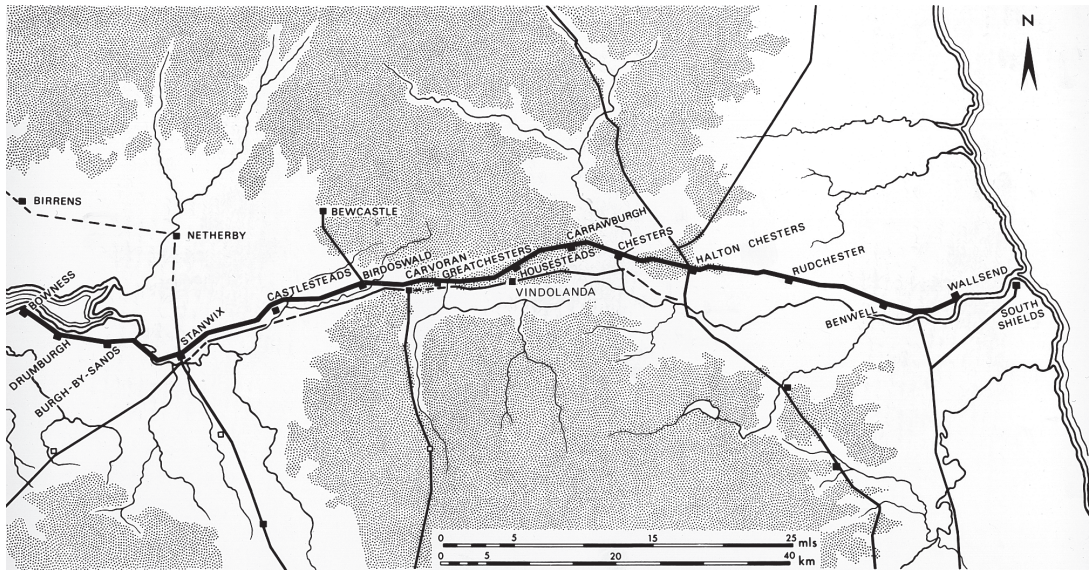


Fig. 1 Hadrian's Wall, showing location of forts.

Swinbank and Spaul (1951, 232–5) also considered military deployment along the Wall. In view of the more recent work on this subject, I have not attempted a critique of this aspect of their paper.

THE 1951 HYPOTHESIS

Swinbank and Spaul reviewed the dating of the forts on the Wall and identified the original forts (rather than supply a reference for every statement below, only the quotations are referenced). These were Benwell, Rudchester, Halton Chesters, Chesters, Housesteads, Great Chesters, Birdoswald, Castlesteads, Stanwix, Burgh-by-Sands and Bowness-on-Solway. Carraburgh was known to be a later addition to the Wall while Wallsend was placed on one side as it was also considered to be later; the date of the construction of Newcastle was not known; while they suggested that Drumburgh was built later (it was also smaller than the 'primary' forts; for the later date of the turf fort see Simpson and Richmond 1952, 13). There was discussion about the date of Great Chesters, and it was suggested that the original intention had been to place a larger fort there on the basis of the pattern of ditches. The conclusion was that the intention had been to place eleven forts on the Wall from the bridge at Newcastle to Bowness-on-Solway with the ten 'fort intervals' being approximately $7\frac{1}{2}$ miles apart, 'more precisely eight intervals of $7\frac{1}{2}$ miles and two of $7\frac{1}{4}$ miles' (Swinbank and Spaul 1951, 228) (Table 1).

The exclusion of Wallsend was because the section of the frontier from Newcastle down river to Wallsend was built later than the remainder of the Stone Wall and as the fort at Wallsend was bonded with the Narrow Wall it also was considered to be an afterthought. This left the authors puzzled as to why the first fort was not at Newcastle but at Benwell. They

suggested that the garrison of MC 4 (not yet discovered) was sufficient to guard the bridge at Newcastle, while the location of the fort at Benwell was good, being 'built on the crest of the hill, with a commanding all-round view, but still within easy reach of the bridge' (Swinbank and Spaul 1951, 230).

The authors believed that the spacing of the forts could give a clue to the order in which they were planned and possibly constructed. The spacing eastwards from Bowness to Great Chesters was detailed with explanations offered when a fort was not in its theoretical location (this is discussed further below). They found the eastern sector more complicated.

Two theories were offered. Theory A was based on the Wall beginning at the bridge at Newcastle with the locations of the forts measured west from Benwell. When forts were not in a 'correct' position, an explanation was offered. Theory B started from the observation that the distance from Great Chesters, close to the centre of the Wall, to the two forts to west and east was the same, but for some reason not explained was reduced from $7\frac{1}{2}$ miles each to $6\frac{1}{2}$ miles. In this theory, the spacing eastwards from Great Chesters resulted in Benwell being placed at about MC 6, where it does sit, rather than at MC 4.

Since 1951 excavations at the fort at Newcastle have been published confirming the post-Hadrianic date of its foundation (Snape and Bidwell 2002). Jarrett (1967, 96) suggested that Wallsend was a primary fort and Hill (2001) that it had always been intended that the Wall would end at Wallsend (in this case, the Narrow Wall east of Newcastle simply reflects that this sector was built late in the programme). The distance between Benwell and Wallsend might be taken as confirmation that Wallsend was a primary fort as the spacing is the same as between several other forts, and indeed longer than that between Stanwix and Burgh-by-Sands. Acceptance that Wallsend was a primary fort eradicates Swinbank and Spaul's problem of the location of Benwell.

Table 1 The spacing of the original forts on Hadrian's Wall with the distances in Roman miles.

Wallsend–Benwell	$6\frac{1}{2}$
Benwell–Rudchester	$7\frac{1}{2}$
Rudchester–Halton Chesters	$7\frac{1}{2}$
Halton Chesters–Chesters	6
Chesters–Housesteads	$9\frac{1}{2}$
Housesteads–Great Chesters	$6\frac{1}{2}$
Great Chesters–Birdoswald	$6\frac{1}{2}$
Birdoswald–Castlesteads	$7\frac{1}{2}$
Castlesteads–Stanwix	$8\frac{1}{2}$
Stanwix–Burgh-by-Sands	6
Burgh–Bowness-on-Solway	$8\frac{1}{2}$

REASONS FOR THE PRECISE LOCATION OF FORTS

In view of the different reasons offered by Swinbank and Spaul on the one hand and Richmond, followed by Daniels, on the other, it would be useful to rehearse the evidence for the location of each fort.

RICHMOND AND DANIELS

Wallsend

Richmond did not comment on its location, but Daniels stated that it 'possessed an extensive view in every direction and commanded an angle of the river formed by two of its reaches: the Long Reach which extends downstream to the west end of South Shields, and the Bill Reach which stretches nearly 2 miles up water. In either direction, therefore, any attempt to slip across the river could easily be observed by the Roman garrison' (Daniels 1978, 55). In his description, Daniels resurrected the earlier wording of Bruce (1863, 38).

Benwell

'The fort occupies a magnificent natural position, on a level hill-top ... from which the ground falls away gently to the north and more steeply on the other sides. Both for outlook and for defence the site is admirable' (Richmond 1947, 48). In the 12th edition Richmond added, 'The site was chosen to guard the gap formed by the valley of Denton Burn, immediately to west' (Richmond 1966, 48). This was dropped by Daniels (1978, 65).

Rudchester

Richmond made no comment on its location in 1947, but later observed that it 'guards the valley of the March Burn to west and an ancient route southwards to the Tyne ford at Newburn' (Richmond 1966, 61). Daniels added that 'to the east the ground drops away to the Rudchester Burn' (Daniels 1978, 78).

Halton Chesters

Richmond (1947, 66–7; 1966, 69–70): 'The fort lies on the east bank of Fence Burn ... The choice of site is peculiar. Close contact is not made with Dere Street which passes through the Wall at Portgate, three-quarters of a mile to the west; nor is the northward outlook the best to be had. But a water-supply is assured by an aqueduct from the head of the Fence Burn, running in a deep ravine to the west, while the site also commands a natural ridge by which men could steal round the marshy headwaters of the Pont, north of the Wall.' Daniels (1978, 84) merely changed 'peculiar' to 'unexpected' and dropped 'natural'.

Chesters

Chesters 'guards the west side of the bridge across the North Tyne' (Richmond 1947, 81; Daniels 1978, 109).

Housesteads

The fort 'is planted ... on a narrow shelf which slopes sharply southwards. A better site is sacrificed in order to overlook the Knag Burn gap' to which Richmond added in 1966 'carrying an ancient traffic route from the north' (Richmond 1947, 113; 1966, 112; Daniels 1978, 140). By the 'better site', Richmond presumably had in mind the ground lying to the west of the fort running towards MC 37 (Housesteads).

Great Chesters

Richmond made no observation in 1947, but later commented that the 'function of Great Chesters' is to guard the Caw Gap' (Richmond 1966, 143; Daniels 1978, 179).

Birdoswald

'The position of the fort is very striking. In addition to the bold cliffs on the south, at the foot of which the Irthing flows, a valley to north takes the overflow of Midgeholm Moss into the Irthing. Its western side now appears its weakest, but was in Roman times a fairly deep bog, draining below the fort into the gully which emerges in the cliff west of Underheugh' (Richmond 1947, 168). This is almost word-for-word Bruce's statement in the *Wallet-book* (Bruce 1863, 174). In the 12th edition, Richmond amended his wording, though retaining the same sense, and added, 'The prime function of the fort, however, was to guard the Irthing bridge and to watch the route from the north across the shoulder of Gillalees Beacon' (Richmond 1966, 163). The wording was retained by Daniels (1978, 198–9).

Castlesteads

Castlesteads 'lies on a high ridge, commanding the Cambeck and looking over the gap in the mosses to north-west which carries the [modern] road from Brampton to Longtown. The fort thus guards an important line of approach to the Wall, from an impregnable position. It also watches the east bank of the Cambeck against raiders from the Bewcastle area' (Richmond 1947, 190–1). This was repeated with slight changes in later editions, the most significant being the amendment of 'gap' to 'break' in the mosses (Richmond 1966, 185; Daniels 1978, 228).

Stanwix

'The situation of Stanwix is advantageous: it lay on the fine elevated platform crowned by Stanwix Church and Stanwix House. The ground falls away on every side except the west, and there the river Eden, with its wide and precipitous valley, is close at hand' (Richmond 1947, 198). In the 12th edition, Richmond added that the purpose of the fort 'was to guard the Eden bridgehead and to watch the very important western route to and from Scotland' (Richmond 1966, 193; Daniels 1978, 236). Bruce (1863, 203) had stated that it 'guarded the northern bank of the Eden'.

Burgh-by-Sands

'Its function was to guard the southern end of two important Solway fords, the Peat Wath and the Sandwath, favourite routes for medieval Border raiders at low water' (Richmond 1966, 199–201; Daniels 1978, 247).

Bowness-on-Solway

'The west terminal fort of the Wall stood on a headland little over fifty feet in height, but rising steeply from the sea-shore and commanding lower ground in every direction' and sits 'at the point where the estuary ends and the waters of the Irish Sea begin. Here was the Stonewath or Bowness Wath, the lowest ford on the Solway' (Richmond 1947, 209). In the 12th edition the wording is slightly modified with 'headland' becoming 'sea-cliff' (Richmond 1966, 209; Daniels 1978, 255; cf. Bruce 1863, 215).

COMMENT

In his 12th and definitive edition of the *Handbook*, Richmond amplified his earlier accounts of the location of most forts. In the 10th edition he had concentrated on the views or the general reason for the fort being in its location (Benwell, Birdoswald, Castlesteads, Stanwix and Bowness). Sometimes he specifically stated that the fort was located to guard a particular point: the bridge at Chesters; the Knag Burn gap at Housesteads; a line of approach at Castlesteads; fords at Burgh-by-Sands and Bowness-on-Solway. The comment on Halton is interesting; Richmond appears to be struggling to find a reason for the placing of this fort, being reduced to suggesting that its location was chosen in order to allow the creation of an aqueduct. This is in spite of the fact that he acknowledged the construction of the (known) aqueduct at Chesters was some 40 years later, and that at South Shields later still (Richmond 1934, 97; 1947, 85), both dates hinting that the aqueduct at Halton Chesters was not likely to be Hadrianic in date.

In the 12th edition the main change was to concentrate on the purpose of forts in guarding valleys, gaps or route ways: Denton Burn beside Benwell; the March Burn and an ancient route at Rudchester; a route through the Knag Burn gap at Housesteads; the Caw Gap at Great Chesters; the bridge and a route at Birdoswald and at Stanwix; the fords at Burgh-by-Sands. In some ways, Richmond is standardising his approach, acknowledging in 1966 that there were fords at Burgh as he had earlier mentioned those at Bowness; and perhaps also demonstrating his increased knowledge. But he is also tying down the location of the forts to very specific and detailed reasons. There is a considerable difference between 'the magnificent natural position' of Benwell and the necessity 'to guard the gap formed by the valley of the Denton Burn immediately to west', and the 'fine elevated platform' occupied by Stanwix which in the subsequent edition had acquired the additional function of guarding the bridge-head and road. Richmond nowhere justified his suggestion of the location of an 'ancient' (?prehistoric) route at Rudchester and at Housesteads.

Daniels retained Richmond's wording in most cases, not surprising considering that he was one of Richmond's pupils. He added comment on the location of Wallsend but dropped the reference to Benwell guarding the Denton Burn. In both cases, one might suspect that he was using his superior local knowledge, or just acknowledging that in the latter case Benwell was not best located to guard the valley of the Denton Burn.

SWINBANK AND SPAUL

Swinbank and Spaul's case was that the plan was for the forts to be placed approximately 7½ miles apart. They offered reasons as to why a fort was moved out of its theoretical position.

Benwell

The argument for Benwell's location was that 'instead of standing in the hollow to guard the [Newcastle] bridge, [it] was built on the crest of the hill, with a commanding all-round view, but still within easy reach of the bridge' while a fort located in the measured position 'would be half-way down the hill, with adequate water no easier to obtain than on the summit'. It was also noted that 'when we consider the trouble and expense entailed by bringing an adequate water-supply to ... Benwell, it is clear that there must have been a compelling reason for placing it there and not at the bridgehead: the outlook and the strength of the hill-top site were held to compensate for the increased cost of the water-supply' (Swinbank and Spaul 1951, 230-1).

Rudchester

Rudchester 'occupies its correct position, $7\frac{1}{3}$ miles from Benwell' (Swinbank and Spaul 1951, 230).

Halton Chesters

'Halton should cover milecastle 21, but in fact it lies slightly west of turret 21a, $7\frac{2}{3}$ miles from Rudchester; if an explanation of the interval is required, it may well be that it was to avoid having to place a fort on the awkward slope of Down Hill, where milecastle 21 stood' (Swinbank and Spaul 1951, 230).

Chesters

'Chesters ... should be situated over turret 28a, but in fact it overlies turret 27a. The reason for this is obvious: the fort was moved a mile east of its planned position, so as to guard the crossing of North Tyne — and to obtain the ample water-supply necessary for a cavalry garrison' (Swinbank and Spaul 1951, 230).

Housesteads

This fort 'should replace turret 35b, but in fact it overlies turret 36b. Here, too, the reason can easily be found in the lie of the ground: the ridge on which the fort stands is obviously more suitable for it than the depression of Busy Gap would have been, and the necessary water-supply could be obtained with little difficulty from the Knag Burn' (Swinbank and Spaul 1951, 231).

Great Chesters

Swinbank and Spaul's paper contains several discussions about the location of this fort which lies more-or-less in the centre of the Wall, but in relation to its precise location they remark, that while 'it may be added that milecastle 43 provided an ideal situation for a fort ... it would have been out of the question to fit one into the steep-sided gap where milecastle 42 stands' (Swinbank and Spaul 1951, 229-32).

Birdoswald

'Birdoswald fort is in its calculated position, overlying turret 49a; it occupies a wonderful site, high on a summit above the Irthing escarpment' (Swinbank and Spaul 1951, 229).

Castlesteads

Castlesteads 'has been placed on the summit of a steep declivity above the Cambeck, some hundred yards south of the Wall: the advantage of such a situation needs no comment' (Swinbank and Spaul 1951, 229).

Stanwix

This fort 'has been moved a mile westwards, to guard the crossing of the river Eden' (Swinbank and Spaul 1951, 229).

Burgh-by-Sands

This fort is two-thirds of a Roman mile west of its theoretical location. Two possible reasons were offered: the preferred location allowed it 'to guard the northern approach, by the eastern edge of Burgh Marsh (which, though invaluable for obstructing raiders, would be an obstacle for the cavalry garrison of the fort)' or 'the river Eden once flowed further south, where Burgh Marsh now is, so that the fort could not be placed in the planned position' (Swinbank and Spaul 1951, 229).

Comment

Swinbank and Spaul, naturally, concentrated on spacing but we may note that of the ten spacings between forts, only Rudchester has the preferred distance to each side. In all other cases, the authors offered a reason for the fort not being in its 'correct' location. These are to place it in a commanding position (Benwell, Birdoswald, Castlesteads), avoid an awkward slope or a gap (Halton Chesters, Housesteads and Great Chesters) or to guard a particular point (Chesters, Stanwix and Burgh-by-Sands).

DISCUSSION

Swinbank and Spaul recognised a general plan for the distribution of the forts. The spacing depended on the length of the Wall and the number of forts and resulted in a distance of between 7 and 8 Roman miles for most forts. This was not, however, a random figure. It is roughly half a day's march and is a figure which appears on the German frontier and on the Antonine Wall (Breeze 2011, 87). It seems more likely then that the approximate distance between each pair of forts was decided upon and the number of forts chosen to relate to the distance.

In 1947, Richmond offered general reasons for the location of forts, as did Swinbank and Spaul (Table 2); in his 12th edition Richmond (1966) added further reasons generally of a more detailed nature and these are given in the third column in Table 2.

It is worth taking each fort in turn and examining the reasons offered by the various commentators.

Table 2 Reasons offered for the location of forts.

Fort	Richmond 1947	Swinbank & Spaul 1951	Richmond 1966
Benwell	commanding position	commanding position	guards valley
Rudchester	—	correct position	guards burn & route
Halton Chesters	guards burn & route	avoids awkward slope	as per 1947
Chesters	guards W side of bridge	guards river crossing	as per 1947
Housesteads	guards gap	avoids gap	guards route
Great Chesters	—	avoids gap	guards gap
Birdoswald	good location	correct position	guards bridge & route
Castlesteads	commanding position guards gap	good position	as per 1947
Stanwix	commanding position	guards river crossing	guards bridgehead & route
Burgh	—	guards route? avoids bad position?	guards fords
Bowness	good position guards ford	correct position	as per 1947

REASONS OFFERED, BY FORT

Wallsend

This, of course, was ignored by Swinbank and Spaul (as noted, it appears to have been M. G. Jarrett who first suggested that it was a primary fort: Jarrett 1967, 96). Daniels, following Bruce, emphasised its excellent location at a bend of the river with good views up and down stream.

Benwell

In his 1947 edition of the *Handbook*, Richmond concentrated on the 'magnificent natural position' occupied by the fort; in his 1966 edition, he added that the 'site was chosen to guard the gap formed by the valley of the Denton Burn'. Daniels dropped the second statement in his 1978 edition, not surprisingly as it is not possible to see into the valley of the Denton Burn from the fort, at least from today's ground level.

Swinbank and Spaul, as we have seen, did not consider Wallsend to be a primary fort, but if we accept it as such – and there is no reason not to – then the spacing between it and Benwell becomes significant. Benwell as measured from Rudchester (and Halton Chesters) is in its correct position according to Swinbank and Spaul rules, but is it only 6½ miles from Wallsend. The spacing preferred by Swinbank and Spaul, 7½ or 7¾ miles, would place the fort a little to the west, as they noted, as of course would dividing the distance between Wallsend and Rudchester.

The fort was certainly placed in a commanding position, as all commentators stated. This conclusion mainly related to the view to the west, but Richmond noted that 'for outlook ... the site is admirable'. To the east, the land slopes gradually downhill towards Newcastle. To the west of the fort are two broad shelves of ground on which the fort could have been placed if the primary concern had been the requirement to guard the valley or divide the distance between Wallsend and Rudchester equally. Neither location would have offered a view to the east, so the sensible position for the fort would have been at the top of Benwell Bank where it was placed as from here there were views both east and west.

This location, however, removed it from the Denton Burn. If the function of the soldiers based at the fort was to guard this valley, then there were not only the two shelves on the eastern slope of the valley but also space in the valley bottom on which to place the fort. Its location at the top of Benwell Bank, 1.5 km from the stream, damages Richmond's contention that its purpose was to guard the valley. Rather, the fort was placed in the best location in that vicinity.

Rudchester

This was in its correct location according to Swinbank and Spaul. In 1966 Richmond argued that it was located to guard possible infiltration along the March Burn. The fort was placed as close to the burn as possible, as between the fort and the burn the ground drops away to the south, but it was still a little over 300 m from the burn.

Halton Chesters

This was also in its correct location according to Swinbank and Spaul. The valley of the Fence Burn is slight (as is also that of the March Burn) and there seems to be no obvious reason why it required special protection.

Richmond noted that the fort ignored the Portgate, but this is consistent with the normal arrangements of Roman planners. The different elements of Hadrian's Wall were laid out separately. The breaks between the legionary lengths of the curtain did not occur at the structures but between them, as evidenced by the junction between Standard A and Standard B 174 m west of MC 17 (Welton) (Breeze 2006, 174). The distance slabs on the Antonine Wall demonstrate that the legionary lengths there were not measured from structure to structure (Keppie 1974, 153). It is therefore not 'peculiar' or 'unexpected' that the spacing of the forts on Hadrian's Wall should ignore other elements along the frontier.

Chesters

All commentators agreed that Chesters is pulled out of its measured location in order to guard the river North Tyne (as Housesteads was pushed a mile to the west of its measured position, resulting in the addition of a fort at Carrawburgh). However, it may not be as simple as that. Placing the fort here sacrificed views to the north. We must also take into account the argument of Symonds and Graafstal that guarding the major valleys crossing the Wall was an important consideration (Symonds 2005; Graafstal 2012, 138–43). So, it may not be so much a matter of 'guarding the west side of the bridge' or even 'the crossing of North Tyne', but improving security at a potentially weak point. Whether the presence of copious quantities of water for the horses of the cavalry regiment played a part is a moot point.

Housesteads

All our commentators stated that the site of the fort was better than other possible locations. Swinbank and Spaul add the advantage of a water supply from the Knag Burn which Richmond saw as a gap to be guarded.

Great Chesters

Swinbank and Spaul did not believe that Wallsend was an original fort and all their calculations ignored its existence. As a result, their arguments about Great Chesters being located at or beside the central point of the Wall are nugatory; in fact, it lies 3 miles west of the centre point of the Wall.

Birdoswald

The statement by Swinbank and Spaul that the fort was 'in its calculated position' is a little disingenuous as it is a full mile short of the basic $7\frac{1}{2}$ miles from Great Chesters, as is Housesteads. So Birdoswald has been pulled eastwards into its 'wonderful position'. Of course, there is more to it than that as the fort is close to the point where the river Irthing passes through the Wall. Richmond's contention was that the 'prime function of the fort ... was to guard the Irthing bridge and watch the route from the north across the shoulder of Gillalees Beacon'. The latter point is particularly interesting bearing in mind that there was a fort at Bewcastle north of the Wall guarding that route. Such an additional explanation seems to be unnecessary. Quite simply, this was an obvious position for the fort and its location here added to the security of the potential weakness of the Irthing valley. However, the fort is a full third-of-a mile from Harrow's Scar so that it does not overlook the point where the Wall crosses the river.

Castlesteads

This was its calculated location bearing in mind that the additional distance to Stanwix in the west was related to the position of that fort. All commentators noted its advantageous location. Richmond adds a reference to its purpose in guarding 'against raiders from the Bewcastle area', which is strange bearing in mind the presence of a fort at Bewcastle.

Stanwix

All commentators accepted that Stanwix was placed beside the road through the Wall a little to its west and to guard the crossing of the river Eden and its bridge. But Richmond interestingly noted that the ground falls away on every side except the west; so why was the fort not placed closer to the river? Perhaps here spacing comes into consideration. In its built location the fort is a mile out of place so perhaps it was felt that to move it even further west and out of its theoretical position would be too great a dislocation. Richmond added the necessity to guard the road north. The fort was indeed placed beside the road, but it is therefore interesting that Halton Chesters was not placed exactly beside the road passing through the Portgate which lay nearly a mile to the west.

Burgh-by-Sands

The two reasons suggested by our commentators for the position of Burgh-by-Sands, guarding the fords or a different topography in Roman times, both ignored the most obvious explanation: the fort was placed on the rising ground which today is similarly occupied by the modern village. We may note that the fort at Drumburgh is in a classic fort location, on the top of a low, flat hill, a position which has been likened to sitting on an upturned pudding bowl.

Bowness-on-Solway

Bowness was also placed on a low hill, which may have been of greater importance than guarding the lowest fording points over the Solway estuary.

It can be seen that an argument can be made for all the fort sites being chosen for straightforward and sensible reasons. All except Housesteads meet a primary concern, a roughly level site. Swinbank and Spaul noted that Halton Chesters and Great Chesters avoid bad positions. Wallsend, Benwell, Castlesteads and Stanwix were in 'commanding' positions. Burgh-by-Sands and Bowness-on-Solway, together with Drumburgh, were all on low hills in low-lying, even marshy, areas. David Woolliscroft has also drawn attention to the fact that the 'new forts were sited in highly visible positions' (Woolliscroft 1989, 15). He pointed out that many of the minor structures were intervisible with the forts on the Wall. Chesters, Birdoswald and Stanwix were close to major rivers over which there were bridges. Finally, from the point of view of Swinbank and Spaul some of the forts were in their measured, and therefore 'correct', positions, at least from the fort to either to east or west, that is, Rudchester, Birdoswald and Bowness, to which we can add Wallsend.

This accounts for all the forts. Richmond (and Daniels) offered additional reasons, which may well be relevant but are rather unnecessary in relation to the primary reasons. These additional reasons nearly all related to a requirement to guard a perceived weak point, the Denton Burn, the March Burn, the Pont, a gap, a potential invasion route or an 'ancient route'.

Local security was clearly a significant issue for the Roman army, as Symonds and Graafstal have emphasised with their suggestions that the first sections of the Wall to have been constructed were those blocking movement along the Irthing and North Tyne valleys (Symonds 2005; Graafstal 2012, 138–43). It would hardly be surprising if forts were placed to monitor these locations. Hutton stated it simply: Chesters is 'near the bottom of the high ground. But the Romans were obliged to fix it here, or they could not guard the river' (Hutton 1802, 210). Birdoswald, as we have seen, was located in its calculated position, but Chesters was not. In addition to the reasons cited above one might wonder whether the valley bottom was chosen as a more congenial location especially considering the sloping ground at the fort's theoretical position $1\frac{2}{3}$ miles to the west.

WATER

A concern with water supply is mentioned by Richmond in relation to Halton Chesters and by Swinbank and Spaul when discussing the location of Benwell, Chesters and Housesteads. But otherwise, and perhaps surprisingly, this issue was not a major concern for any of the commentators. Certainly, every unit required a convenient source of drinking water. Both

pseudo-Hyginus (57) and Vegetius (III, 2; 8) mentioned this in their military treatises. Most forts contained a well, but this single well was in the headquarters building and may have provided water only or primarily for religious ceremonies. The various water tanks in the fort at Housesteads underline the importance of water, but they also indicate that it was possible to place a fort where there was no ready source of water in the form of a stream or river. Elsewhere, forts placed beside streams, such as Rudchester beside the March Burn, may have been so located to be close to a source of water rather than control movement along the burn.

We should, however, be wary of stressing the requirement for water too strongly. The Denton Burn is 1.5 km from the fort at Benwell while there are no significant streams close to Great Chesters, Burgh-by-Sands or Bowness-on-Solway, though, as Humphrey Welfare has pointed out to me, villages have survived on the latter two sites for several hundred years. Further west, Beckfoot on the Cumbrian coast does not lie beside a stream while the river Ellen is nearly 1 km from the fort at Maryport. Even where there were streams, aqueducts were later constructed to aid the delivery of water to the forts at Halton Chesters and Chesters.

THE ROLE OF FORTS AND MILECASTLES AND TURRETS

The explanations of the function of forts offered by Richmond and Daniels appear to ignore the existence of the milecastles and turrets along the Wall. One might assume that the purpose of the soldiers based in these installations was to keep watch over the possibility of raiders creeping along valleys, climbing over the Wall or slipping past its end, that is, to maintain control of movement in the frontier zone. In that context, it is useful to acknowledge Baatz' distinction between the duties of soldiers patrolling the frontier line and those whose function was wider (Baatz 1997, 14–9). He drew attention to the locations along the German frontier where two army units were based, suggesting that the role of the additional units was to act as support or back-up troops able to 'be moved very quickly to the area of conflict without exposing the *limes*, because *numeri* and cohort infantry just continued to keep watch'.

On Hadrian's Wall, 'priority' milecastles have been recognised (Hunneysett 1980; Symonds 2005; Graafstal 2012, 131). These are structures whose four walls were built to Broad gauge as opposed to the north wall only being Broad and some or all of the side walls completed to Narrow gauge as is the case with most of the milecastles on the Stone Wall. The reason for their early construction, it is argued, was to guard weak points on the Wall, in particular where streams crossed its line. The milecastles in the valleys of the North Tyne and the Irthing (27, 47 and 48) have Broad Walls on every side (and other distinctive features) and are clearly 'priority' milecastles. They sit in the valleys that Richmond argued required securing and this is generally regarded as the reason for their prioritisation. If Richmond was correct in arguing that forts such as Rudchester and Halton Chesters were specially located to guard weak points through the Wall, then it might be expected that the milecastles in or beside those valleys would also have been 'priority' structures. This was not the case. In the eastern sector, we do not have measurements for the walls of many milecastles, but enough to allow comment to be made. MCs 9 (Chapel House) and 19 (Matfen Piers) had a Narrow south wall, MCs 13 (Rudchester Burn), 17 (Welton), 18 (East Wallhouses), 22 (Portgate) and probably 20 (Halton Shields) had Narrow side walls; MCs 23 (Stanley Plantation), 24 (Wall Fell), MC 25 (Codlawhill) and MC 26 (Planetrees) had Broad side walls but the width of the south wall is not known. This leaves us with MC 10 (Walbottle Dene) and MC 14 (March Burn) as definite Broad Wall milecastles. MC 10 lies halfway between Benwell and Rudchester Burn beside a

small gorge through the Wall, which would account for its prioritisation, while MC 14 sits on the west side of the March Burn, the fort at Rudchester later occupying the east side. The early construction of MC 14 might therefore be regarded as supporting Richmond's case for the location of the fort at Rudchester. On the other hand, MC 22 (Portgate) was not a priority milecastle, nor was it pulled out of position to guard the valley of the Fence Burn as it lies a third of a mile to the west. Further, the Broad side walls of MCs 23 to 26 may point to them as being priority milecastles (Graafstal 2012, 131). The location of the priority milecastles do not appear to provide unqualified support for Richmond's contention that certain forts were so located to guard weak points, valleys or routeways, though, of course, it does not necessarily disprove his argument.

In his discussion of the location of individual forts, Richmond also appears to have ignored the fact that the original plan for Hadrian's Wall did not include the placing of forts on the linear barrier. Here, as in Germany, we can see a distinction between control in the immediate vicinity of the Wall and the wider task of defending the province. Richmond and Daniels, however, focused on the necessity for the troops in the forts to undertake local patrolling rather than the wider issue of military defence of the province, which was surely their primary purpose. The soldiers in the milecastles and towers could be left to monitor movement in the immediate vicinity of the Wall (on their capabilities see now Foglia 2014).

This may have a relevance for the location of the forts. Birdoswald, though said to be guarding the Irthing bridge, actually lies a third-of-a-mile to the west with no view of the bridge. MC 49 (Harrow's Scar), however, does overlook the bridge and therefore it may have been thought that there was no need to pull the fort closer to the edge of the escarpment. It also might be expected that the Romans would have been relaxed about locating the fort still within striking distance of the bridge and the Irthing valley yet on a better site with more space on the plateau than one perched on its eastern edge would have had. Benwell lies even further from the valley of the Denton Burn, as already noted.

THE PLACING OF FORTS FOR MOVEMENT NORTH

One aspect of the location of forts does not appear to have been considered by any of the commentators, the placing of forts for attack rather than defence, and I am grateful to Dr Matthew Symonds for drawing my attention to this aspect.

We may note first the relationship between the forts and the Wall. Seven of the forts were placed astride the Wall; Wallsend, Benwell, Rudchester, Halton Chesters, Chesters, Birdoswald and Burgh-by-Sands. Of the others, topographical considerations led to Housesteads, Great Chesters, Stanwix and Bowness-on-Solway being placed south of the Wall, though still attached to it, while the original plan for Great Chesters might have been for it to lie astride the barrier (Heywood and Breeze 2010, 7). Castlesteads was detached from the Wall (as was the earlier Carvoran); Carrawburgh was later and south of, but still attached to, the Wall. It has been argued that the placing of forts astride the Wall wherever topography allowed was 'to allow unrestricted access for major forces to the north', replacing the hitherto constricted access through milecastle gateways (Breeze and Dobson 2000, 47). This view saw the army operating north of the Wall, as did Bruce and Collingwood, and it was underlined by the fact that the forts astride the Wall (and Carrawburgh) faced north. Two of our ancient sources stated that forts should face the enemy, or the east as do Housesteads, Great Chesters, Drumburgh and Bowness (Vegetius, I, 23; Hyginus, 56).

Table 3 The relationship between forts and routes northwards.

Fort	Relationship between the forts and potential routes north
Benwell	several modern roads fan out northwards from Newcastle
Rudchester	—
Halton Chesters	sat beside two Roman roads north
Chesters	lay in the North Tyne valley
Housesteads	—
Great Chesters	—
Birdoswald	lay in the Irthing valley
Castlesteads	the Cam Beck and the King Water offered two routes northwards
Stanwix	sat beside the western route northwards
Burgh-by-Sands	sat inland from a major ford across the Solway
Bowness	sat beside the lowest ford across the Solway

Some forts were well placed for deployment to the north, should the need arise. Halton Chesters lies beside Dere Street and Stanwix next to the road through the Wall to the north of Carlisle. The unit at Chesters could move up the North Tyne valley, and the placing of a cavalry regiment here under Hadrian may not be coincidental. This is set out in Table 3.

The two main routes northwards are well covered by Halton Chesters together with Chesters in the east and Stanwix in the west, but other forts are well placed for northern deployment. Of course, this is only one consideration. The placing of some forts, such as Rudchester, Housesteads and Great Chesters, related to the spacing rules enunciated by Swinbank and Spaul. A strong force may have been located at Bowness because it was at the end of the Wall and had a wider stretch of terrain to cover.

It is possible that the relationship between the fort and the surrounding landscape is important in a different way. I have already noted that the line of the Wall is not always in the best defensive position (Breeze 2003, 6; cf Birley 1956, 33). One such location is Great Chesters where the land rises to the north of the fort. Humphrey Welfare has pointed out to me that the Solway cannot be seen from the fort at Burgh-by-Sands as the land rises gently for about 200m to the north suggesting that defence was not the primary consideration in the minds of those seeking a good location for the fort. Chesters in the valley of the North Tyne sits low down with restricted views north (and south) but perhaps its location beside the river was regarded as more important than wide views.

In the early third century, we can perceive rather more clearly the nature of military deployment across northern Britain, as Eric Birley long ago appreciated (Birley 1963, 122). At that time, there was a cavalry unit based at Halton Chesters as well as at Chesters, with two cavalry units in the hinterland of the Wall at Binchester and Chester-le-Street. In the west, the thousand-strong cavalry unit lay at Stanwix and to the south there were smaller cavalry units at Old Carlisle, Papcastle and Brougham (Breeze 1993, 25, Map 4). This is unlikely to be hap-
penstance; it is unfortunate that we do not have such evidence for the Hadrianic period, but the third-century dispositions do demonstrate that the Roman army carefully considered military deployment. But was the deployment related to defence or attack? The focus of the cavalry on the two main gates through the Wall, each astride one of the two Roman roads

north, may suggest that attack was the primary consideration. Further, on the basis that armies tend to prepare for the previous war, we may note that many wars were recorded on the northern frontier throughout the second century, and into the early years of the third (Breeze 2006, 26–32). It would not be surprising if in the third century Rome's generals arranged the deployment of their forces on the assumption that such warfare would continue and not only would the frontier be attacked, but also that they would have to intervene in events to its north.

Richmond seems generally to have considered the role of the units in the Wall forts in terms of defence rather than attack. This followed his more general view of the Roman army (Breeze 2014b). In his publications, it is not easy to recognise the Roman army as one of the world's pre-eminent fighting forces. It is hardly surprising therefore that he saw the Wall as a defensive barrier and not also as 'the basis of military operations against a foe on either side of it' (Bruce 1863, 16). This of course coloured his interpretations of Hadrian's Wall and has been followed by others, in particular by his pupils. The discovery of pits on the berm of Hadrian's Wall (and the Antonine Wall) in certain locations emphasises its role as an obstacle (Bidwell 2005, 74). So, too, our relatively recent acknowledgement that some of the earlier forts on the Stanegate continued in occupation when Hadrian's Wall was constructed underlines the strong military presence across the Tyne-Solway isthmus (Breeze 2006, 50). Hadrian's Wall and all its appurtenances was clearly a strong military line. Perhaps this appreciation has led to the view that Hadrian's Wall was a great divide, almost an impermeable barrier, itself almost a return to the prevalent opinion before the discovery of milecastle gates (Anon 1855, 49; Breeze 2014a, 111).

There is, however, evidence, that Hadrian's Wall was not such a barrier. We know that in later times there were treaties between the Romans and the states to the north (Cassius Dio, 75, 5, 4 referring to 197 and Ammianus Marcellinus, 20, 1, 1 describing the events of 360). Archaeological research has demonstrated that at two locations, Wallsend and Birdoswald, civil settlements have been found to spread to the north of the Wall, and the same may have occurred at Chesters, though in no case do the settlements date to the Hadrianic period (Breeze 2006, 84).

There is one change that does appear to date to the time of the building of the Wall, a major modification in farming practices on the Northumbrian Plain to the north (Hodgson et al 2012, 216–7). There was a fundamental change with the abandonment of long-established rural settlements and the creation of stock enclosures, which may reflect a reaction to the prodigious requirements of the Roman army, not least for cattle (Proctor 2009, 83, 101; Hodgson *et al.* 2012, 219), though other views have been advanced, including the deliberate clearance of the land to the north of the Wall (Hodgson *et al.* 2012, 217–9). The sudden arrival of several regiments on the southern edge of the Northumbrian Plain in the 120s could well have had a major impact on local farming practices (Proctor 2009, 101). The impact may have spread much further than the farms in the few kilometres to the north of the frontier. Stallibrass (2009) has suggested that the post-medieval droving of cattle from northern Britain may be a model for similar activity in the Roman period.

A further sign of the long arm of Rome is the 'drift' of Roman material northwards. These include artefacts, for which there may have been several different motivations for movement, and coin hoards which are generally linked to Roman diplomacy (Hunter 2007; 2015). Whatever the reasons, these items are reminders of continuing links between the Roman empire and its northern neighbours with the Wall acting as a porous membrane.

This discussion may have drifted from the main focus of this paper, but the point is simply that an alternative view of Hadrian's Wall, not just as a strong defensive line which it clearly was, but, in the words of John Collingwood Bruce (1863, 16), as a base for operations to the north, should also be taken into account in considering the reasons for the placing of the forts along Hadrian's Wall.

Finally, in considering movement north, we should also take account of access to and from the south. Bruce stated that the Wall was 'the basis for military operations against a foe to either side of it' (Bruce 1863, 16). Be that as it may, we might expect the Roman army to take all aspects into consideration. We have already discussed the views both east and west from forts such as Benwell. Again, I am grateful to Humphrey Welfare in reminding me that while good access, opposed to a view, to the north was important, a view and access to the south was also relevant and existed at most forts: Chesters and Bowness-on-Solway are the main exceptions. In short, we must take the widest possible view of any fort in relation to the landscape in which it sits.

CONCLUSIONS

The thinking behind the spacing of the forts along Hadrian's Wall was set down by Brenda Swinbank and John Spaul in 1951. It was based on the relationship between the length of Hadrian's Wall and about half the distance a Roman army would normally march in a day, seven to eight Roman miles. This determined the number of primary forts on the Wall. It seems likely that the actual location of each fort was then manoeuvred to produce the best fit with the local topography. In his three editions of the *Handbook to the Roman Wall*, Ian Richmond placed great emphasis on a requirement to guard what he perceived as weak points; a stream, a gap in the crags or a route. In this, he ignored the role of the soldiers based in the milecastles and turrets whose primary duties, it can be argued, related to control of movement in the frontier zone. Richmond's explanations also related to his wider interpretation of how Hadrian's Wall functioned as a defensive barrier, but an acknowledgement of the possible placing of the forts for military deployment to the north may not be out of place (Breeze and Dobson 2000, 47; Breeze 2014a, 113-4).

There is a thread running through most considerations of the operation of Hadrian's Wall: it was defensive. A more nuanced view was offered by Bruce who stated that 'if the Wall had been intended to form the boundary of the empire, it would not have been provided with nearly a hundred gateways leading through it. The fact of such an arrangement shows that the territory north of the Wall was not given up to the enemy; and that the Wall itself was not a mere fence, but a line of military operation, intended to overawe a foe, whose assaults were chiefly to be expected from the north' (Bruce 1867, 73-4). Obviously, Hadrian's Wall in its sheer massiveness and together with all its structural elements, military installations and ancillary works formed a major military cordon across the country. It presented a remarkable change from military deployment in north Britain during the previous generation, even more so from military deployment across the empire 100 years before when many legions had been placed with future conquests in mind (Mann 1974). Under Hadrian's predecessor, there were seven or eight forts across the isthmus; the placing of forts on the Wall increased that number to 18, perhaps more, together with three outpost forts (Breeze and Dobson 1985, 7 and 9). This incredibly strong military presence emphasises that the Wall was of its time, built in the reign of an emperor who was not interested in expanding the empire but rather holding carefully

onto what had been won by his predecessors. That reminds us that we should be prepared to consider that attitudes and priorities were different later in the life of Hadrian's Wall. Our sources tell us that some emperors — Antoninus Pius, Septimius Severus and Constantius Chlorus certainly — were still prepared and able to operate beyond the Wall and even undertake new annexations, as were other emperors elsewhere. Eighty years after the death of Hadrian, both the Wall and military deployment in the north were radically different from in its founder's day. The focus appears to have moved from the Wall itself with as many as 25 turrets — the great majority of those investigated — abandoned, the north gates of at least about a dozen milecastles narrowed, and the Vallum obliterated around forts, while the quality (that is, the presence of more cavalry) and quantity of troops at many forts was increased, and, crucially, the whole balance of deployment changed by the occupation of strongly held outposts up to the Cheviots and apparently beyond; it was 'a military solution ... which effectively ignored' the Wall (Breeze 1972, 203, n. 121; Breeze and Dobson 2000, 142–50).

As Hadrian was not interested in expansion, does that tell us that the primary purpose of his Wall was defensive, that he did not envisage his army ever going onto the attack? A review of the meaning of the Antonine Wall distance slabs may offer some support. In this review it is suggested that one interpretation of these elaborate items with their martial images was that through them the army was reasserting its primacy as an offensive rather than a defensive force following 20 years of immobility (Breeze and Ferris 2016). Let us, however, not confuse defensiveness with weakness. Every military strategist will aver that the weakest points in defensive arrangements were the gates; there were over 80 gates through Hadrian's Wall. This would suggest that the Roman army felt secure. But security is a different issue from military activity.

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