

WALLS AND WARFARE IN ROMAN FRONTIERS

Rob COLLINS

Professor of Frontier Archaeology, Newcastle University, UK
robert.collins@newcastle.ac.uk

Introduction

From the early 2nd century AD, the Roman Empire had either halted or lost its expansionist momentum. In practice, the Rhine and Danube rivers had functioned as significant lines of demarcation for Roman military distribution in the Empire's peripheries for decades, supplemented in other frontiers by lateral fortified roads such as the Stanegate system in northern *Britannia* and the *via nova Traiana* in the Arabian frontier.¹ Mural barriers were soon added in those frontiers lacking a substantial river or other linear element. In the German *limes* a timber palisade was constructed for a length of 550 km in the early years of Hadrian's reign, though felling dates of the timber suggest work began in the final years of Trajan's reign, *c.* 117.² Shorter lengths of walls known variously as *claustra* or *fossatae* and designated collectively as the *Fossatum Africae* were built across wadis and their surrounding landscapes in North Africa under Hadrian.³ In Britain, a monumental wall was built from *c.* 120 across the Tyne-Solway isthmus under Hadrian, with a second wall built *c.* 140 under Antoninus Pius across the Forth-Clyde isthmus.⁴ Around 160, the Raetian *limes* was upgraded with a stone wall connecting the Danube to the linear features of the Upper German *limes*.⁵ The later 3rd and 4th century saw the construction of walls in key passes of the eastern Julian Alps.⁶ While there is a clear concentration of construction under Hadrian, the continued occupation of these walls and the construction of new murals points to a perceived positive function of walls for the Romans in their frontiers. Each wall or

¹ For more general accounts and interpretation of Roman frontiers, please see Breeze 2019; Whittaker 1994.

² Baatz 2000.

³ These are found in different portions of the provinces of Mauretania Caesariensis, Numidia, and Tripolitania, and consist of stand-alone or combined mural barriers and/or ditches that can be accompanied by a road. Breeze 2019a, p. 82-84.

⁴ Breeze, Dobson 2000; Hodgson 2017; Hanson, Maxwell 1983.

⁵ Baatz 2000; see also Scholz, Flügel, this volume.

⁶ Višnjić, Zanier 2019; see also Višnjić this volume.

barrier was built subject to local and regional needs, and no two walls in the frontiers were built in the same way. Circumstances on the ground at the time of construction were also different, further explaining the different execution of each mural barrier. As the longest-lived of the frontier barriers, Hadrian's Wall provides a beneficial case study for the role of walls in Roman frontiers presented through a lens of strategic assessment, rather than a narrative or structural history of the Wall itself. In that regard, there are two fundamental concepts that are distinct but inextricable: frontier; and strategy.

The concept of the frontier should be understood as a dynamic landscape at the periphery of an empire, formed and sustained for the benefit of that empire.⁷ Landscape is a complex concept in and of itself, incorporating the recursive relationships between the physical environment and its occupants.⁸ For the Roman Empire, the frontiers are notably militarized landscapes, occupied by the Roman army and often organised and structured to meet the sustained needs of the occupying army. The Roman frontiers were not occupied only by the Roman army, of course. While military communities are typically the focus of Roman frontier studies, the majority of occupants lived among rural agrarian communities and towns, and merchants and craftsmen could be found among all these communities. Simple classifications can be applied to the various individuals of these communities—soldier, civilian, Roman, provincial, or barbarian—but it is the interactions and movements of individuals between and across communities that were crucial to state of play of any given frontier. In this regard, much of the dynamism of frontiers is because they are intended to be and continue to function as contact zones, in which peoples of different cultural backgrounds are coming into contact with each other. This is not only a question of 'Romans' meeting 'barbarians', but also includes the diversity of peoples, languages, and cultures that are associated with the Roman army. Indeed, one of the great accomplishments of the Roman army as an institution was its ability to incorporate the cultural diversity of its soldiery.⁹ Linear borders or structures, such as Hadrian's Wall or the Rhine, are useful in distinguishing between an inner frontier and outer frontier, or those frontier lands respectively inside or outside the bounds of the Roman Empire, but the Roman Empire was not restricted by such borders.¹⁰ To be clear, a frontier should not be conflated with or equated to a boundary or border—regardless of the presence of any monumental erections. Throughout this paper, frontier should be understood as the militarized landscape of the Roman imperial periphery that extends beyond the immediate hinterlands of any recognised border.

⁷ To my knowledge, there is no highly detailed account or assessment of any Roman frontier as presented as the evolution of a landscape in both environmental and cultural terms, though this understanding can be inferred through many archaeological accounts of Roman frontiers. Collins 2018, p. 149-151 does this in a summary fashion.

⁸ Turner *et alii* 2019.

⁹ Haynes 2013.

¹⁰ The distinction of an inner and outer frontier is made by Lattimore 1940 in his work on the Great Wall of China.

The concept of strategy is well understood even if there is no universally agreed definition, in part due to the complexity of the concept.¹¹ For the purposes of this paper, strategy should be understood as the full range of actions undertaken in pursuit of dominating an opponent; furthermore, strategy also needs to be understood as dynamic and interactive, incorporating and responding to the activities of all participants, allies and enemies alike. Strategy and strategic thinking will incorporate a range of inputs and data, both quantitative and qualitative that contribute to various actions. In this regard, very nebulous aspects can have a substantial influence on strategy, such as the perception of an enemy, whether accurate or not, or the cultural value placed on a concept such as *invictus*. These must be considered alongside the more tangible facts that inform strategy, such as troop numbers and disposition, logistics, and economic costs. In addition, there have been a number of debates in scholarly literature that question the extent to which the Roman Empire—its politicians and generals—understood and acted in a strategic fashion.¹² The key observation and criticism is that strategy as we understand it is a relatively modern concept that was articulated from the 18th century, and that our modern formulation is the result of the intersection of a number of epistemological developments, not least accurate cartography. The fundamental counterpoint, however, is that the modern formulation and lexicon of strategic theory does not preclude strategic practice and understanding prior to the 18th century. The challenge is to avoid projecting anachronistic frameworks of strategy onto the Roman past. Accepting that the Romans may have perceived and articulated strategy differently from the way that modern audiences do, there is sufficient evidence that over the course of centuries, the Romans acted strategically and certainly understood key principles of strategic thinking in a well-rounded fashion as framed by modern strategic theory. For example, it is clear that the Romans would employ strategic thinking in reference to political and economic issues as well as purely military issues. Hadrian's Wall and the wider frontier that it served was fundamental to Roman political strategy in Britain, and this can be understood through a consideration of the physical topography, the cultural terrain, and Roman military infrastructure and practice (**Fig. 1**).

Significantly, Hadrian's Wall provided a tactical and strategic enhancement for the Roman army and imperial rule of Britain, as a focus within a much wider and dynamic frontier landscape. The Wall was not constructed nor did it operate in isolation from the larger frontier 'ecosystem', and it was as vulnerable to distant political decisions as local hostilities.

¹¹ Gray 2010.

¹² The key stimulus can be traced back to Luttwak 1976 and critiques of his grand strategy that pointed to anachronistic interpretation. Overviews of historic use of strategy can be found in Hauser 2010, and specifically for the Roman Empire with Wheeler 1993a; 1993b, Mattern 1999; Lacey 2022.

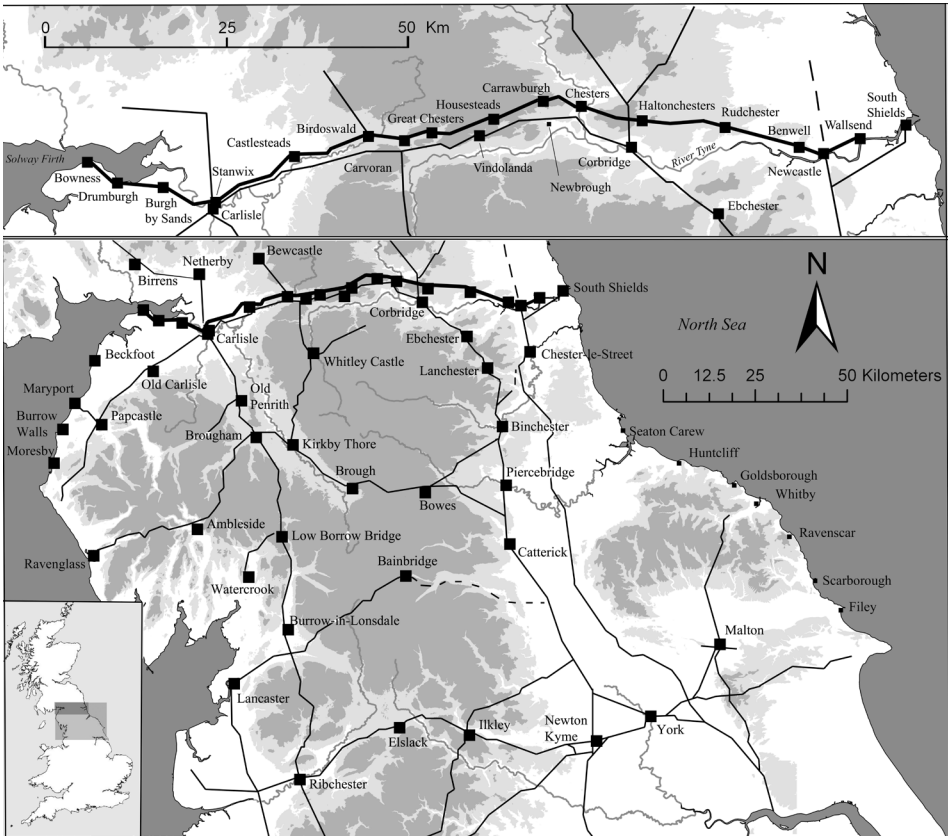


Figure 1: The northern frontier of *Britannia*, showing the wider distribution and road network, with a more detailed map of Hadrian's Wall.

Credits/sources: Rob Collins.

The physical terrain and cultural landscape

Before looking specifically at the history, structure, and strategic function of Hadrian's Wall, it is important to provide a broader temporal and geographical context to the northern frontier of *Britannia*.¹³ The Roman conquest of Central Britain and the attempted conquest of the northern part of the island began *c.* 70, ostensibly at the request of the allied queen of the Brigantes. By the mid 80s, the Roman army had moved through the territory that became northern England and had advanced as far as the Scottish highlands. By the late 90s, the Roman army had retreated south again,

¹³ Hodgson 2017, p. 31-41; Symonds 2021, p. 37-50 provide overviews of the history of the period.

with installations occupied south of the Forth-Clyde isthmus, and a stronger linear cordon of forts and fortlets connected by a road across the Tyne-Solway isthmus was established *c.* 100, known in scholarship as the Stanegate system. The Stanegate was supplanted by Hadrian's Wall, slightly to its north *c.* 120. Across this period of 50 years, the Roman army of Britain had gained valuable firsthand experience of the topography and peoples of Central and Northern Britain. This experience provided an invaluable prologue to the longer term and more permanent 'fixed' positions of frontier forts and the operation of their garrisons in later decades and centuries, particularly for Central Britain—the lands of Britain found north of the Humber estuary and south of the Firth of Forth, and the region that should be understood as the frontier from the late 1st century to the early 5th century.

This region was home to an uncertain number of individual 'tribes' or peoples in the later 1st century. The Brigantes are credited by the Romans as the largest of these groups, with a large oppidum center at Stanwick, North Yorkshire.¹⁴ Ptolemy names a number of other tribes and attributes particular locations and settlements to each tribe, while inscriptions and other sources provide evidence of further groups, such as the *Carvetii* based in northern Cumbria, the *Corionotatae* and *Textoverdi* of south-west Northumberland, the *Votadini* of west and north Northumberland, the *Selgovae* of the Cheviots and Borders area, and the *Novantae* of Dumfries and Galloway to name but a few.¹⁵ It is unclear to what extent these groups were politically discrete and separate, or if some of these might be considered as 'sub-tribes' of a larger grouping. Regardless, the groups were politically and geographically fluid, and while a core territory might be associated with any given group their full territorial and political influence will have shifted under specific leaders and alliances. The size, position, affiliation, and names of these groups will also have changed over time. In the later 3rd century, the *Caledones* and *Dicalydone*s are named as key enemies north of Hadrian's Wall, and through the 4th century it is the Picts that are the most frequently mentioned enemy. The reduction in named groups of peoples north of the Wall may support the formation of larger confederations of barbarian groups over the course of the 2nd-4th centuries, as seen in other Roman frontiers. But these names may also reflect a Roman perception, or even propagandist presentation of their barbarian enemies that misrepresents the way in which a political confederation was formed and/or enacted for purposes of waging war. There is much that is uncertain and unknowable, but the key point is that there were numerous discrete social groups in the northern frontier, and that they could act as small groups as well as collaboratively in their relations with Roman communities.¹⁶

Central Britain itself was a challenging region for Roman imperial authorities to govern. Much of the more intensive and extensive arable agriculture was limited to the south-east of the region and the eastern lowlands off the North Sea coast. The

¹⁴ Haselgrove 2016.

¹⁵ Collins 2012, p. 11-12.

¹⁶ Hunter 2025; Hodgson 2017.

Pennines and Cheviots created a long south-north belt of hills and mountains separating the east and west coasts, and west of these the land remained hilly with only discrete areas of lowlands, such as the Solway plain. The hills and mountains of Central Britain favour pastoral agriculture, with valleys and dales used for arable. River valleys created natural routeways throughout the region, with four key east-west routes. At the southern limit of Central Britain, between the Humber and Mersey estuaries, the River Colne provided a route across the southern Pennines (broadly mirroring the modern A62 highway). Further north, the Stainmore Pass separated the North and South Pennines (mirroring the modern A66). The Tyne-Solway gap provides the next east-west route (mirroring the modern A69), and at the northern limit of Central Britain, the Forth-Clyde isthmus is the final east-west route (mirroring the modern M8 motorway).

Hundreds of rural sites, traditionally called ‘native settlements’ provide evidence for extensive occupation of the region.¹⁷ Aerial photography, satellite imagery, and LIDAR have effectively documented the presence of a range of settlements in lowland and upland positions. These settlements are more regularly and densely found in lowland positions, favouring the eastern half of Britain, with more dispersed patterns found in upland terrain. With the exception of the large enclosed oppidum of the Brigantes at Stanwick, the largest settlements were hillforts—though none compare in scale to Stanwick. Most common are enclosed and unenclosed farmsteads, which appear to have housed multi-generational households. The general absence of large settlements and an associated centralised governance among the various tribes underscored the challenge the Romans faced in conquest and occupation. Significantly, it was the ‘fixing’ of the frontier with long-term military garrisons and the construction of Hadrian’s Wall that substantially changed the settlement patterns of the region.¹⁸ With a stable long-term Roman frontier came the establishment of permanent towns and small towns in the Roman provincial lands, expansion of villages, and in the southern parts of the frontier region, villa estates. Notably, Hadrian’s Wall does seem to demarcate the northern extent of this change in settlement. *Civitas* capitals are notably few in number in Central Britain, providing a ‘tribal’ capital and civilian centre for local government; Aldborough was the *civitas* of the Brigantes, and Carlisle the *civitas* of the *Carvetii*, and it is presumed that Corbridge may have been another *civitas*. In contrast, it is difficult to identify any large centres of barbarian elite status north of the Wall, with the exception of Traprain Law at the northern edge of the frontier zone; presumably barbarian elites were dispersed more widely across a number of settlements, though there is still significant potential for increased understanding of rural and barbarian settlement patterns.¹⁹

¹⁷ Smith *et alii* 2016.

¹⁸ Hodgson 2025.

¹⁹ Traprain Law, as with the other identified sites of elite barbarian occupation was a hillfort. However, Traprain Law is of a larger size than most other hillforts in the region. While reliable dating of such sites can be problematic, it is problematic to assume that sites of elite occupation needed to be large in

Building the Wall

Hadrian's Wall was built along the northern flank or edge of the Tyne-Solway gap of Central Britain. The Tyne and Irthing rivers and natural topography of the region make the narrow isthmus of Britain between the North Sea and the Irish Sea, conveniently marked by the cities of Newcastle and Carlisle respectively, a 'natural' corridor for movement east-west, with further river valleys providing access north and south from the gap. Hadrian's Wall was not the first linear arrangement of the Roman army in this region, though it was the longest-lived. In contrast to the preceding Stanegate, the line of the Wall was set to the north of the Tyne and Irthing rivers, and this appears to be a conscious decision.

The Stanegate system was secondary to the establishment of key military installations at Corbridge in the east and Carlisle in the west, which respectively anchored Roman military presence at key crossroads in the region to the east and west of the Pennines. The positions of Corbridge and Carlisle were chosen initially by an army coming from the south and still moving north. Corbridge and Carlisle remained active settlements during the further expansion and conquest north to Highland Scotland, and therefore remained useful anchors for establishing a new cordon when the Roman army retreated south in the 90s, supplemented by new installations and connected by a paved road. Furthermore, Corbridge and Carlisle were also positioned along the main north-south trunk roads on the east and west sides of the country, respectively. The tactical and strategic value (or vulnerability) of the region is further evidenced by a large number of temporary camps constructed that seem to predate the Stanegate system, with a significant number of these in the western half of the Tyne-Solway gap.²⁰

The withdrawal from Northern Britain in the 90s seems to have been the result of a combination of revised political priorities—notably conquest and consolidation along the Danube—alongside resistance from native Britons in the north. As a result, when Hadrian came to power in 117, Britain seems to have been an active theatre of conflict, and the current consensus is that this was a driver for building a monumental wall across the island. The Wall, in terms of its basic plan and monumentally, is attributed to Hadrian himself.²¹ The chosen location for the Wall across the Tyne-Solway isthmus almost certainly reflects a number of benefits. First, this was ground that was well-known to the Romans. Second, the Romans understood that the narrowness of the isthmus reduced the scale of building a barrier from sea to sea in this location. Third, the region had existing infrastructure, in terms of a road network and established military installations.

area, or even fortified. Archaeologists must be more open-minded to the possibility of greater variation in form and position of prospective elite sites among 'barbarian' peoples.

²⁰ Welfare, Swan 1995. Note, for example, the series of camps of varying size on Haltwhistle Common.

²¹ Breeze 2009.

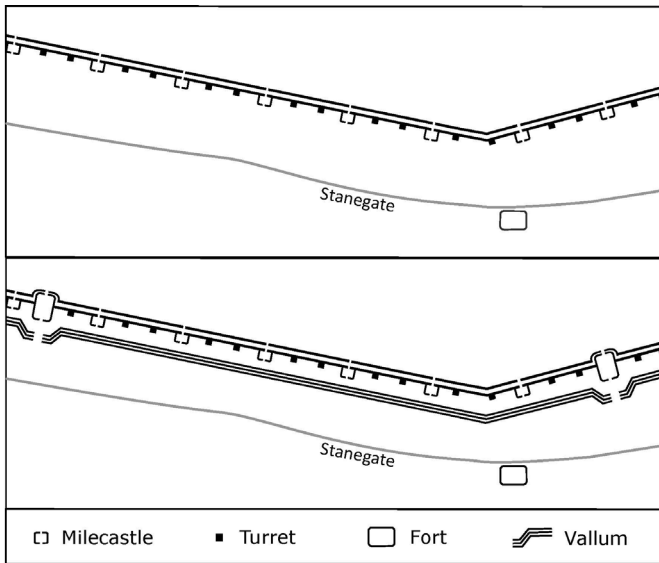


Figure 2: An idealised plan of Hadrian's Wall, showing how it was initially conceptualised (1) compared to its revised state following the addition of forts and the Vallum (2).

Credits/sources: Newcastle University, created by Nicky Garland.

The initial plan, or perhaps the idealised plan, consisted of a mural barrier with a small fortlet located every Roman mile, with two towers spaced equally within each mile. This was generally executed, and resulted in the rather unique system of milecastles and turrets along the length of the curtain. However, the initial plan was modified through the process of execution, with detailed accounts of the interpretation and supporting evidence for the planning and building sequence of the Wall available (**Fig. 2**).²² Topography introduced challenges, and there is some evidence and a reasonable argument that the construction process was informed by tactical and strategic needs on the ground. In its final execution, the Wall consisted of a number of discrete elements that resulted in a monumental complex. In this regard, the Wall should be understood as consisting of a series of east-west linear elements with installations of varying size and function along its length. This has resulted in a highly specialised vocabulary, summarised for convenience in **Table 1**.

In a series of studies, Symonds has argued for a priority programme of construction, in which key turrets and milecastles were built in locations that enhanced observation and control of vulnerable points in the landscape.²³ Rivers and fording points, and in some locations the absence of any rivers, were key to this. There is also a debate as to the extent that a fast building programme was important. The eastern two-thirds of the monument was initially built in stone, while the western third was built in turf and

²² Breeze 2018; Graafstal 2012; 2018; Hodgson 2017; Poulter 2009; Symonds 2019; 2021; Symonds, Breeze 2016.

²³ Symonds 2005; 2019; 2020. See also Graafstal 2012; Hunneysett 2017.

timber. Notably, good building stone was not as readily available in the western sector, whereas the eastern and central sectors benefitted from good quality building stone that could be quarried usually less than 1km distant from any given point. This might suggest that completion of building may have been a priority in the western sector.²⁴

Element	Definition
Ditch	An east-west ditch excavated north of the curtain, but not found when the curtain is built along cliff-top
Berm obstacle	In the eastern sector of the Wall, postholes evidence the position of sharpened stakes and/or branches thought to function like barbed wire in between the curtain and the ditch
Curtain	The linear wall element of the monument
Turret	Towers of square plan found every 1/3 of a Roman mile built directly into the curtain, with 2 found between a pair of milecastles; thought to reach a height of at least 10m; probably occupied by shifts of 2-4 soldiers
Milecastle (incl gate and tower)	A specialised fortlet of square or rectangular plan attached to the curtain, containing a north and south gate tower; there is typically evidence for a barrack building, and the gates can provide access through the curtain; probably occupied by a small garrison of 8-24 soldiers
Fort (incl gates, towers, specialist buildings)	An enclosed rectangular settlement planned to house units of c. 550 or 1,000 soldiers, consisting of a primary gate with tower on each length of the perimeter wall, and typically supplemented by corner towers and secondary towers; internally specialist buildings consisting of barracks, workshops, granaries, headquarters, and the commanding officer's house; further settlement can be found outside the fort walls; one or more ditches can be found outside the fort walls
Gateway	Two known independent gateways (not attached to a fort or milecastle) at Portgate (north of Corbridge) and Knag Burn (by Housesteads), with a third expected north of Carlisle
Military Way	A paved road running parallel and south of the curtain, connecting forts and other facilities along the Wall
Vallum	A mound-ditch-mound earthwork running east-west to the south of the curtain, typically only 5-10m distant, but sometimes as much as 250m to the south of the curtain in the central sector; crossings across the Vallum ditch are found at forts and milecastles

Table 1: Individual elements of the Wall complex.

Changes and alterations to the plan were also made during the building process. First, a decision was made to build new forts on the line of the Wall itself, known as the ‘fort decision’, as well as to dig the mound-ditch-mound earthwork known as the Vallum to the south of the curtain. The relationship between the Vallum and Wall forts makes

²⁴ Graafstal 2012, p. 137-138, and Hodgson 2017, p. 66-69, have highlighted that the turf wall could have been completed in one season of building work. For quarrying and stone sourcing of the Wall see Collins *et alii* 2023.

it clear that the position of forts was planned prior to the planning of the Vallum, but the Vallum was surveyed and sometimes excavated prior to the forts actually being built. Second, the stone curtain was reduced in thickness; this may have reduced the amount of stone to be quarried and thus increased the building speed or it could have been for improved structural qualities. Third, the position of milecastles and turrets constructed once the 'fort decision' was made seems to adhere less rigidly to the idealised spacing of the original Hadrianic plan and respect more nuanced needs, benefits, and limitations imposed by local topography—an increased 'sensitivity' to the landscape.

It is uncertain how long it took to complete building of Hadrian's Wall, and it is possible that the Wall had not been completed by Hadrian's death in 138.²⁵ Assuming construction began *c.* 120-122, it is possible with enough supporting labour that the Wall could have been constructed in 4-5 years, but there is evidence for breaks in the building programme and RIB 1736 from Great Chesters names Hadrian as *Pater Patriae*, a title he did not take until 128 and indicating completion of the fort no earlier than that year.²⁶ Eventually, and probably following the interlude that was the construction and occupation of the Antonine Wall, the western sector of Hadrian's Wall saw the replacement of the turf wall with stone construction. Further changes in the later 2nd century saw the abandonment of a number of turrets, and their subsequent destruction. There also appears to have been a substantial rebuilding and/or repair programme in the later 2nd and early 3rd century, associated with Septimius Severus and his campaigns in Northern Britain.²⁷ This was the last Wall-wide building programme that is attested in the archaeological record, though individual structures required maintenance and numerous changes were made in forts and milecastles in the subsequent decades and centuries.²⁸

The building sequence provides a simple order for the events in the construction of the Wall, and this helps to elucidate how the Roman builders prioritised aspects of construction and infer significance of particular structures to localised aspects of the landscape or the otherwise unattested socio-political conditions of the frontier region. However, the underlying motivation for much of the research on the building sequence has been focused on achieving a deeper understanding of the intended purpose and function of the Wall. But these insights are limited to a narrow chronological band and the intense focus on the structural remains has tended to also restrict the geographical scope of interpreted function to the line of the monument itself.²⁹ Given the subsequent changes to the Wall and its long-term use and occupation by the Roman army, a more zoomed out perspective is required.

²⁵ Breeze 2019b, p. 90.

²⁶ Stevens 1966, p. 39; Graafstal 2012; Hodgson 2017, p. 63.

²⁷ Hodgson 2017, p. 107-111.

²⁸ Hodgson 2017, p. 144-145.

²⁹ There are exceptions, and this highlights a crude distinction between those whose interpretation of the Wall lean toward a processual structural perspective, of both the monument and the Roman army as an institution, and those whose interpretation can be perceived as post-processual, foregrounding socio-cultural frameworks.

The tactical and strategic value of the Wall

The function and purpose of Hadrian's Wall is perhaps the most perennial and fundamental debate about the entire monument. As a monumental military barrier, it is quite natural to assume that the primary purpose was for defence.³⁰ Yet, the addition of milecastles that provided a gateway through the barrier every Roman mile can be seen to undermine this defensive function. Frequency of 'crossing points' has been used to argue for something more akin to modern border control, inferring expectations for regular and frequent passage across the Wall.³¹ In practice, debates about function and purpose have typically favoured one particular use over others, generating false dichotomies between active defence and 'peaceful' control of movement.³² The tactical and strategic value of the Wall can be assessed by layering a series of interpretations: the functional use of individual elements; the localised implications of the Wall's operation; and the wider strategic implications of the monument.

The functional use of the Wall's elements

Each element of the monumental complex of the Wall had one or more tactical functions, which were enhanced by their interrelationship and interoperability (**Table 2**). It is significant that individual elements often had numerous functional benefits that can be clustered relative to movement, observation, defence, and resource concentration. For example, the linear elements—the ditch, berm obstacles, the curtain, and the Vallum—combined to create a series of impediments to movement in a north-south fashion without access to a gate (**Fig. 3**). While no single linear element was insurmountable by an able-bodied person, the curtain was particularly beneficial in preventing horse-borne transit.³³ Concurrently, the curtain may have facilitated movement of soldiers along its top, though the presence of a walkway along the top of the curtain is unproven and debated.³⁴ The movement of soldiers was also facilitated by the Military Way to the south of the curtain, and certainly milecastle and fort gates provided passage through the Wall to soldiers. Less certain is if civilians had access or permission to use milecastle gates. It seems most likely that non-military persons were

³⁰ A defensive function for the Wall is clear through a range of historic texts, including: Camden 1610, p. 775; Horsley 1732, p. 125, and more recently Hodgson 2017; Symonds 2021.

³¹ Collingwood (1921, p. 65) and Eric Birley (1961, p. 273) have proposed the Wall was primarily designed to control the movement of people, and by extension to also support economic development of the Roman province to its south.

³² McCluskey 2018.

³³ It should go without saying that the Wall was tall enough that it could not simply be jumped across by a horse, and the presence of the ditch in front of the curtain also prevented—or at least made more difficult—cavalry from riding directly up to the curtain. Horses, of course, are not adept at climbing walls.

³⁴ Bidwell 2008.

channelled to use the primary independent gates and those at forts, and this argument is reinforced by the evidence for the narrowing and/or blocking of milecastle and fort gates as early as the mid-later 2nd century, but also occurring in later phases in the 3rd and 4th centuries.³⁵

Element	Movement		Observation	Defendable Structure	Resource Concentration
	Impede	Facilitate			
Ditch	X				
Berm obstacle	X				
Curtain	X	possibly		X	
Turret			X	X	X
Milecastle (incl gate and tower)		X	X	X	X
Fort (incl gates, towers, specialist buildings)	X	X	X	X	X
Gateway		X	possibly	X	X
Military Way		X			
Vallum	X				

Table 2: The tactical functions of individual elements of the Wall complex.
An X indicates positive contribution to the function.

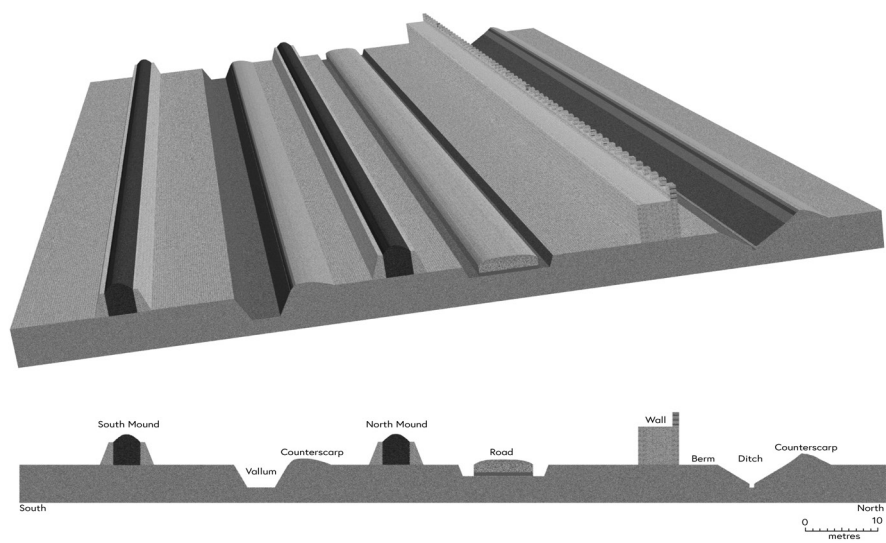


Figure 3: A cross-section of the Wall, showing the linear element that contributed to the monumental complex. North is the right edge of the image.
Credits/sources: Newcastle University, created by Alex Turner.

³⁵ Collins 2012, p. 80-85.

Along the line of the Wall, turrets, milecastle gate towers, and fort gates and towers all provided at least four elevated observation platforms within each Roman mile of the curtain. GIS-based analysis, combined with historical data has demonstrated that this provided a reasonable overlapping visual screen for people approaching the Wall, though limited by the physical capabilities of human eyesight in combination with light and weather conditions and local terrain.³⁶ This is not to say that it was impossible to approach the Wall from the north or south without being seen by a sentry atop a tower, but it was made more difficult. It is worth noting, however, that many turrets were abandoned in the later 2nd century, and the majority of these were subsequently demolished by the early 3rd century at the latest. It is difficult to say with certainty how many of the approximately 160 turrets were abandoned and subsequently demolished, but this does point to a changed perception in the need to have local observation platforms along the entire length of the Wall.

Turrets, milecastles, and forts were also defensible installations. Architecturally, none of these installations incorporated the most defensive forms seen in other frontiers. Turrets, for example, all appear to have doors on the south face at ground level, suggesting that a more controlled upper-storey access seen in towers along the Upper German *limes* was deemed unnecessary. Regardless, turrets, milecastles, and forts all provided cover for soldiers to shelter or to defend themselves from attackers. Bolts and arrowheads along with natural or carved stone balls are known from turrets and fort sites, suggesting anti-personnel artillery and missile weapons.³⁷ Yet, the Wall did not see the defensive architectural upgrades found at installations along the Rhine and Danube in the 4th century, and this too provides evidence for the type of warfare that occurred in the frontier of Central Britain.

Last but not least, forts provided a means of concentrating resources, in terms of manpower, craftsmen and other productive capacity, and stores of goods and food. Milecastles and turrets also provided facilities for smaller concentrations of manpower, and the towns at Corbridge and Carlisle provided even further capacity to concentrate various resources, in both material and skills.

Given that each individual element of the Wall contributed various functions, the interoperability must also be considered. The layering of east-west features meant that any person wishing to cross the Wall complex without using a gate from the north needed to: a/ climb down and then up the ditch; b/ possibly manoeuvre through the berm obstacles; c/ scale the curtain and then descend on the other side; and d/ climb up the north Vallum mound, scramble down and back up the Vallum ditch, then climb up the south Vallum mound. If the intention of the said trespasser was to accomplish this unexpectedly, then this series of obstacles created two important results: first, it slowed down the movement of an individual; second, the trespasser was frequently moving up and down. These two results increased the possibility of detection, itself

³⁶ Foglia 2014.

³⁷ Donaldson 1988.

enhanced through the frequency of elevated observation platforms provided by turrets and towers. Detecting potential trespassers would also be enhanced by patrols ranging north and south of the Wall from the forts along its length. This provided an opportunity for Roman soldiers to intercept and dispatch potential enemies north of the Wall or just after crossing over the Wall.

Should the trespasser(s) be of a more militant or aggressive nature, then turrets and milecastles provided a point to retreat to for defence, if the local soldiery was outnumbered. The concentration of soldiers in neighbouring installations provided a more ready means of reinforcement, and various signalling systems could be employed to visually or acoustically direct aid.³⁸ Any such aid might be sent to the point of conflict on the Wall, or intercept enemies that had successfully crossed the Wall.

The regular positioning of turrets, milecastles, and forts creates a mirage of regularity for the Wall, but the general plan of milecastle-turret-turret-milecastle masks the localised flexibility of the position of any given installation on the ground. Many turrets and milecastles were located to provide good observation of the immediately local terrain, effectively watching 'blind spots' where the terrain created opportunities for trespassing across the Wall unobserved, such as steep burn (stream) and river channels, defiles and clefts.³⁹ Other turrets and milecastles were well placed for longer distance visibility. Some turrets and milecastles accomplished both at the same time, and the majority of these towers were intervisible in some fashion to the east and west. Additionally, the regular and more carefully positioned visual presence of turrets and milecastles may have also provided a tactical benefit in deterrence of trespassers or attackers, undermining the confidence of a trespasser that they could cross the Wall unobserved or that they would be made too vulnerable to attack during the crossing.

The spacing of forts along the Wall, typically between 6-8 Roman miles apart has been interpreted as reinforcing a preferred model of regular spacing of installations. But as with turrets and milecastles, this is more of a mirage than a strict planning rule. Forts are almost always positioned at strategic locations in the landscape, providing a concentration of soldiers and other resources. A few examples suffice, such as South Shields on the south bank at the mouth of the Tyne on the coast of the North Sea, or Chesters positioned beside the river North Tyne, or Housesteads, located on the Whin Sill south of a broad rolling moor immediately north of the Wall.

In addition, it is worth assessing forts as supporting garrisons that achieved greater control of the local landscape, reinforcing the functioning of neighbouring garrisons. Chesters guarded the Wall where it crossed the river North Tyne, and this river valley was almost certainly a natural corridor of movement prior to the construction of the Wall, and probably continued to be so after the Wall's construction. But Chesters' position along the North Tyne was reinforced by the forts immediately to its east and west. About 9 km to the east, Halton Chesters was positioned alongside a burn that

³⁸ Woolliscroft 2001.

³⁹ Symonds 2018, p. 118-121.

provided access south into the Tyne valley, and was a very short walk to both Dere Street and the Devil's Causeway, Roman roads that extended many 100s of miles north into barbaricum. Just over 5 km to the west of Chesters, Carrawburgh was positioned near the north edge of the shelf that overlooked the westward swing of the river North Tyne. From a bird's eye view, Chesters guarded the valley bottom of the North Tyne where it ran north-south and the Wall crossed it, while Carrawburgh provided a reasonably good position to physically look down into the east-west stretch of the North Tyne valley and Halton Chesters guarded traffic coming south along Dere Street or the Devil's Causeway. These three forts provided overlapping cover and reinforcing observation of people moving through the landscape. This pattern can be observed across a number of other neighbouring forts along the length of the Wall.



Figure 4: Milecastle 39 sits in a gap between two outcrops of bedrock on the forward edge of a short cliff known as the Whin Sill, the height of which enhanced the Wall.

Credits/sources: Rob Collins.

Thinking operationally – the Wall at the local level

The Wall did not operate in isolation. The curtain and its installations provided a monumental focus and concentration of military resource that effectively created a barrier or interdiction across Central Britain, often working in conjunction with the topography (**Fig. 4**). However, the Wall was also part of a wider network of installations to its north and south. At any given point, there were 50-60 Roman forts occupied and garrisoned in Central Britain. The implications of this will be considered below, but it is important to reinforce here that to better understand the Wall's function locally it must also be understood to be part of that larger network of the militarised frontier landscape.

So, at the local level, what did the Wall accomplish in tactical, operational terms? First, it concentrated military strength in a relatively even distribution across the entire isthmus. Second, the Wall provided infrastructure and facilities to support various military activities, which can be distilled to observation and control of the local landscape and its defence as needed. The physical structure of the Wall created a barrier. All these functions combined instilled a psychological presence to the Wall that probably magnified the impression of its monumentality in both physical and psychological terms.

For 'peaceful' travellers,⁴⁰ the Wall directed people to designated gates and access points, where Roman soldiers and other officials could complete inspections, collect taxes, and register or record goods and individuals moving across the Wall.

For hostiles, the Wall was not impenetrable; it could be climbed or crossed by small numbers and simply overwhelmed by large concentrations of enemies.⁴¹ But the various layers of the monument slowed down trespassers and raiders and kept cavalry from riding 'through', and the repetitive 'up-and-down' movement necessary to cross the Wall provided more time for such trespassers to be observed. Large forces would more easily cross the Wall by capturing a gate or milecastle, but this would be more likely to attract attention. In either case, the Wall provided a means of changing the 'pace' or 'tempo' of prospective enemies. The Wall and its garrison were an interdiction, and this worked whether the trespassers came from the north or from the south. In addition, the ability of the Wall garrison to function as interdictors was enhanced through other activities, such as ranging patrols of the lands to its north and south and signalling systems for calling and directing reinforcements. In combination, the number of installations, impact on where and how fast trespassers or attackers might move through the landscape or their ability to cross in stealth all impacted on how individuals and groups approached the Wall, in peace or hostility. The Wall and its garrison could deter or redirect or meet those that approached it. Such activities were operational in impact, but also strategic by affecting long-term behaviours of allies and enemies alike.

Thinking strategically – the Wall and frontier working for the Empire

To what extent can we understand prospective enemies of the garrison of the frontier? There are sufficient accounts to demonstrate that the frontier was never truly pacified, even if we cannot ascertain the specific causes for conflict from current evidence. The construction of the Wall provided a bold statement of imperial intentions to hold and govern the land to its south. Indeed, the symbolic value of the Wall

⁴⁰ Distinguishing between peaceful and hostile visitors to the Wall is overly simplistic. Peaceful in this paper means approaching the Wall without intent of violence or conflict, though that can of course mean that the person's intent may still be illegal or nefarious even if not overtly violent. Smuggling, for example, might happen through legal and visible movement across the Wall, or illicitly under the cover of darkness or through bribery or other means.

⁴¹ Hodgson 2017, p. 160-166.

as a statement of imperial power was made over 45 years ago,⁴² and the monumentality of the Wall is difficult to dismiss out of hand. The substantial labour investment in its construction, the decision to build in stone, and the ability to staff the Wall with 1,000s of soldiers all clearly communicated Roman imperial power.

Though traditionally understood as ‘facing’ enemies to the north, this may not necessarily mean that all hostiles were located north of the Wall, especially when it was first constructed. But the advance north into Scotland and the construction of the Antonine Wall from 138 suggests that a certain level of ‘pacification’ was achieved by that date. The pacification of the natives of Central Britain may have been exaggerated, however, as the Roman army gave up the Antonine Wall and reoccupied Hadrian’s Wall by 160. That said, outpost forts north of Hadrian’s Wall were occupied at High Rochester, Risingham, Bewcastle, Netherby, and Birrens.

The majority of hostilities were probably small bands of raiders, the exact size of which is uncertain. Occasionally, a larger force seems to have come together, and there is an account by Dio Cassius that indicates in *c.* 180 a large group of hostile peoples crossed a Wall (presumed to be Hadrian’s Wall), did a great deal of damage and killed a high-ranking officer.⁴³ Regardless of the scale of enemies, however, there does not seem to be any evidence that they intended to be conquering or occupying forces. The motivations of such raiders can only be guessed at, but these are worth considering, as they further shape prospective interpretation of the Wall and its strategic role in the wider frontier.

Small groups of raiders, for example, may only represent the interests of a smaller social group or tribe, while larger groups may represent a wider coalition of shared interests or goals. Why would those peoples outside the Empire engage in violent activities, though? Was it a direct response to Roman imperialism—an attempt to resist or throw off unwanted Roman attention? Or was raiding part of a wider social practice? Engaging in raiding could enhance the martial reputation of individuals or a group, acquire goods or booty for economic gain, or increase a group’s political influence via their potential threat. What was raided? Portable wealth—jewellery, silver plate, and money are obvious choices for booty, but livestock such as horses and cattle as well as slaves were also prized throughout the ancient world. Though we cannot be certain of motivations, this points to how security and defence concerns in the frontier may have been perceived by the Romans. Certainly, the Wall made it difficult to drive livestock or transport captives without securing a gate, or circumventing it with a boat via the North Sea or Irish Sea.

Operationally, the Wall concurrently imposed Roman imperial authority as a border control and as a proactive defensive screen, restricting options for trespassers and attackers. These operational advantages worked in conjunction with the wider

⁴² Mann 1979.

⁴³ Hodgson (2017, p. 106) provides an account and discussion of this, and destruction deposits from the fort at Halton Chesters on the Wall and Corbridge just south of the Wall may be associated with this event.

network of Roman military installations in the frontier. The outpost fort garrisons to the north of the Wall almost certainly had important reconnaissance, intelligence, and diplomatic functions while they were occupied and it is presumed that they reduced the potential for larger forces to approach the Wall from the north undetected.⁴⁴ The forts south of the Wall provided prospective reinforcement to the Wall garrison, or could be employed to intercept trespassers or hostiles that had managed to cross through the Wall corridor. These garrisons could also provide security through regular patrolling of the road network south of the Wall, and/or collecting taxes and provisions that economically supported the military occupation of the frontier. In this regard, the frontier of Central Britain can be seen to split into three bands: a northern screen (outpost forts); the interdiction or speed trap (the Wall); and a mobile reserve and reinforcement (hinterland forts).

Over the long term, the stability of the Wall garrisons probably helped to firm up supply lines and trade goods.⁴⁵ This could have acted as an economic stimulus to the garrison communities and others that might trade along or across the Wall. This in turn may have also reinforced more predictable relations with local peoples and barbarian groups, for example channelling attention to preferred locations for trade or tax purposes, or establishing preferred trading networks or other social links.

There is some evidence that supports more peaceful conditions in the immediate vicinity of the Wall, as noted above. The reduction in the number of turrets indicates that observation platforms were not as necessary from the later 2nd century, nor were they ever rebuilt or replaced. The reduction in available gates, both at milecastles and at forts, indicates increased control or funnelling of cross-Wall traffic to preferred locations. Furthermore, after the Severan campaigns of the early 3rd century, there is less prominence for the Wall in textual accounts, and there is no evidence for the defensive architectural upgrades seen in other frontiers from the later 3rd century. This is not to say that the frontier of Central Britain became entirely peaceful, but that levels of violence and conflict became manageable and possibly predictable. There were no substantial technological advances that affected the way in which warfare was conducted. Northern barbarian groups, for example, did not besiege Hadrian's Wall, but the Wall may have been a stimulus for different tactics being employed.⁴⁶

Forts, milecastles, and turrets continued to be occupied and used through the 4th century and up until the end of Roman Britain in the early 5th century and beyond. This continued occupation of the Wall occurred alongside structural changes to the Roman army and imperial organisation, with the units along the Wall reclassified as *limitanei*—frontier soldiers—and the entire Northern British frontier placed under the command of the *dux Britanniarum*. There is no clear evidence that the Wall

⁴⁴ Austin, Rankov 1995 provide a wide ranging detail on Roman intelligence gathering.

⁴⁵ Collins 2018.

⁴⁶ The Wall may have prompted increased seaborne raiding, and it is notable that the west coast of *Britannia* retained a series of forts, and a new cordon of coastal fortlets was built along the North Yorkshire coast c. 370, after the Barbarian Conspiracy of 367 (McCluskey 2017).

was fully abandoned by the Roman army at any point in the 5th century, though the archaeological evidence for the end of Roman forts can be interpreted in various ways.⁴⁷ Significantly, this suggests that the Wall retained its tactical and strategic value up to 'the end' of Roman Britain, even if the Roman Empire had greater military and political priorities elsewhere in the Empire. In that regard, the Wall can be seen as an effective solution that resulted in tactical and strategic success in Roman Britain.

Conclusions

Hadrian's Wall was a substantial monumental construction in the northern Romano-British frontier, and its origins are linked to violence and conflict in the frontier. Though the monument saw changes and adaptations to its structure during the process of construction and in the decades following, the Wall garrison and monument were sustained from c. 120-early 5th century, with the exception of the c. 20-year interlude when the Antonine Wall was built and occupied. This long-term investment favours the argument that the Wall provided a number of tactical and strategic benefits for the British frontier. Primarily, this was a focus of military assets that had utility for 'peaceful' and martial governance and defence of Britain. Though it may have been an operational focus for the wider frontier, it is also important to underscore that the Wall's success was also due to its position within the wider network of frontier installations. Furthermore, the tactical and strategic benefits of the Wall were numerous and mutually reinforcing. Impacting the movement of people under 'friendly' conditions does not preclude affecting the movement of hostiles; the defensive advantages of towers and fortifications do not preclude their utility in deterring hostilities. Indeed, what has been argued here is only a very general assessment of the tactical and strategic benefits of the Wall as it pertains to actual fighting on the ground. More insightful understanding requires a more detailed analysis, and one that must include the various peoples that the Romans were attempting to influence and more explicit consideration of economic, political, and ideological factors as well as those limited to fighting capacity.

The various walls and barriers in other Roman frontiers do not seem to have been built to the same scale as Hadrian's Wall, nor were they occupied and used for as long a time. This is almost certainly due to changed circumstances, for example in which the Upper Germanic and Raetian *limes* had become militarily untenable by the later 3rd century. Yet walls also remained within the strategic repertoire of the late Roman army. The construction of barriers across the Julian Alps in the 4th century underscores the value that such constructs could still have in affecting the movement of hostile forces in specific landscapes. To be clear, controlling movement encompasses a range of outcomes that include slowing an enemy or stopping them outright; but

⁴⁷ Collins 2012 sets out the evidence, with an update in Collins, Symonds 2019, p. 68-76.

deterrence and redirecting enemy attention elsewhere is another form of affecting enemy movement. Arguably, this may indicate a growing understanding on the part of Roman commanders in the 3rd and 4th centuries where walls were most effective as tools for strategic and tactical benefit compared to their 1st- and 2nd-century predecessors. Indeed, the Anastasian land wall west of Constantinople may be the ultimate example of Roman application of monumental mural defence.⁴⁸

Acknowledgements

Many of the ideas expressed in this paper can be found across the range of literature referenced throughout and listed in the bibliography. The historiography of Hadrian's Wall is substantial, and discussion of its function is frequent. To that extent, it is fair to say that most of the ideas expressed within this paper have also been expressed by others, sometimes implicitly and sometimes explicitly. This paper attempts to pull that discourse together into a more consistent framework and presentation, stimulated by many fruitful discussions over the years with many colleagues, but especially Matt Symonds and Al McCluskey.

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⁴⁸ Crow 1986; also this volume.

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