



Historic England

Roman Forts and Fortresses

Introductions to Heritage Assets



Summary

Historic England's Introductions to Heritage Assets (IHAs) are accessible, authoritative, illustrated summaries of what we know about specific types of archaeological site, building, landscape or marine asset. Typically they deal with subjects which have previously lacked such a published summary, either because the literature is dauntingly voluminous, or alternatively where little has been written. Most often it is the latter, and many IHAs bring understanding of site or building types which are neglected or little understood.

This IHA provides an introduction to Roman forts and fortresses (permanent or semi-permanent bases of Roman troops). These installations were a very important feature of the Roman period in Britain, as the British provinces were some of the most heavily militarised in the Roman Empire. Descriptions of the asset type and its development as well as its associations and a brief chronology are included. A list of in-depth sources on the topic is suggested for further reading.

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Front cover:

Whitley Castle auxiliary fort, Northumberland (near Alston in Cumbria), from the east in 2007.

Introduction

Roman forts and fortresses (as opposed to camps) were the permanent or semi-permanent bases of Roman troops. These installations were a very important feature of the Roman period in Britain, as the British provinces were some of the most heavily militarised in the Roman Empire.

The word fortress is used to denote the bases of the legions. A legion had a complement of 5,000 soldiers, all of whom were Roman citizens. Four legions participated in the conquest and early campaigns in Britain, but by the end of the 1st century AD, and thereafter, the British garrison included three legions.

By the end of the 1st century there were three established, permanent legionary bases in Roman Britain, at Chester, York and Caerleon (Wales), which continued in occupation into at least the 4th century. During the 1st century conquest phase, however, legionary bases were moved according to strategic necessity. The locations of these early legionary fortresses are Colchester, Gloucester, Lincoln, Exeter, and Wroxeter, Usk (Wales) and Inchtuthil (Scotland). Where dimensions are known it is clear that the sizes of the fortresses varied (Lincoln was 16.5 ha in area, and Chester 22.7 ha), but not enormously. Most were around 20 ha in area.

In the cases of Colchester, Lincoln and Gloucester, the departure of the legions was followed by the establishment of official settlements of veterans (*Coloniae*) on the sites of the fortresses, and major towns also grew up on the fortress sites at Exeter and Wroxeter. In these cases the fortresses appear as the earliest archaeological phases of developing cities.

Smaller fortresses, known as vexillation fortresses, were thought to provide winter quarters for half-legions. However, a more likely suggestion is that these installations, provided mostly in the

south of England, provided accommodation for a number of brigaded auxiliary units during the original conquest phase of Britain.

Fortes were the bases of auxiliary troops. These served in units known as *cohortes* (for infantry) and *alae* (cavalry). They were not citizens, but were recruited from the provinces. Their names usually embodied a tribal identity. There were several different kinds of auxiliary unit. Cavalry units might contain a nominal strength of 500 (*ala quingenaria*) or 1,000 (*ala milliaria*). The same was true of infantry units (*cohortes milliaria*, *cohortes quingenaria*). There were also part-mounted units (*cohortes equitatae*) which could also be 1,000 or 500 strong.

Attempts to identify forts to unit type using size and other criteria have been tried, but none satisfactorily. The identification in recent years of the special cavalry barrack type has complicated this kind of attempt. The fort of Wallsend (Tyne and Wear), which has all of the buildings to accommodate a *cohors quingenaria equitata*, is the only example in Britain sufficiently excavated to be certain of the garrison type.

The earliest forts and fortresses had turf and timber ramparts and timber internal buildings. Forts of this kind were built throughout Britain, from the south coast to the Moray Firth, during the initial conquest phases of the 1st century.

In the south, civilian settlement development often took place on the sites of forts, as it did with fortresses; in both cases military structures



Figure 2
Aerial view of the Hadrian's Wall fort of Housesteads.

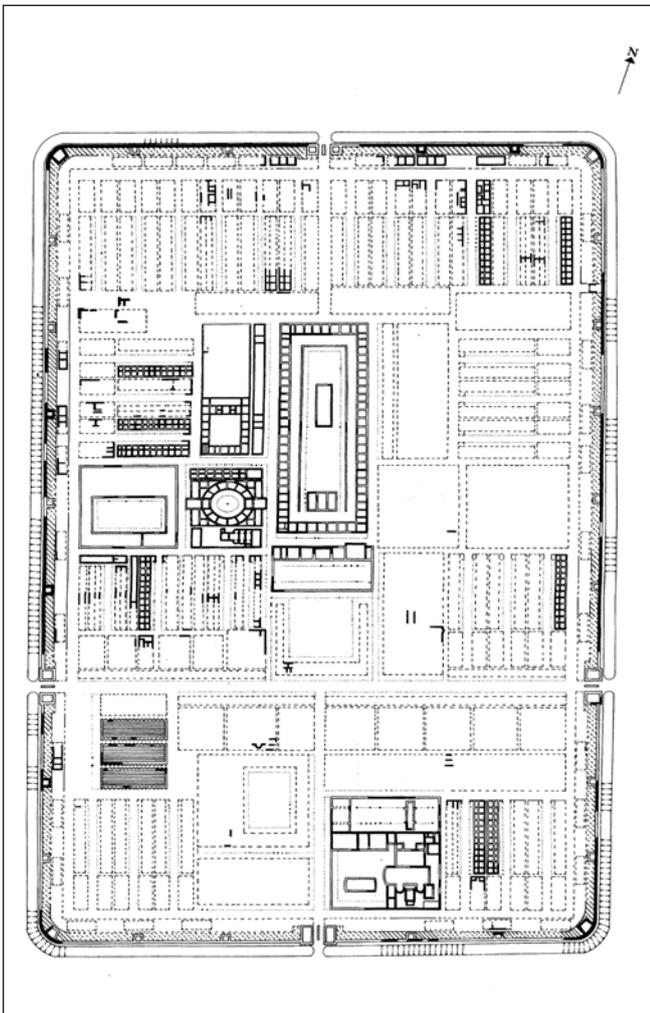


Figure 1
Plan of the Roman fort of Chester in the 3rd century. Note the very large long narrow building behind the principia, and the elliptical structure to one side. These are unique and anomalous structures in Roman legionary fortress planning.

are sometimes found archaeologically as the earliest phases of Roman towns. As the pattern of military occupation in the north of Britain and on the frontiers, such as Hadrian's Wall, became established in the early 2nd century, three legionary fortresses, at Caerleon, Chester (Figure 1) and York, became permanent, and remained the bases of the three British legions for the rest of the Roman period. From this time the turf and timber bases were often rebuilt in stone to become more permanent establishments.

As surviving archaeological monuments, forts are widespread and frequent in the Roman military north (broadly defined as the area north of the Mersey and Trent rivers). Forts in Britain were constructed to a fairly standard plan from the period of the Roman invasion of AD 43 to the mid-late 3rd century when the earliest forts of the Saxon Shore system were built. Legionary fortresses

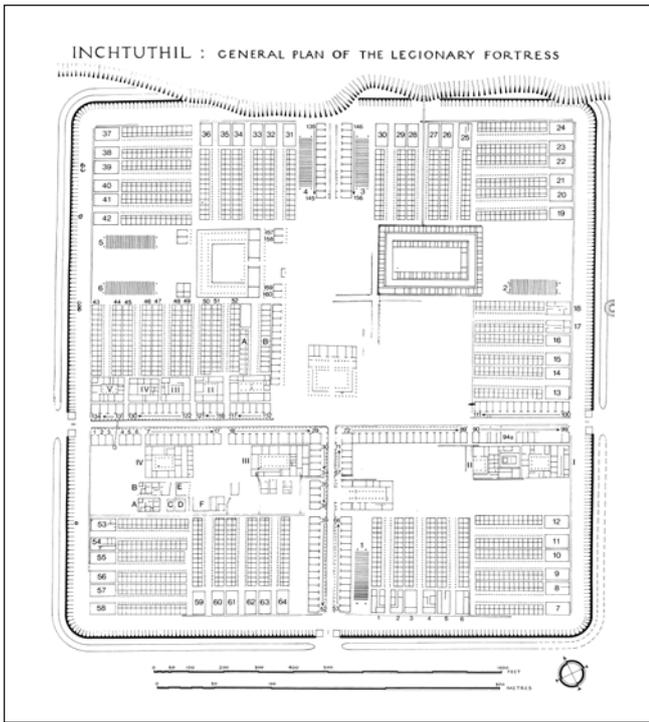


Figure 3
Plan of the timber-built legionary fortress of Inchtuthil in Scotland.

conformed to a template, variations of which can be found on such sites across the Roman Empire.

Roman forts and fortresses were studied as part of the burgeoning of interest in Roman antiquity stimulated by the Renaissance. The earliest published plan of a fort was produced in Germany in 1597, and observations of forts in Britain have been made since the publication of William Camden's revised *Britannia* in 1600. The study of forts and fortresses remains an important field of Roman archaeology, though emphasis on inscriptions, artefacts and internal structures has developed into interest in broader issues of Roman military settlement.

The first stone-built fort to be excavated sufficiently to reveal a complete plan was Housesteads on Hadrian's Wall (Figure 2), excavated by Bosanquet in the 1890s, while the plan of timber-built forts was established first and in most detail by the excavations of Sir Ian Richmond at Fendoch in Scotland during the 1920s. Most of the legionary fortresses have been revealed through urban excavation, as most are beneath Roman and/or modern towns and cities, although a near-complete

Figure 4
Aerial view of the fort plan at Wallsend, as laid out in the townscape.



plan of a timber built fortress was revealed by Richmond at Inchtuthil, Perthshire (Figure 3).

The best and most completely excavated timber fort is now Elginhaugh in Scotland, while the work at Wallsend (east of Newcastle) on Hadrian's Wall by Tyne and Wear Museums has revealed not only the entire plan of a stone-built fort, but its development and phasing over two and a half centuries (Figure 4). These are now the exemplars.

1 Description

Shape and defences

Forts and fortresses were virtually always rectangular with rounded corners, the so-called playing-card shape so typical of Roman military architecture. There are exceptions, where the defences were fitted to topographical features. Most were surrounded by at least one V-shaped ditch, though there could be more defences, such as the four ditches at Whitley Castle,



Figure 5
Aerial view of the fort and multiple ditches at Risingham, Northumberland.

Cumbria (cover), and (somewhat obscured by later ridge and furrow ploughing) at Risingham, Northumberland (Figure 5). The number of ditches could vary on different sides of the same forts depending on terrain.

Defences of timber forts and fortresses took the form of ramparts, ideally constructed with turf blocks, usually faced with turf, but with a variety of earthen materials used as the core. Ramparts ranged from 3 – 9 m in width, depending on the stability of the core. They had a slightly battered outer face, which was as near vertical as possible, with a more pronounced batter on the interior face. Stone or timber bases were sometimes employed to aid stability. Ramparts were sometimes timber-laced, sometimes revetted with a box-rampart. Depictions on Trajan's column suggest a timber rampart-walk and breastwork could be present. Stone forts were surrounded by stone walls some 4.5 m high to a wall-walk which had a protective breastwork on the outer side. The stone wall was backed by an earthen rampart some 4 m broad. Internal towers were placed around the walled circuit at regular intervals. At the corners, angle towers were built, with interval towers on the inner wall faces. These square timber towers were supported by the rampart, with posts driven into the underlying ground. Stone towers were integral with the stone walls, with earth ramparts butted against their sides. The wall-walk was accessed through doors in the sides of the interval, angle and gate towers.

Auxiliary forts normally had four gates (though there could be fewer, or as many as six), positioned in the centres of the short sides, and towards the front of the fort at the ends of the principal street in the long sides. The main gates were double and were flanked by towers. Timber gates are identified by a pattern of post-holes,



Figure 6
Reconstruction of the timber gate at the auxiliary fort at Ribchester, Lancashire.

which can vary according to gate type (Figure 6 and 7). Masonry gates show the plan of two towers flanking two portals. In masonry gates the towers, normally with gabled roofs, flanked an attic storey which was either provided with a gabled roof, or a flat, crenellated parapet.



Figure 7
Excavations and reconstructed fort gate at South Shields, Tyne and Wear.

Internal plan

Legionary fortresses

The internal area of the fortress was divided into three ranges by two transverse roads. The front and rear thirds were further divided into two by longitudinal streets. Beyond this shared pattern of subdivision the buildings within fortresses, though the same in character, tended to be differently arranged according to local requirements.

The administrative centre of the legion (*principia*) lay in the centre of the fortress at the junction of the principal transverse street (*via principalis*) and one of the longitudinal streets (*via praetoria*). This building (Figure 8) had an open court at the front, behind which was a cross-hall, behind which again were offices, flanking the chapel of the standards (*aedes*) in the centre. The building sometimes contained a sunken strong-room. The fortress is deemed to 'face' in the direction faced by the entrance to the *principia*. The commander's residence (*praetorium*), which was usually a courtyard building, sometimes with a hypocaust and usually with its own integral bath-house, lay either to the rear of the *principia* or to one side of it.



Figure 8
Principia of the fort at Hardknott, Cumbria.

Also within this central range were the hospital (*valetudinarium*), workshops (*fabricae*) and equipment store. The barracks of the first cohort were located on the right-hand side of the *principia*, ranged parallel to the side wall, with the houses of the senior centurion on the *via principalis* street frontage. The accommodation for a further cohort lay on the other side. In the front third of the fortress, the *praetentura*, the houses of the six military tribunes, occupied the street frontage, while the barracks of the remaining cohort occupied the rest of the *praetentura* and the whole of the rear portion, the *retentura*.

Granaries (*horrea*), comprising long narrow buildings with flanking buttresses, with raised floors supported on posts, *pilae* or dwarf walls, and also store buildings, usually occupied the areas closest to the gates. Often (as at Inchtuthil), the main streets were lined with small square rooms, open to the street, that may have been storage or workshop premises. Often, as at Chester and Exeter, large and elaborate bath houses were situated within the fort defences.

The legionary fortress at Chester is one of the largest in the Roman Empire, and contains several unique building types. First among these is the so-called ‘elliptical building’, which has been interpreted as a major religious structure. Buildings such as this confirm that, though Roman fortresses are well understood and conform to an approximate template, the order in which buildings were laid out can and does vary, and novel buildings still await discovery.

‘Vexillation fortresses’

These installations are not well-understood, and in any case seem to vary greatly in layout, apparently reflecting a variety of garrison and purpose.

Auxiliary forts

The auxiliary forts on Hadrian’s Wall form a group which has greatly contributed to our understanding of this class of site. They were designed for single auxiliary units, and this has become accepted as a norm, though in fact many if not most forts are not so tidily designed, being built, perhaps, for part-units, or multiple units.

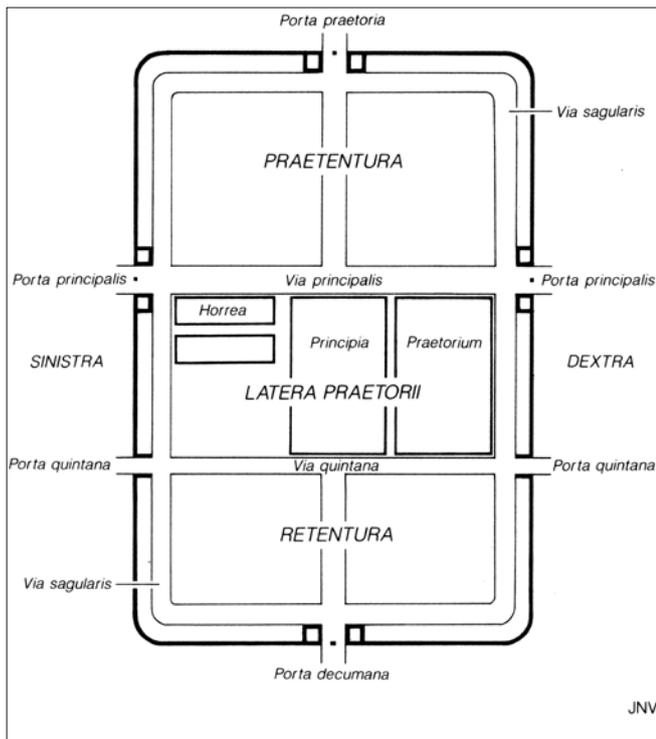


Figure 9
Guide to Latin terms for parts of the standard auxiliary fort plan.

Most forts maintain a basic plan (Figure 9) which is based upon that of a legionary fortress. The principal street (*via principalis*) crossed the short axis of the fort linking the two main gates in the long sides. A street (*via praetoria*) running from a gate in the short side nearest the main street joined the *via principalis* in front of the central building, the headquarters building (*principia*). The area in front of the *principia* (the *praetentura*) contained barracks and store buildings.



Figure 10
External bathhouse of the fort of Hardknott, Cumbria.

Infantry barracks were long narrow buildings divided into 8-10 rooms (*contubernia*), with a slightly projecting block at one end for the officer of the century that occupied the barrack. Cavalry barracks were similar, but divided longitudinally such that stables were at the rear and the men's accommodation at the front. The stables were identified by the presence of an oval manure pit in the centre of the room.

Facing onto the *via principalis* were the buildings of the central subdivision of the fort, the *latera praetorii*. These include, in the centre, the *principia*. To one side was the commander's house (*praetorium*). On the other side were granaries (*horrea*).

In the rear section of the fort (*retentura*), a road ran behind the structures of the *latera praetorii* (*via quintana*), and a further road ran to the gate in the other short side. This area contained further stores, barracks and other structures – possibly a hospital (*valetudinarium*), which was a courtyard building.

Other structures are occasionally encountered. Bath-houses were usually located outside forts, but are sometimes found inside the walls. The best surviving example is that at Chesters on Hadrian's Wall, though that of Hardknott, Cumbria (Figure 10), shows a simple plan with three rooms – cold (*frigidarium*), warm (*tepidarium*) and hot (*caldarium*) – and a plunge pool (*laconicum*).

At the Lunt, Baginton, Coventry, a circular, open, palisaded area known as a *gyrus*, possibly for the training of horses, was found. At Birdoswald on Hadrian's Wall a large basilica was discovered and identified as a basilica *exercitatoria*, a building for exercise and training.

Function

All fortresses and forts, timber or stone, were intended to house troops, garrisoning and controlling an area of territory. They were linked by the Roman road system which was part of the network of control. Although the pattern of legionary deployment remained unchanged

after the early 2nd century, the pattern of fort occupancy altered according to changing strategic needs. While accommodation for entire units was provided in the forts, we know from the evidence of documents like the wooden writing tablets found at Vindolanda on Hadrian's Wall that the whole unit was seldom present at any one time, as soldiers would have been on detached duty, sick, or on campaign.

2 Chronology

Timber-built forts and fortresses are in general a feature of the conquest phase of Roman Britain, from AD 43 to the first decade of the 2nd century. The stone-built northern forts were occupied from the 1st to the 5th century, and changes in the plan of the internal buildings were frequent and complex.

An example is the alteration in barrack types and structure that occurred in the mid-late 3rd century. The latest forts of the standard plan were those built on the Saxon Shore in the mid-3rd century.

3 Development of the Asset Type

The vast bulk of our knowledge of forts and fortresses comes from excavation, although in recent years the investigation of fort plans by means of geophysical survey has been very successful, revealing whole plans and evidence for fort *vici* beyond the walls.

New sites are occasionally still identified during development work and through aerial survey. Despite many excavations of Roman forts and fortresses over more than a century, discoveries are still frequently made, such as the identification of new building types.

4 Associations

Auxiliary forts and legionary fortresses are part of a group of linked Roman military establishments. Many forts have associated extramural settlements or *vici*. Forts and fortresses were linked by Roman roads, and are frequently the earliest elements of Roman towns. In the post Roman period medieval farmsteads and castles were placed within the walled enclosures of forts.

5 Further Reading

The most accessible book on Roman forts in general remains A Johnson, *Roman Forts* (1983).

A useful summary of forts in Britain is P Bidwell, *Roman Forts in Britain* (2007).

Legionary fortresses are very well presented in many aspects in a set of conference papers edited by R Brewer, *Roman Fortresses and their Legions* (2000).

There is a vast literature of excavation reports on forts and fortresses covering an immense range of sites over a long period.

The best known group of forts is that on Hadrian's Wall, and for them the bibliography in D J Breeze, *J Collingwood Bruce's Handbook to the Roman Wall* (14th edn, 2006) is complete and comprehensive.

Recent excavations on individual forts are reported in a number of volumes including T Wilmott, *Birdoswald: Excavations of a Roman Fort on Hadrian's Wall* (1997), and for the complete excavation of a stone-built, single-unit fort, N Hodgson, *The Roman Fort at Wallsend (Segedunum); Excavations in 1997-8* (2003) is essential.

For timber-built forts, W S Hanson, *Elginhaugh: A Flavian Fort and its Annex* (2007) is a thorough report on a completely excavated early timber fort.

Also in Scotland, the legionary fortress of Inchtuthil, the only such fortress in Britain for which the whole plan is known, is reported in L Pitts and J K St Joseph, *Inchtuthil, The Roman Legionary Fortress* (1985).

6 Where to Get Advice

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7 Acknowledgments

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