

EARTHWATCH INSTITUTE FIELD REPORT

Project Title: Roman Fort on Tyne

Principal Investigators: Paul Bidwell (Head of Archaeology, Tyne and Wear Museums)

Dr Nick Hodgson (Principal Keeper of Archaeology, Tyne and Wear Museums)

Position/Affiliations: Tyne and Wear Museums

Research Site: Arbeia Roman Fort and Museum, South Shields, Northeast England

Local management Status of Research Site: Hadrian's Wall World Heritage Site

Key Research Objectives:

- The discovery of, and information about, the earliest Roman settlement at South Shields.
- Elucidation of the plan of the first stone Roman fort to be built at South Shields in c. AD 160.
- To continue to collect data to address the questions of the nature of the transition between the Iron Age and Roman periods.
- Enhancing knowledge of the system of supply to the fort and port of South Shields.
- The recovery of the complete plan of the accommodation within the third century supply-base.

Date: October 2005

Data Collection and Results:

a. *Area of a probable workshop within the third-century fort/area of the intervallum and rampart of the second-century fort (Figs 1-3).*

The earliest noted deposits within this area consisted of the remnants of the rampart backing, surviving as a thin layer of yellow clay. This material once formed the extensive mound of earth and clay laid behind the stone defensive wall of the original 2nd century fort (Fig. 3). This material was not investigated during the 2005 season but could be seen where later terracing or intrusions had cut down to that horizon.

Contemporary with this was the remains of the street, known as the intervallum street (*via sagularis*), that occupies the area of the intervallum (the open space between the rear of the rampart backing and the internal buildings). This consisted of a compacted layer of pebble metalling, containing a characteristic worn white magnesian limestone pebble.

At some point during the occupation of the 2nd century fort (c. AD 160-208) the rampart backing was removed (down to its lowest level) and replaced by a surface of small to medium riverine pebbles extending from the existing intervallum street to the inner face of the fort wall. Within this

surface were visible traces (in the form of post settings) of a possible timber building occupying some of this newly acquired space. Unfortunately it was not possible to examine this building in any detail during the 2005 season.

There were no remains of the original stone-built defensive wall (*murus*) as this had been removed when the fort was extended during conversion to a supply-base at the beginning of the 3rd century AD. A shallow robbing trench contained its demolition debris, consisting of small angular sandstone fragments and degraded mortar pieces all set in a sandy clay matrix. Nothing of the original fort wall superstructure had survived apart from a small area of original core stones. The wall had sat upon a substantial foundation, 2.35m wide, made up of a double layer of water-worn cobble stones set in a deep foundation cut and topped with a thin layer of clean, pink coloured, clay. A 27m length of this foundation was revealed at the end of the season but not fully examined.

Following the conversion of the site to a supply-base, sometime around or shortly after AD 208, the new eastern quadrant of the site was occupied by barrack accommodation. To the northwest of these buildings (and lying within the current research area) had been a probable workshop (*fabrica*). Examination of this building previously (in 1999) had shown that it was entirely of timber construction, with the roof supported upon large timber posts (the post-holes of which were still visible across the area), and the external walls a mixture of post-hole and beam construction. Associated floor surfaces, and pits containing metalworking debris, were found and removed during that season.

To the northwest of the workshop lay the granaries of the supply-base, but only the very southeastern ends (the rear walls and buttresses, and part of the side walls) of three (C15, C00 & C16; Fig. 1) lie within the current research area. It could be seen that the side walls of two of the granaries (C00 & C16) had been severely robbed in antiquity, with only the interior deposits and the external buttresses remaining. The rear (southeastern) walls, however, had survived to their lowest course, although this was due to these walls being removed in the early fourth-century when this row of eight granaries (C10-16) were converted to barrack accommodation – having an extension to accommodate the officer of the century built at their southeastern ends (the remains of these extensions were examined by Earthwatch teams in 1995-6).

Two of the granaries (C00 & C16) were found to have been cut deeper into the pre-existing intervallum street, perhaps in order to maintain a level footing for all of that row of buildings; remembering that their entrances were at the opposite end facing northwest onto the *via principalis*. The construction cuts were backfilled with various layers, including stone chippings and mortar deposits (and within which lay the deposited builder's trowel mentioned below in the finds section).

b. *The via praetoria of the third-century fort (Fig. 2)*

The various road surfaces making up the *via praetoria* were removed during the 2004 season and beneath the earliest of those surfaces was an extensive layer of mid-brown coloured sandy clay used as a levelling deposit, dating to the initial years of the enlargement of the fort, c. AD 208-9. It varied in thickness from 45 to 460mm and contained an abundance of small to medium sized angular sandstone fragments. It was seen to lie upon substantial deposits of wind-blown sand, known from previous research to form the pre-Roman ground surface, which was very undulating hence the need for levelling.

This material, characteristically, also contained an abundance of finds, particular animal bone and pottery, representing the tipping of rubbish alongside the operation of infilling hollows. More elaborate items had also entered this deposit, including one of the two copper alloy

cavalryman's spurs found in 2005; two pieces of corroded iron ring mail armour, a copper alloy brooch and a silver coin (see finds, below).

FINDS

A significantly large quantity of bulk finds, particularly pottery, tile, iron nails, shells, and animal bones was recovered during the 2005 season. This partially reflects the fact that a new, larger, area was opened up, but also due to the layers being investigated containing a high proportion of Roman 'rubbish'.

There was also fifty eight individual small finds. These included:

a) Only two coins (not illustrated) were recovered during the season: one silver *denarius*, and one copper alloy (bronze) *dupondius*. Both were of the emperor Trajan (AD 98-117) and would have been quite old coins when they were lost in the 3rd century AD, the latter coin being particularly well worn.

b) Two copper alloy cavalry spurs (see Plates 1 & 2), one from a late 2nd century AD context, and one from the early 3rd century. The former is quite small, from the boot of a very nimble footed cavalryman or it represents a spur from a child's imitation cavalry boot. Such items, which can also be made of iron, are generally very rare considering the amount of Roman cavalry present on the northern frontier. Indeed at this site the 2nd and 3rd century garrisons were part-mounted units containing cavalry.

c) A small collection of copper alloy items were recovered including:

- A copper alloy Button-and-Loop fastener (Plate 3), with enamelled button, probably dating to the 2nd century AD.
- A copper alloy 'trumpet' brooch (Plate 4), dating to the 2nd century AD.
- A copper alloy pin (Plate 6), missing its tip.
- A copper alloy disc brooch (not illustrated) with embossed, gilded, silver plate face (now completely degraded) dating from the mid-1st century AD onwards.
- A copper alloy ring (not illustrated) of undeterminable date.
- The base of a copper alloy seal box (not illustrated).

d) Two lead sealings (Plate 5) impressed on both sides, one bearing the initials CVG (the V having a ligature above to denote that it is the numeral for 5) which is the name of the unit station at the fort in the 3rd century – *cohors quinta Gallorum*, the fifth cohort of Gauls, while on the reverse is the poorly understood legend NEM *D*. It is not clear exactly what these sealings were attached to before being discarded but we believe that they were on some form of goods rather than letters.

e) Iron objects, other than nails and the occasional individual hob nail, included:

- Two large fragments of corroded iron ring-mail armour (Plate 7).
- A corroded iron builder's trowel (minus its wooden handle; Plate 8), found immediately next to one of the supply-base granaries within a construction deposit, suggesting a ritual deposition of the item by its user once the building was completed.

f) Various fragments of both vessel and window glass (Plate 9 shows a small selection), and a fragment of a melon bead (not illustrated).

g) Two bone pins, both broken (not illustrated)

h) Two whetstones (sharpening stones; not illustrated).

i) Two bases of samian pottery bearing makers stamps (not illustrated) and a graffito (Plate 10) on a sherd of Black Burnished Ware pottery, dating to the 3rd century AD, possibly the base of a bowl, bearing the last three letters of perhaps a name.

Progress

Substantial progress has been made during the 2005 season towards achieving our research objectives, the specific details of which are given below. Work continued within the area of the *via praetoria*: an area comprising some 190 square metres (Fig. 2), and the current research site since 2003. However, a further area within the eastern quadrant of the site, comprising approximately 325 square metres, was opened up for research at the beginning of the season (Fig. 2). This lay to the northwest of the reconstructed barrack block and once formed part of the original research area, previously hosting Earthwatch volunteers between 1995 and 1999. During 1999 a possible workshop (*fabrica*), belonging to the 3rd century layout of the fort, was examined in this area. Subsequently, the area was abandoned (the archaeological levels being covered with a protective membrane and sealed beneath backfill) to allow the construction of the replica barrack block.

Summary of Results

a. The discovery of, and information about, the earliest Roman settlement at South Shields.

In the area of the *via praetoria* a levelling deposit, upon which the road had been constructed, was encountered at the end of the 2004 season. Work in 2005 involved the examination and removal of this material, which had been laid during the conversion of the site into a supply base sometime around AD 208-9. It was used to provide a level surface as it was found that the underlying ground was very uneven. This pre-Roman surface was found to be made up of layers of wind-blown sand with traces of relic vegetation in the form of possible turf layers. It was presumed, during the 2004 season, that a horizon would be encountered which would be broadly contemporary with the original 2nd century fort and, because this area would have lain immediately outside of the southeast gate of that earlier fort, a trace of a roadway leading from this gateway might be encountered. This proved not to be the case.

b. Elucidation of the plan of the first stone Roman fort to be built at South Shields in c. AD 160.

The new research area for 2005 is situated both within the supply-base and within the eastern quadrant of the original 2nd century fort (Fig. 3). Thus the layout of that part to the original fort could be investigated. The first discovery was that an area of pebble metalling lying beneath the 3rd century workshop, and previously thought to represent a hiatus between two building phases, belonged instead to the 2nd century fort layout, representing a phase when the earth rampart backing, behind the fort defensive wall, had been removed and the intervallum street extended right up to the inner face of the defensive wall. The purpose of this is unclear but it may have been to increase the available space within the fort at that time and perhaps traces of an earlier structure, once thought to be an earlier phase of the 3rd century workshop, represents an additional timber building utilising this extra space. However, it was not possible to examine the form or function of this building during the 2005 season. The remains of the 2nd century fort defensive wall were examined, which was found to have been thoroughly removed (from within the current research area) after its deliberate demolition at the beginning of the 3rd century. All that remained was its foundation of large cobbles, which began to appear at the end of the 2005 season.

c. To continue to collect data to address the questions of the nature of the transition between the Iron Age and Roman periods.

During the 2005 season, no data was collected regarding the nature of the transition between the Iron Age and Roman periods; however, within the area of the former *via praetoria* the pre-Roman surface had been reached by the end of the season, which will enable these early deposits to be fully examined during the next season, in 2006.

d. Enhancing knowledge of the system of supply to the fort and port of South Shields.

Two lead sealings, bearing the initials of the garrison resident in the 3rd century during the main phase of the supply-base, were found lying close together on a street between two of the granaries, which suggests a link between the unit and the function of the supply-base in that items (as yet undetermined) bearing these seals are either being sent to or despatched by the unit, or, the seals were attached to items as some form of stores control within the supply-base.

e. The recovery of the complete plan of the accommodation within the third century supply-base.

Previous work within the new research area, as mentioned above, showed that a timber-built workshop lay to the northwest of the barrack accommodation, in the early 3rd century (within Period 6A, AD 210/12 – c. 225; Figs 1 & 2). The same work suggested that the traces of an earlier building, noted though not fully investigated, could be assigned to an earlier period (5B) and the plan of this building, in outline, was added to the definitive plan of that phase (published as Hodgson 2001, cited below, Figs 2 & 3, pgs. 28-9). However, the findings from the 2005 research (see *ii*, above) has shown that this plan is incorrect, as the building shown to lie northwest of Building I belongs to the original 2nd century fort (Period 4; Fig. 3). Therefore in Period 5A and 5B this area, between the barrack accommodation and the supply-base granaries, would have been unoccupied, remaining instead as a metalled surface as it was in Period 4.

Also within this new area, along the northwestern edge, lay the ends of three of the supply-base granaries C15, C00 and C16; the surviving remains of which were recorded and left *in situ*. However, it was possible to examine the streets between the granaries as well as the street to the southeast. Deposits associated with the construction of the granaries were recorded and removed. The construction trenches of the granaries were found to have been cut from Period 4 levels, which is significant as a similar thing was found in 2000 in the area of C12-13 (*ibid.* 26) where there was no evidence of activity between the demolition of Period 4 and granary construction in Period 5B. Thus the 2005 observations help to confirm the theory that large parts of the southern half of the supply base in Period 5A were devoid of any building activity.

Significance/Benefits of Research

- **Local**

The 2005 work adds considerably to the ever-growing data set of the Hadrian's Wall corridor.

- **National**

The work adds greatly to our understanding of Roman Britain as a whole.

- **International**

The work in 2005 further advances our understanding of this internationally unique type-site (a stone military supply base).

Contributions to Sustainability

As well as achieving research objectives, the work carried out in 2005 was part of a long-term project to conserve these internationally important Roman remains in a sustainable way for the foreseeable future.

Dissemination of Results

- **Scientific papers:**

Work with Earthwatch teams since 1994 is summarised in:

N. Hodgson, 'The Origins and Development of the Roman military supply-base at South Shields: an interim report on the results of the excavations in the Eastern Quadrant and Central Area 1999-2000', in Arbeia Journal 6-7 for 1997-8 (2001), 25-36.

Paul Bidwell, Hadrian's Wall 1989-99: a summary of recent excavations and research (Carlisle 1999). (This contains quite detailed interim reports on recent work at South Shields and Wallsend).

An interim report on the cavalry barracks excavated in 2000-2001 appeared in:

N. Hodgson, "'Where did they put the horses?'" revisited: the recent discovery of cavalry barracks in the Roman forts at Wallsend and South Shields on Hadrian's Wall' in Roman Frontier Studies 2000 (Proceedings of the XVIII International Congress of Roman Frontier Studies) (Oxford; British Archaeological Reports, 2002).

Whilst a fuller discussion of auxiliary barracks, based heavily upon evidence recovered over years of research work at South Shields, has recently appeared in:

N. Hodgson and P. T. Bidwell, 'Auxiliary Barracks in a New Light: Recent Discoveries on Hadrian's Wall' in Britannia xxxv (2004).

Interim reports on the work at South Shields have also appeared annually in the journal Britannia since 1984.

See also: **A Croom, 'Spectacular find of a Roman iron ring-mail suit at Arbeia Roman Fort', in Minerva vol. 9 no. 2 (1998) 7.**

Finally, the excavation of the Iron Age and earlier prehistoric remains underlying part of the Roman fort which was tackled by Earthwatch teams in 1993-4 has been definitively published: **N. Hodgson, G.C. Stobbs and M. van der Veen, 'An Iron Age settlement and remains of earlier prehistoric date beneath South Shields Roman Fort, Tyne & Wear', in The Archaeological Journal 158 (2002).**

All of the above are probably difficult to obtain outside Britain, but if Earthwatch members signed up for the project contact us we will do our best to sent photocopies of a t least some of these publications. The Arbeia Journal is published by the Arbeia Society: for more information about the Society or the journal contact Elizabeth Elliott at Arbeia.

- **Management plans and reports:**

A new corporate plan for the site for 2005-10 has been prepared, replacing the existing plan.

The site is considered within English Heritage's Management Plan for Hadrian's Wall 2002-2007.

- **Presentations:**

Lectures on the results of the research project have been presented internationally to both academic and popular audiences ranging from the prestigious International Congress of Frontier Studies (at meeting in Romania, Jordan and Hungary), to the National Roman Archaeology Conference in Britain, the Society of Antiquaries of Newcastle, and to the Massachusetts Classical Association. The Arbeia Society holds an annual conference in which specialists and members of the public participate, and at least one paper is given based upon results from the site. Numerous presentations are also given throughout the year to interested local groups.

- **Popular articles or films:**

Results of recent work also appear in articles on South Shields in **Current Archaeology 133** (March 1993) and on Wallsend and South Shields in **Current Archaeology 164** (August 1999), and in **Dig** magazine (May/June 2005, Vol. 7 No. 5), the junior version of the American Institute of Archaeology magazine **Archaeology**.

- **Books, chapters, illustrations:**

The background to research on site is given in chapters 1 and 2 of the most recent monograph excavation report:

Paul Bidwell and Stephen Speak, Excavations at South Shields Roman Fort, volume I (Society of Antiquaries of Newcastle-upon-Tyne Monograph 4) (Newcastle-upon-Tyne 1994).