VINDOLANDA

1999 EXCAVATIONS

INTERIM REPORT

by Andrew Birley & Justin Blake
VINDOLANDA
THE EXCAVATIONS OF 1999
INTERIM REPORT
ON THE WORK ON THE
SOUTHERN DEFENCES OF
STONE FORT TWO

by
Andrew Birley & Justin Blake

with contributions by
Robin Birley, Patricia Birley & Richard Brickstock
The production of this report on the work of the 1999 season at Vindolanda has been delayed by a number of unavoidable interruptions, not least a very nasty virus which invaded the Director’s computer in March 2000. It thus appears after the 2000 excavation season has already started, with further work in the same area, and for that I must apologise. It is perhaps a little unfair at this stage to flag up a discovery which can only be described in the 2000 Report, but as it is of some significance, it will be done.

Between the South Gate and the SW corner of Stone Fort 2, a further series of stone-built circular native-style huts have been discovered, beneath the Stone Fort 2 buildings, and similar to those at the north-east of the fort and the two underlying the north end of the Stone Fort 2 praetorium. Others may be found on the eastern side of the Gate, and it is evident that speculation on their function will have to be resumed.

Robin Birley
May 2000.
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INTRODUCTION
by Robin Birley

The excavation of the praetorium (1997-1998) had produced further evidence for late fourth century and sub-Roman activity at Vindolanda, with the discovery of the probable Christian Church sited on the former courtyard of the Residence, and remains of very late buildings on both the intervallum road to the east and on the major road to the south. Efforts to determine more accurately the construction date of the first stone fort had been unsuccessful, due to the very thorough nature of the demolition process which had preceded the early third century alterations. For some few years, the fort platform appeared to have been given over to sub-military activity dominated by orderly ranks of stone-built circular huts, before Stone Fort 2 was laid out for the incoming Fourth Cohort of Gauls.

Further information about the successive occupations of the stone forts was of the highest research priority, and Scheduled Monument Consent was applied for and granted for a three year campaign devoted to the southern defences, including the south gate and the fort ditches beyond that. Although the eastern half of the southern fort wall, and the gateway, were known to have suffered severe damage from stone robbers, the western half had been better protected by the swampy nature of the terrain. Modern four-wheel-drive dumpers fared no better than the stone robbers’ horses and carts in that area.

This Interim Report deals with the work accomplished in the first season of 1999. In many parts of the excavation site further work will be required in 2000 before a full statement can be made. But some areas have been completed, in particular the berm outside the south-western corner of the fort, the angle-turret at the SW corner, and the latrine building at the SE corner. Some significant information was also obtained at the South Gate and inside the SW corner.

The daily supervision of the excavations was undertaken by Andrew Birley and Justin Blake, assisted by one full-time excavator and a number of volunteers, the majority of whom were undergraduates reading for degrees in archaeology. Patricia Birley and Linda Thompson undertook the conservation of the finds in Chesterholm Museum laboratory, and the former has contributed the report on the Diana relief. Richard Brickstock has once more dealt with the coins with his customary thoroughness and efficiency. Thanks are also due to Professor Charles Thomas and Professor Rosemary Cramp, for responding to our pleas for assistance on the chi-rho stone, and to Mrs Jacqui Huntley for accepting our environmental specimens for study at Durham University.

The excavators are grateful to the Trustees for their encouragement and, in some cases, practical excavation assistance. It was with the deepest sorrow that the news of Barri Jones’ death was received, for apart from being a Trustee and friend of long standing, he was always ready to assist with geo-physical and aerial surveys. We also miss his never-ending enthusiasm and very considerable skills. English Heritage Inspectors of Ancient Monuments were much in evidence, and we are grateful to them for their helpful comments. Finally, we must record the fact that the weather in 1999 was a great deal better than it had been in 1998.
The fort wall at the SW corner, and work on the berm and ditch.

Although substantial excavation had taken place just outside the SW corner of the fort in the past (especially in 1973-76 and 1985-89), when the timber pre-Hadrianic remains were investigated, it had not then been possible to examine the berm and fort wall.

Fig. 1
The fort wall proved to be on average 1.50 metres wide, and stood to a height of almost 2 metres, with up to twelve courses of stone of varying thickness. The lowest two courses contained chamfered stones re-used from earlier walls, including one inserted sideways and upside down. Presumably they had been removed from the wall of stone fort 1.

Between the South Gate and the SE corner of the fort, little more than three courses of stone remained in position on the outside face, so efficient had the stone robbing been. But the presence of springs between the South Gate and the SW corner, and the unstable nature of the ground above the old fort ditches, made it impossible for carts to gain access to the wall between the South Gate and the western corner, preserving the Roman remains.

The wall had clearly been repaired on a number of occasions, with patches of different types of stone and a number of straight joints. It was likely that the prime cause of the problem had been the failure of the builders to lay any drains through the wall, in spite of the presence of powerful springs inside the fort platform.

The berm
The berm, built up with clay and rubble, was between 10.0 and 8.5 metres wide at the SW corner, and the inner lip of the fort ditch had been the most easterly point of the earlier excavations. Removal of some 35cms of the clay and rubble revealed a number of features associated with the periods II to V timber forts, some of which could be directly tied in with the plans published in Vindolanda Research Report New Series Vol 1 (1994)
The pre-Hadrianic remains

Fig 2 The fort wall and ditch at the SW corner of Stone Fort 2, with a variety of features associated with the pre-Hadrianic forts revealed below the covering layer of clay and rubble. The original ground surface beneath the berm was nearly a metre higher at this point than the surface of the period II floor immediately to the west, resulting in split levels in the buildings constructed across the divide. Unfortunately, the construction of the stone fort’s western ditch had removed evidence for timber strapping or steps.

It was evident that on this higher part of the site there had been efficient clearance of old foundations before the construction of new buildings – the very opposite of what had taken place further to the west. There every opportunity had been taken to level up the site gradually, by leaving old walls standing to up to 70 cms high, and packing the spaces between with turf or clay. In these fortuitous circumstances, the Roman builders had created the anaerobic environment for the old floors, leading to the preservation of a vast amount of material that would otherwise have perished.
Fig 3. A view from the top of the fort wall of work in progress on the berm outside the SW corner of the stone fort, with posts (with white markers) sticking up above one of the layers of timber strapping in the original period I pre-Hadrianic rampart.

Although a number of squared load-bearing uprights and the lighter rounded alder and birch wattle fencing posts were found, little more than 20cms of them survived. The only remaining occupation material lay to the north of the wattle feature C, and in the round wattle-lined pit, feature H.

When the features discovered in 1999 were plotted on an extended plan of the 1973-76 Cerialis praetorium, it was possible to determine which lines of posts represented particular periods of the pre-Hadrianic timber constructions. Feature E was the row of four squared alder uprights, some 90cms apart, and all approximately 14cms x 8cms, with squared off bases. They had been inserted against the southern edge of a 70cms wide construction trench, which had been backfilled with puddled clay. Not more than 24cms of the posts survived, and although there were minimal traces of the construction trench extending westwards, no further posts remained, apart from two smaller, 10cms x 8cms examples, seven metres to the west. The method of construction, the types of posts and the alignment of the trench proved that this feature was a continuation eastwards of the main southern wall of the Cerialis praetorium. This brought the east to west dimensions of that building to at least 35 metres. Feature I, with two small 8 x 6 cms posts on either side of the wall line, did not appear to have anything to do with the period III structure.

It was immediately apparent that features C, D and B represented walls on a different alignment, which was the same as the period V timber period. B and D had been major load-bearing walls, with large squared oak posts of up to 15 x 14cms, with
a few small birch and alder uprights between them, with traces of wattlework. Feature C was purely a light wattle dividing wall, and beyond it, to the north, lay a cobbled floor with a scatter of charcoal, fragmentary bones and shell-fish, amongst traces of very rotted laminate. This was presumably a period V floor. Beneath that floor, and below the bases of the contemporary posts of features C and D, lay the turf and timber strapped rampart, which must represent the western defences of the much smaller period I fort.

The identification of traces of the periods III and V structures in parts of the berm left a number of problems unresolved. What had happened to the posts of periods II to IV in the northern part of the site, and why did none of period V survive to the south? It must be assumed that the higher ground to the east, made more pronounced by the remnants of the period I turf rampart, had forced successive re-builders to clear almost all previous work away, and that in the southern area where feature E lay, the stone fort wall builders had shaved down even more of the early remains. The deeply buried period III posts had just survived this process.

Four features remain to be described. H could only be partially examined, because safety requirements could not permit deep excavations within a metre of the high-standing fort wall. The five small rounded posts, with traces of wattlework between them, appeared to represent the lining of a circular pit, and within that circle, to a depth of 35 cms, lay a scatter of discarded footwear and bones. It is likely to represent a period V structure. Feature F created some excitement when first identified, for it proved to be an oak box, with its lid in position, buried in the underlying turf rampart.

![Fig. 4 The oak storage box, in section. The black bar represents the tenon which kept the two sides apart at the top.](image)

The oak planks were not held together by nails, and a single tenon kept the two long sides apart. It must have served as a permanent storage receptacle. It was 107 cms long and 25cms wide, with 4cms and 6cms thick oak side planks standing 20cms high, above an 8 cms thick base plank. The oak lid was 4 cms thick. The removal of the lid revealed nothing but a 7 cms deep layer of almost liquid mud. Many of these timber lined pits must have been sited in most military buildings, for the storage of any possessions which might be attractive to thieves.

It was impossible to be certain which period of occupation the box belonged to, but it was perhaps more likely to belong to the barrack's period, IV.

Curving beneath the box, and running SW until cut off by the later fort ditch, was a simple wattle-made drain, G on the plan, similar to those found elsewhere in the periods II and III structures. It had been provided with a wattle-hurdle roof, which had subsequently collapsed into the drainage channel. The last feature, A, was a short length of very distinctive wall, with a bare 9 to 16 cms of the bottom tips of 9 cms wide oak paling surviving. The alignment suggested that they belonged to the
period V structure, although that form of wall was also used in the period IV building examined further to the north.

**The period I turf rampart**

All these features had been constructed on the site of a former turf and clay rampart mound, which can only have been the western defences of the period I pre-Hadrianic fort, dating to the mid AD 80's. Fig 6, below, shows an area containing one of the layers of timber strapping in the rampart, made up of a mixture of thin branches of alder, birch and oak, interspersed with some larger branches, all laid horizontally. Fig 5 shows a section of the rampart, with the clear traces of turf laid grass to grass. The western edge had been cut by the eastern lip of the stone fort's ditch, and the eastern edge must lie just inside that fort's western wall.

![Fig 5 Layers of turf in the period I turf rampart.](image1)

![Fig 6 One of the layers of timber strapping.](image2)

**Sub-Roman structures above the fort ditch & berm, off the SW corner**

![Fig 7 The Christian stone](image3)

![Fig 8 The sub-Roman floor above the silted up fort ditch outside the SW corner.](image4)

Fig 8 shows the location of the patch of sub-Roman flooring, lying above the silted-up fort ditch. The berm at this point was nearly 10 metres wide, and it might have been thought to be the obvious place for a late structure, sheltered by the fort wall itself. Presumably by the time of the late structure, the berm was littered with
stones fallen from the fort wall, and the silted up ditch was the nearest available site. There were no traces of post holes around the patch of flooring and the walls may have been turf. The floor consisted of some 2 square metres of small cobbles and chippings, surrounded by a variety of large, undressed lumps of stone. There was no trace of a hearth or an oven, and the material on the floor was a mixture of grey silt and a light scatter of small food bones, with a few residual scraps of fourth century pottery. Apart from three corroded iron nails, the only significant find was the small rectangular stone slate, worn by much handling, and bearing Christian symbols in one corner.

Professor Rosemary Cramp very kindly visited Vindolanda to inspect the stone slate, and Professor Charles Thomas was also good enough to comment by letter upon a photograph and description of the object. They both agreed that the symbols represented the form of the chi-rho in the first half of the sixth century, although the stone’s precise function remains uncertain. The evidence for considerable wear would appear to rule out identification as a grave-marker, and the appearance of the symbol in only one corner would not be right for a portable consecrated altar. But the stone had evidently been a cherished Christian object, and may well have been connected with religious services. It would appear reasonable to suggest a date in the sixth century for the structure in which this object was found, although there was no other dating evidence, beyond the fact that it had to be later than the complete silting-up of the Roman fort ditch.

It should be noted that there are traces of similar late structures on the berm outside the fort wall as it begins to run towards the east, and these will be investigated in the course of the 2000 season. The site is a good one for small huts or the like, sheltered by the remains of the southern fort wall, but protected to some degree by steep slopes to the east and south, leading down to the Doe Sike.

The evidence for sub-Roman activity at Vindolanda is beginning to mount up. The Brigomaglos Christian tombstone, also dated to the sixth century, was found in 1878, on a pile of stone collected at some time from the Roman site, and excavations since 1968 have revealed two certain Anglo-Saxon bronzes – a sixth century zoomorphic brooch and an eighth/ninth century strap-end. But structures have also been identified which cannot have been built before AD 400 at the earliest, especially those lying on major roads within the fort, and the 1999 excavations revealed more of them, in the south-west corner. The siliqua of Arcadius (see the comments of Richard Brickstock on p 26) may well have been lost several years after 400.
The western edge of the southern defences within Stone Fort II.

The excavations within the south-west corner of Stone Fort II have produced a broadly similar picture to the 1980 work by Paul Bidwell (Bidwell 1985), in the north east-corner of the fort. A late period of occupation c370, with associated structures and floor surfaces, used identical building techniques to those in the north-east corner of the fort, with similar building materials. Although little is known about the garrison of Vindolanda at this time, it is becoming increasing likely (with the evidence of late structures appearing all over the fort plateau), that the garrison/occupation of Vindolanda during the c370’s – c400 was as intensive as at any other time since the primary construction of stone fort II. It is also beyond doubt that occupation of the site carried on into the fifth century and perhaps the sixth, with more sub-Roman structures emerging every year of excavation.

Fig. 9 A plan of the fort in the fourth century.
The plan below shows the entire excavated area in the SW corner of Stone Fort two. The yellowed walls represent primary construction of the fort; the green areas represent a major re-building of this area c350-400; and the red area marks the walls of structure 4, a post c400 building, clearly using the foundations of building 3 for its own north wall.

Fig. 10 The south west corner of Stone Fort two.

Structure 1.

**SW corner angle tower/platform and fort wall to the north**

A roughly built structure stood in the SW corner of Stone Fort two (see detail in figure 11), similar in design to the small turret or tower on the SE corner of the fort. Constructed adjacent to the fort wall, the platform consisted of a solid base of clay and rubble, on top of which had been placed a flagstone surface. The flagstones
vary in size and shape, and have been acquired from other structures within the fort or surrounding vicus, to provide level foundations for the walls. The platform of rubble, clay and flags rested above a mixed debris of occupation some 60-70cm thick. Beneath the debris lay the foundations of an earlier structure, badly battered, the clay bonding only surviving in places, and on the north side of this earlier structure a small oven had been built, with extensive burning to the surrounding area.

On top of the platform, traces of only the eastern and northern walls survived and in both cases only one face remained intact. The walls had been bonded with a sandy orange mortar, similar to that used in the extensive re-modelling of the prætorium during the late 4th century re-build, when the west wall of its courtyard was re-built. Little pottery was recovered from the surface of the structure, but all was 4th century in date.

![Fig. 11 The SW angle tower](image)

It is likely that all of the angle towers at Vindolanda during the late 4th century were replaced in this style. Similar structures have been uncovered at High Rochester, identified as firing platforms, but it is more likely that the Vindolanda examples were watch-towers only, the space available with the walls of the ‘tower’ being very small.

Immediately to the north of the angle tower lay a well preserved section of fort wall (see fig 12), illustrating the many re-builds that must have taken place since the fort wall’s original construction (AD220-230). The absence of rampart mound had hastened the decay of the wall, and it appears to have collapsed inwards, leaving the outer face more or less intact, but with a collage of different masonry on the inward face.
The reconstructions have resulted in a reduced thickness for the fort wall at this point, from the 1.7m on the south of the angle tower, to a 1.15m thickness, and the stone used in the re-build is far inferior to that used in the rest of the fort wall. It is unlikely therefore that the re-built fort wall carried a walkway as well as crenellations, if indeed it carried either. No trace of a timber walkway adjacent to the fort wall has been located, although this seems the most likely method of patrolling this part of the defences. The mortar that has been used in the re-build was similar in composition to that used in the angle tower, and it is likely that they are of the same phase of construction. This raises the possibility of an earlier angle tower being located beneath the foundations of the later one. It is hoped that next season should provide the answer to that question, as it is likely that some evidence of an earlier structure should remain.

The lack of rampart mound throughout the SW corner of the fort is most likely due to earlier structures, dating to the primary construction of Stone Fort two, taking the available space.

Middle – late 4th century structures
Structures 2 & 3

These two middle to late 4th century structures represent the last ‘Roman’ occupation layer in the SW corner of Stone Fort two. The construction material is a mixture of mud stone, fort wall stones, and a large selection of other material that could conceivably come from the demolition of the barrack blocks they almost certainly replaced. A mixture of soft sandstone from the remains of Stone Fort one construction was also present. The walls were clay bonded, and showed no sign of ever having a mortar. Both buildings were similar in construction style to the Bidwell Period 6 barrack blocks discovered during excavations in 1980 on the north-east corner of Stone Fort two (P Bidwell 1985).
Structure 2

Measuring 3.2 metres by 5 metres, only two walls of this building remained intact. The north wall survived only at foundation level, and had been placed above the foundations of an earlier wall. This wall appears to have slipped to the north, causing a collapse, and a large amount of fallen debris was taken away to expose the remains of this side of the structure. The east wall of the structure was the best preserved, standing some 5-6 courses high, although this also was leaning badly. The foundations for this wall rested upon a deposit of top-soil type earth some 8 cms thick, under which was a very well flagged area that protruded to the east of the building for approximately 2 metres. It is possible that the flagged surface was completely covered with debris by the time the building-work was started. The remaining walls, to the south and west, are only partially intact, with little more than the foundation level surviving.

The floor surface within structure 2 was completely flagged. Two levels of flagging remained, the lower of the two being the more substantial, and better laid. It is possible that the lower level of flagging linked up with the surface below the east wall of the building, and was not associated with the structure. The whole interior of the structure was burnt, and a layer of sooty soil covered the floor surface to a depth of 12-16cms, with the inside of the walls showing a mixture of blackened and red scar from intense heat. Within the sooty debris, a mass of artefacts was recovered, some fire damaged but most of them intact. These ranged from military material such as spear-heads, and what appeared to be a badly damaged part of a standard tip, as well as more personal items such as brooches, a belt adornment and an intaglio. Four coins were also recovered from the floor surface of the structure:

- Coin 429 Constans fragment
- Coin 431 Antoninus Pius
- Coin 432 Faustina II
- Coin 433 Antoninus Pius (See Richard Brickstock’s report, p 26)

Structure 3

Structure 3 was a long narrow building, measuring at 2.5 metres wide and 4.7 metres long. The excavation of this building was only partially completed and hopefully more evidence for its purpose will be discovered next season. The structure ran on the same alignment as building 2, and was very similar in construction. Extensive robbing had left it standing only two courses high, and the floor level appeared to have been removed, leaving the foundations only. Unlike building 2, all four walls in building 3 had their foundations mostly intact. The efficient demolition could be explained by the construction of building 4, which used the south wall of building 3 as a foundation for its own north wall. No small finds have come from this structure to date, nor have there been any coins. The pottery was predominantly Huntcliff ware and other late 4th century types.
Flagged area (5) around buildings 2 & 3

A poorly flagged/cobbled area surrounded both buildings. The flagging was made up from a mixture of roofing slates, which predominately occupied the area to the north of building 3, and a mixed flag/cobble surface to the north of building 2, with sporadic surface material between. This layer produced similar artefacts to those recovered within building 2, including two very notable finds, one of which was a small coin hoard alongside a coin of Arcadius (figs 13 & 14), the other being a badly burnt stone relief of the goddess Diana, re-used as part of the flagging (see figure 31). A similar roughly cobbled and flagged surface was also uncovered during the excavation of the north-east corner of the fort and its barrack blocks, which was also dated to c400. It is likely that most of the interior of the fort was covered with a similar surface (P Bidwell, 1985).

Figs. 13 & 14 coin 444
The well preserved silver coin of the emperor Arcadius, minted in Milan AD 388-394. It is the latest coin to come from Vindolanda so far.

This evidence suggested a very late date for both this surface and the associated structures of buildings 2 & 3, taking the occupation of this level right to the end of the 4th century. Other coins recovered from this surface show the huge variation in coinage in circulation at the end of the 4th century at Vindolanda.

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<td>Domitian, Caesar</td>
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<tr>
<td>Coin 439 (coin hoard)</td>
<td>Mark Antony</td>
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<td>Coin 440 (coin hoard)</td>
<td>Elagabalus</td>
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<td>Julia Domna</td>
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<td>Mark Antony</td>
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<td>Coin 446 Sestertius</td>
<td>Antoninus Pius</td>
</tr>
<tr>
<td>Coin 448</td>
<td>Magnentius</td>
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Structure 4

At the moment, little can be said about this building, as it remains only partially excavated. It is standing very high for such a late structure, and it offers an excellent insight into post AD400 construction techniques at Vindolanda. The west wall of the building has been excavated down to its foundations, on the west face, showing a remarkable mixture of rubble and squared building stones used in its construction as shown in figure 16 below.
Fig. 16 The western face of the west wall of structure 4, with the fort wall on the right.

The structure had been placed directly against the southern fort wall, utilising the fort wall for its own south wall. The use of facing stones mixed with flagging and mud stones, gives the wall very little support. No artefacts have so far been uncovered from this structure, and the interior of the building has yet to be explored. The north wall is built over the remains of structure 3 (see figure 10) placing the building beyond that constructional phase with its associated yard/flagged exterior area.

18th century flagged area, floor surface

The last building level in the SW corner of Stone Fort two appeared to be the construction of a agricultural building, most probably a shed to shelter livestock, which dated from the late 17th or 18th century. It was not until the 1850’s that OS started to survey the area, and by this time the flagged area must have been covered over and the structure removed. This structure was approximately 6-9cms below the turf, and some 70-80cm above the level of the flagged floor in building number 2.

Numerous pottery sherds were recovered from the floor area, most of them post Medieval. No post holes, or post pads were located with the flagged area, and it is difficult to estimate the area that the flagging once covered. Several gaps in the surface suggest that it had been robbed out in places before being covered over by the turf. Figure 17 shows this surface in relation to the southern defences of Stone Fort 2.
Figs 17 & 18 Showing the SW fort wall, tower, and 18th century structure, with a view from the west on the right.

Only one coin was recovered from this surface, which was imbedded in the foundations of the floor, sealed below one of the larger flagstones.

Coin 434 fragments of a Julia Domna issue

Latrine In South East Corner.

A classic Roman latrine building was located in the south eastern corner of Stone Fort 2, (see below). The overall internal dimensions of the latrine were 5.20m from north to south by 3.80m east to west, the internal area being 19.76sq m.

Its position in the corner of Stone Fort 2 is typical for a fort latrine, and the south eastern angle at Vindolanda has the added bonus of being one of the lowest points in the fort, making drainage of the latrine relatively simple. The steep bank outside the fort wall also made the carriage of effluent away from the fort wall into the ditch a straightforward process.
Fig. 19 The latrine in the south east corner of Stone Fort 2.

The fort wall, which doubles as the south wall of the latrine, is 1.50m wide at this point and still stands to 1.80m high on the inside face. There is a major discrepancy between the build of its inside and outside faces. The inside face is made from coursed, faced rubble blocks of the soft yellow sandstone, more commonly associated with Stone Fort 1. These blocks average 30cms by 18cms and are bonded with a strong fawn coloured mortar that has quite large, river washed gravel in it. Conversely, the outside face is made up of random rubble masonry. Any mortar once in the outside face has perished. The entire wall has subsided downhill to the south by a substantial distance (some 50cms from its true position on the inner face). The patches of repair mortar show that at least some of this shift has occurred in antiquity and the reason for the differences of wall facing is due to these differing styles of repair. The chronology of the repairs is shown clearly by the arched sluice gate built through the south wall. The archway is actually a series of 3 consecutive arches built right through the curtain wall and there was almost certainly a fourth on the outside face of the wall. Due to a collapse at that point, the face had been patched up in the random fashion described above, and instead of rebuilding the outermost arch, a more simple rectangular lintel stone was used instead.

Outside the fort wall the effluent was carried below the arched sluice and through the berm by a stone built drain 42cms wide, which cuts through the berm. As
yet the destination of this drain has not been confirmed, but it is difficult to draw any other conclusion that it is leading to the inner-most fort ditch.

Fig. 20 The inner wall, showing the arched sluice.  
Fig. 21 The outer wall with lintel and drain.

The side-walls of the latrine have survived extremely well up to the level of demolition. Made from small buff sandstone blocks, 20cms by 10cms, the walls are both 60cms wide and are of faced rubble. Both of the side-walls show a similarity to the walls of the north eastern latrine building at Vindolanda (Bidwell, 1985), in that they are bonded with mortar from the channel floor up to the level of the internal floor. The mortar used in the walls of the south-eastern latrine was cream in colour and had an aggregate of coarse sand. The remains of the walls above the internal floor were bound together with thick grey clay. Unfortunately, both of the side-walls had collapsed with the main south wall and had moved out of their true position by some 50 to 60cms. Where this collapse had taken place the mortar had disintegrated.

Fig. 22 Elevation drawing of the latrine building’s west wall, east face. The collapse of the wall at its southern end can clearly be seen.
The only practical location for the entrance to the latrine must have been near the centre of the north wall (see fig 19 above), but because of the thorough demolition of the building no evidence of a doorway survived. It is probable that the good quality dressed masonry necessary for a door was taken away to be reused in another structure after demolition. This was certainly the case with the internal floor flags, which were all missing except for those lying on the channel walls. These had not been removed because they were all mortared into position making it exceptionally difficult to lift them without damage.

All three of the latrine sewer channels were much the same depth, being between 1m and 1.30m deep and all sloped from north to south. The gradient would have allowed the waste material to move out through the sluice gate assisted by gravity and the flow of water. Each of the channels was paved with large yellow sandstone flags, laid in an irregular manner, but fitting close enough to each other to provide an excellent surface. In this building there was no trace of the possible impermeable layer of clay that was noted in Vindolanda’s north eastern latrine channels (Bidwell 1985).

There is no evidence that the latrine channels were flushed by a specially piped supply of water, as was the case both at Housesteads (Crow 1995) and in the Vindolanda north eastern latrine (Bidwell 1985). There are no inlet holes in either of the channel walls as in the north east latrine and no aqueduct channel brings water into the channels as at Housesteads. However, throughout the excavation the channels always had a steady stream of ground water running down them, and it is possible that the Roman builders had utilised this steady stream of naturally flowing water to flush the waste away. The position of the latrine in the lowest point of the stone fort means that ground water naturally drains towards the latrine and it is
perhaps no surprise that it bubbles up into both channels through small gaps in the
floor flags at their head.

The demolition of the building meant that no clear evidence was found for a
timber-seating frame covering the channels. For much of the perimeter, the walls had
been demolished down to just above the internal floor level, so if a wooden frame was
used, it would not have survived the demolition process.

There was also very little evidence of the latrine’s roof, if it had a roof at all.
The praetorium site to the north of the latrine produced a host of stone slates. The
latrine building only produced one stone slate, however, and it is not impossible that it
never possessed a roof. This would make it similar to those Mediterranean examples
noted by J.C Mann (Mann, 1989). Certainly an open-air building would help to
control the inevitable stench and the latrine, tucked into the rampart mound and butted
up against the high fort wall, would have been a well-sheltered and private area.

Dating the latrine is more problematic than determining its function. Primarily
this is because of the efficient job of demolition carried out by the garrison, but also
because the constant flow of water down the sewers channels had washed almost all of
the dating evidence away. The side walls of the latrine were butt-jointed onto the
southern wall of Stone Fort 2, meaning the foundation of the latrine must have been
after Vindolanda’s second stone fort was built in AD223-5. Given the important
nature of providing a convenience for so many men, this could not have been long
after the work on the southern curtain was complete. How long the latrine was in
operation and the date of its demolition is even harder to surmise. The only dating
evidence from the latrine area was the pottery which came from the sewer channels
and from the later structures built on top of the latrine. The only pottery from the
latrine channels was a Black Burnished Ware cooking jar of Gillam type 143, AD 180-
280. The difficulty in using this pot to help date the building is that it is impossible to
know how long the pot had been in existence before it ended up in the latrine. Also
there is the problem of whether it was left in the sewer at the beginning of the latrine’s
life or at the end, during demolition. The pottery from the central floor area of the
latrine should have been a good indication of date, but because the floor had been
robbed, the deposit was not sealed, again rendering the pottery unreliable for dating.
Of the small collection to come from the floor area the majority was Black Burnished
Ware of late second to early third century date. There was also a good selection of
mortaria shards of Gillam type 285, AD 320-370. After the demolition of the latrine,
the area had been covered in a thick layer of grey clay. In this clay, traces of a small
building were found which overlay the site of the latrine. A large pit full of broken
pottery was located just to the south of the structure. The pottery from the floor levels
of this building and the pit was almost all Huntcliff Ware of Gillam type 163, AD360-
400. There was also a smaller amount of Crambeck mortaria bowls dating to AD370-
400.

From the meagre amount of dating evidence found in the latrine area, it seems
the latrine was built in the early third century, shortly after AD223 and was definitely
demolished by the mid-fourth century. However, there were undoubtedly major
demolition and rebuilding programmes taking place in the rest of the fort around
AD300. The fort’s praetorium, gateways and barracks were all being altered around
this date and it is probable that the latrine in the south east corner of the fort was demolished then, rather than 60 years later.

After its demolition the latrine facility was possibly moved to the north east corner of the fort. The lavatory block there had certainly been built when the south-eastern structure was demolished. The pottery from the north-east and north-west channels of this latrine was dated no earlier than AD370 (Bidwell 1985) suggesting that this latrine did not go out of use until much later than the south eastern example.

**Stone Fort 2, South Wall.**

During the 1999 excavations both faces of the southern curtain wall were exposed, east of the south gate. The outside face was excavated down to foundation level throughout its length, but due to time constraints the inner face was only excavated to about half of its full depth. It is hoped that the remainder of the inner face and its associated features will be uncovered in the year 2000 excavation season.

The wall was similar to the north and east fort walls of the same date at Vindolanda, in that it was the usual 1.83m (6ft) thick and showed signs of many repairs and partial rebuilding in places.

The outside face of the South wall varied widely in its make up at different places. Immediately east of the South gate the wall was 1.96m thick. There appears to have been a repair to the wall at this point using huge sandstone blocks, one of which was 66cms x 110cms x 30cms. This style was not the same as the original wall, which was made of faced rubble blocks averaging 30cms x 15cms. The repair runs for 4.20m along the wall eastwards from the south gate. Unfortunately it only survives one or two courses high above foundation level. The wall foundations at this point are of rough coursed rubble often with only rudimentary facing, and this foundation style is consistent along the entire length of the south curtain, east of the South Gate.

East of the repair described above, the next 4.65m was built in the classic Roman style of the Hadrian’s Wall area with faced, rubble blocks of 30 x 15cms, in this case quarried from buff sandstone. The stones were bonded with a hard cream mortar using an aggregate of small, river washed gravel.
At a point approximately 9m east of the South Gate the wall changed in character again. The faced rubble style of roughly square blocks was replaced with a section of faced rubble in long rectangular blocks, which ran for 4m. There were a number of smaller stones set on their edges in the wall to level these 'string courses' up. This section of wall must be a repair to the original and it appears that the builders had trouble with subsidence during the wall's lifetime. It is possible that the repair crew hoped to solve this problem by laying the longer thinner stones rather than the smaller blocks originally used in the rest of the wall.

The following 3.0m of the south face was in very poor repair. The whole wall was leaning over to the south and indeed the south face had collapsed. It is possible that the reason for this collapse was that the eastern ditch of one of Vindolanda's earlier periods was running north/south underneath the curtain wall. The settling of the material in the ditch had created subsidence in later periods elsewhere on the site and if the same holds true for the south wall it would certainly explain this particular collapse. The facing stones which had fallen were located within a metre of the fort wall and the nature of these suggested that the wall here had been repaired at least once before its final collapse. The facing stones had been reused from another building and were of high quality. Time and care had been taken in their dressing and all four faces had been finely worked.

The fact that the outer face had fallen away from the wall meant that the core could clearly be seen at this point. It was made up of small angular stones and bits of building debris along with soil. There were also large chunks of cream mortar, which had been thrown in with the rest of the builder's rubbish to fill up the cavity between the two wall faces.
The remainder of the south wall from the above collapse to the south-east corner was badly damaged. There was very little above three or four courses high and the mortar had eroded away leaving the wall unstable. The outer face was made up of faced rubble laid in 30 x 15cm blocks. The majority of these blocks were soft buff sandstone but there were a few soft white sandstone blocks among them.

There also appear to have been two more repairs at the south side of the latrine, (see latrine above).

**The South Gate of Stone Fort 2**

The southern gateway of Stone Fort 2 was originally excavated in 1969 by R. E. Birley and reported in A.A. Fourth Series, XLVIII 1970. During this excavation trenches were excavated across the entire gate sill, both of the passage walls and across the southern curtain wall to the east of the eastern respond. The excavations principal finding was that, in the parts excavated, the southern gateway had been extensively robbed; a fact immediately obvious to the excavators by the depressions in the ground surface left by the robbers’ trenches. The eastern passage wall only stood to four courses of masonry and the western passage wall had been robbed down to Roman ground level, the only remaining trace being its foundation stones.

The 1999 excavation of the entire gateway supported the findings of the 1969 team. The south gate of Stone Fort 2 was a single portal flanked by thick passage walls, originally without guard-chambers. The rampart-walk was carried over the passage in a straight line with the fort wall. The portal itself is 3.35m wide and the passage walls are 4.40m long. The roadway through the fort gate was made of small cobbles laid into a hard grey clay base. There were at least 3 discernible layers of this cobbling, although the second, which was patchy, was certainly a repair to the original. This second layer contained a fine silver coin of Julian the apostate, AD 361.

The earliest surface had many small bronzes and a varying scatter of pottery. The latest surface was extraordinarily clean and showed signs of water draining out of the fort area over the road surface through the rills cutting into the last covering. The whole roadway rises as it moves north into the fort area.

The eastern passage wall was four courses high along its whole length and was 90cms wide. The blocks in it were made of the same buff coloured sandstone as the forts’ southern curtain wall. These blocks were on average 30 x 20cms and the wall was built in the ‘faced rubble’ style. On the western face of the east passage wall about 40% of the stones showed the diamond broaching that is common on the wall stones around the eastern gate of Stone Fort 2.
The two eastern gate responds were made from some high quality ‘block in course masonry’, the style of which was very similar to that of the late Headquarters building of Stone Fort 2.

The respond in the north east corner was standing 2 courses high and was made of some finely crafted masonry. The blocks had been cut into an L shape some 94cms x 67cms with their inside corner rounded off to accommodate a post. The quality of the carving was such that it is no surprise that the stone robbers had targeted this area.

The southern respond on the eastern side of the gate had not survived to the same high standard as its northern counter part, largely due to the more extensive weathering it had endured as part of the outside of the gateway. The southern respond only stood 1 course above foundation level, the stone measuring 114 x 60 x 45cms. The pockmarks of the mason’s point were still visible on all of its outer faces.

The western passage wall of the gateway had been robbed down to foundation level throughout its entire length and both of the western responds had also been robbed out. The foundations of the wall were made of roughly squared off blocks in the same fashion as the rest of the southern curtain wall and the eastern passage wall. The foundation wall here measured 96cms across and from this thickness, which was identical to the eastern side, we can presume that the western passage wall must also have been about 90cms thick. The section of rampart immediately to the west of the western passage shows a layer of 30cm topsoil, 40cm of orange brown rampart clay and then a thin 4cm line of black material which could once have been organic. Below that there was some 66cms of builder’s rubble made up of a combination of broken plaster and mortar mixed in with clay and soil as well as small stones. This layer seems to continue for at least 3m to the west. After that point the roots of the oak tree growing outside the gate interfere with the evidence.

As reported by Birley R. in 1970, the gate threshold survives only at the east side with a large flag carrying the characteristic hole and groove to accommodate a door post. Enough space remains within the gateway for 3 of these threshold flags but this is the only survivor. Immediately to the south of the threshold stone is a step down of 30cms onto another large flag which is cracked. The stone is similar to the southern respond stone of the eastern passage wall. Outside this there seems to be a further drop as yet not fully excavated. This substantial step must have prevented wheeled traffic entering the gate at some stage; a fact backed up by the lack of worn wheel ruts anywhere within the gateway.
Fig 30. The section across the rampart to the west of the South Gate.

Key:

Note
The terms used here to describe building styles are taken from P. R. Hill - Stonework and the Archaeologist Including a Stone Mason’s View of Hadrian’s Wall, in Archaeologia Aeliana, 5th series, Vol IX, 1981. In this article Hill noted that “rubble should not in any way be taken as a derogatory term. The majority of ancient buildings of stone in this country are in coursed or random rubble, and many have stood for centuries without any regular maintenance”.

The Coins, by Richard Brickstock

Firstly, I should note that the provisional listing of 1998 coins published in the last volume may now be regarded as final, since a further spell of study suggested no changes of attribution.

Secondly, I offer some brief comments on the 1999 excavations, which produced 38 coins to be added to the over twelve hundred site finds recovered at Vindolanda over the last seventy years. Further comments are reserved for the more detailed discussion of the complete site assemblage that I hope to produce in the course of this year.

There is once again a general conformity with the pattern of finds demonstrated over previous years, but a couple of points of particular interest stand out, the first being the presence of two late siliquae (C417 and C444). The former, recovered from the cobbled underlay of the road through the south gate, is a full-sized (i.e., unclipped) but worn siliqua of the emperor Julian, minted in AD 360-61. Similar coins were recovered both from the Mansio (Birley, 1970) and by the 1980 series of excavations (Bidwell, 1985).
The latter coin, however, recovered from the penultimate level in the SW corner of the stone fort, probably represents the latest issue found at Vindolanda so far. It is a very heavily-clipped and also quite worn siliqua of Arcadius, of a type produced at Milan between Spring 393 and September 394: it is unlikely to have been deposited before the end of the fourth century and quite possibly not for some years into the fifth. Hitherto, only two coins of the House of Theodosius had been found at Vindolanda, the first in the headquarters building in 1932 (Birley, 1936) and the second during the 1980 excavations (Bidwell, 1985). Both were copper salus reipublicae issues of 388-402, the former certainly of the earlier part of that period (prior to the death of Valentinian II in 392), the other less fully-identifiable.

At the other end of the timescale, a small hoard of denarii (C439-C442) can be used to demonstrate the extreme longevity of the early imperial currency. The hoard was discovered (in the same context as the coin of Arcadius) corroded to an iron object. As such the four coins are likely to represent a small purse hoard. Two of the coins (C439 and C442) are very worn denarii of Mark Antony, the reverse of one (C439) being worn completely flat and its obverse twice countermarked. The other two coins are Severan: C441 is fairly worn issue in the name of Julia Domna, wife of Septimius Severus (AD 193-211), while the latest (C440), only slightly worn, belongs to the reign of Elagabalus (AD 218-22). The coins of Mark Antony (minted in 32/31 BC) are thus shown to have been in circulation for some 250 years, emphasising the problem of residuality inherent in the coin record, a problem addressed by the quoting in all reports of a (rather subjective) assessment of the degree of wear alongside the mint-dates of the coins.

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The Diana relief, by Patricia Birley

Fig. 31

The relief has been carved from local buff sandstone, and has been burned and blackened by fire. The burning, combined with general weathering, leading to the crystallisation of salts and a powdering of the surface, has weakened the stone, causing the breaks when it was used as floor packing.

Four fragments have survived (the upper part is missing), and these constitute around 85% of the original relief. The dimensions are now 315mm high, by 270mm wide, and the stone is 90mm deep.

The relief is in the form of a niche, containing the carved figure of the now headless goddess, Diana. She faces the viewer, and wears a clinging tunic with an overfold secured by a plain girdle, and the soft broad folds of a cloak cover her upper right arm. Her right hand holds or reaches towards a torch, which is the symbol of one of her functions as a light-bearer. The left hand holds a bow firmly by the side of the body. A hound of graceful proportions sits by her right foot, and looks towards her with upturned snout.

Diana is depicted here in the role of huntress and light-bearer, reinforcing the strong link between Diana and the Greek Artemis. The work is undoubtedly that of a provincial sculptor, who has achieved a fair standard of work in the classical style.

This straightforward Graeco-Roman representation of the goddess makes no concession to any symbolic association with a native or local deity. The carving does show a strong affinity with the purely classical depictions of Diana to be found, for example, on the altar to Apollo Maponus (RIB 1121) and the silver Lanx, both from Corbridge, and the widely imported decorated samian ware.
The small finds of 1999

The bulk of the area examined in 1999 consisted of the remains of late fourth century and sub-Roman occupation, and by Vindolanda standards small finds were relatively scarce. Of the 240 items recorded as small finds, the majority were heavily corroded fragments of iron objects or nails, together with small fragments of bronze.

Identifiable weapons included three spear-heads, three lance-heads, three small arrowheads and a single javelin-head, but the only recognisable tool was an iron trowel. Other iron objects included a variety of T and L angle pins, a joiner’s dog and fragments of collars. Eight bronze brooches were recovered, half of which were of the pannanular variety, which appear to dominate the categories in the fourth century at Vindolanda.

Items of female use included six hairpins (one jet and five bone), six beads and two fragmentary bronze bracelets and one bronze necklace. The most frequent find category here, as on the praetorium site in 1997/98, was the small circular stone disc, of which nine examples were recovered. They are sometimes described as ‘counters’, and a few may have been used as such, but they could also serve as lids for cooking or storage pots.

The two carved stones (the Diana relief and the Christian symbol) are described elsewhere in the report, and there were no stone inscriptions. There were three fragments of pipe-clay Dea Nutrix statuettes, representing at least two different examples.

In the pages that follow, some of the better bronzes from the excavations of 1997-1999 are illustrated and described, together with some iron objects.
Plate I: bronzes found in 1997-99

7052  V97-1 North end of the *praetorium*, above a post AD 370 floor, but unstratified. Enamelled hemispherical seal box lid, with blue enamel in the raised panels. Diameter 22mm.

7259  V97-1 Above the late floor of room 1, east wing of the *praetorium*, but unstratified. Enamelled pear-shaped seal box lid, 36mm x 22mm x 2mm thick. The upper surface has a raised heart-shaped design, filled with red enamel. Green enamel fills the panel surrounding this. Similar to South Shields 3.375.

7063  V97-1 Unstratified from the north end of the *praetorium*. Millifore bronze disc brooch, missing only its fastening pin. Diameter 27mm. The complicated pattern can be seen in the illustration.

7369  V98-111 On the roadway between the *praetorium* and the *principia*. Enamelled belt plate, 79mm x 12mm x 3mm thick. Leaf decoration in the centre panel 67mm x 9mm, with one side having green enamel within the leaves and red in the background, reversed on the other side. One fixing pin remains in position. The reverse has a raised rim, 2mm high, down the long sides.

7659  V99-47 Fourth century context, SW corner of the stone fort. Enamelled bronze belt buckle. The hinged end, 28mm wide, is decorated with circular spots of green, red and yellow enamel. The single surviving terminal at the other end has a red enamel spot.

7678  V99-49 Late pit in the SE corner of the stone fort, close to the latrine. Bronze crossbow brooch, with disc-necked globular terminals. Almost identical to South Shields 3.44, with the eight sunken dots on the top edge of the catchplate.

7810  V97-37 North end of the west wing of the *praetorium*, on the penultimate floor, before AD 370. P-shaped brooch, with wide bow, decorated with incised lines of cable moulding and three projecting knobs on the central rib. The pin has not survived. 60mm long. Similar to Collingwood and Richmond (1969) no 73 from Corbridge, but here surely fourth century.

7583  V99-40 Late structure on the intervallum road in the SW corner of the stone fort. T-shaped bow brooch, broken at the catchplate and pin, 63 mm long. A plain headloop and cross-piece. The upper surface of the bow is decorated with three grooves which have not been enamelled. The pin was a simple wire looped over the cross-piece. This appears to have been a southern England type - see R. Hatatt 1985, who illustrates parallels from Wimbourne, Dorset and Worthy in Hampshire.

7535  V98 -108 Rampart mound to the west of the South Gate of the stone fort, in a post AD 370 context. Bow and fantail bronze brooch, with no trace of enamel. 42mm long, with the edge of the fantail 23mm wide.

7689  V99-50 In an area disturbed by stone-robbers, to the east of the South Gate. Very small but complete penannular brooch, with milled knob terminals. Maximum diam 22mm, with pin 23mm long.

7731  V99-58 As for 7689 above. Penannular brooch, cast in a mould, with a plain circular hoop and milled knobbled terminals. Little of the pin survives. Identical to South Shields 3.113, a Fowler Type A2. 25 mm diam.
Plate 2: bronzes from 1997-1999

7405  V98-154  Room IX, praetorium, in rubble packing above the final floor. Pennanular brooch with pin. 38mm wide.

7348  V98-115  Room X in the SW corner of the praetorium. Large pennanular brooch, with pin, and dog-head terminal. Diam. 52mm.

7702  V99-47  SW corner of the stone fort, in packing above the penultimate level. The neck and part of the shoulder of a bronze plume-holder(?). Height 30mm.

7541  V99-21  From the earth and silt deposit against the inner face of the stone fort wall in the SW corner. Ornamental attachment for leather. Diam. 29mm.

7537  V99-30  From the pre-Hadrianic deposit below the surface of the berm outside the SW corner of the stone fort. Fantail-type tweezers, 68mm long, with a blade of max. width 43mm.

7716  V99-52  North of the angle turret in the SW corner of the stone fort, in the penultimate level of burned deposit, below the later rampart mound. Bronze tweezers, 60mm long, with max. blade width of 6mm.

7513  V99-15  Rampart mound in the SE corner of the stone fort, above the back-filled latrine block. Bronze bureau handle with two rivets. Rectangular sectioned stem, with one plain terminal and one elongated pine cone terminal. 75mm max. width.

7667  V99-46  SE corner of the stone fort, to the west of the latrine block, in rampart material. Tiny bronze tongs, 96mm long.
Plate 3: iron objects 1997-1999

7254 V97-1 Unstratified, north end of *praetorium*. Corroded lance-head, with tang. 195mm long.

7534 V99-14 Late structure on the rampart mound in the SW corner of the stone fort. Knife blade with tang, 184mm long.

7197 V97-82 Eastern rampart mound, opposite room II of the *praetorium*. Fragmentary dagger blade, 145mm long.

7396 V98-145 In the early drain below the floor of room X, *praetorium*. Large iron spearhead, 260mm overall, with socket of 16mm diam., and max. width of blade 72mm.

7354 V98-108 On the late road surface to the SE of the *praetorium*, a complete arrowhead with tang, overall 61mm long.

7053 V97-1 Unstratified at the north end of the *praetorium* site, complete arrowhead with tang, also 61mm long overall.

7618 V99-44 East of the angle turret in the SW corner of the stone fort, on a late road surface. Complete arrowhead with tang, 54mm long overall.

7349 V98-115 In the south-west corner of room X, *praetorium*, above the last floor. An almost complete pilum head with socket 18mm in diameter. Overall length of surviving part 292mm. Although there is plentiful evidence for the presence of legionary soldiers at Vindolanda, pilum heads are very rare finds.

7558 V99-40 SE of the late angle turret in the SW corner of the stone fort, on the flags of an underlying structure. A worn socketed lance blade, 127mm long. Internal diameter of socket 13mm.

7597 V99-40 Same findspot as 7558 above. Small knife blade, with part of the tang. Blade 71mm long.

7525 V99-22 Below the berm outside the SW corner of the stone fort, and probably dating to the Hadrianic period V. A socketed iron lance-head, with four-sided point. 106mm overall, with socket diam. 12mm.
Bibliography

Very extensive Vindolanda bibliographies have been published in recent Research Reports, and only the most important works relating to the 1999 excavations are listed below.


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