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A Geophysical Survey at High Rochester Roman Fort

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SUMMARY

A magnetometry survey, designed to consolidate and extend previous work, has been carried out to the west of the Roman fort at High Rochester and has confirmed the existence of a complex multi-phase annex. Structures inside the annex indicate possible buildings. At the south-west corner of the annex is a separate enclosure, termed the 'sub-annex', in which there is a large building that could be a bathhouse. To the north of the annex are a number of buildings, with associated small fields and access tracks, and to the south-west, what may be prehistoric earthworks and the slighted remains of temporary camps.

INTRODUCTION

High Rochester is situated just off the A68 and about 35 km (22 miles) north of Hadrian's Wall (fig. 1). It is on a plateau above the Sills Burn and occupies a strategically important position with commanding views down the length of Dere Street, the main Roman highway, as it runs south through the Rede valley towards the fort of Risingham. High Rochester also guards the junction with the un-named Roman road leading east towards Low Learchild and overlooks Dere Street's crossing of the Sills Burn. The fort's Roman name, *Bremenium*, meaning 'The place by the roaring stream', is given in several sources: Ptolemy's 'Geography' (Ptolemy 1991, 50), the Antonine Itinerary,¹ the Ravenna Cosmography² and by epigraphic evidence, notably RIB 1270 which mentions the *numeri exploratorum Bremeniensium* (Bruce 1978, 295).

The first Roman fort is presumed to have been constructed following Agricola's advance in AD 78/79 and the site is likely to have been abandoned again around AD 100, when the Roman army withdrew to the Tyne-Solway frontier (Breeze and Dobson 2000, 10–13). While there is no firm evidence for reoccupation of the site under Hadrian in the earlier second century, this is still a possibility.³ The fort was re-constructed in stone in the mid-second century AD at the latest. An inscription from AD 139–143 attests building activity and records a five-hundred-strong mixed infantry and cavalry unit as the garrison, the *cohors I Lingonum equitata* (RIB 1276; Breeze and Dobson 2000, 115). High Rochester now served as a hinterland fort of the Antonine Wall.

There is no conclusive evidence for a continued occupation of High Rochester following the abandonment of the Antonine Wall in about AD 162. The outpost forts at Newstead further north and Birrens in the west may have been abandoned after the troubles in about AD 184, according to pottery evidence. The wording of an inscription from Risingham, south of High Rochester, appears to suggest a similar time of abandonment (RIB 1234; cf. Breeze and Dobson 2000, 134).

Nothing is known about High Rochester for that period, but it is reasonable to assume that it would also have been maintained until that time (Breeze and Dobson 2000, 134–5). Evidence for reoccupation in the late second or early third century comes from an inscription, RIB 1277, AD 205–207. By AD 213, the unit stationed at High Rochester was a thousand-strong mixed infantry and cavalry unit, the *cohors I fida Vardullorum milliaria equitata* (RIB 1265, 1272). A unit of frontier scouts is

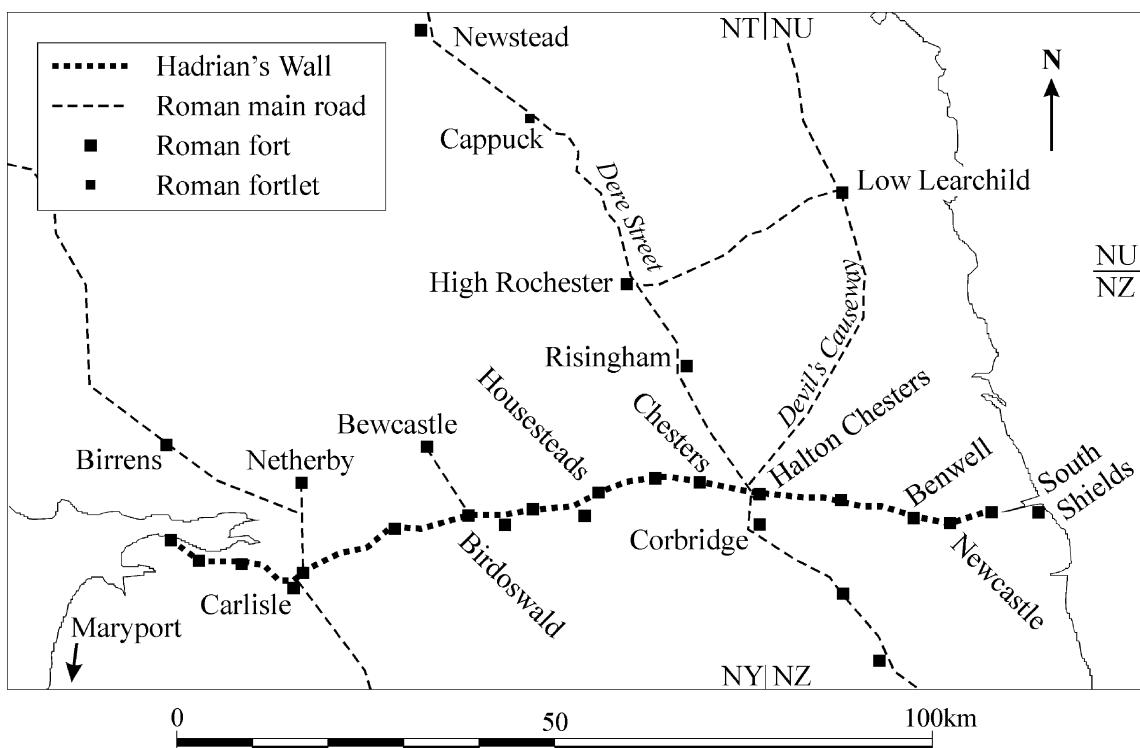


Fig. 1 High Rochester – general location map.

recorded on two altar stones, the *numeri exploratorum Bremeniensium*, RIB 1262 from about AD 238–241 and RIB 1270. These types of unit were ideally suited for the fort's role in the frontier system, providing long-range patrol and observation as well as flexible and fast reaction in the wide buffer zone forward of Hadrian's Wall (Breeze and Dobson 2000, 143–4, 147).

Following Severus' death in AD 211, the period of campaigning in Scotland ended with the re-establishment of the Hadrianic frontier. Initially conditions were peaceful, but incidents of disorder seem to have become more frequent, with the first campaigns against the Picts recorded in AD 306 (Breeze and Dobson 2000, 152, 234). Although the outpost forts were reconstructed before AD 306, numismatic evidence appears to suggest the final abandonment of High Rochester followed soon after, in about AD 312 (Casey and Savage 1980, 79;

Bruce 1978, 38; Breeze and Dobson 2000, 229, 241–2).

Interestingly, the pottery recovered from excavations of part of the Petty Knowes cemetery, which lies close to High Rochester, spanned two hundred years from the early second century AD to the early fourth (Charlton and Mitcheson 1984, 22–8).

Evidence for post-Roman occupation is inconclusive, but fairly continuous occupation of the site is likely, considering its favourable position. A recent publication suggests High Rochester as the site of a battle in the late sixth century AD (Breeze 2002, 169). Late medieval activity, mainly small-scale pastoral use, is documented in the thirteenth century (Hodgson 1827, 14–18; Charlton and Day 1979, 209–10). In some fields, the remains of ridge and furrow may affirm medieval presence, but this cultivation is notoriously difficult to date. Since the mid-sixteenth century, a settlement

has existed within the remains of the fort (*cf.* Hodgson 1827, 71; Charlton 1986). Various bell-pits in the vicinity reflect coal-mining activities, certainly in the eighteenth and nineteenth centuries, but perhaps also earlier. The Roman road continued in use under the name of 'Watling Street', not least as a major cattle-driving route, into the eighteenth century (Warburton 1716).

Summaries of the earlier archaeological history of the fort have been given by Birley (1961, 242–4) and by Daniels (Bruce 1978, 295–301). Antiquarian visitors described the contemporary remains and the inscriptions (Horsley 1732, 115, 241–4, 395; Hutchinson 1778, 198–211; Hodgson n.d., 148–53, and 1827, 90, 138–49). In the early 1850s, the fort was excavated by Bruce and members of the Society of Antiquaries of Newcastle upon Tyne (Bruce 1857). Most of the fort's internal plan was recovered, including the headquarters building and an internal bathhouse in the south-west angle. In 1935 Richmond carried out a small excavation near the north-west corner of the curtain wall. His investigation revealed a stone-slab foundation projecting obliquely from the curtain wall, but he was at a loss to explain it (Richmond 1936, 171–84, esp. 172–4).

Recent work has shed further light on this enigma and on the history of this outpost fort by combining geophysical survey techniques with some excavation of specific areas (Crow 1993, 1994, 1995, 1997, 1999a, 1999b; Frodsham 1996). As part of these investigations, the stone-slab foundation was re-excavated, identified as part of an annex rampart (in the following referred to as annex A), and has been attributed to a Flavian date (Crow 1994, 31–32). Some areas of annex A have been investigated further, but without establishing a chronological sequence (Crow 1999b, 292; 1999a, 189). A pre-Roman Iron Age enclosure has been proposed as the antecedent to annex A (Crow 1994, 36; 1999a, 189–191; 1999b, 291). A feature entering the fort from the south-east has been tentatively identified as an aqueduct (Crow 1999a, 193).

The work presented in the following account was initiated to consolidate and extend this

earlier research using geophysical survey techniques.

GEOPHYSICAL SURVEY

The main objectives of this latest geophysical survey were to determine the nature and extent of the fort annex(es) and to establish possible evidence for the location of an external bathhouse, together with any other ancillary structures.

The survey was conducted during March and September 2003, covering an irregular area totalling 5.0 hectares. The survey boundaries were delineated by field walls to the north-east and to the south, by a steep scarp to the north and to the west and by the fort defences to the east. The survey was centred upon NY 831987, with the survey grids aligned at an angle of 45° to the eastern field wall. This configuration ensured that, for data-processing purposes, traverses would cross any major archaeological alignment. It should be stressed that geophysical survey techniques can generally only provide an overall representation of buried archaeological features within the instrument's operating depth of about 1m. With a palimpsest of features as detected here it may be difficult to distinguish between different complex constructional phases.

SURVEY RESULTS

The results are shown as a grey scale magnetometry plot (fig. 2) from which a magnetic anomaly plan has been derived (fig. 3); the latter is also presented as an overview (fig. 4). The features numbered in bold in the text refer to references on the magnetic anomaly plan. The results of the survey are described in the following order: the first section deals with annex A as identified by Crow (1994, 31–6), the traces of which are found within the more prominent larger enclosure, the suggested annex B. This latter annex extends west from the fort more than half-way across the field. The results for annex B are given in sections

relating to defences, interior and sub-annex respectively. Findings so far from the areas north, south and west of the annexes then follow.

Annex A

The northern and part of the western perimeter of annex A described by Crow (1994, 31–36) can be recognised from the magnetic survey at (18). The overall size given by Crow is about 80m north-south by 60m east-west (*ibid.*, 33), the total area of which is not visible here as its southern extent is largely obscured by other features. It is noteworthy that in the northern half of this annex no notable features were detected. Features located in its southern area are discussed below in the section headed ‘Interior of Annex B’.

Annex B and its defences

Several ditches (15) extend from the north-west angle of the fort to the west, marking the northern limit of annex B. This annex seems to have at least three visible defensive ditches on its northern side and two on the west with a width of *c.* 4m each. The three northern annex ditches and the two western ones appear to intersect at (16). It is noteworthy that the two outermost of the northern annex ditches (15), which can be traced all the way to the fort, curve at their north-east end and seem to intersect the fort’s defensive ditches.

The southern sector of the survey presents a very complex group of features. It would appear that the southern limit of annex B was at some time defined by the line of a possible masonry structure (27), parallel to which was a substantial ditch (28). Traces of possible constructions across the western end of this ditch suggest it may have been filled in at a later stage. Further south, a second linear feature (29) indicates another possible embankment that may be associated with a re-alignment of the annex perimeter. Another major ditch (15B) was located south of these features, although later building foundations somewhat obscure the evidence. This ditch (15B) may in

fact be an even later part of the annex defences, joining the inner western defensive ditch (15) near the group of features (22) discussed below. The course of this ditch to the east is less clear.

A conspicuous rectilinear structure (17) near the north-west angle of the annex is connected with the rampart and appears to cross, or interrupt two ditches. This feature does give the impression of a projecting tower though this would be rather unusual as part of annex defences. A possible entrance passage or gateway (16) is tentatively suggested at the intersection of the three northern annex ditches and the two western ones, where there seems to be a gap in the defences. On the west side of the annex, a complex group of features (22) appears to cross the inner defensive ditch and possibly indicates the location of a substantial gateway, with one or perhaps even two flanking towers. From the south-west face of this ‘gateway’ and closely associated with it, some parallel features extend west (23); these may represent a road with a central drainage channel or the walls of an entrance passage.

Interior of Annex B

Annex B is defined by ditches to the north and west (15), to the south (28) and by the western perimeter of the fort proper. Within this annex are two distinct areas. The northern sector has few features while in the southern sector a significant number of stone building foundations are indicated. Close to the west gate of the fort, several rectangular buildings (19) were detected which appear to face a road leaving the gate. The clutter of building foundations in this area may imply more than one phase of construction and may even include structures from the Flavian annex A. Additional larger buildings (20) further west appear to have more robust foundations. To the south and to the west of these, linear features (21) may indicate two roads with drainage channels joining at a small, hollow square feature of unknown function. Further buildings (24, 25) are located to the south of the ‘road’ (21). They all seem to face this ‘road’, which appears to connect the suggested ‘gateway’ (22) with the

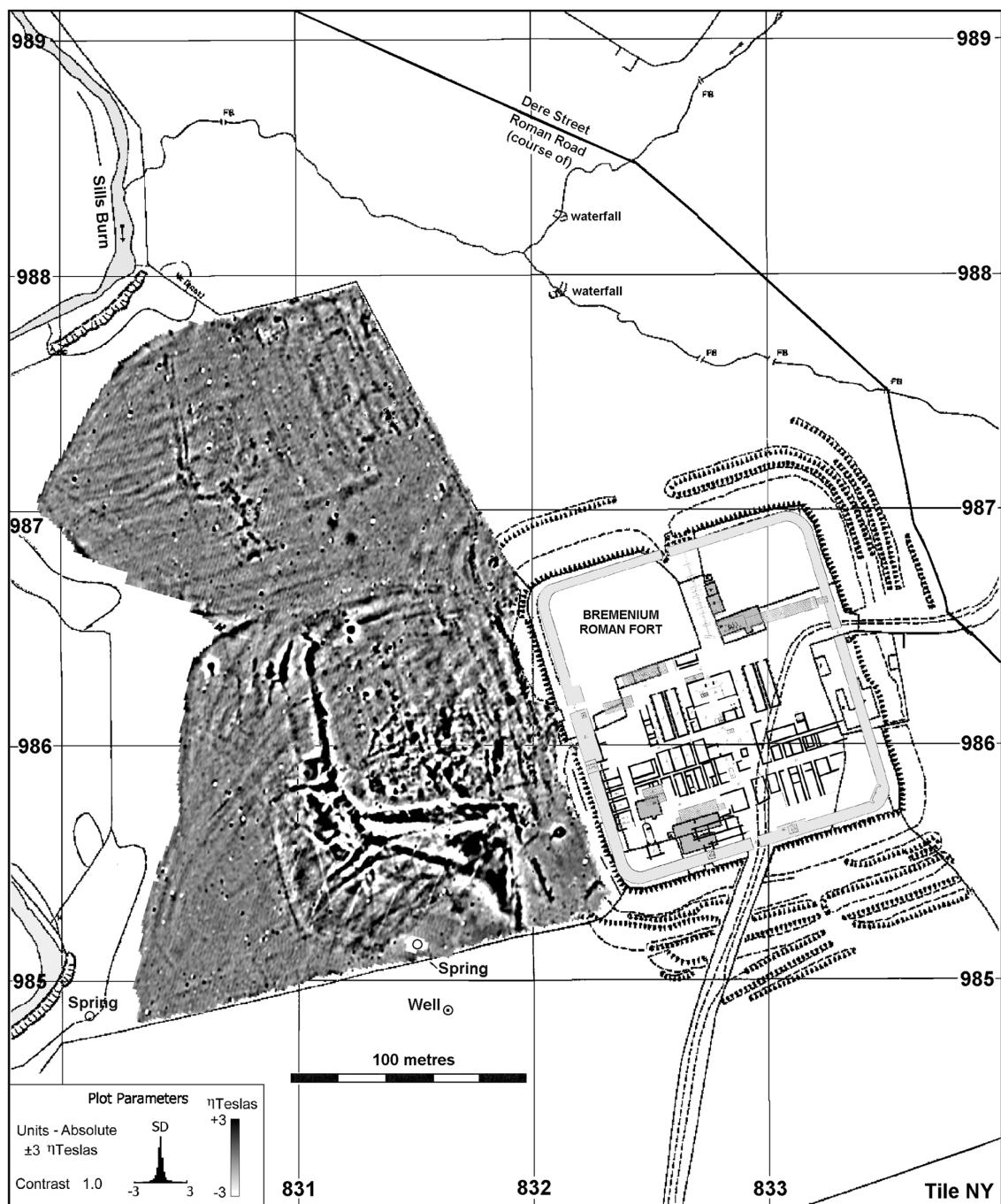


Fig. 2 High Rochester – grey scale magnetometry plot.

fort's west gate. Some features that do not comply with the expected alignment could indicate structures of a different phase. Another set of sub-rectangular features further to the east (26) appears to overlie the defensive ditches of the fort (13), but here the evidence for buildings is less secure. On the whole, the buildings in the southern area of the annex appear to respect the southern limit and thus give the impression of being contemporary with this southern limit.

Other possible structures can be identified in the triangular area roughly defined by the substantial ditch (28) to the north, the ditch (15B) to the south and the fort's defensive ditch (13) to the east. Mention has already been made of the possible constructions across the western end of the substantial ditch (28) associated with the potential masonry structure (27). Just to the north of ditch (15B) is a feature tentatively identified as a water storage tank (30); a pair of buildings (31) are located to the east, separated from each other by one of the fort's defensive ditches (13B). A linear feature (32) leading downhill could be associated with drainage. The short, sharply angled ditch (33) is most likely part of the drainage system for the internal bathhouse.

At the eastern boundary of the annex, three of the fort's defensive ditches (13) continue along the west curtain wall. Within the annex as well as outside it, the survey located various features with strong magnetic responses with properties usually caused by ferrous, ceramic materials or brick (14A–14F); these could arguably be interpreted as kilns or ovens. Notable on a prominent elevation inside the annex is one of these features (14C), of uncertain nature, which exhibited a very strong response.

Sub-annex with large building

Outside the south-west corner of annex B is another enclosure, or sub-annex, delineated by a possible rampart (36) with some evidence of a palisade fence. This rampart was associated with an external ditch about 1.5m wide, which,

at its southern side, seems to curve towards the east but soon fades near the modern field wall.

The sub-annex seems to accommodate a large building complex (34), which dominates its northern sector. It is on a different alignment to the annexes and the fort and part of it appears to cross the annex defensive ditches. The building may comprise six or seven rooms with perhaps some smaller ancillary rooms attached. Overall the dimensions of the complex could be as great as 30m by 40m. A possible sub-circular feature is notable in the centre of the north-western sector of the building. A square structure (35) with another similar square feature to the west may possibly form part of an entrance area to the building complex.

The survey results further indicate what may be a drain at the north-west end of the complex (south-west of 35). Just to the south of the building, and apparently respecting its southern extent, is another prominent feature (37), that gives the impression of an entrance passage of some sort but seems to terminate within annex B at the ditch (15B). A narrow linear feature (38), possibly of stone and crossing the enclosure, is notable here because, if extrapolated to the north, it appears to align with the major outer annex ditch.

North of the annexes

A distinctive circular feature (1) at the very northern end of the field, still visible as a prominent mound today, may represent the location of a former bell-pit. Several linear features to its south-east (2, 3, 5B, 6), suggest some form of human intervention, possibly ditches and boundaries. However, the medieval ridge and furrow cultivation in this particular part of the field may make this interpretation less certain. A potential building (5A) also located here is probably post-Roman as it seems to lack any Roman characteristics. Parallel to the north-east field wall, a possible stone-lined channel (4) is likely to represent one of the fort's drains. Branches downhill (4A, 4B)



Fig. 3 High Rochester – magnetic anomaly plan.

may suggest a post-Roman re-use of the stone-lined channel, perhaps to carry freshwater to possible buildings (5A) and (5B).

A group of rectilinear stone-built dwellings (7A, 7B, 7C), with what appear to be insubstantial foundations, lie to the west. These seem to be associated with the remains of small fields (9) with access tracks (10, 11A), and a possible boundary ditch (11B). A possible road (9A), here visible north of feature (7A), may be associated with the suggested northern annex ‘gateway’ (16). Examination of further plots used for analysis purposes, shows that this ‘road’ seems to run directly south to the ‘gateway’. On the same images, there are even hints that this ‘road’ (9A) continues along the same straight line inside the annex, ultimately connecting with the north-eastern ‘road’ (21) where this bends.

A feature of unknown origin or function (8) is indicative of a 4m wide ditch with up-cast on either side, or an in-filled hollow-way. At least two coal-pits (12) have been recognised south of this feature. The possible kilns or ovens (14A, 14B, 14F) have been referred to above. At the north-east angle of annex B, traces of four or five of the fort’s defensive ditches (13) were detected.

South and west of the annexes

To the south of the annex there is a mixed group of features of uncertain significance (39). It comprises a number of possible ditches, some rectangular features and a line of possible postholes or pits. A drainage trench (40), opened by the local farmer to alleviate drainage problems in this waterlogged area, revealed two natural springs flowing into the trench.

West of the annex, several linear features (41) were detected which may represent prehistoric earthworks. Curvilinear features (42) appear to extend from the extreme south-west corner of the survey area for about 180m towards the north-east and to pass under the fort. The characteristics of the survey response for these features imply substantial earthworks but also a relatively short occupation period, as the magnetic response encountered was quite

weak. Occupation over a longer time span, evidenced by human activity such as burning close to the ditch with subsequent infilling, typically produces strong readings. To the south of these marks (42), similar features (43) were detected, which are visible today as two distinct earthworks. Yet another pair of curvilinear features (44) extend to the south. Features (43) and (44), which, together with (42) seem to pre-date the annex, may indicate the rounded corners of one or more temporary camps.

DISCUSSION

Annex A

The smaller annex A is considered to be associated with a Flavian turf and timber fort. In fact, two phases of turf fort ramparts have been identified, with the second apparently replacing the first one quite quickly (Crow 1999a, 189; Richmond 1940, 69–70). Excavations have shown that the annex was an early addition to the second fort, and must pre-date the first stone fort, the defences of which overlie the rampart of this Flavian annex (Richmond 1936, 173–4; Crow 1994, 31–2). Flavian pottery has been recovered from the annex area (Crow 1997, 29).

Annex B and its defences

It seems quite certain that annex B post-dates annex A, because annex A is known to be Flavian, and because the features of and within annex B overlie and conceal the outline and remaining structures of annex A. Furthermore, it is postulated here that the re-alignments of the southern perimeter of annex B progress outwards over time, as suggested in the following discussion.

The junction of the three northern annex ditches with the two ditches from the west, near the location of a possible ‘entrance passage’ (16) represents a fairly common feature and warrants no further discussion here (Johnson 1983, 48). The situation is quite different at the north-east angle of annex B, where the two

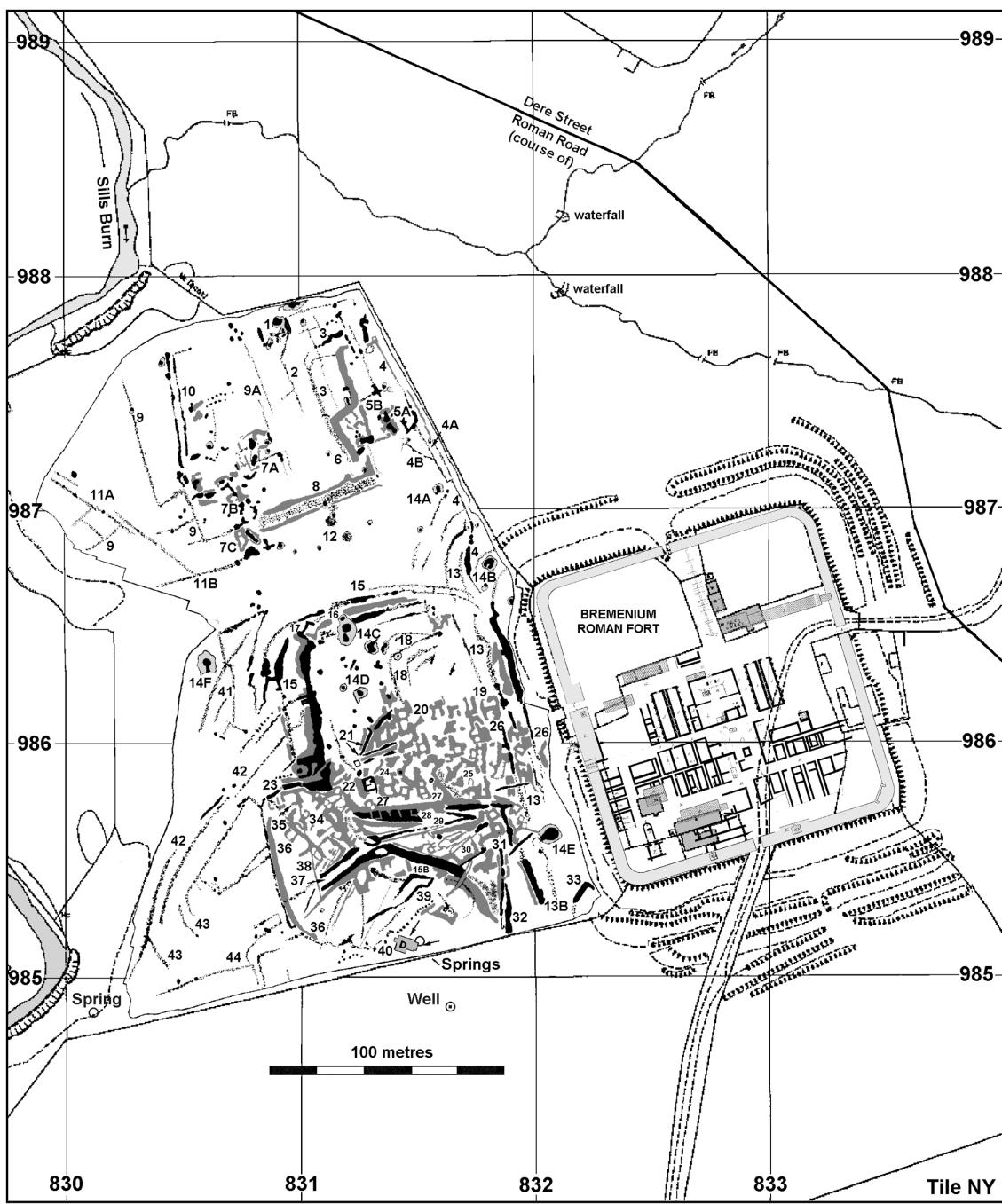


Fig. 4 High Rochester – magnetic anomaly overview plan.

outermost of the northern annex ditches (15) seem to intersect the fort's defensive ditches (13) rather than joining with them. This would indicate that the two features are probably not contemporary. Analysis of the survey data suggests that the eastern end of these two outermost of the northern annex ditches (15) may possibly post-date the fort's defensive ditches. From the overall appearance, a post-Roman re-use and adaptation of part of the annex defences may seem conceivable, to meet some later need for fortifications. This is further supported by aerial photographs, which show that some earthworks appear to extend west as far as the scarp, thus effectively cutting off the plateau at its narrowest part. However, it cannot be ruled out that these features pre-date the fort and annexes. The north-eastern curve of the two ditches is reminiscent of Roman defences, but an even earlier fort would be difficult to fit into the timetable of the Roman occupation. Possible pre-Roman explanations remaining are thus a temporary camp or prehistoric earthworks. Only excavation could provide positive identification of these features.

Major modifications of the annex defences seem to have been limited to two possible realignments of its southern boundary and the likely addition of projecting towers. The details of the re-alignments are difficult to interpret, but what can be suggested is that the first re-alignment (29) seems minor, creating little additional annex space. Considering the slope of the ground in this area (Frodsham 1996, 35) and the wet conditions prevailing today, this may possibly represent the relocation of an unstable embankment or wall. The second, more substantial re-alignment (15B) appears to maximise the annex area to the south. Here buildings can be recognised within the augmented annex, although it is possible that some of them may pre-date this re-alignment.

As stated earlier, a 'projecting tower' as proposed at (17) is not a common element of annex defences, but there appears to be no other plausible explanation for such a rectangular feature jutting forward from the rampart. The possible entrance passage or 'gateway' suggested at (16) seems even more likely when

considered in conjunction with the possible road (9A), even though the evidence for the latter is admittedly rather weak. The fact that the possible 'projecting tower' (17) and the 'gateway' (22) are placed forward of the annex rampart, between two defensive ditches, suggests that they may be later additions to the annex defences, or a reconstruction. They are probably contemporary if only because of their morphological similarity. The type of projecting towers implied here does in fact appear from the mid-second century AD until the first half of the third century AD (Johnson 1983, 92). Due to the overall complexity of the features at the southern end of annex B, it has not been possible to identify entrances or gateways in this area.

It seems reasonable to associate the construction of annex B with the reoccupation of the fort in the second century. The minor alignment may, as suggested above, possibly represent a repair. The major alignment might conceivably be associated with the reoccupation in the early third century. Furthermore, the south-west corner of annex B seems to be constructed right up to the large building (34), representing the maximum possible annex extent without including it. This arrangement gives the impression that the annex might respect the building as an earlier structure.

Interior of Annex B

There is little information on the use of annexes, but in general they are regarded as areas reserved for military use rather than for civilian settlement. They would usually incorporate buildings for storage and military equipment. The large open spaces would be used for wagon parks, corrals for livestock and for temporary storage of supplies and personnel (Crow 1999b, 292).

The complex arrangement of building remains in the southern half of annex B seems to reflect a multi-phase occupation. Of particular interest here is the notable difference between the groups of buildings (19), situated also within the outline of the earlier annex A, and (20); the less clear outlines of the former,

could perhaps indicate some Flavian building remains. The possible buildings (26) that appear to overlie the fort's defensive ditches may be compared to buildings from the *vicus* to the east of the fort at Birdoswald, which would also seem to have been built on and between the defensive ditches and possibly reflect a long period of post-Roman occupation (Biggins and Taylor 1999).

Unfortunately, nothing can be said about the use of the buildings at High Rochester from the few characteristics that can be recognised. However, observations from other sites as well as from this fort together with its known history, suggest the following possibilities.

Among the buildings detected in annex B, there are likely to be storage facilities for supplies and military gear. Furthermore, there will have been workshops of various types, with at least some operated for the Roman military by civilian artisans such as smiths. This proposition is supported by the many possible kilns or ovens (14A–F) identified on this side of the fort, inside the annex as well as outside, though conceivably not all need to date to Roman times. In principle, the coal-pits (12) also could date to some period during the Roman occupation. Use of coal has been established on other Roman sites, notably within the extensive *vicus* at Maryport (Robinson 1881, 237–57). Metalworking is ubiquitous in the *vici* and small towns of Britain, and it may be that this trade was widespread at High Rochester. Fairly big aisled workshop buildings have been seen at Saperton, Gloucestershire, where during an early phase of the building, a partition was constructed to form a living area at the rear, with a workshop at the front (Simmons 1995, 163). Such workshops, if they existed at High Rochester, could well post-date the Hadrianic period, because at that time at least, it is believed that civilians were not allowed to build shops or residences within the military areas such as that between Hadrian's Wall and the *Vallum* or the annexes frequently found outside the forts from the first century onwards. This situation is thought to have changed at the time when the *Vallum* was abandoned in the third

century AD (Breeze and Dobson 2000, 109–110, 203).

Additionally, some of the buildings may have served as accommodation for the garrison as suggested by an example from Halton Chesters. Here, in the military zone between the *Vallum* and the Wall, geophysical survey has revealed a walled annex towards the west, with another complex of unknown extent towards the east. The siting of the buildings in this latter enclosure suggests a military influence, and because the size of some of the buildings (7m x 30m) and their general layout appear similar to that of barracks or stables, accommodation for additional units has been postulated as one possible use (Taylor *et al.* 2000, 43). The need for these facilities may have resulted from a shortage of space in the fort itself or its later extension (*ibid.*). Interestingly, 'long buildings' were also noted in the eastern half of the western annex at Birrens in 1731, and were interpreted then as stables (Bruce 1978, 319). At High Rochester, as at other sites, the fort itself could hardly accommodate its third-century garrison even assuming that some detachments were on patrol or out-stationed, for example, to the fortlet at Cappuck about half-way to Newstead (Breeze and Dobson 2000, 143–4, 145, 150). That space in the fort was lacking is also evidenced by the construction of buildings against the rear of the rampart, presumably in the third century (Crow 1999a, 191).

Sub-annex

While the northern half of the sub-annex is clearly dominated by the large building complex (34) and possible associated entrance area (35), its southern extent and its possible function are unknown. A prominent feature in the sub-annex is the entrance-like passage (37). The large building appears to border this and may also be in alignment with it. The 'entrance passage' is of particular interest here because, when extrapolated to the north-west, it would extend straight to the fort's west gate. An extension in the other direction would take it directly into the valley of the Rede from where

local supplies might come. This passage, then, may have been part of one of the main roads to the fort, originating at a time when there was no annex. That the course of this possible 'road' cannot be detected north-west of the ditch (**15B**) could be explained by the fact that later features may overlie its remains.

Significantly, the sub-annex appears to post-date the second re-alignment (**15B**), because it seems to respect it.

It should be noted that there is an enclosure at Newstead that bears a certain resemblance to the one identified here. At some time during the Antonine reoccupation, a separate 'defensive embankment' was apparently constructed in the area of the west annex. This Newstead enclosure contained a bathhouse (Bruce 1978, 310).

Proposed bathhouse

The substantial building (**34**), with an overall size of about 30 by 40m could represent a *mansio* (official lodgings), a bathhouse, a private residence or a farm.

Identification as a private residence or a farm, however, appears rather unlikely. Private residences, especially of this size (bigger than the commanding officer's residence) would mostly be found in towns, farms would surely be located amidst their fields (*cf.* Maryport, Biggins and Taylor 2004b), as the smaller dwellings (**7A, 7B, 7C**) north of the annexes at High Rochester seem to be. More importantly, the consideration of annexes as military areas suggests that buildings within these enclosures should have had an official function (Breeze and Dobson 2000, 109). Furthermore, the plan of building (**34**) does not conform to the closed rectangular outline characteristic for the courtyard-type residence or the winged-corridor farmhouse (Collingwood and Richmond 1969, 128, 135–40).

An identification of this substantial building with a *mansio* seems equally unlikely though it cannot be totally excluded. The building outline as located here does not follow the closed courtyard-type layout usually expected for

mansiones – as for example at Benwell, Corbridge and Newstead (Salway 1965, 170–3; Bruce 1978, 66, 69; Collingwood and Richmond 1969, 122–3). Admittedly the irregularities in its outline could conceivably result from later additions of rooms such as seen at the *mansio* at Corbridge (Salway 1965, 50–4). Similarly the sub-circular feature noted within the building might relate to a bathsuite such as are often attached to *mansiones* (Collingwood and Richmond 1969, 122–3). Against this *mansio* identification however is an argument based on the siting of building (**34**). Salway suggests that the location of *mansiones* was related to 'administration and commerce', and the examples from Corbridge, Chesters and Benwell do seem to confirm this (Salway 1965, 172, figs. facing 46, 78; Bruce 1978, 66). In this respect, the location of building (**34**) on the opposite side of the fort from Dere Street, would seem inappropriate for a *mansio*.

A bathhouse however, would represent a very suitable identification for this building. Its overall plan supports this, with individual conjoining rooms of varying sizes clearly visible, some of which are quite large. The characteristic irregular outline, with several rooms projecting from the basic structure is typical of bathhouses at Benwell, Chesters, Carrawburgh, Netherby and Bewcastle (Bruce 1978, 70, 117, 129, 313, 324). The sub-circular feature noted in its north-western sector may possibly indicate a *sudatorium* (hot dry room) or hot bath. This feature appears to have a width of roughly 4m, which corresponds well to the width of the semi-circular hot bath at Chesters (Breeze and Dobson 2000, 179). The location of the building also favours this identification. It fits Johnson's description of the characteristic position as 'often situated beneath the fort on a slope down to a nearby river' (Johnson 1983, 220). Water would have been readily available here as the fort was probably supplied with freshwater coming from the south-east (Crow 1999a, 193), whilst drainage would follow the natural slope to the south-west. Other advantages would have been its sheltered location and its exposure to the welcome afternoon sun.

If this identification for the building's function is accepted, it would not be the only bathhouse at High Rochester. Antiquarian sources have described two other such structures. The descriptions relating to the bathhouse discovered in 1773 in the northern half of the fort, may suggest it was the commanding officer's private bathhouse in his residence, the *praetorium* (Hodgson 1810, 150; Hodgson 1827, 149; Hutchinson 1778, 210). Before 1827 three altars to *Minerva* had been dug up in the 'extensive' remains of a building west of the south gate (Hodgson 1827, 149). As no large buildings outside the fort are noted by antiquarian visitors, it seems fairly safe to assume that this building near the south gate, was the bathhouse unearthed during the 1850s excavations, especially as all three altars (*RIB* 1266–1268) had been trimmed and shaped as though for re-use in a hypocausted room (Bruce 1857, 77, 85ff). One of these altars, *RIB* 1268, can be dated to about AD 213 and would thus possibly suggest a construction of this internal bathhouse after that date.

There are numerous other Roman forts with two known bathhouses, several on the Antonine Wall, for example at Bar Hill, Balmuildy, Cadder and Mumrills (Johnson 1983, 193–4). However, these cases are not strictly analogous and often too little detail is known to draw conclusions from a comparison. At Balmuildy for instance, one bathhouse was located within the fort, another more elaborate one in the annex, across the fort's two defensive ditches; this external bathhouse was systematically dismantled (Keppie 1998, 136; Collingwood and Richmond 1969, 39–40). At Halton Chesters on Hadrian's Wall, an external bathhouse has tentatively been identified in addition to an elaborate internal one (Taylor *et al.* 2000; Bruce 1978, 87). The latter is dated to the fourth century but the former is as yet undated.

It is worthy of note here that the suggested 'bathhouse' (34) seems to pre-date annex B. The south-west corner of the annex here seems to be constructed right up to the large building, as though it post-dates it. Another possible indication of the bathhouse pre-dating annex B is its association with the proposed

'entrance passage' (37). The potential bathhouse borders this feature and is also in alignment with it, suggesting they were contemporary at some stage. This may suggest that the bathhouse was built next to an early road (37) leading south-west from the fort's west gate into the Rede valley, at a time when no annex would affect the course of the straight road.

It is also likely that the proposed bathhouse has seen several phases of construction. There may have been a smaller precursor of this bathhouse – if such it be. The survey only reflects one set of foundations, but the building visible appears quite large compared to other bathhouses known from Hadrian's Wall (e.g., Bruce 1978, 117, 313, 323). Because of this, and because part of it appears to extend across the annex defences, it seems reasonable to assume a later re-construction or extension along the same lines. Such re-building or enlargement is by no means unusual, as evidenced by the modification history of the bathhouse at Chesters (Bruce 1978, 117–20). An extension might possibly be expected when the third-century garrison, nominally about twice the size of the previous unit, moved into High Rochester some time in the early third century AD. Furthermore, if access to the enlarged bathhouse was via the west annex gate, this might also provide a context for the possible reconstruction of the 'gateway' at (22).

North of the annexes

Features (9, 10, 11) seem to represent a Romano-British field system, which, with the buildings (7A, 7B, 7C) associated with it, may have been contemporary with annex B, as they seem to respect its extent. The fields could have been plots for veterans who, in time of danger, would probably have found protection within the annex or the fort.

There is a problem associated with the tentatively proposed 'road' (9A): it heads straight for today's steep scarp. However, land may have been lost at the edge of the escarpment due to erosion, so that the road's Roman course connecting the fort and annex with the valley of the Sills Burn may have been lost. The

probability of such landslip is also suggested by the abrupt ending of the 'track' (11A) and the 'fields' (9) to the west of it. Evidence of such erosion is well documented at other sites such as Birdoswald, where conservatively it is thought that up to 100m length of the *vicus* may have been lost into the valley of the River Irthing (Biggins and Taylor, 2004a).

South and west of the annexes

Evidence for earlier prehistoric activity has been recorded at several Roman military sites, such as Hod Hill in Dorset (Johnson 1983, 241), Corbridge (Bishop and Dore 1988, 7) and, more recently, at South Shields (Hodgson *et al.* 2001) and Maryport (Biggins and Taylor 2004b). Therefore it comes as no surprise that a number of possible prehistoric features have been located at High Rochester, in particular in the area to the south and west of annex B, along with traces of early Roman activity.

The possible line of postholes or pits (39) may have a prehistoric origin, as may the linear earthworks (41). The suggested Roman temporary camps (43, 44) underlying the site are more certain and could relate to Agricola's campaigns, thus pre-dating the first fort. For the curvilinear features (42), interpretation is more difficult. These earthworks are on a similar alignment to (43) and extend in a straight line almost to the fort and the survey data implies a short occupation period. All of this would seem to indicate another temporary camp. But in this case, the morphology is ambiguous, and the earthworks may pre-date Roman occupation after all; in effect the short occupation could just as well relate to a prehistoric structure. Additional investigation would be required to confirm either suggestion.

CONCLUSIONS

The geophysical survey west of the fort suggests Roman presence to have been more extensive than previously envisaged. In some areas, the multi-phase occupation has resulted in such complex data that its interpretation represents

a challenge. A number of expected as well as unexpected archaeological features have been suggested by the survey; the most remarkable are the multi-phase annex with internal buildings and the possible external bathhouse located in its own sub-annex or enclosure.

Some of the conclusions derived must necessarily be speculative and additional supportive evidence is desirable for the identification of the various features as well as the proposed Hadrianic occupation. Verification or otherwise could be provided by targeted excavation, together with a full analysis of pottery recovered. Verification of the ideas presented here would contribute to a better understanding of the frontier system and the role of the outpost forts.

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NOTES

¹ The *Itinerarium Antonini Augusti*, a compilation of routes prepared in the third century AD for journeys by the emperors and imperial officials

² A late seventh-century compilation of place names

³ The authors have re-evaluated the information contained in an article on the coins from the 1850s excavations at High Rochester (Casey and Savage 1980, 76–7) and compared it to the relevant data from Housesteads on Hadrian's Wall (Casey 1974, 51). This comparison appears to suggest a Hadrianic, rather than a later Antonine, reoccupation as the Hadrianic coins found at High Rochester are as numerous as those of the same period at Housesteads. Furthermore, the plan of the headquarters

building as recovered in the 1850s suggests two L-shaped ambulatories for the building's courtyard, an arrangement which Johnson has classified as Hadrianic (Bruce 1857, 85 ff; Johnson 1983, 130–1).

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