HISTORIC ENVIRONMENT SCOTLAND | ÀRAINNEACHD EACHDRAIDHEIL ALBA

Property in Care (PIC) ID:	PIC175
Designations:	Scheduled Monument (SM90013)
Taken into State care:	1953 (Guardianship)
Last Reviewed:	2019

STATEMENT OF SIGNIFICANCE

ANTONINE WALL – ROUGH CASTLE

We continually revise our Statements of Significance, so they may vary in length, format and level of detail. While every effort is made to keep them up to date, they should not be considered a definitive or final assessment of our properties.

Historic Environment Scotland – Scottish Charity No. SC045925
Principal Office: Longmore House, Salisbury Place, Edinburgh EH9 1SH

Any enquiries regarding this document should be sent to us at:

Historic Environment Scotland

Longmore House

Salisbury Place

Edinburgh

EH9 1SH

+44 (0) 131 668 8600

www.historicenvironment.scot

Historic Environment Scotland – Scottish Charity No. SC045925
Principal Office: Longmore House, Salisbury Place, Edinburgh EH9 1SH

HISTORIC ENVIRONMENT SCOTLAND
STATEMENT OF SIGNIFICANCE

ANTONINE WALL – ROUGH CASTLE

CONTENTS

Part A: Frontiers of the Roman Empire World Heritage Site

Introduction

In 2008 the Antonine Wall was inscribed by UNESCO to become part of the Frontiers of the Roman Empire World Heritage Site (FREWHS). This already included Hadrian's Wall (inscribed in 1987) and the German *Limes* (inscribed in 2005). To be inscribed on the world heritage list, a site must meet at least one of the criteria for the assessment of Outstanding Universal Value (OUV) as defined by UNESCO[1]. A fuller exposition of the OUV of the site is given in Appendix 3 below or can be found on the UNESCO website.

This brief introduction sets the Antonine Wall in the context of the FREWHS and outlines the justification for inscription of the Antonine Wall on the World Heritage List.

The Historic Environment Scotland (HES) Statement of Significance for Rough Castle which follows at Part B, recognises this individual site as an integral part of the wider landscape and cultural ensemble of the Antonine Wall. The Assessment however focusses in on Rough Castle itself for a closer examination of its individual history, development and range of heritage values.

It is also acknowledged that HES directly manages only a small proportion of the whole Antonine Wall WHS. This assessment is intended to inform understanding and management of those sites (or 'Properties in Care') for which HES has direct management responsibility:
Bantaskin (PIC167); Bar Hill (PIC168); Bearsden Bath-house (PIC169); Castlecary Fort (PIC170); Croy Hill (PIC171); Dullatur (PIC172); Garnhall Farm (PIC173); Kinneil House (PIC152); Kirkintilloch (PIC174); Rough Castle (PIC175); Seabegs Wood (PIC176); Tollpark (PIC177); Watling Lodge (PIC178) and Watling Lodge West (PIC179).

The Frontiers of the Roman Empire WHS (FREWHS)

The Antonine Wall is one of only three artificial frontiers constructed by the Roman army in Europe. Collectively, they form a serial trans-national World Heritage Site, the FREWHS; the OUV of which lies in the survival of the 2nd-century Roman frontier system across Europe, North Africa and the Middle East. This reflects the development and breadth of Roman military architecture and power. Together, the inscribed remains form an extensive relict cultural landscape which displays the unifying character of the Roman Empire, through its common culture, but also its distinctive responses to local geography and political and economic conditions. Each component part is a substantial reflection of the way resources were deployed in a particular part of the Empire.

[1] For more information on Criteria and the Inscription process, see https://en.unesco.org/

The Antonine Wall within the FREWHS

For a short period in the mid second century the Antonine Wall formed the north-western frontier of the Roman Empire. The Antonine Wall was built under the Emperor Antoninus Pius in the 140s AD as an attempt to conquer parts of northern Britain, and extends for some 60km across central Scotland from the River Forth to the River Clyde. Through its military and civil constructions, it demonstrates cultural interchange through the extension of Roman technical skills, organisation and knowledge to the furthest reaches of the Empire. It embodies a high degree of expertise in the technical mastery of stone and turf defensive constructions. As it was in use for only a single generation, it provides a dated horizon at a particular point in time and offers a specific insight into how the frontier was designed and built. Together, the remains of the frontiers, consisting of vestiges of walls, ditches, earthworks, fortlets, forts, fortresses, watchtowers, roads and civilian settlements, form a social and historical unit that illustrates an ambitious and coherent system of defensive constructions perfected by engineers over the course of several generations. [2]

The Antonine Wall, as a Roman frontier, is a physical and visual testimony to the former extent of one of the world's greatest states, the Roman Empire. It formed part of a frontier system which surrounded and protected that Empire.

The Antonine Wall has a particular value in being the most highly developed frontier of the Roman Empire: it stands at the end of a long period of development over the previous hundred years and therefore facilitates a better understanding of the development of Roman frontiers in Britain and beyond. It is one of only three artificial barriers along the 5000km European, North African and Middle Eastern frontiers of the Roman Empire. These systems are unique to Britain and Germany, though more fragmentary linear barriers are known in Algeria and Romania. Built following an invasion of what is now Scotland during AD 139/142 and occupied for possibly only 20 years, it served as the most northerly frontier of the Roman Empire at the high point of its power and influence in the ancient world. It has many unique features which demonstrate the versatility of the Roman army, while its short life is of considerable value in offering a snap-shot of a Roman frontier in its most advanced state. As the most northerly frontier, it stands as an example of Rome's stated intention to rule the world.

The Antonine Wall has a distinctive value as a unique physical testimony to the nature of the constitution of the Roman Empire and the requirement of the emperor for military prestige. The abandonment of Hadrian's Wall and the construction of a new northern frontier at the behest of a new emperor reflects the realities of power politics in Rome during Edward Gibbon's "Golden Age". It also stands as a physical manifestation of the statements of writers flourishing during the reign of Antoninus Pius about the measures which

[2] https://whc.unesco.org/en/list/430

Rome took to protect its inhabitants, even those living in its most distant province.

The Antonine Wall is of significant value in terms of its rarity, scale, preservation, and historical and archaeological value; the engineering and planning skills of its builders; the understanding of Roman frontier policy and management, and its influence on the landscape and history of local peoples during the Roman period and beyond; and also in terms of its contribution to the economic, educational and social values of today's society.[3]

The Antonine Wall sits within the broad framework of Roman frontiers, but it also contains many unique or unusual elements. These mainly relate to the structure itself:

- The Antonine Wall was built within 20 years of Hadrian's Wall, and, in its general framework, bears some features in common, but in many aspects it is clearly a development of Hadrian's Wall and is different in many ways, reflecting a more complicated frontier complex;
- The Antonine Wall is the only frontier to have had a turf rampart erected on a stone base. Hadrian's Wall was of stone in the eastern part and turf in the west, but the turf wall was built directly on the ground - though short stretches of cobble foundations have been found at two locations - and was wider than the Antonine Wall. The Outer *Limes* in Germany was a timber palisade in its primary phase. The purpose of the stone base may have been to add stability to the superstructure, or to aid drainage through the barrier;
- The forts are more densely spaced on the Antonine Wall than on any other frontier of the Roman empire;
- Unlike on Hadrian's Wall the forts are diverse in their sizes, defences and internal arrangements;
- Unusually, many forts have annexes attached to them. Annexes have been recorded at many forts but not at those on linear barriers, but no such structures were constructed on Hadrian's Wall and they do not exist in the same form on the German *Limes*;
- Six expansions, probably used for signalling, are known: these structures are unique to the Antonine Wall;
- The three small enclosures discovered in one section of the Antonine Wall are unique on Roman frontiers;
- The short life of the Antonine Wall, coupled with the location and morphology of the known camps, enables most to be definitively identified as temporary camps used by the soldiers building the frontier. As a result, it is possible to offer suggestions on the organisation of labour, which is not possible on other frontiers. Many temporary camps are known along the line of Hadrian's Wall (few are recorded in Germany), but the long history of that frontier renders it difficult to disentangle temporary camps from marching camps and practice camps;

[3] Historic Scotland 2007: 75

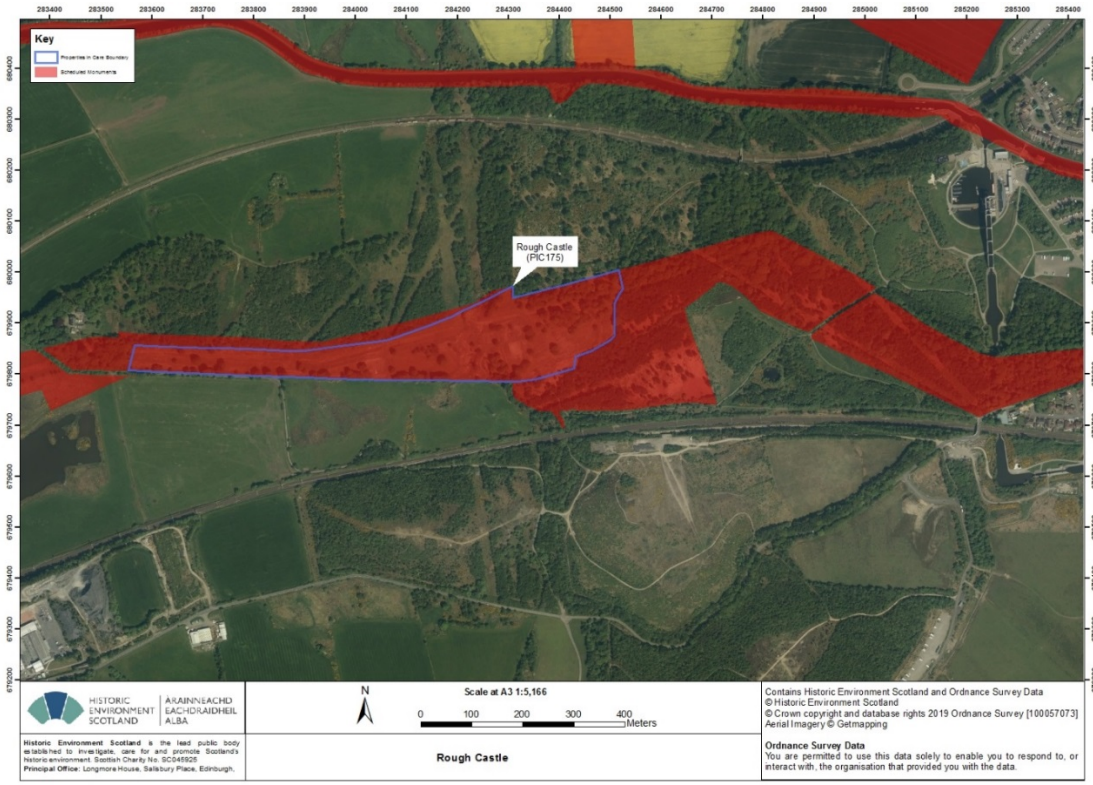
- The Antonine Wall was the shortest occupied linear frontier in the Roman Empire and is thus a unique archaeological resource.

The temporary camps discovered on the Antonine Wall are particularly important in relation to the final unique element, the twenty Distance Slabs which are known either whole or in part from the Antonine Wall. These record the lengths of Wall built by each of the three legions of Britain, the Second, Sixth and Twentieth.

However, the Distance Slabs are not simple records, but highly decorated and sculptured stones which depict events during the military campaigning and form one of the most important collections of Roman military sculpture from any frontier of the Roman Empire. [4] Together with the evidence of the temporary camps, they allow important conclusions to be reached about the construction of the Antonine Wall which are unique to this frontier. They are also an important element in any consideration of the reason for the construction of the Antonine Wall, which is generally believed to relate to the personal position of the new Emperor Antoninus Pius. On one interpretation, they glorify the success of Roman arms on behalf of the emperor, whose name appears on all the inscriptions, over the enemies of Rome and emphasize the support of the gods, and in particular the goddess Victory, for the Romans and their emperor. However, as the known Distance Slabs have been removed from the monument and placed in museums for their protection, they are not included in the World Heritage Site.[5]

[4] See too forthcoming work by Dr Louisa Campbell on the application of pigment on Distance Slabs.
[5] Historic Scotland 2007: 76-77

Part B: Statement of Significance



1 Summary

1.1 Introduction

This property is part of the Antonine Wall and represents the best-preserved section of the former Roman frontier, including the most impressive and best-preserved fort, with accompanying annexe. The property features about 980m of the Antonine Wall's key linear elements, including a highly visible Ditch and Outer Mound, and the tallest surviving stretch of extant Rampart. Traces of Roman period civil settlement and field systems are located to the south of the fort, with three medieval buildings located near the fort. The property lies on open grassland with occasional trees. There is definitive evidence for the reuse of the property as the location of cattle markets in the eighteenth century, and the site has had a long association with myths and legends that developed around the Antonine Wall throughout the medieval and early modern periods. The property is the most popular visitor location along the entire line of the Antonine Wall and is accessible by car, with a nearby car park, and also via a pleasant wooded walk from the nearby Falkirk Wheel.

1.2 Statement of significance

As a part of the Antonine Wall, this property inherits the following aspects of significance:

- It is part of a well-preserved Roman frontier.
- Of all of imperial Rome's linear frontiers, this is the final and most developed example, in terms of strategic defense. Its engineers improved on Hadrian's Wall (built a generation before), to incorporate new features into its design, such as the use of fortified annexes which are unique in Roman linear frontier systems. It allows the development of Roman frontiers to be investigated through comparison with Hadrian's Wall and the German *Limes* thereby allowing us to understand more clearly the arrangements the Romans made to protect their Empire, as well as the relationship between broad principles and distinct local requirements. The Wall has further importance as a dating tool. Artefacts, pottery and ecofacts found in the structures along the frontier had a limited period of use, and are invaluable for helping date other forts and civil settlements.
- At the time of its creation, it represented the biggest ever engineering project to be undertaken within central Scotland, and a major human-engineered topographical transformation of the landscape.
- The Antonine Wall is the only frontier to have had a turf rampart erected on a stone base; this may have been to add stability to the superstructure, or to aid drainage through the barrier.
- Following the Roman military abandonment of the frontier, it remained a highly visible landscape feature with continued significance in subsequent periods. It retained significance in a number of ways, e.g. as a defensive line, with its stones and Distance Slabs reused in the construction of neighbouring dykes and properties, and in the name "Graham's Dyke," by which it came to be known; a name still reflected within modern street names in the eastern half of the Wall's line.
- Within the FREWHS, the Distance Slabs are unique to Scotland. Three legions built the Wall, and erected these 19 sculpted and inscribed sandstone blocks to record the completion of their individual stretches.
- The Antonine Wall is a most important repository of environmental evidence, both through its materials of construction and because it provides a dated horizon stretching right across Scotland. Through environmental evidence from the Antonine Wall, it has been possible to reconstruct the vegetational history of Central Scotland. The wall gains further international significance through the context in which it is managed as a World Heritage Site. The archaeological remains, the line and the setting of the Antonine Wall and its buffer zone are protected by UK Acts of Parliament, supplemented by National Planning Policy Guidelines, which together form a coherent framework for the protection of the whole of the World Heritage Site and its buffer zone.

More particularly, Rough Castle is significant for the following reasons:

- It includes the best-preserved fort of the Antonine Wall.
- It offers the most complete combination of visible linear features along the frontier.
- It includes the tallest surviving stretch of Antonine Wall Rampart anywhere along the line.

- It provides the only known presence of *lilia* defensive pits to the north of the Outer Mound.
- It features good evidence for extra-mural activities and has high potential to provide information about civilian settlements along the Antonine Wall.
- It features the only Rampart "expansion" to have had serious excavation, with three additional (unexcavated) expansions nearby.
- It was at this site that the term 'Principia' was recognized as the Roman name for headquarters buildings due to the excavation of an inscription in the early 20th century – this then informed other excavations around the Roman empire.
- It has strong association with medieval/early modern myths and legends.
- Known re-use of the site in the eighteenth century as a venue for regional cattle markets.
- It is the most popular Antonine Wall site for visitors. It is within walking distance of the Falkirk Wheel and offers potential for HES to engage with a wide range of people.

2 Assessment of Values

2.1 Background

The Antonine Wall is the remains of the Roman Empire's northwest frontier built in the mid-second century. It was around 41 miles (66km) long and stretched across central Scotland from the Firth of Forth near Bo'ness to Old Kilpatrick on the Clyde. The Wall was constructed, in functional operation, and then abandoned all within a period of about twenty years between the early AD 140s and 160s. A full overview and description of the Antonine Wall is given at Appendix 4[6].

Though termed a "Wall", the main structure was of Rampart and Ditch. The Rampart was constructed mostly out of layers of turf, erected on a stone base, and reached a height of 3m. To the north of the Wall, the defences also included a huge Ditch, nearly 5m deep in places, and an Outer Mound constructed from the earth thrown out of the ditch. Seventeen forts plus additional 'fortlets' accommodated the men stationed along the Wall during its brief occupation (the number could be as low as 4,500-5,000 men)[7].

The Military Way, a service road built to the south of the Wall, was another important element, enabling troops to move swiftly along its course, bearing supplies, commands and news. The Wall was entirely built by members of the three Roman legions stationed in Scotland. During construction, the soldiers lived in leather tents or wooden huts situated inside temporary camps which were enclosed by light defences. These temporary camps were an integral

[6] Note: The key linear features include the Rampart, Ditch, Berm, Outer Mound, and Military Way; these features are all presented in this document with an initial capital letter in order to avoid confusion between the main frontier's Rampart and Ditch and those ramparts and ditches that surround the Wall's installations.
[7] Keppie 2009

part of the design of the Antonine Wall, and were carefully positioned along the frontier during its creation, to ensure maximum efficiency.

In the late 150s / early 160s AD the Antonine Wall was abandoned and the guard withdrawn. The rampart was not demolished, nor was the ditch filled in, but fort buildings were burnt or dismantled. The Romans took valuable and portable items away with them, but heavy or worthless objects were discarded, in some cases down the well of the fort – to the great benefit of future archaeologists.

Throughout the post-Roman and medieval periods the Antonine Wall and its immediate vicinity saw continued occupation and the construction of new settlements and structures, including churches, villages, and several castles, including mottes. The wall became known as 'Grymisdyke' and its Roman heritage was forgotten. Throughout the post-Roman and medieval periods the Antonine Wall and its immediate vicinity saw continued occupation and the construction of new settlements and structures, including churches, villages, and several mottes and castles.

From the 18th century there was growing interest in and exploration of the Wall by antiquarians, and certain sites became celebrated. Industrialisation and development in the central belt also saw destruction of some parts of the wall by agricultural and industrial development, and the building of roads and canals.

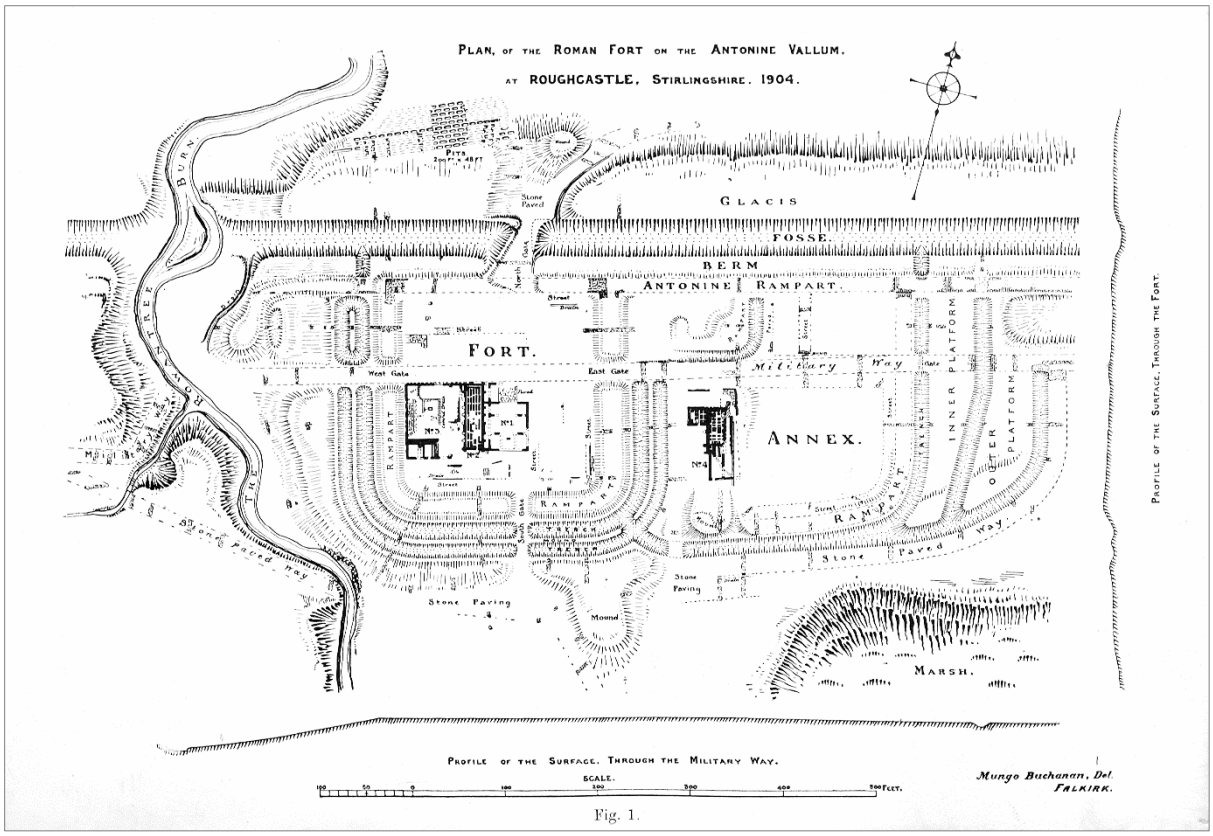
HES manages fourteen sites along the Wall but the majority of the Wall is not in State care. Rough Castle was taken into State care in 1953 and was first scheduled in 1975. In 2008 the Antonine Wall was inscribed as a World Heritage Site and a management plan for the WHS is available at www.antoninewall.org/world-heritage/managing-antonine-wall

Following inscription in 2008, a Management Plan Steering Group was established to develop and deliver Management Plans and key strategic work along the Antonine Wall. This comprises Historic Environment Scotland (HES) and the five local authorities along its length (West Dunbartonshire Council, Glasgow City Council, East Dunbartonshire Council, North Lanarkshire Council and Falkirk Council). A World Heritage Site Co-ordinator is employed by HES to work on behalf of this partnership and deliver the UNESCO WHS requirements. The Partnership invests in capital and revenue projects to protect and promote the Antonine Wall; since inscription this has included (amongst other projects) key branding work, a new website, a digital app platform, new road and onsite signage, economic and visitor studies, investment in visitor counters and a significant Heritage Lottery Fund (HLF) project focused on regeneration and community engagement. Four new staff members were recruited for a three year period to manage the HLF project and key to their work was a co-design and co-curation approach with local communities. Key groups being targeted include communities in the most deprived areas of the Central Belt, asylum seekers (including those from areas associated with the original Roman troops stationed on the Antonine

Wall), young people both in and out of schools, and individuals seeking skills development opportunities.

The Antonine Wall has benefited from the development of the John Muir Way, a coast to coast walking route that crosses several parts of the Antonine Wall. This has helped to find alternative routes for cyclists and horse-riders, where some parts of the site had been vulnerable to damage from such use.

Internationally, as part of the Frontiers of the Roman Empire World Heritage Site, staff and communities connected to the Antonine Wall liaise and network with counterparts along Hadrian's Wall and the German *Limes*. This has included: joint European funding bids; networking trips; hosting / attending international meetings and delegations; and conferences and seminars. There has also been successful engagement with wider European Roman frontier networks.



Plan of the 1903 excavations of the fort at Rough Castle

2.2 Evidential Values

This property provides extensive visible and subsurface evidence for the Antonine Wall, with strong evidentiary potential in previously unexcavated areas. The property's excellent preservation meant that it was very well known to antiquaries, with its Roman origins widely acknowledged from the

seventeenth century onward. Sibbald[8], Gordon[9], Horsley[10], Maitland[11], and Roy[12] all note the site as the most obvious along the whole line of the frontier. Roy was particularly observant in recognising both the fort and its annexe, correctly ascertaining which portion was the fort and which was the later addition. The first serious archaeological investigation took place in the early 1890s, when the Antonine Wall Committee cut several sections across the frontier's Rampart[13] – this was part of a campaign by the Glasgow Archaeological Society on the Wall itself, followed by excavations on the forts by the Society of Antiquaries of Scotland. The fort was excavated between 1902–03[14], revealing some of its internal buildings, a bath-house within the fort's annexe, and the surprise discovery of ten rows of *lilia* defensive pits. Subsequent excavations were carried out in 1920[15], 1932–33[16], and then again in 1957–61[17], each providing some clarification of details. The first – and only – excavations within the extramural field systems were carried out to the south-west of the fort's annexe in 1982[18], revealing features dated as early as the Neolithic or Early Bronze Age, and many more of much more recent date. It is possible that some of the enclosures encountered within this area were developed during the Roman period, and this may be the closest thing we have to evidence of a possible civilian settlement (*vicus*) at Rough Castle. There are, however, no clearly dateable structural remains for a *vicus* here, and this interpretation must remain speculative.

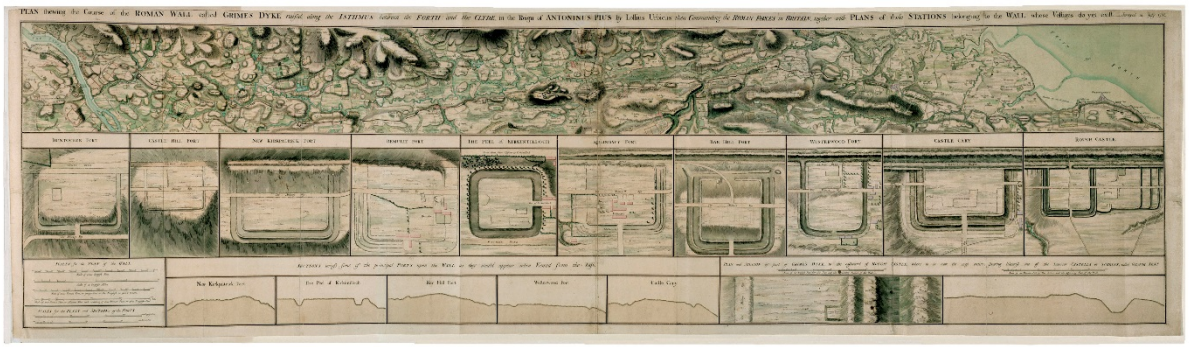
While the ramparts and ditches of both the fort and annexe – as well as those of the Antonine Wall itself in this area – have been extremely well-preserved, excavations have revealed that the structures within the fort's interior have not survived so well. As with most Roman fort excavations, work focused on the central range of buildings, including the headquarters building (*principia*), commanding officer's house (*praetorum*), and a granary (*horreum*), each of which had been constructed of stone. An inscription from the headquarters building (RIB 2145) was instrumental in convincing archaeologists that this building should be called a *principia*, rather than a *forum* or *praetorium*, as had been previous practice (see below). The 1957–61 excavations added knowledge of timber buildings in the western *praetentura* (i.e. the part of the fort located in front of – in this case north of – the *via principalis*, the main road running through the fort), and these are almost certainly the remains of barrack blocks for the housing of the fort's garrison. The primary discovery within the fort's annexe was of an L-shaped stone bath-house. The remainder of the annexe, larger than the fort itself, was not excavated, and may provide a valuable resource of subsurface evidence. As so little excavation has been

[8] Sibbald 1707: 30
[9] Gordon 1726: 59
[10] Horsley 1732: 171–172
[11] Maitland 1757: 173
[12] Roy 1793: 161
[13] Glasgow Archaeological Society 1899: 101–119
[14] Buchanan *et al* 1905
[15] Macdonald 1925: 285–287
[16] Macdonald 1933
[17] MacIvor *et al* 1980
[18] Máté 1995

carried out within Antonine Wall annexes, the value of this potential evidence may be particularly heightened.

Within the property – near its western end – is the location of the Bonnyside East "expansion"; the only example of this class of installation to have been subjected to serious archaeological excavation[19]. These always occur in pairs, with three pairs known; two (Bonnyside East/West and Tentfield Plantation East/West) located to either side of Rough Castle fort, and one pair located on the western slope of Croy Hill (PIC171).

Analysis of the Antonine Wall LiDAR data[20] has added greater detail to the series of field systems and enclosures to the immediate east and south-east of the fort's annexe. In particular, a patterned row of rectangular enclosures are observed under the tree cover to both the north and south of the Military Way as it issues out of the annexe's east gate. This is in an area that was excluded from Máté's[21] earlier survey and excavation and is, therefore, new information about subsurface evidentiary potential. Given their rigid alignment to the Military Way, these enclosures may possibly have originated in the Roman period, representing small agricultural fields, or part of the fort's civil settlement (*vicus*).



SC 934405 © Courtesy of HES. The course of the entire Antonine Wall along with plans and sections of the main forts and fortlets along the Wall. Surveyed in 1755. Titled 'Plan showing the course of the Roman wall called grime's Dyke...together with plans of those stations belonging to the wall'.

2.3 Historical values

This property visibly tells the story of imperial Rome's occupation of part of Scotland, perhaps more so than any other site along the Antonine Wall. Not only is it the location of the best-preserved fort along the former Roman frontier, but it offers the most complete combination of visible linear features and the tallest surviving portion of Rampart. Due to the turf and earthwork nature of the Antonine Wall and most of its installations, it is often

[19] Steer 1957
[20] Hannon forthcoming
[21] Máté's 1995

underwhelming to visitors, and it can be very difficult to pick out individual elements and to gain a sense of how the subtle surface remains relate to ancient features. The very fine preservation at Rough Castle makes both the fort's and wider frontier's key features relatively easy to distinguish, and this enables a stronger understanding of the design and function of the frontier.

The evidence from excavations, surveys, and remote sensing analyses, greatly enhance the story that the visible remains can tell. The *lilia* defensive pits to the north of the Outer Mound, although only known to have been present at this site, underscore the complexity of the frontier and the depth of fortification to be found along the line of the Wall. Inscriptions from the site reveal that the fort's garrison was drawn from the Sixth Cohort of Nervians, who were commanded by Gaius Flavius Betto; a centurion of the Twentieth Legion (RIB 2144–2145). Structural evidence for alterations in nearly every building of the fort was initially interpreted as representing multiple distinct occupations of the site, but these are now interpreted as routine changes during the course of a single period of occupation[22]. There is also evidence for repairs or alterations to the bath-house, located within the fort's annexe, in the form of brick-built pillars that were occasionally replaced by stone pillars. A wide range of pottery has been found within the fort, including Samian ware, Black Burnished ware, and mortaria, all of which can be comfortably dated to the period around AD 140–60. A significant number of leather fragments were recovered from the Antonine Wall Ditch here, including two shoes that are almost complete. Glass finds included a bangle and several pieces of window glass. These finds help to personalise the story of the fort's occupation through everyday functional objects.

The site also plays an important role in the story of modern archaeological scholarship and the development of a more accurate understanding of the terminology to be applied for certain structures within Roman forts. Initially, there was confusion about the correct term to apply to the headquarters building within forts: when reporting on the headquarters building from his own excavations at Bar Hill (PIC168), Macdonald expressed uncertainty about whether this should be called a *praetorium* or *principia*[23], preferring *praetorium* but noting that epigraphic evidence from Rough Castle[24] suggested *principia* instead. Ultimately, Macdonald would adopt the term recorded at Rough Castle[25]. This debate extended beyond the Antonine Wall and would have a lasting impact on Roman military archaeology, with the English archaeologist Francis Haverfield successively transitioning this central structure's name from the Victorian *forum* to *praetorium* and, finally, *principia*[26].

The property also has the ability to tell stories about the Antonine Wall's reuse in later periods. The presence of probable medieval structures on or near the

[22] Breeze 2009: 28
[23] Macdonald and Park 1906: 435
[24] Buchanan *et al* 1905: 470–472
[25] Macdonald 1934: 277–278
[26] Hingley 2012: 196-198

property are indicative of this reuse and these structures should be investigated further in order to develop a better understanding of the property's post-Roman history. Early modern use of the property is more certain. Near the end of the eighteenth century, William Nimmo reported that:

> "the two great annual markets for black cattle, called the Trysts of Falkirk, which were formerly held in a commonty [sic] upon the south of that town, have, within these few years, been removed to the muir around Roughcastle, where tents are erected for the accommodation of the merchants along the very summit of the wall: There one may see the Caledonians trampling upon the ruins of Roman ambition, and unfettered commerce occupying the seat of imperious usurpation."[27]

Keppie suggests that the name "Rough Castle" derives from this eighteenth century use of the site[28]. Although Nimmo seems to suggest that the Falkirk Trysts had then only recently moved to the area around Rough Castle fort, antiquarian accounts suggest that the name had developed within the early eighteenth century: Sibbald never uses the name but simply refers to "a great fort" at "the Rowentree Burn-head,"[29] while Gordon clearly calls the fort "the Rough Castle" less than twenty years later[30]. Thereafter, every other account uses this name. How this name would derive directly from these cattle markets is unclear, but the nearby names for Achnabuth ("field of tents") west of Rough Castle and Tentfield Plantation to its east, must certainly refer to these eighteenth century activities[31].

The property also ties into a range of myths and legends that accumulated around the Antonine Wall at various locations throughout the medieval and early modern periods[32]. Of particular importance for this property is the nearby Elf Hill, located just west of the property and immediately north of St Helen's Loch. According to Gordon[33] and Horsley[34], this is where the legendary figure Gryme is said to have broken through the Wall during the fifth century, thereby originating its medieval and early modern name, first reported in the fourteenth century by John of Fordun as "Grymisdyke"[35] and developing over time into the more familiar "Graham's Dyke" that is still reflected within area street names. The Gryme legend is first recorded by Fordun around 1360 and is later elaborated upon by Hector Boece[36] in the early sixteenth century. Neither Fordun nor Boece specify where Gryme's legendary attack on the Wall took place, but it is probable that the area around Rough Castle became associated with this story because of the fort's excellent preservation, and because Boece places Gryme's attack

---

[27] William Nimmo 1777: 52
[28] Keppie 2012: 14
[29] Sibbald 1707: 30
[30] Gordon 1726: 59
[31] Reid 2009: 313
[32] Rohl 2014: 311–345
[33] Gordon 1726: 58; calling the hill "Broom-hill"
[34] Horsley 1732: 171; who refers to two "Elf-hills" in this area
[35] Fordun 1872: *Chron. Gent. Scot*. 3.3–5 – see Skene 1872: 79-83
[36] Boece 1527: 7.19–7.54

immediately after the Pictish king Eugenius issued an edict "stating that the first man to climb the wall would be made mayor of Camelodunum [misinterpreted by Boece as nearby Camelon], a worshipful position among the Picts at the time, and an office only bestowed on the most outstanding men of the nation"[37]. As Fordun is the first to record both the name Grymisdyke and the character Gryme, it may be tempting to suggest that he invented them both. He clearly states, however, that the name Grymisdyke was by then already popular. According to Rohl:

> "the Gryme narrative and Grymisdyke name can be pushed back only as early as the thirteenth century. The form of the story as it has been transmitted over the centuries reveals, however, the hallmarks of a particular narrative and named individuals which appear to have been introduced in order to explain an already entrenched place--name for which its true origins had been lost. If this is the case, the Wall was probably already called "Grymisdyke" by the beginning of the later medieval period, and Fordun, or an even earlier source, had introduced the Gryme narrative [in order] to account for [this name's] origins."[38]

Although Elf Hill now barely features in discussions of the Antonine Wall, it was previously considered of more significant relevance. For example, a 3 September 1888 excursion of the British Archaeological Association featured a lecture about "the importance of the site in ancient days as a watch-tower or fort" by Dr James Russell before the group visited Rough Castle fort, Falkirk Church, and Linlithgow Palace[39]. It is unknown if Russell's lecture included any mention of the hill's association with the Gryme legend but, by the late 1890s, it was noted that "living tradition, unfortunately, appears to have lost hold of this interesting local association"[40]. Although there is no known record of archaeological excavation or geophysical survey, Elf Hill has been interpreted as a natural feature[41], and it must be recognized that the Roman Military Way respects its existence by skirting around its base to the South[42].

2.4 Architectural and artistic values

Although Rough Castle is the best-preserved fort along the Antonine Wall, it is also the second smallest, with an internal area of only 0.4ha. Interestingly, its annexe, attached to the east side of the fort, is even larger than the fort itself. The fort faces north, with the Antonine Wall Rampart and Ditch serving as its northern defences; the Rampart's stone base has been measured at 4.5m wide, while the Ditch measures 12m wide. The fort's own ramparts were considerable wider than that of the frontier's own Rampart: a section cut near the fort's north-west corner revealed very well preserved turfwork of the fort's rampart, 6.10m wide at the base and 1.37m high above kerbed stone

[37] Boece 1527: 7.42
[38] Rohl 2014: 325
[39] *The Antiquary* 1888: 277
[40] Glasgow Archaeological Society 1899: 102
[41] Robertson 2015: 74
[42] Macdonald 1934: 130

foundations. As many as 18 individual turf layers were visible within this section (MacIvor *et al* 1980: 234). The fort originally featured two ditches around its south and west sides, with a single ditch along the southern half of the east side, between the fort and annexe. A second ditch was later added to the south-east, with an additional very small section of ditch added a considerable distance west of the fort, and to the north of the road that exited from the fort's west gate. On the fort's east side was the annexe, with a turf rampart, a single ditch on the south, and three ditches on the east, which may have been separated by further portions of turf ramparts; this is very unusual, and may indicate that there had been several different phases and formats to the Roman defences. To the west of the fort, the Antonine Wall's Rampart, Ditch, and Outer Mound are in a fine state of preservation, with the Rampart surviving to a height of c.1.3m, the Ditch c.2m deep, and the Outer Mound c.1.6m. Excavation has shown that the Rampart's stone base was laid before the fort was completed.

In the eastern annexe lies a further rectilinear enclosure. At one point claimed as a fortlet, its function is unknown but it may have served an additional function for storage.

There is a causeway just north of the fort, providing access across the frontier's Ditch. This causeway is slightly offset from the fort's north gate. The existence of the causeway is an important indicator that the fort was probably planned from an early date in the frontier's construction period – as the Ditch was not cut here – but the deviation between the causeway and north gate locations remains unexplained.

Excavations within the fort's interior revealed the stone foundations of the expected central range of buildings: headquarters (*principia*), commanding officer's house (*praetorium*), and granary (*horreum*). The *principia* is notable as the smallest anywhere along the Antonine Wall, while the *praetorium* appears to be modelled on the usual accommodation provided to a Roman legionary centurion[43]. This may suggest that the fort was commanded by a centurion; a suggestion that may be further supported by an inscription on the altar to Victory (RIB 2144) found to the south of the fort in 1843. The inscription indicates that the altar was dedicated by the Sixth Cohort of Nervians, who were commanded at the time by Gaius Flavius Betto, a centurion of the Twentieth Legion.

Amongst other important features, the area around Rough Castle is well known as the location of four of the six known Rampart "expansions", which occur in pairs. One pair – Tentfield East and West – is located to the east of the fort, beyond the present bounds of the property, while the other pair – Bonnyside East and West – is located to the west of the fort; the only other known pair is located at Croy Hill (PIC171). This class of installation remains somewhat enigmatic, and their precise function is uncertain. The Bonnyside East expansion is the only one located within this property's bounds and is

[43] Breeze 2009: 28

the only example of this class of installation to have been fully excavated. Excavations demonstrated that this expansion measured about 5.18m square, had stone foundations that abutted the foundations of the frontier's Rampart, but also featured stacked turves that overlapped with those from the Rampart[44]. A quarry pit, of Roman date, was found to underly the expansion's base and may have been used as a source of stone for the nearby Military Way.

This property contains the best selection of diagnostic architectural features to be found anywhere on the Antonine Wall. It is unique in having extremely well-preserved remains of the Antonine Wall, Military Way, and fort. The juxtaposition of the fort, Ditch, and *lilia* is a fine example of Roman defensive thinking. In addition, the changes in Ditch design can be easily shown to visitors as evidence of the continued change in the use of the fort system throughout the Roman period.

2.5 Landscape and aesthetic values

There is no question that this property provides the most visually impressive view of the Antonine Wall as a complex package of inter-related features. Visibility of the Roman remains are excellent, and the site is well maintained. However trees to the north of the site obscure the views toward Falkirk and beyond, giving a false impression of what the soldiers at the fort would have been able to see to the north. Unfortunately, electricity pylons cross over one of the best sections of Antonine Wall Ditch to the west of the fort, and this also detracts from visitor's ability to imagine the historic setting of the property.

2.6 Natural heritage values

A number of protected species have been noted at Rough Castle. Bats are known to forage over the site, and while there are no known roosts, the presence of mature trees suitable for roosting, should be noted. Skylark, Spotted Flycatcher, Green Woodpecker, Kestrel, and Starling have also been recorded, and the presence of Marsh Violet is also of note.

One of the most important aspects of Rough Castle, along with other sections of the Antonine Wall, is their capacity to act as wildlife and biodiversity corridors for the surrounding areas. Linear features of relatively undisturbed countryside are of great importance. The area in Care is bordered to the north by a pocket of long-established woodland of plantation origin.

Geology
The Antonine Wall was created making best advantage of the local geology. Here the bedrock largely belongs to the Passage Formation, including coarse sandstones and seatearths. However, the western end of the site sits upon Scottish Lower Coal Measures Formation, comprising sandstone, siltstone and mudstone, with uppermost layers of seatclay, seatearth and coal.

[44] Steer 1957

Superficial deposits are comprised of Devensian Till, Alluvium and Sediment[45].

2.7 Contemporary / use values

The Antonine Wall is well used by communities along its length as a relatively rare green space amid the urbanisation of Central Scotland. Walkers, trail runners, healthy living groups, and youth groups have all been identified as key 'greenspace' users during consultation events. Since its World Heritage Inscription in 2008, growing awareness of its status has emerged, and a more diverse audience developed. 'World Heritage' tourism has been noted by local tourism providers and a growing schools audience has been observed through social media. Further information on the WHS Management Plan Group and partnership activities and projects is given above at section 2.1 Background.

Wider opportunities for community development, regeneration, and local / national / international networking remain significant. With a neighbouring pocket of community woodland, this property is a favourite for local leisure walkers and is a "must-see" for visitors interested in the Antonine Wall and/or the Romans in Scotland. The property's close proximity to the nearby Falkirk Wheel enhances its visitor numbers, drawing in interested tourists who may not otherwise visit a site associated with the former Roman frontier. Exhibits within the Falkirk Wheel visitor centre provide basic information about the Antonine Wall that serves to encourage visitors to visit Rough Castle as part of their local experience.

New signage at the entrances to the site asking dog walkers to pick up after their dog in both English and Latin have proved popular with visitors!

Visitor numbers to the HES managed Antonine Wall sites are difficult to quantify as the sites are freely accessible and not staffed. Many attract substantial numbers of walkers as well as those setting out to visit the Roman site. Automatic counters have been installed at some sites which gives an idea of footfall. At Bar Hill 34,000 were counted while at Rough Castle, over 100,000 were counted, over the course of a year (2018). This is likely to be the highest number of visitors to any of the HES managed Antonine Wall sites. This high footfall brings with it the potential to reach out to audiences who may be less aware of HES activities than more established HES audiences.

3 Major gaps in understanding

The primary gaps in our understanding of this property are:

- What is the sequence of changes to the fort and annexe?

[45] British Geological Survey, 2019

- How far did the *lilia* pits north of the Outer Mound extend across the property?
- Why is the fort annexe larger than the fort itself?
- What is the date and function of the rectilinear enclosure inside the northwest corner of the fort annexe?
- What is the nature, date, and extent of extramural Roman period activities/civil settlement?
- What is the nature, date, and extent of medieval settlement/activity at the site?
- Research is needed to establish a better understanding of visitor number and visitor profile across Antonine Wall sites. This would help in realising the potential of sites, especially those with high-footfall, to engage with a wide variety of community and interest groups who may represent new audiences for HES.
- There is good potential for the recovery of environmental samples from the fills of the Ditch and from ancient ground surfaces sealed beneath the rampart that can improve our knowledge of the local landscape when the Antonine Wall was built and in use.

The Antonine Wall Research Agenda, which takes a holistic approach to the Wall and draws out key themes and research questions, is currently being developed. As this Agenda develops there will be a better understanding of the research potential and priorities for the HES managed sites. This section will therefore be updated in due course accordingly. For further information on the Research Agenda see: www.antoninewall.org

4 Associated Properties

In addition to this property, there are currently 13 further portions of the Antonine Wall in the care of Historic Environment Scotland:
Bantaskin (PIC167); Bar Hill (PIC168); Bearsden Bath-house (PIC169); Castlecary Fort (PIC170); Croy Hill (PIC171); Dullatur (PIC172); Garnhall Farm (PIC173); Kinneil House (PIC152); Kirkintilloch (PIC174); Seabegs Wood (PIC176); Tollpark (PIC177); Watling Lodge (PIC178) and Watling Lodge West (PIC179).

5 Keywords

Roman frontier; German *limes*; Antonine Wall; Hadrian's Wall; World Heritage Site; vicus; Medieval; myth; Roman fort; rampart, Military Way

Bibliography

The Antiquary (1888) Meetings of Antiquarian Societies. *The Antiquary*, 18: 269-279.

Boece, H. (1527) *Scotorum Historiae a Prima Gentis Origine*. Paris.

Breeze, D.J. (2009) A Selection of Sites on the Antonine Wall, pp. 25–36 in N. Hodgson, *Roman Scotland: XXI International Limes Congress, Handbook to Accompany the Post-Congress Excursion to Scotland*. Newcastle upon Tyne: Tyne and Wear Archives and Museums.

British Geological Survey (2019). Onshore GeoIndex. Available from: https://www.bgs.ac.uk/geoindex/ [6 February 2019]

Buchanan, M., Christison, D., and Anderson, A. (1905) Report on the Society's Excavation of Rough Castle on the Antonine Vallum. *Proceedings of the Society of Antiquaries of Scotland,* 39: 442–499.

Fox, P. (2011) Antonine Wall: Rough Castle. *Discovery and Excavation Scotland*, new series 12: 83.

Fox, P. (2015) Antonine Wall: Rough Castle. *Discovery and Excavation Scotland*, new series 16: 80.

Fordun (1872) *John of Fordun's Chronicle of the Scottish Nation*. Edited by W.F. Skene, translated by Felix J. H. Skene. Edinburgh: Edmonston and Douglas.

Gillam, J.P. (1976) 'Possible changes in plan in the course of the construction of the Antonine Wall'. *Scottish Archaeological Forum*, 7: 51–56.

Glasgow Archaeological Society (1899) *The Antonine Wall Report*. Glasgow.

Gordon, A. (1726) *Itinerarium Septentrionale*. London.

Graafstal, E., Breeze, D.J., Jones, R.H., and Symonds, M.F.A. (2015) Sacred Cows in the Landscape: Rethinking the Planning of the Antonine Wall. Pp. 54–69 in D.J. Breeze, R.H. Jones, and I.A. Oltean (eds), *Understanding Roman Frontiers: A Celebration for Professor Bill Hanson*. Edinburgh: John Donald.

Hannon, N. (forthcoming) The Hidden Landscape of the Roman Frontier: Aerial Laser Scanning, Spatial Analysis and the Antonine Wall. (PhD thesis, Canterbury Christ Church University)

Hannon, N., Rohl, D.J. and Wilson, L. (2017) The Antonine Wall's Distance Slabs: LiDAR as Metric Survey. *Journal of Roman Archaeology*, 30: 447–468.

Hanson, W.S. and Maxwell, G.S. (1986) *Rome's North West Frontier: The Antonine Wall*, revised edition. Edinburgh: Edinburgh University Press.

Hingley, R. (2012) *Hadrian's Wall: A Life*. Oxford: Oxford University Press.

Historic Scotland (2007) Frontiers of the Roman Empire World Heritage Site Proposed Extension: The Antonine Wall, Nomination for Extension of the World Heritage Site, Vol. 1. Edinburgh, Historic Scotland.

Horsley, J. (1732) *Britannia Romana*. London.

Keppie, L.J.F. (2009) 'The Garrison of the Antonine Wall: endangered species or disappearing asset' in A, Morillo, N. Hanel and E. Martin (eds) *Limes XX. Estudios Sobre la Frontera Romana*, Madrid, 1135-45.
Keppie, L.J.F. (2012) *The Antiquarian Rediscovery of the Antonine Wall*. Edinburgh: Society of Antiquaries of Scotland.

Macdonald, G. (1925) Further Discoveries on the Line of the Antonine Wall. *Proceedings of the Society of Antiquaries of Scotland*, 59: 270–295.

Macdonald, G. (1933) Notes on the Roman Forts at Rough Castle and Westerwood, with a Postscript. *Proceedings of the Society of Antiquaries of Scotland*, 67: 243–296.

Macdonald, G. (1934) *The Roman Wall in Scotland*, second edition. Oxford.

Macdonald, G. and Park, A. (1906) The Roman Forts on the Bar Hill, Dumbartonshire, Excavated by Mr Alexander Whitelaw of Gartshore, F.S.A. Scot. With a Note on the Architectural Remains by Thomas Ross, Architect, F.S.A. Scot. *Proceedings of the Society of Antiquaries of Scotland*, 40: 403–546.

MacIvor, I., Thomas, M.C., and Breeze, D.J. (1980) Excavations on the Antonine Wall Fort of Rough Castle, Stirlingshire, 1957–61. *Proceedings of the Society of Antiquaries of Scotland*, 110: 230–285.

Maitland, W. (1757) *The History and Antiquities of Scotland, from the Earliest Account of Time to the Death of James the First, Anno 1437*. London: A. Millar.

Maldonado, A. (2015) 'The Early Medieval Antonine Wall', *Britannia,* Vol 46, pp 225-245)

Máté, I.D. (1995) Excavations of an Enclosure System at Rough Castle, Falkirk. *Proceedings of the Society of Antiquaries of Scotland*, 125: 483–497.

Murray, D. (2006) Antonine Wall - Rough Castle. *Discovery and Excavation Scotland*, new series 7: 79.

Nimmo, W. (1777) *A General History of Stirlingshire*. Edinburgh.

Reid, J. (2009) *The Place Names of Falkirk and East Stirlingshire*. Falkirk: Falkirk Local History Society.

Robertson, A.S. (2015) *The Antonine Wall: a Handbook to Scotland's Roman Frontier*, revised and edited by Lawrence Keppie, 6th edition. Glasgow: Glasgow Archaeological Society.

Rohl, D.J. (2014) More than a Roman Monument: A Place-centred Approach to the Long-term History and Archaeology of the Antonine Wall (unpublished PhD thesis). Durham University.

Roy, W. (1793) *The Military Antiquities of the Romans in Britain*. London: Society of Antiquaries of London.

Sibbald, R. (1707) *Historical Inquiries*. Edinburgh.

Steer, K.A. (1957) The Nature and Purpose of the Expansions on the Antonine Wall. *Proceedings of the Society of Antiquaries of Scotland*, 90: 161–169.

Other Resources

3D digital models of various artefacts found at Antonine Wall sites, can be freely viewed on Historic Environment Scotland's Sketchfab page[46]. This includes a range of objects from the collections of the Hunterian Museum, Glasgow. An interactive Antonine Wall mobile app can also be downloaded to aid site visits and interpretation[47].

Appendices

Appendix 1: Timeline

c. AD 79–88	Archaeological finds indicate that the vicinity may have been used during the Flavian period.
c. AD 139/142	Construction of the Antonine Wall is initiated by the Roman Emperor Antoninus Pius (AD 138–161), after a successful campaign in AD 139/142 by Lollius Urbicus, Governor of Britain. Fort is garrisoned by *cohors VI Nerviorum*, who build the headquarters building, under the command of Fl. Betto,centurion of *legio XX Valeria Victrix*.
c. AD late 150s / early 160s	The Antonine Wall system is abandoned by the Roman military, and the northern frontier returns to the line of Hadrian's Wall.

Medieval settlement

[46] https://sketchfab.com/HistoricEnvironmentScotland/collections/antonine-wall
[47] Available at: http://www.antoninewall.org/visiting-the-wall/download-the-app

18th century	Regional cattle markets, known as the Falkirk Trysts, move to the site of Rough Castle from a previous location just south of Falkirk town centre.
1953	The property is taken into State care (Guardianship).
1975	The site is first Scheduled.
2003	The Scottish Executive announces that the Antonine Wall (including this property) would be nominated as a UNESCO World Heritage Site.
2008	The Antonine Wall is inscribed as part of the "Frontiers of the Roman Empire" UNESCO World Heritage Site, joining Hadrian's Wall and the Upper German-Raetian *Limes*.

Appendix 2: Summary of Archaeological Investigations

1899	Antonine Wall Rampart sectioned in this area by Glasgow Archaeological Society.
1902-03	Major excavations by the Society of Antiquaries of Scotland uncover much of the plan and layout of the fort and annexe.
1920	Minor excavations by Sir George Macdonald.
1932-33	Further excavations by Sir George Macdonald.
1934	Line of Wall and Military Way surveyed by Sir George Macdonald.
1957	Line of Wall and Military Way surveyed by Ordnance Survey.
1957–61	Part of the headquarters building along with the NE and NW quarters of the fort were re-investigated.
1970	1899 sections re-excavated and recorded by I. MacIvor.
1975	Military Way sectioned under modern track.
1980	Line of Wall and Military Way surveyed by Ordnance Survey.

1982	Excavations of the field system to the south-west of the fort annexe by I.D. Máté reveal layered enclosures of multiple periods.
1995	Archaeological monitoring and a watching brief were carried out during the dismantling of an electricity tower on the east bank of the Rowantree Burn, and during works to erect an electricity pylon with accompanying cable trench.
2006	A watching brief in June by Kirkdale Archaeology recorded and photographed a stone-lined pit that had first been uncovered in the 1957-61 excavations.
2010	Aerial LiDAR captured at 0.5-m resolution covering the World Heritage Site, as part of the "Hidden Landscape of a Roman Frontier" collaborative research project run and jointly funded by Canterbury Christ Church University (CCCU) and Historic Environment Scotland (HES). Terrestrial Laser Scanning of Rough Castle PIC.
2011	Four test trenches were excavated over the Ditch by Kirkdale Archaeology in order to evaluate the current drainage system and Roman Ditch. This was followed up by a watching brief during installation of new drains.
2015	A watching brief in August by Kirkdale Archaeology during replacement of interpretation panels revealed some flat sandstone slabs that were not fully excavated nor dated.

Appendix 3: Outstanding Universal Value

The Justification for Inscription of the Antonine Wall World Heritage Site against OUV criteria[48].

Criterion (ii): *exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design.*

The extant remains of the fortified German *Limes*, Hadrian's Wall and Antonine Wall constitute significant elements of the Roman Frontiers present in Europe. With their forts, fortlets, walls, ditches, linked infrastructure and civilian architecture they exhibit an important interchange of human and cultural values at the apogee of the Roman Empire, through the development

[48] A fuller exposition of the OUV of the site can be found on the UNESCO website: https://whc.unesco.org/

of Roman military architecture, extending the technical knowledge of construction and management to the very edges of the Empire. They reflect the imposition of a complex frontier system on the existing societies of the north-western part of the Roman Empire, introducing for the first time military installations and related civilian settlements, linked through an extensive supporting network. The frontiers did not constitute an impregnable barrier, but controlled and allowed the movement of peoples: not only the military units, but also civilians and merchants. Hence, they triggered the exchange of cultural values through movement of soldiers and civilians from different nations. This entailed profound changes and developments in the respective regions in terms of settlement patterns, architecture and landscape design and spatial organization. The frontiers still today form a conspicuous part of the landscape.

Criterion (iii): *bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared.*

As parts of the Roman Empire's general system of defence the German *Limes*, Hadrian's Wall and the Antonine Wall have an extraordinarily high cultural value. They bear an exceptional testimony to the maximum extension of the power of the Roman Empire through the consolidation of its north-western frontiers and thus constitute a physical manifestation of Roman imperial policy. They illustrate the Roman Empire's ambition to dominate the world in order to establish its law and way of life there in a long-term perspective. They witness Roman colonization in the respective territories, the spread of Roman culture and its different traditions – military, engineering, architecture, religion management and politics – and the large number of human settlements associated with the defences which contribute to an understanding of how soldiers and their families lived in this part of the Roman Empire.

Criterion (iv): *be an outstanding example of a type of building or architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history.*
The fortified German Limes, Hadrian's Wall and the Antonine Wall are outstanding examples of Roman military architecture and building techniques and of their technological development, perfected by engineers over the course of several generations. They demonstrate the variety and sophistication of the Romans' responses to the specific topography and climate as well as to the political, military and social circumstances in the north-western part of the Empire which spread all around Europe and thereby shaped much of the subsequent development in this part of the world.

Integrity
The inscribed components convey the extraordinary complexity and coherence of the Frontiers of the Roman Empire in northwestern Europe. Although some parts have been affected by land use change and natural processes, the integrity of the property is demonstrated through its visible remains and buried archaeological features. Their state of survival has been researched in many areas. Several areas of the frontier have been built over,

but where significant archaeological remains have been proven to exist they have been included in the property.

Currently, about one-third of the linear barrier is visible; about one third lies in open countryside but is not visible above ground, though its existence has frequently been tested through excavation; about one-third lies in urban areas, though again its survival has been tested through excavation in many areas. About 2 km of the total length of the Antonine Wall have been totally destroyed, though to this sum should be added minor cuttings for roads and railways.

Authenticity
The inscribed component parts have a high level of authenticity, with each having been verified through extensive study and research. The materials and substance of underground archaeological remains are well-preserved, as are upstanding and visible remains. The form and design of each representative part of the frontier and its associated structures are clear and comprehensible. Later development overlying parts of the frontier are treated as vertical buffer zones.

The remains of the Antonine Wall exist in a generally good condition and visible sections sometimes have significant heights and depths. Conservation and consolidation measures that have been carried out in the interest of better understanding and protection fit in with the setting of the property and do not diminish its authenticity.

Protection and management requirements
At the time of inscription on the World Heritage List, the World Heritage Committee adopts a Statement of Outstanding Universal Value (SOUV) which will be the key reference for the future effective protection and management of the property. The FREWHS as a whole is collectively managed. At the international level, the States Parties have established an integrated management system consisting of three closely cooperating and interacting bodies: the Inter-Governmental Committee (IGC) to oversee and coordinate the overall management at an international level; the Management group which assembles those directly responsible for the site management of the property and provides the primary mechanism for sharing best practice; The Bratislava Group, an international advisory body with expert members from States Parties with inscribed or potential parts of the Frontiers of the Roman Empire World Heritage property.

The Antonine Wall is protected by designation under the Ancient Monuments and Archaeological Areas Act 1979, and through the legislation that guide planning and development in Scotland - the Town and Country Planning (Scotland) Act 1997, the Planning etc. (Scotland) Act 2006 and the Planning (Listed Building and Conservation Areas) (Scotland) Act 1997. It is covered by national policy for the historic environment set out in the Scottish Historic Environment Policy and Scottish Planning Policy. Policies to protect, promote, conserve and enhance the property are included in local authority

development plans and strategies, supported by Supplementary Guidance. Most of the Antonine Wall is in private ownership, but some sections are in the care of local authorities and Historic Environment Scotland.

Appendix 4: Overview and introduction to the Antonine Wall

The Antonine Wall is the remains of the Roman Empire's northwest frontier in the mid-second century. Stretching across central Scotland from the Firth of Forth to the Clyde, the Wall was constructed, in functional operation, and then abandoned all within a period of about twenty years between the early AD 140s to early 160s. The Antonine Wall was one component within a vast and varied system of linear frontiers established by Rome during the second century AD, and other examples are known from across Europe, the Near East, and North Africa. The most famous of these Roman frontiers is Hadrian's Wall in the north of present-day England, which preceded the Antonine Wall and served as a model for key components of its design. In 2008 the Antonine Wall was inscribed as a UNESCO World Heritage Site, joining Roman frontiers in England (Hadrian's Wall) and Germany (the Upper German-Raetian *Limes*) as the latest addition to the "Frontiers of the Roman Empire" serial trans-national World Heritage Site.

The Antonine Wall is about 41 miles (66km) long and features a range of linear features that are present along most of this length, which is punctuated by several types of installations of various purposes; the Wall was previously reported to have a length of 60km, but this has been amended by recent three-dimensional distance measurements based on analysis of recent LiDAR survey[49]. Although common perceptions of the term "wall" often revolve around an enclosing structure or rampart – generally of timber, stone, or brick – the term "Antonine Wall" is used by scholars and heritage managers to refer to this full collection of inter-related features. Beyond the installations, the linear features of Rampart and Ditch are typically (and would have been in the Roman period) the most topographically visible elements of the frontier.

Linear Features
Note on nomenclature: The key linear features include the Rampart, Ditch, Berm, Outer Mound, and Military Way; these features are all presented in this document with an initial capital letter in order to avoid confusion between the main frontier's Rampart and Ditch and those ramparts and ditches that surround the Wall's installations.

The Rampart was a turf or earth/clay superstructure set atop a kerbed stone base, averaging 4.3–4.8m wide, and rising in a sloped fashion to a height of probably at least 3m. The best-preserved Rampart remains lie just west of Rough Castle fort (PIC175), where it survives to a height of only about 1.5–1.8m. Because the Rampart does not survive to its full height anywhere, we remain uncertain of how it was finished on top, but it was probably squared flat and may (although there is no direct evidence) have featured stakes set

[49] Hannon forthcoming

into the top or a wooden duckboard walk with a timber palisade. The Rampart's superstructure differs to either side of Watling Lodge (PIC178 and PIC179), with stacked turves used from here westward and packed earth or clay revetted by clay or turf "cheeks" to the east.

The Berm represents the space between the Rampart and Ditch, and is relatively flat or gently slopes toward the Ditch to the north. The Berm is typically between 6–9m in width, but can vary widely, exceeding 30m at Croy Hill (PIC171); at some locations – usually in the eastern half of the frontier – series of pitted obstacles have been identified on the Berm, matching similar features also known from Hadrian's Wall.

The Ditch is a monumental earthwork dug to the north of the Berm, with a V-shaped profile and banks cut at an angle of about 30 degrees, with evidence at some locations for large stones placed to strengthen its edges. Ditch size varies widely across three key sectors: generally between 6.1–10.7m wide to the east of Falkirk, an average of 12m wide and 4m deep between Falkirk and Bar Hill, and generally between 6.1–7.6m wide to the west of Bar Hill (PIC168); across its full length, the Ditch's width ranges from a narrow 4.27m to as wide as 20.73m, although subsequent erosion must account for some of the wider widths, and it should be noted that the Ditch was not cut at all in a short section on Croy Hill (PIC171).

Immediately north of the Ditch lies the Outer Mound, occasionally called the "Upcast Mound" on the assumption that it is formed from material cast up from the digging of the Ditch. The Outer Mound is typically a low mound spread and partially leveled to a width of about 18–20m; this frequently serves to heighten the north face of the Ditch, and on north-facing slopes the Outer Mound was narrowed to further accentuate the Ditch.

The final linear feature is the Military Way, which was a Roman road located to the south of the Rampart, offering lateral communication and movement along the frontier; this was generally about 5–5.5m wide with a distinct camber and flanking ditches. The Military Way was typically situated between 36–46m south of the Rampart and was usually connected to each fort's *via principalis*, with evidence at several sites (e.g. Rough Castle, PIC175; Croy Hill, PIC171) for an additional bypass road that provided movement without the need to enter the fort. At river crossings, the Military Way was provided with bridges, as confirmed at the river Kelvin near Balmuildy.

Installations

Installations can be grouped into five key types: forts, fortlets, expansions, minor enclosures, and possible watchtowers. Forts are the primary and largest installation type, with 17 forts currently known, ranging in size from 0.12–2.6ha. Although there is no set interval between forts, they are generally located about 3.5km apart, and it has long been assumed by many scholars that there may have been as many as 19 or 20 forts in total; given the long gaps between the forts at Carriden and Inveravon and those at Rough Castle (PIC175) and Castlecary (PIC170), it has been suggested that additional forts

may have been located at Kinneil and Seabegs (near PIC176), but these sites have only provided evidence of fortlets rather than forts. The forts themselves were – like the Rampart – primarily constructed of turf and/or clay, with stone or timber internal buildings, and all but one (Bar Hill, PIC168; and possibly Carriden, if the Rampart did not reach that far east) were physically attached to the Rampart. Whilst the majority of forts were defended by turf or clay ramparts, those at Castlecary (PIC170) and Balmuildy featured stone defences. Most forts have also been found to include an additional fortified space, traditionally called an "annexe". The precise purpose and nature of these annexes remains uncertain, but they are likely to have been later additions and not part of the original plan; in some cases the annexe is significantly larger in area than the fort itself.

Fortlets were smaller enclosures attached to the rear (i.e. south side) of the Rampart, and were first formally identified during excavations at Duntocher in 1949; the fortlet at Watling Lodge (between PIC178 and PIC179) had been initially described in the 1720s but was only recognised as a fortlet after the discovery at Duntocher. Similar in design and construction to the Antonine Wall forts, they measure about 21m x 18m and were constructed with turf ramparts on stone bases, with small timber barrack-blocks to house the soldiers stationed within them. All known Antonine Wall fortlets had a south and north gate, the latter opening through the Rampart. These northern gateways are problematic, as only the fortlet at Watling Lodge (between PIC178 and PIC179) has provided clear evidence for a causeway across the Ditch. Although tentative traces of a possible causeway that was later removed were identified at Kinneil fortlet, it appears that most Antonine Wall fortlets either did not provide access to the north of the frontier or that a decision was made during the frontier's short functional lifespan to eliminate these original access points; this latter view may be further supported by tentative evidence at Kinneil and Seabegs Wood (PIC176) that the north gateways of these fortlets may have been narrowed or removed. Fortlets are known from across the Roman Empire, with others on Hadrian's Wall known as "milecastles" because of their regular spacing at approximately one Roman mile intervals. Searches in the 1970s for fortlets on the Antonine Wall succeeded in identifying some examples at Kinneil, Seabegs Wood (PIC176), Croy Hill (PIC171), Summerston, and Cleddans. If a model of a regular series of fortlets at about one Roman mile intervals is proposed, a total of 41 fortlets would be expected; to date, only nine have been definitively identified, and investigations at proposed additional fortlet locations have either provided negative or inconclusive results.

Expansions are represented by roughly square southern extensions of the Antonine Wall Rampart, constructed of turf on a cobble stone base and about 5.2m square. Six examples are currently known, all occurring in pairs located close together; two pairs are located to either side of Rough Castle fort (PIC175), called (to the east of Rough Castle) Tentfield East/West and (to the west of Rough Castle) Bonnyside East/West, whilst a third pair is located on the western slope of Croy Hill (PIC171). The functions of these installations are uncertain, but one interpretation is that they served as signalling

platforms, with some evidence of burnt material recorded at Bonnyside East. This type of installation is unknown on other Roman frontiers, and may have been a unique innovation for the Antonine Wall, serving a similar function to towers or “turrets” known from Hadrian’s Wall and the Antonine frontier in Germany.

Minor Enclosures are known at three locations along the frontier, all in the vicinity of the fortlet at Wilderness Plantation, and each identified via aerial photography. They are sub-rectangular and ditched, attached to the rear of the frontier’s Rampart. Only one (Wilderness West) has been excavated, revealing that it is later than the Rampart, and had an internal area of about 5.5m square; no entrance or internal surfaces or structures were identified. Although these appear to have been designed as permanent features, their precise function remains uncertain.

Watchtowers may have existed along the Antonine Wall, as they are known from other Roman frontiers, but no definitive evidence for this type of installation has been uncovered. The minor enclosures near Wilderness Plantation do not appear to feature structural evidence for towers, and other possible watchtowers suggested at Garnhall (PIC173) and Callendar Park require more substantiation before they can be accepted as definitively representing this type of installation.

When all of these features are taken into account, the Antonine Wall was one of the biggest ever engineering projects to be undertaken within central Scotland, and the digging of the Ditch particularly altered the local topography, with continuing implications for later periods. Currently, about one-third of the linear barrier is visible; about one third lies in open countryside but is not visible above ground, though its existence has frequently been tested through excavation; about one-third lies in urban areas, though again its survival has been tested through excavation in many areas. Only about 2 km of the total length of the Antonine Wall have been totally destroyed, though to this sum should be added minor cuttings for roads and railways.

The Antonine Wall provides significant evidence for the activities of the Roman military during the mid-second century AD. Structural remains provide evidence for the advanced degree of complexity in Roman frontier planning and construction, with the most complicated array of interlinked elements known from any Roman frontier. The short functional lifespan of the Wall – only about 20 years in total, a generation – makes this frontier particularly valuable as a dated horizon that is relatively unencumbered by the wide range of significant alterations that complicate the functional histories of longer-lived frontiers elsewhere in the Empire. Artefacts inform us about production and procurement and daily life and society on this particular edge of the Empire, offering crucial comparative collections to assemblages from both the Empire’s other frontier zones and areas that were closer to the Empire’s cultural and political centre. Inscriptions also add a very valuable dimension that allows for the identification of specific military units, and, in some cases,

even named individuals. The most important set of inscriptions are the Distance Slabs: at least 19 sculpted and inscribed sandstone blocks that record the work of building the frontier (perhaps the Rampart itself) by different legions, and which have been identified at various locations along the Wall.

The Antonine Wall's Abandonment and Later History
Around the late AD 150s / early 160s the Antonine Wall was abandoned by the Roman army, who moved south to the line of Hadrian's Wall and its outpost forts. Evidence from some sites, notably Old Kilpatrick and Bar Hill (PIC168), indicate that the frontier's installations were deliberately demolished and ritually decommissioned in advance of the redeployment south. Although the Roman army would return to the area during the early third century campaigns of Septimius Severus, there is no evidence that the Antonine Wall was brought back into functional operation or reoccupied by Roman forces.

Active research and fieldwork on the Antonine Wall has – not surprisingly – focused almost entirely on its Roman period construction, functional operation, and abandonment. There is, therefore, significantly less detailed knowledge of the Wall's post-Roman history. A possible souterrain at Shirva, in the Wall's central sector midway between the forts of Auchendavy and Bar Hill (PIC168), may represent the earliest post-Roman settlement activity on the former Roman frontier and could have been in operation from very soon after the Roman withdrawal until as late as the AD 220s. Although the Antonine Wall had ceased to function as a frontier of the Roman Empire, it would continue to play a role in subsequent settlement and other activities in the region.

It appears likely that the Forth-Clyde isthmus served as an effective border in the early medieval period, separating the Anglo-Saxons and Picts in the east, while to the west the successive British kingdoms of Alt Clut and Strathclyde straddled the line of the former Roman frontier. Whether or not the Antonine Wall was itself utilised or recognised as a geopolitical or cultural barrier in this context, its continued visibility would have served to underscore the transitional nature of the isthmus in this period. Timber structures located along the Wall in the area of Falkirk – a ninth-century hall possibly associated with the Thanes of Callendar at Callendar Park and another large structure east of the fort at Mumrills – may represent examples of early medieval reuse of the Wall's line as a regional power centre[50].

Castles or mottes were also constructed on the line of the Wall in the Norman and later medieval period at Inveravon, Watling Lodge (PIC178 and PIC179), Seabegs (near PIC176), Kirkintilloch, and Cadder, each using some aspect of the Roman frontier as part of its own defences. These are part of a wider regional collection of medieval period fortified sites and may not necessarily reflect a conscious decision to reuse former Roman military sites. They do, however, reflect these particular locations' continued relevance and

[50] For further discussion, see: Maldonado 2015

significance as powerful places within a medieval landscape and this later reuse does not detract from the sites' association with the Roman frontier, but adds further depth to their accumulated meanings and significances within the present. It is in this period when the Wall is first recorded (by John of Fordun) as bearing the name "Grymisdyke," later modified to "Graham's Dyke," and still reflected within modern street names in the eastern half of the Wall's line.

In the late seventeenth century the Wall began to attract serious antiquarian attention and was visited and discussed in some depth through the eighteenth century by antiquaries such as Sir Robert Sibbald, Alexander Gordon, and the Rev. John Horsley, amongst others. These antiquaries provided valuable early documentation of the Wall and its remains before the extensive industrialisation and development of the Wall's corridor from the late eighteenth century onward. Such works included the controversial dismantling of Arthur's O'on by Michael Bruce of Stenhouse in 1743, using the masonry from the possible Roman temple in the construction of a dam on the Carron[51]. Numerous other areas of the Wall also fell prey to quarrying and agricultural "improvements", and the wider Antonine Wall corridor played an important role in the Industrial Revolution, with the formation of the Carron Iron Works, construction of the canals, steam engine experiments by James Watt at Kinneil, increased mining and factory production, and the building of the railways. The Forth-Clyde Canal was particularly important, criss-crossing the former Roman frontier multiple times and running parallel to it for long stretches; while the construction of the canal extensively damaged large portions of the Wall, it also revealed significant information and provided the context for later antiquarian activities and the transition to formalised archaeological societies and – by the 1890s – more scientific exploration.

Events in Northern Britain relating to the Antonine Wall and its abandonment[52]:

138	Accession of the Emperor Antoninus Pius.
139	Rebuilding at Corbridge on Dere Street by Hadrian's Wall.
142	Victory celebrated; Balmuildy built? Lollius Urbicus leaves Britain?
143	Wall from Castlehill to Seabegs built with primary forts, fortlets, expansions, small enclosures and Military Way.
144	Wall from Seabegs to Bo'ness built with primary forts, fortlets, expansions and Military Way.
144/5	Building of secondary forts began; fortlets amended, annexes started to be added to forts? Wall from Castlehill to Old Kilpatrick built.
145–50	Some troops sent to fight in Mauretania, in north Africa? Building work on Wall slowed or even ceased.
147-?153/57	Detachment of Second Cohort of Tungrians in Raetia (modern south Germany) and possibly earlier in the reign in Noricum (modern Austria).

[51] See https://canmore.org.uk/site/46950/arthurs-oon-stenhouse
[52] Historic Scotland 2007: 59

151?	Troops return to Britain from north Africa?
151+	Work recommences on the Antonine Wall.
154–55	Coin issued showing Britannia and indicating a victory in Britain.
c. 155+	Annexes added (or continued to be added) to forts; Bearsden divided into fort and annexe; Duntocher fort built; Wall from Castlehill to Old Kilpatrick built (if not earlier).
c. 158	Legionaries sent from Britain to Germany.
158	Rebuilding on Hadrian's Wall and at Birrens.
161	"War was threatening in Britain."
163	Rebuilding at Corbridge.
c.163	Samian pottery indicates date of the abandonment of the Antonine Wall.
164–9	Date of coin of the Empress Lucilla found in the granary at Old Kilpatrick.
?180–90	Date of inscription recording the erection of a shrine at Castlecary.