

Excavating Arbeia Roman Fort, South Shields on the river Tyne in northeast England



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Background

Built by the Romans *circa* AD 160, Arbeia Fort guarded the entrance to the River Tyne against invasion, and later acted as a supply base for the frontier system of Hadrian's Wall, which ran for 80 Roman miles at the northernmost limits of the Roman province of Britannia. The Wall starts four miles west of the town of South Shields (Figure 1). It was originally built to house a garrison of Roman troops but in the early Third Century was converted into a military supply port, initially for the Roman army on campaign in Scotland with the Emperor Septimius Severus, and then later for the forts along the Wall. The Fort also had a civilian settlement (*vicus*) that extended outside the Fort's walls. Today, Arbeia Fort hosts the most extensive and sustained excavation of an interior Roman Fort in Britain, with artefacts and reconstructed original buildings providing a unique insight into life in Roman Britain. The permanent, large-scale excavation of Arbeia at South Shields produces a more detailed picture of a Roman military supply base than has ever been achieved before. Because of its cultural importance, Hadrian's Wall was one of the first designated UNESCO World Heritage sites in the United Kingdom, as part of the transnational property "Frontiers of the Roman Empire". World Heritage sites require careful conservation and management to ensure they will be available for future generations.

Project overview

The goal of this Earthwatch project is to provide a strong knowledge base which can inform future plans for the management and conservation of the

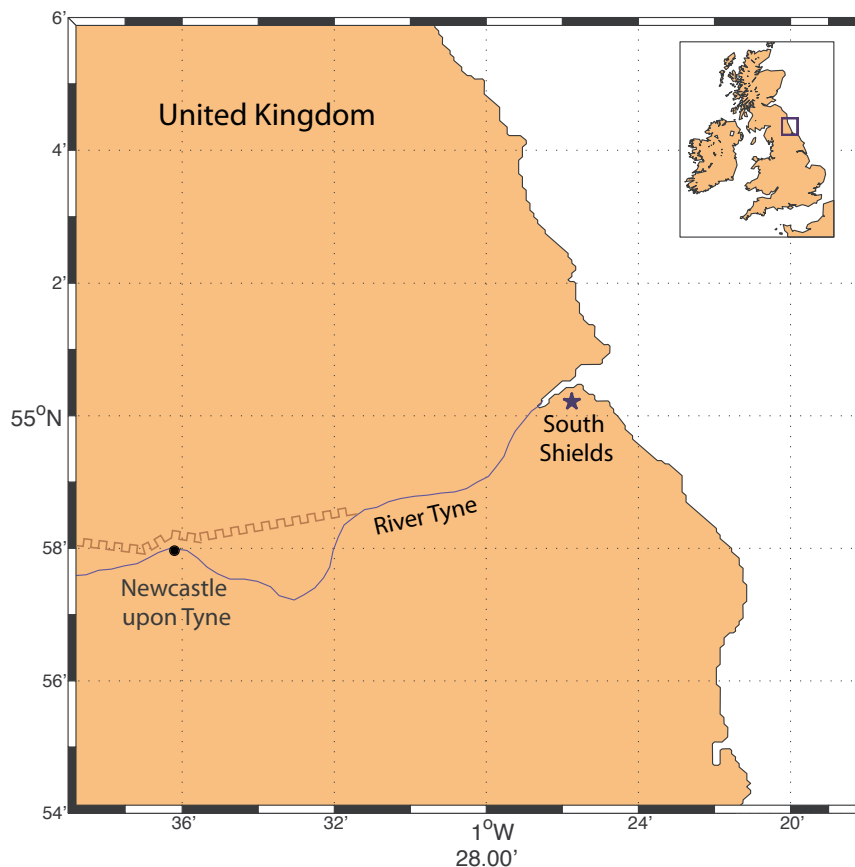


Figure 1. The town of South Shields, where the research site of Arbeia Roman Fort is located, on the northeast coast of the UK, and the eastern-most section of Hadrian's Wall.

Hadrian's Wall. To achieve this goal the project objectives are to:

- Understand the transition from Iron Age to Roman society
- Locate, date, and understand the origins of the Roman site
- Form a complete plan of the Roman Fort and supply base in its various periods
- Balance knowledge of the Fort with improved knowledge of the surrounding area, particularly the archaeological survivability of historical structures
- Enhance understanding of the economy and systems of supply of the frontier zone, and how these fitted into the context of the Roman Empire at this time in history

Intermittent excavations have occurred at the site since 1875, when the first were undertaken in advance of building development over the site. By the 1970s, the Victorian buildings on top of the site had reached the end of their useful life and had been removed, leaving nearly the whole area available for conservation and research. It passed into the ownership of the local authority and is now curated by Tyne & Wear Archives & Museums (TWAM), where the Earthwatch scientists are based. The Earthwatch project has been running for 16 years, and analysis of the results from the excavation of the *vicus* has revealed that the settlement is likely to have survived beneath the modern town of South Shields.

Earthwatch volunteers are involved in a number of processes surrounding excavation and recording Iron Age and

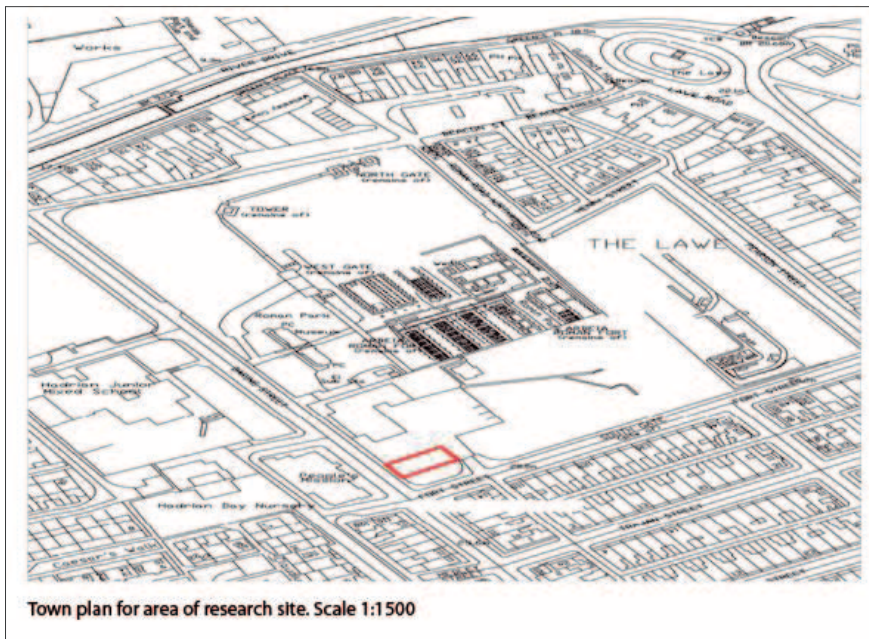


Figure 2. Work in 2009 involved the opening of a new trench (marked on the plan by the red box) in the southern corner of the site, just beyond the fort wall, where the civilian settlement (or *vicus*) is believed to have encroached up to this side of the fort.



Newly discovered remains of the 19th Century waggonway, uncovered in a trench excavated in 2009, just beyond the fort wall.

Roman features of the site. Research activities include stratigraphic excavation with trowel and brush, elementary site surveying, sampling, cleaning, mapping and processing environmental material.

Learning from ancient societies' practices will help inform local and national strategies and contribute to safeguarding cultural heritage.

Outcomes and actions

This Earthwatch project helps us to understand the many impacts of an imperial power (Rome) on an indigenous Celtic agrarian culture. South Shields is

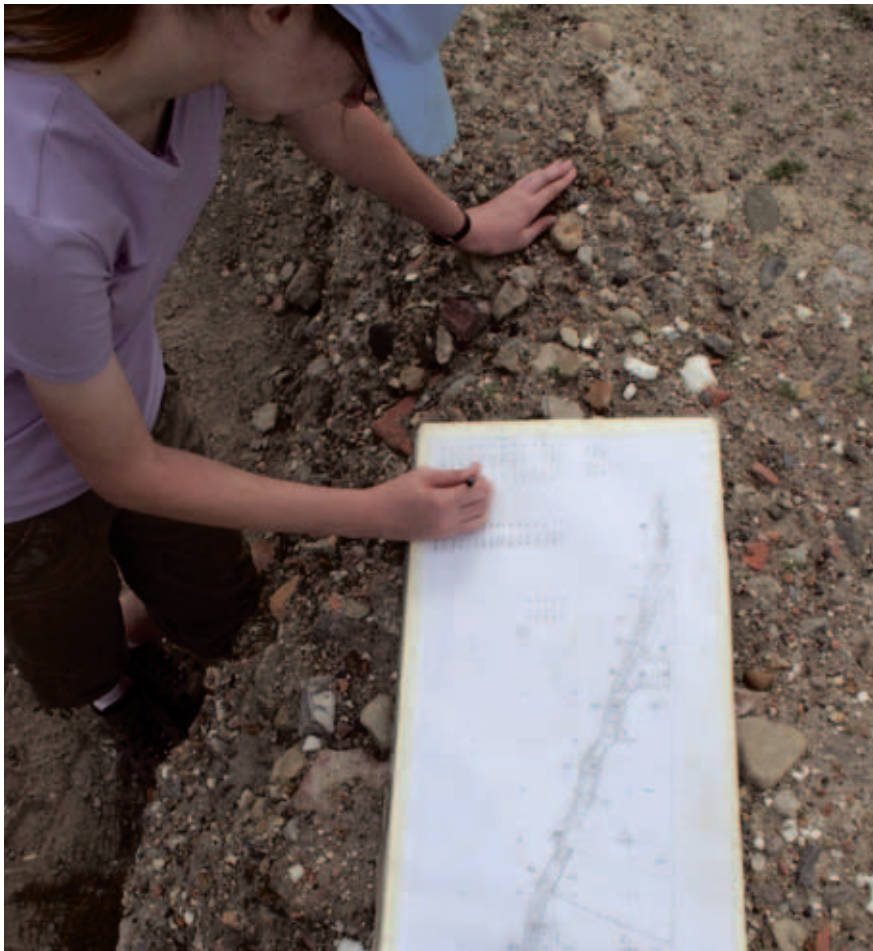
the only known supply base of its type in the Roman Empire, and work over the last 16 years has contributed to the complete reconstruction of the building's site plan, as well as various other revelations about Roman society.

One discovery resulting from artefact analysis has been the understanding that the soldiers within the Fort, and the traders and shopkeepers located within the *vicus*, were not from the indigenous rural population but from other parts of the Roman Empire. Recent pottery analysis is helping improve understanding of the economy and

supply systems of goods and materials to the Hadrian's Wall frontier zone, since other goods were often transported within pottery vessels.

In 2009, a new trench was created at the site to examine a part of the settlement which is still almost completely covered by modern housing (Figure 2). This trench will enable the team to evaluate the level of archaeological impact from new building developments in this unprotected area including a new museum for the site. Within the uppermost levels of the Roman deposits, the demolished remains of two *vicus* buildings have been found, proving that walls and interior and exterior surfaces belonging to buildings within the *vicus* do survive in this area. To the rear of the buildings is an area which could possibly be a rubbish pit, or the construction cut for a well. This area will be examined more fully in the 2010 season. Absence of evidence of structures suggests that the area between the *vicus* houses and the Fort's defensive ditches was perhaps used as garden plots. Military equipment was also recovered, including: a broken scabbard runner (a sheath for holding a sword); a fragment of belt fitting; a piece of an elaborate belt-plate; a bell-shaped stud, and a bead. These finds indicate that dumping of rubbish from the Fort happened close to the defences. Alternatively, as the majority of these finds are made of copper alloy, it may suggest collection or purchase of pieces from the soldiers for recycling. A range of coins were also found in this trench just outside the Fort, however the absence of Fourth Century coins (which have been found inside the Fort walls) offers speculation that the *vicus* may have been abandoned by the end of the Third Century.

The new trench has been important in determining the nature and depth of not only the Roman level stratigraphy, but also later archaeological deposits. Beneath the modern surface, an extensive deposit of ship's ballast was discovered to a depth of 1.2m. Immediately below the ballast was an early 19th Century plough soil horizon, 0.4m deep over the top of the Roman horizon. The undulating nature of the plough soil is indicative of



Volunteer mapping one of the trenches at the excavation site.

cultivation methods from as recent as the Napoleonic era to as far back as the early medieval period (ranging from the 18th to Fifth Centuries).

Encountering the ship ballast in the area surrounding the Fort was a surprise as extensive deposits of such depth and quantity have not been encountered at the site before. The ballast was dumped by empty ships returning to the Tyne from London and the Thames estuary and, by the 1820s had threatened to engulf the town, so ballast was then transported to the sand dunes to the east of the Fort site (now North Marine Park). It was known that a waggonway had been specifically built for transporting the ballast, and in the 2009 field season, the remains of the waggonway were discovered within the northwest part of the new trench. Its presence here was unexpected, as although this transport line is shown on a map of 1827, previous comparisons with modern mapping equated the line to lying parallel with the southeast side of the Fort. The waggonway consisted of a dry-stone retaining wall, 0.5m high, with a track

bed of compacted ballast. No trace of the actual track remains.

The knowledge gleaned by the research on the project is passed on to conservation officers of the local authority who ensure that building development and intrusive work only takes place after appropriate archaeological mitigation and recording of threatened remains. The work is constantly improving the urban archaeological site, re-acquainting residents with an important aspect of the region's heritage. The site is an increasingly popular tourist destination, attracting visitors into an area where tourism will help counter the effects of industrial decline. The site has been the focus of many research and vocational training schemes for students and other employment or training programmes.

The results of the excavations have attracted international attention among professional archaeologists, and those concerned with the presentation and display of heritage sites. The Earthwatch project won the award for Best Archaeological Research Project at

Britain's Current Archaeology magazine Awards in 2009.

Scientist profiles

Paul Bidwell is Head of Archaeology at TWAM Archaeology, UK. He has excavated widely, and has a strong publication record. He is best known in the UK for discovering and excavating the Great Baths in the Fortress of the Second Legion in the city of Exeter, in southwest England in the early 1970s, his work on Roman pottery, and of course his many excavations on Hadrian's Wall.

Dr Nick Hodgson is the Principal Archaeological Projects Manager at TWAM Archaeology. He has excavated on many sites on the northern frontier in Britain, and has published numerous excavation reports and articles about Roman Britain and the Roman frontiers, as well as gaining his PhD in the same subject.

Graeme Stobbs is the Archaeological Projects Officer at TWAM Archaeology. He is a field archaeologist of many years' experience and an acknowledged expert on Hadrian's Wall.

Collaborative Organisations

- The Arbeia Society, UK
- Newcastle University, School of Historical Studies, UK
- Action 4 Employment, UK
- British Trust for Conservation Volunteers

Project website

www.earthwatch.org/europe/exped/bidwell.html

Key publications

Bidwell, P. (2007) *Roman Forts in Britain*. New edition, Tempus Publishing, Stroud

Bidwell, P. & Hodgson, N. (2009) *The Roman Army in Northern England*. The Arbeia Society, Kendal

Hodgson, N. (2009) *Hadrian's Wall 1999-2009: A summary of Excavation and Research prepared for The Thirteenth Pilgrimage of Hadrian's Wall, 8-14 August 2009*. CWAAS & SANT, Kendal