

**The afterlife of Roman Forts:
a case study of the Hadrian's Wall
region**

by

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Abstract

This project studies the re-use of Roman fortification sites in the Anglo-Scottish border region, from 410 AD to the end of the 18th Century, to critique and identify any patterns for monument re-use. A singular methodology of collection and categorisation of public downloadable data for architectural and artefact evidence for the project region was completed for analysis and discussion. Two buffer zones around the Roman fortifications were created to set boundaries for evidence collection and analysis, 0.25 kilometres for the immediate area of the fortification and 3 kilometres for the proximate area of the fortification. Therefore a distinction could be made as to whether it was the Roman fortification itself which was important, or the landscape location for the monument re-use. The data is reviewed in two chapters; architectural evidence, the siting of fortified dwellings and ecclesiastical sites; and artefact evidence, the siting of find spots, both in relation to the Roman fortifications. The archaeological record and theoretical discussions of the re-use for Roman fortifications displays connections to the Early Medieval Christian church and Norman military tactics. This study revealed a significant concentration of architectural and artefact evidence located within 3 kilometres of many Roman fortifications, with certain time periods having high numbers of statistical evidence and locations having more than one associated piece of evidence. Therefore this project has revealed a High Medieval association with Roman fortification sites for architectural evidence, and artefact evidence for Early Medieval usage of some fortification sites. Therefore the evidence aids the archaeological record in a wider understanding of Roman fortifications heritage and their agency through historic time periods.

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1. Introduction

1.1 Project Framework

This project will examine the historical use of Roman fortifications in the post Roman period through to the end of the 18th Century, to determine if these sites were significant in their landscape for continued use or re-use, rather than the believed abandonment after the Roman Empire collapsed in Britain in 410 AD. The study is being implemented due to Roman fortifications being studied through monument re-use in ecclesiastical and military discussions. With Early Medieval church studies noticing a pattern of 7th and 8th Century Roman church foundations on Roman fortifications sites (Bell 1998, 7) and Norman concepts of invasion replicating Roman military tactics and therefore building on the sites of Roman fortifications (Creighton 2002, 40). These heritage memories of Roman fortifications have been taken and used in these two different architectural cases, drawing upon a connection to a symbolic past (Harvey 2008, 6). This constitutes the project will be important in the collection and discussion of statistical data for Roman fortification afterlives through their agency and legacy use. This review of such monuments will be attained by examining and exploring public downloadable data of architecture and artefact evidence. The sites themselves will be chosen for their lasting legacy on the landscape, those Roman fortifications of significant size and material structure. Buffer zones from the Roman fortifications will be established, to understand the connectivity of the Roman fortifications to the statistical evidence. It is worth noting that the architectural evidence will be the dominant of the two types of statistics to be reviewed, while the artefact evidence will be used to aid the understanding of the architectural statistics. These statistics will be grouped, tabulated and placed into a data mapping system to help understand locational evidence as well as statistical discussions. The project region will be centred on Hadrian's Wall, and extend the parameters of the project region north and south of this landmark by approximately 50 miles (see 3.2 Project Region) (see figure 1). The region has an increased amount of Roman fortifications and compilations of work, such as Collingwood Bruce (1852), Breeze (2006 and 2018) and Shotter (1996) discuss the theories of military

zones, frontiers and Romanisation within the project region. Providing the reasoning behind choosing the area for study.

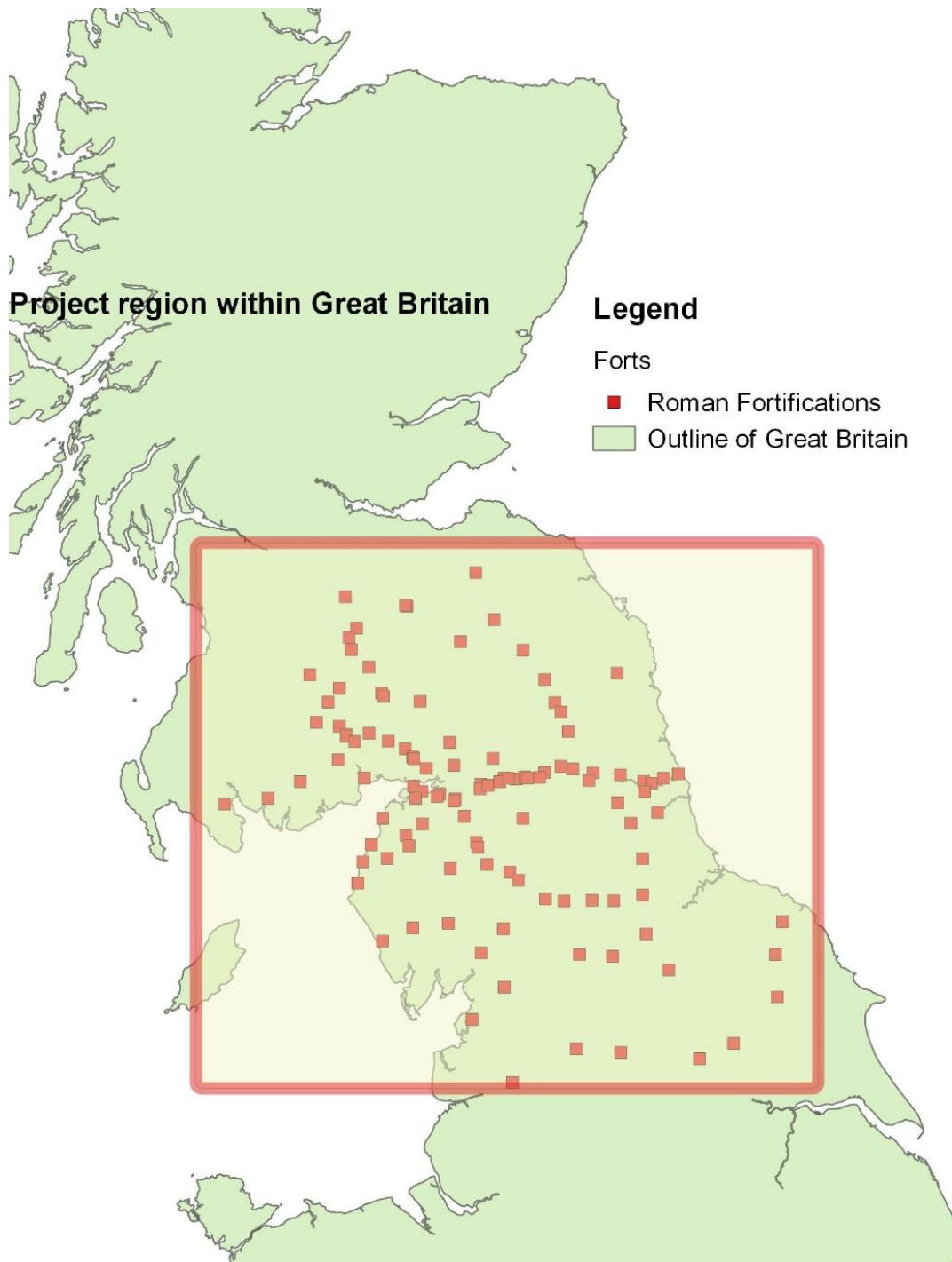


Figure 1: Displaying the project region within Great Britain. The region was selected from Hadrian's Wall, which is central to this area, and taken approximately 50 miles north and south of this landmark monument, making note of Roman fortifications within this region.

The archaeological record displays evidence of pockets of people transforming themselves from a land with a late Roman military presence within forts, into equipped localised bands of people able to farm, land manage and able to defend themselves if needed (Gerrard 2013, 276; Frodsham 2004, 79; Platt 2013, 2). However, the amalgamation of such data indicates a strong ecclesiastical presence in the project region, with an increase of new buildings connected to Roman fortifications in the High Middle Ages. Determining a possibility of re-use of Roman fortification sites than a continuation.

This statistical study, through the processes described above, of monument re-use, will benefit the greater understanding of Roman fortification monument use, through heritage and agency studies (Harvey 2001, 4). Localised styles of fortified homes and church styles began to appear in this Anglo-Scottish area, displaying a continued use of living in the landscape, but with preparedness for defence as and when required (Rowley 1997, 126; Rodwell 1989, 68). These studies will aid in the combination of castle, church and Roman studies, amalgamating the three types of monumental architecture discussions and therefore constructing the theories of monument use. A monuments lasting legacy in the landscape and on the memory of people, distinguishing the monuments heritage use and will aid in the understanding of a shown afterlife of these monuments.

1.2 Project Aim and Questions

To study the Roman fortifications within the project region aims and questions were set, to enable discussion of the qualitative and quantitative data (see 3.1 Data Types), to determine a conclusion on the data and to help understand and identify patterns of continued historical use of the Roman fortifications in the project region.

A project aim was therefore set:

To investigate and identify the historical use of Roman fortifications in the project region and to draw conclusions on the sites post Roman use.

To assist in summing up the statistics for the project and conclude on the project aim, questions were set:

1. *What evidence has been presented statistically in the use of the Roman fortifications and what do these statistics infer within the project region?*
2. *What evidence has been presented spatially in the distribution of the use of Roman fortifications within the project region?*
3. *What do these pieces of evidence reflect with regards to archaeological studies of monument re-use?*

These questions present the principle purpose of this project, to address and identify how Roman fortifications in the project region have been recognised as significant monuments in the landscape and as a monuments heritage, agency and lasting legacy in the landscape has affected the historical use of such sites.

2. Literature Review

A review of literature with regards to Roman fortifications, castles and churches will be discussed to understand the project region. Artefact typology will not be reviewed due to the number of discussions, theories on use and types of artefacts found within the region.

1 Afterlife – a brief history of the region

The time period in this study spans from the end of a Roman Empirical presence in Britain (410 AD) through to the end of the 18th Century. Therefore this is not a full understanding of the time period for the region, but a brief introduction to understand the significance of key archaeological and historical events that affected the archaeological record.

The *Notitia Dignitatum*, was a Roman military living administrative document dating between 390 and 428 AD (Gerrard 2013, 27; Collins 2014, 48-50) which informs of Britain having three commands; the ‘Duke of the Britain’s’, the

'Count of the Saxon Shore' and the 'Count of the Britain's' (Shotter 1996, 113). This contemporary document aids the archaeological record, informing of a strong Roman military presence in Britain in the early 5th Century and therefore establishes a foundation of understanding how Roman military sites were still utilised by a community in the early 5th Century (Collins 2006, 7).

Structural evidence for the Early Medieval period displays building styles of timber construction, communal halls have been uncovered at sites including Birdoswald, a Roman fort within the project study (Newman 2006, 97). Church buildings and estates also grew in this period, with the spread of Christianity in Britain through missionaries and the founding of monasteries. Such as at Jarrow where extensive excavations have taken place and revealed an early pre-conquest monastic establishment (Rodwell 1989, 34). Such pieces of work as early Christian artwork of stone material can help understand the spread and connection of religious following and missionaries within the region (Durham University 2018a), which helps understand the region and movement of people and ideas more accessible. The archaeological record during the Dane Law period (Kirby 1967, 81; Wormald 1991, 130) for the region provides evidence of settlements like Whitby (Brindle 2012, 20), structured cemeteries like Cumwhitton (Fell et al 2011) and landscape and farming management like in the Cumbrian fells (Newman 2006, 98).

The power of the Norman fortification grew in strength and importance, while aiding the control, defence and offence of the region (Platt 2013, 2). This can be seen in the large concentration of early Norman fortified homesteads (Frodsham 2004, 79). In 1086 AD only the Yorkshire region, which also saw the Harrying of the North between 1069 and 1070 AD, was detailed in the Domesday Book (Prior 2006, 38; Williams 1997, 40). While Carlisle eventually came under Norman rule and had the stone castle built in 1092 AD by King William II of England, replacing an earlier timber structure (Summerson 2014, 23).

The most significant piece of historical and archaeological information for this project region is the establishment of the Marshes, a buffer zone created for controlling the Anglo-Scottish border. These marshes take significant amounts

of the project region into consideration and were first created in 1249 and did not cease in existence until the Union of the Crowns in 1603 (Brooke 1988, 1-2) (see figure 2).

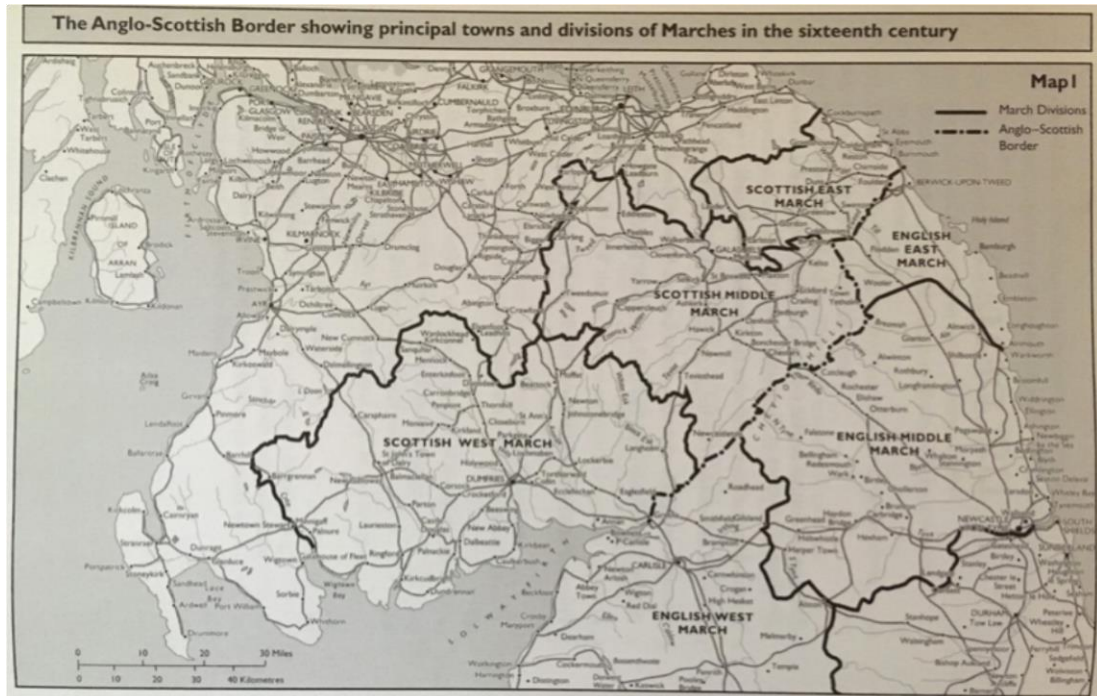


Figure 2 Map of the Debatable Lands of the Anglo-Scottish border (Brooke 2000, xx. Map 1).

Documents inform us of the people of the marshes being clans with no loyalty to either Crown and would raid anyone of any nation or family (Maxwell-Irving 2000, 1), if should be noted however that since this time lapse many romantic works have been created such as Walter Scott's works of literature, and these have been used to convey a land of romanticism such as in the works of Watson (2018). The archaeological record does pertain to this information of a border region which had many centuries of conflict in raiding and warfare, making for a particular defensible style of architecture in fortified dwellings (Rowley 1997, 126) and ecclesiastical sites (Rodwell 1989, 68).

Roman fortifications have been studied since the Medieval period, through to the re-evaluation in the 18th and 19th Centuries of Roman fortifications for colonial aspects by the British military in the Highlands of Scotland and in India, and into the modern day discussions on Roman military tactics (Hingley 2008, 138-139). Excavations at Burrow Walls (Graham 2016, 9), Birdoswald

(Wilmott 2012, 13) and Binchester (Ferris 2011, 123) have provided evidence of Medieval halls at Burrow Walls and Birdoswald and Early Medieval rubbish dumping at Binchester. Therefore displaying evidence on these sites within the project region and within the vicinity of the Roman fortifications exhibit evidence for activity (Collins 2014, 156). Norman fortified dwellings were strategically placed across the project region to control and maintain power. Localised fortified homes and church styles began to appear, displaying a continued use of living in the landscape, but with preparedness for defence as and when required (Newman 2006, 143; McNeil and Newman 2006, 163; Maxwell-Irving 2000, 5; Brooke 1988, 360; Petts and Gerrard 2006, 182). Therefore historical and archaeological records display evidence of monument continuation, re-use and abandonment for Roman fortifications in connection to fortified dwellings and ecclesiastical sites.

2.2 Roman fortifications

Forts were military bases for army units, being permanent bases with a range of sizes for different uses, where needed in the landscape (English Heritage 2011, 3; Breeze 2006, 77). Legionary fortresses were the largest of the military structures, designed to accommodate a legion of around 5,300 soldiers, Auxiliary forts were smaller than Legionary fortresses, varied in size approximately 2 to 7 acres, and most were of a 'playing card' shape, designed to accommodate infantry and cavalry (Symonds 2008, 136; Crow 2012, 12). Fortlets were smaller again than Auxiliary forts, accommodating detachments from Auxiliary forts of a century of 80 soldiers (Symonds 2008, 137). All fortification types provided similar defences and layouts; turf ramparts, outer walls with a walkway, internal towers placed at regular intervals for movement, access and gateways (Wilson 2011, 4). The intention of these military sites was to garrison soldiers for controlling a region, establishing a network of defence for military movement and utilising these permanent establishments while connected to maintained roads and waterway systems for access, control and connectivity (Davies 2002, 115; English Heritage 2011, 5). There were other fortification types used for military purposes by the Roman army, such as Milecastles, Milefortlets, Signal Stations (sometimes named Watch

Towers), and temporary marching camps. Milecastles (located along Hadrian's Wall, built of stone) and Milefortlets (located along the Cumbrian Coast, built of earth and timber) were of the same design and layout, and were significantly smaller than Fortlets, providing approximately 370m² internal areas (Breeze 2004, 74). Signal Stations (located across the Pennines and the east coast of the project region) were placed for look out and signalling connections where needed (Goodall 2013, 23). Temporary marching camps are identified by the defended ramparts left in the landscape, ranging in size from less than 0.5ha to 67 ha and were not designed to be long term structures in the landscape (Hanson 2009, 179; Philpott 2006, 63).

2.3 Roman fortification studies

Archaeological investigations began in the 19th Century to understand a monuments practical uses, building materials and foundation dates (Collins 2014, 154). The establishment of the four archaeological societies of the region (the Society of Antiquaries of Newcastle upon Tyne, the Cumberland and Westmorland Antiquarian and Archaeological society, the Society of Antiquaries of Scotland and the Glasgow Archaeological Society) allowed amalgamation of written records and discussion of sites and theories between members, which in turn helped evolve discussions on the Roman military presence in the region (Breeze 2014, 3; Keppie 2016, 4). The 20th Century saw changes to how monuments were investigated and displayed for a public audience. The 1930s AD saw the Ministry of Works (a government body established to protect monuments of a public interest and is the precursor to Historic England) acquire monuments into state care, making them accessible to the public and also preserving them for future viewing and research. The main archaeological investigations were being carried out on the east and central areas of Hadrian's Wall in the mid-20th Century, redevelopment of Victorian housing in the region of Newcastle meant housing situated over South Shields and Wallsend forts were demolished and large scale open excavations were carried out (Breeze 2014, 8). In the central region of Hadrian's Wall sites such as Vindolanda fort had excavation schools established during the mid-20th Century, and have continued to this day

(Breeze 2014, 8-9). In 1987 AD Hadrian's Wall monument (including its west Cumbrian coastline) was designated a World Heritage Site and contingency plans and committees were set up to control work, access, restoration and preservation to the monument (Wilmott 2009, 6; Sage 2018). Fort sites such as Birdoswald and Maryport have had major research excavations carried out in the late 20th Century (Wilmott and Asten 2009, 414; Haynes and Wilmott 2012, 29), and Ribchester and Binchester excavations are currently ongoing. While excavations at Burnswark, in the project region, have brought new theoretical discussions to Roman studies, as to whether this site in particular was sieged or a Roman training camp (Breeze 2011).

Reflections on the regions Roman fortifications and investigations that have taken place, shows a difference in the work carried out across the project region. The eastern forts, especially those along the Wall, have had extensive investigations such as South Shields and Wallsend, due to urban spread and redevelopments. In the west there is only Carlisle and Stanwix roman forts that are situated in an urban area, therefore neither site has been extensively investigated with open plan excavations and restorations. However there is no difference in investigations for fort sites that are located within large wealthy family estates across the region, such as at Maryport and Vindolanda.

2.4 Monument Studies

Roman fortifications are one of many types of monument in Britain, and discussion when it comes to the use of such a site through social processes (Harvey 2001, 3). For example, there are two current living document research frameworks; the Hadrian's Wall Research Framework (Durham University 2018; Breeze 2018, xii) and the second is the Historic England's (2018) War Memorials Listing Project. These two categories of monuments have been recognised as important to the cultural history and archaeology of Britain, and therefore research frameworks have been created for the purpose of study and conservation through recording. Studies have not only been set in place to record and list monuments, but to understand their wider connections, their greater meaning and importance to society, its structure and their landscape

setting. Monument studies have brushed on theories of Roman fortification re-use with a monument connection to the Romanisation of peoples and places of a post Roman date (Collins 2008, 51).

There are 25 known Roman fortifications in England with a later Anglo-Saxon period ecclesiastical structure, within the Roman monuments vicinity (Bell 1998, 14). Morris and Roxan (1980) first studied the concept of connections between Roman structures and ecclesiastical sites on a nationwide level, while Rodwell (1984) reviewed the understanding behind the process of site selection for a new ecclesiastical foundation. The structures of the buildings themselves can incorporate several hundred years of such alterations and have used available Roman masonry at the time of construction, or even reconstruction at a later date (Bell 2001, 99). Specific discussions on ecclesiastical sites with connections to Roman fortifications have been trying to see the wider agency of church to state. Many people in the Early Medieval period knew of the military sites of the Romans and their sites use in its history. Christian missionaries, who had travelled through Europe preaching, will have seen many monuments and known the connection of these military sites to the Roman Empire, such as Paulinus in Lincoln (Harkel 2017, 25). As the church in its early form was the Roman church at this time, then a spiritual connection to Rome may have been sought for the foundation of new ecclesiastical sites (Bell 1998, 15). This would conceive that the topographical landscape itself is not important, but the monument having agency and that known connection to the Roman Empire. Therefore the Roman church is displaying a connectivity to a previous historical known power construct, the Roman Empire and therefore the Roman church, to the community through the significance of the re-used monument (Harvey 2001, 8).

Studies have also reviewed connections in the re-use of monuments in a later historical period, with Norman castle studies. Specific studies for monument re-use through early Norman castle foundations have been discussed with a known connectivity to a previous military conquering body and therefore re-use of Roman fortification sites (English Heritage 2011, 4). The term Romanisation was not seen at this time (Hingley 2008, 60), however variables of military styles are very much akin to Roman tactics. The concept of a visible

purposeful display of connectivity by Norman builders to a previous conquering empire, shown through a monuments re-use, is seen at certain sites in the project region, such as Birdoswald Roman fort, where a medieval tower house was built approximately 1200 to 1500 AD on the site of the Roman fort (Wilmott 2012, 14). These stone fortified dwellings were of a distinct class of structure, displaying the importance of the person who owned the monument. The agency of the connection to such sites brought a display of power, control and hierarchy, as well as a physical connection to structures (Thurley 2013, 89), for conquering people to a new place for settlement.

Churches and castles were often built in close proximity to each other during the Medieval period, displaying the connectivity of the symbolic power of secular and ecclesiastical (English Heritage 2011, 4; Rowley 1997, 17). These ecclesiastical and military secular connections are both drawing on physical establishments, often placed close to or on site of a previous monument. However, there are other theories on the re-use of such monuments for new architectural buildings, not only from a connection to a Romanisation aspect.

Monument re-use through landscape studies reflects on functions of sites to gain advantage of the topography, locations close to fresh water, on good firm ground and accessible for travelling, or retreat where necessary. Placed for the purposes of social connectivity, either for communication systems or social aspects can also be important. Such as studies carried out by Uubina et al (1998) in Galacia, or landscape discussions of evidence in 11th to 12th Century England by Creighton and Rippon (2017). These landscape studies incorporate all aspects of why siting an architectural feature is important to those establishing the connection to earlier standing monuments. Stone buildings were the skyscrapers of their time up to the Late Medieval period, displaying monumental architecture of importance (Trigger 1990, 120), with the stone work being an iconic material emblem of the person who initiated construction and their connection to the current hierarchy. This building material can also be seen as readily 'available' on site for re-use in architectural buildings, thus a quarry site which can be built upon, that also commands a position in the landscape. Such buildings that have been confirmed to re-use Roman fortification structural material in the project region

include such places as Drumburgh Castle, Cumbria (Pevsner 1967, 74), Hoddum monastery, Dumfries and Galloway (Gifford 1996, 128), St Martin-cum-Gregory church in Micklegate, York (Wenham 1972, 72), and Rubers Law fort in the Borders (Cruft et al 2008, 125). All these locations re-using Roman fortification stone material are positioned close to Roman forts and therefore there is evidence in the project region of re-use of materials as well as the sites themselves. This project will audit such data evidence of re-use of a Roman fortification and its site to gain an understanding of these monuments and their physical agency and heritage on a wider scale of meaning (Harvey 2001, 6).

2.5 Castle Studies

The term castle is understood to incorporate any fortified residence (Nevell et al 2012, 1; Coulson 1996, 186), with different types of dwellings offering accommodation, a central place of administration and agricultural operations, as well as being a statement of status through power and control (Gardiner 2017, 98). In the project region unique styles of fortified dwellings began to emerge, due to the region being in a constant flux of conflict, bringing increased amounts of fortified dwellings (Frodsham 2004, 87), and the need for residences to have fortifications (Frodsham 2004, 98).

The motte and bailey castle was introduced into Britain on a grand scale during the 11th Century by conquering Normans, as a quick construction that helped maintain dominance and control of the surrounding landscape and community (Rowley 1997, 67). This system of offence and defence in one structure allowed the Normans to control the country and made a lasting impression on the landscape (Wyeth 2018, 146). The structures having been studied from a military and phenomenological perspective, with discussions on layouts and positions in the landscape being similar to Roman military tactics (Prior 2006, 234). To understand castle studies of this border region it is important to know of the transforming boundary between Scotland and England. Border lands switched between England and Scotland, for example Carlisle belonged to King David I of Scotland for a while, before reverting back to English rule (Summerson 2017, 22). Castle studies first began during the English Civil

War, when fortified residences became fundamental for moving and housing soldiers, with some being maintained with fortifications or refortified, becoming power houses once again (Grainger 1997, 60-61). Both Parliamentary and Royalist forces used castle sites for accommodation, controlling an area and to show their influence and power in the landscape (McNeil and Newman 2006, 163-164). For example, Newcastle Castle (built on the same named Roman fortification) was refortified in 1643 by Royalist troops that held the castle before surrendering (Historic England 2018).

There are many types of defensive dwelling in the project region, such as tower houses, bastles, moated manors and motte and bailey castles. Most of these dwellings were for the tenantable society, who made a home for themselves with fortified residences in an area of unsettled Britain (Gifford 1996, 60).

Defining and cataloguing different types of residential dwellings has allowed spatial awareness of these dwellings and therefore presenting emerging patterns of building styles through the region. Such data display more Medieval moated manor houses in the Greater Manchester area and more fortified dwellings further North West (Newman 2006, 121-123). Bastle houses are spread across the project region, but are concentrated in the north Pennines. The layout of a bastle dwelling comprises of a ground floor basement for enclosing animals and a first floor living accommodation, which is reached by a ladder (Ryder 1995, 3). These fortifications were often aided by a 'quenching hole', a sloped channel placed above the door of the ground floor entrance for the allowance of extinguishing fires set against this 'weak' point of the structure (Ryder 1995, 9). Bastles have been found to measure approximately 9 metres by 6 metres internally, with walls 1 metre wide (Ryder 1995, 7) and are dateable from the late 16th and 17th Centuries (Ryder 1995, 4) (see figure 3).

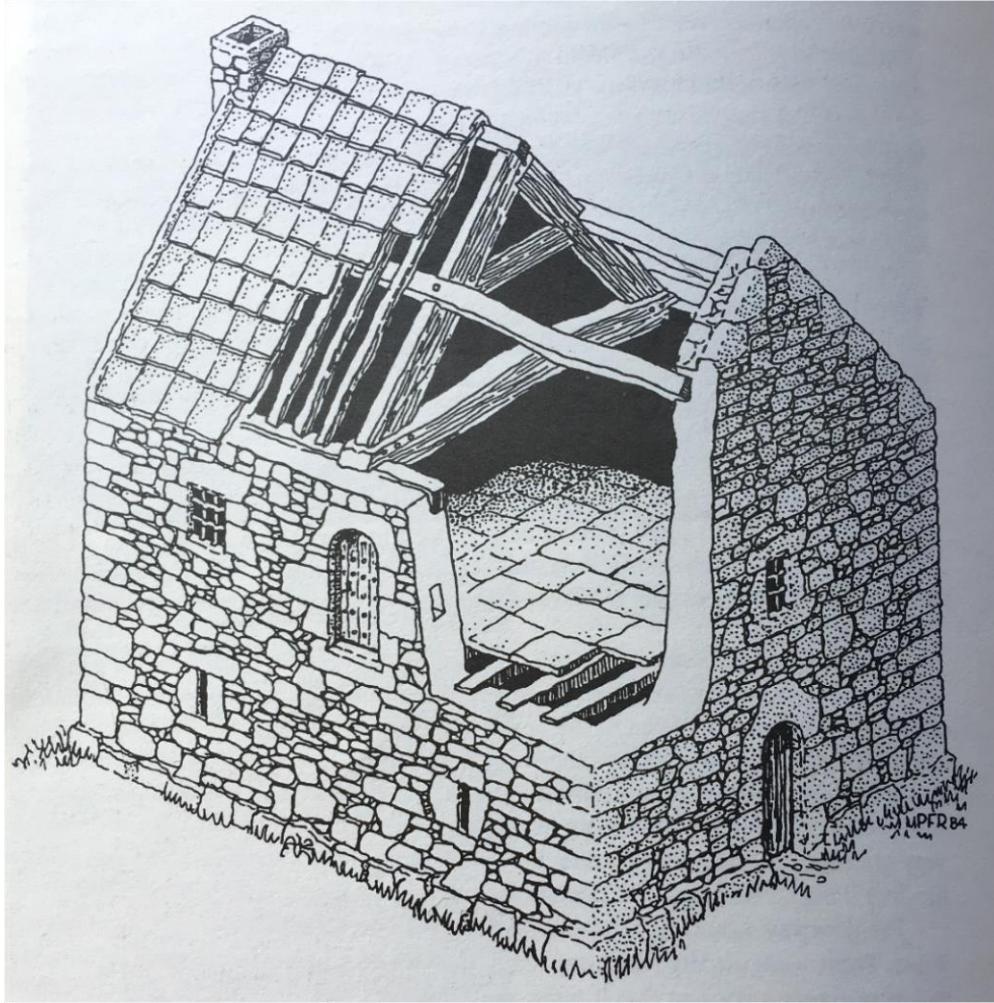


Figure 3: Example of a Bastle House style and construction (Ryder 1995, 8).

Tower Houses were built in many forms, to many varieties of size, depending on the needs and finances of the erector. Tower houses have their origins in southern Europe during the 10th Century, while travelling elites and Normans brought their own styles of tower house to Britain for accommodation, passive fortified retreats that were able to resist attack (Maxwell-Irving 2000, 13). While some tower houses were built in the project region from the 11th Century their allowance to be built and style took off in the 14th Century, with Sanquhar tower house (a Roman fortification in this study) dating to the 14th Century (Gifford 1996, 514). Tower house fortifications included sheer sides with wooden hoardings on the top of the buildings for defence purposes and generally were approximately 18.5 metres by 12 metres in size and 22.5 metres in height (Maxwell-Irving 2000, 13-14) (see figure 4). There were also lesser towers, which were smaller and sometimes made of timber (Maxwell-Irving 2000, 14).



Figure 4: Pendragon Castle, East Cumbria, is a Norman Tower house dating to 1180 AD. This site is not a site known to be connected to any Roman military site, although it has been speculated. However the tower keep and earth works were constructed at this location in order to protect the Mallerstang Valley. The tower house was enlarged in 1309 AD, burnt by Scots in 1341 AD, rebuilt 1360-1370 AD, and destroyed again by Scots in 1541 AD. The tower house was then refurbished by Lady Anne Clifford in the 1660s AD (who owned large estates in the region and set to refurbishing many of the dwellings in the region when ownership was completed) and later finally dismantled in 1685 AD (Historic England 2018). This known history of the site informs the archaeological record well, as to why so many types of fortified dwelling were constructed in this border region, and how military tactics were continued from the Roman period through to the late 18th Century. This winter aerial view of the site displays such fortifications well (picture Visit Cumbria 2018).

Pele towers were of a smaller and simpler design than tower houses, which meant there was little or no accommodation for livestock. Clay mortar was used in the construction of the Pele instead of lime, Peles were not vaulted, were square in shape and had rubble walls of varied thickness (Mawxell-Irving 2000, 17). There is also fortified urban strongholds, these town houses also included fortifications of wooden parapets and gun loops for deterrence (Maxwell-Irving 2000, 17). The fortified dwellings in the borders have been studied to explain the reasons why there are many buildings and styles of defence used on residential dwellings of the region, from more prominent buildings as castles, to local residences of Bastles or Pele towers. With the history of the region being unsettled for both sides of the border, it is not surprising those who could build a residence with fortifications would do so (Clarke 1883, 43; Nevell et al 2012, 8). Fortified dwelling studies in Ireland and Scotland have considered the distribution of such sites and architectural designs, with base-batters for defence but having political and cultural uses and therefore holding a power status (Dempsey 2017, 376) and Iron Age duns with evidence of continued fortification into the 12th and 13th Centuries (Oram 2008, 13). The architectural style progressively changed from defensive purposes to a country estate in the 17th Century (Gifford 1996, 63). The country house style showed a different type of power status, a more elaborate wealthy symbol placed in the elite's landscape to display a power of wealth through artistic display, rather than through displayed fortifications and a military power (Platt 2013, 229-233). Once a Roman frontier, the region continued through history as a living, moving border, the modern Anglo-Scots border, which continued to be debated up to and including the 18th Century (Hingley 2008, 328).

Just as Hadrian and Antonine's phases of Roman fortified building works, so too did the Normans set to build fortified dwellings at strategic points in the landscape and also increased the amount of fortified dwellings at frontiers or where conflict with local people occurred, such as in Northumbria, which has the claim of 'England's castle county' (Ryder 1992, 58). Through historical geography and archaeological studies, castle studies have flourished, but with limited excavations at sites in the north of England (Nevell et al 2012, 6-7). In

the 20th Century castle studies discussed theories of landscape use, functions of defence systems, layouts of buildings, how the historical context of a region is significant as to fortified dwellings and castle locations and uses (McClain 2017, 204; Nevell et al 2012, 17). Fortified dwellings were built in the project region from the 11th Century, with the amount of new sites built increasing in the 12th and 13th Centuries (Rowley 1997, 75; Gifford 1996, 57-58), while some sites saw the redesign and additions of more than one style of building on a site. Castles in the region were positioned and garrisoned strategically in accordance with the Norman Conquest, with the guarding of route ways and river crossings being notable in relation to castle positions (Nevell et al 2012, 14; Rowley 1997, 67). Such as the line of castles guarding the modern named Stainmore Pass and Eden Valley; Appleby, Brough and Brougham, all located on the Late Medieval Anglo-Scot border (Nevell et al 2012, 14). Each of these castle sites have an associated Roman fortification, in the project region, Brough and Brougham Roman fortifications are thusly named, while Appleby has a Roman fortification name of Castrigg. A statement of social and political power, and of social status, for fortified dwelling owners was not only the architectural structure of a fortified dwelling, but also the location of an associated church, with private chapels or churches built within the estates of the occupied fortified dwelling, which then progressed to be the parish church (Nevell et al 2012, 19). Therefore church locations also play an important role in the understanding of the continued use, or re-use of Roman fortifications.

2.6 Church Studies

Church studies incorporates a great volume of theory to aid the archaeological record in understanding regional styles of art and architecture, particularly for this project region which displays defensive evidence (Brooke 2000, 362) and connections to the continent and/or local craftsmanship (Rodwell 1989, 47). Christianity came to Britain through the Late Roman Empire and while there is small pockets of evidence such as at Lullingstone Villa in Kent (Wilson 2015, 9-10), there is minimal amounts of evidence in the project region for a Christian presence (Philpott 2006, 78), possibly due to the region being heavily militarised and the Roman army being known to be followers of other deities

(Cumont 1903, 24). As there are often many stone inscriptions and altars found at fort locations, perhaps this is a belief system that continued on these sites, such as Ribchester and Maryport forts which have significant amounts of Roman altars, 22 stone inscriptions at Maryport, Cumbria (Haynes and Wilmott 2012, 26) and 18 stone inscriptions at Ribchester, Lancashire (Philpott 2006, 78). While the deity changed to a Christian presence, the fundamental connection to stone, stone carving and therefore Roman fortifications became linked in the late Roman period and transferred through into the Early Medieval period (Collins 2014, 105). Early Medieval Christian sculpture marks sites of early Christian worship, being one of the earliest types of religious symbols for evidence of Christian worship, which there are many of in the project region (Newman 2006, 102; Frodsham 2004, 74; Gifford 2002, 31).

The connection between Roman fortifications and ecclesiastical sites has been reviewed through studies. Bell (1998) provides statistical evidence of 160 churches throughout Britain having a known connection to a Roman structure (Bell 1998, 1), while 25 Roman forts have connections to churches across Britain (Bell 1998, 14). The sites of forts have been theoretically seen as connected to the Roman church, rather than the Roman Empire in the Early Medieval period (Bell 1998, 15; Collins 2014, 105). Early ecclesiastical sites in the project region are known at Whitby (Brindle 2012, 20), Carlisle (McCarthy 2002, 153), Jarrow (Aston 2002, 46) and Whithorn (Aston 2002, 33), to name a few. These established monasteries throughout the region were bases for a network of sites for missionaries to work from, and move through the surrounding landscape, connecting with people and growing the Christian fellowship in Britain (Cramp 2017, 33).

The concept of an independent ecclesiastical site for a community who did not have an ascetic way of life does pre-date the Norman Conquest, although parish churches became more numerous in the centuries following 1066 AD (Platt 2013, 24). The church for a settlement is usually the oldest surviving building, and therefore can provide a *terminus ante quem* for architectural archaeology of the area and help understand the landscape in the post Roman settlement history (Rodwell 1989, 46). Although this border region has the reputation of a politically volatile climate, with border warfare from the 12th to

18th Centuries, the evidence displays new ecclesiastical sites being built, or were being elaborated, in the region (Frodsham 2004, 106), displaying a need and/or want in the region for ecclesiastical buildings (see Data Analysis Chapter, Ecclesiastical Sites, for evidence of amounts of these sites within the project region). The warring period of the borders saw raids and thefts of ecclesiastical buildings by Scandinavian raiders at Lindisfarne (Aston 2002, 61), Border Reiver raids at Ingram Northumbria in 1587 (Frodsham 2004, 109) and modern day thefts at St. Kentigern's church Keswick, Cumbria (News and Star 2018). These events helped to create a unique architectural church style in the project region (Brooke 2000, 364), with ecclesiastical buildings including towers, that held bells but were also a place of protection and beacons to warn of approaching enemies, such as at Dearham church in West Cumbria (Bulmer 1883, 616) (see figure 5). Other defensive features could be added to the buildings and layout of a church for protection, such as at Alnwick Abbey where a defensive gatehouse incorporated turrets, battlements, machicolations and tunnel vaulted passages at ground level (Brooke 2000, 99).



Figure 5: Dearham Church, North West Cumbria, is an example of a church with fortified tower of 12th Century origin date (Historic England 2018). The image conveys the structural sturdiness and practicality of the tower, with small windows in each storey and no entrance directly into the tower, except through the church itself (picture Visit Cumbria 2018).

The physical structure of the church building, like their counterparts in private residences, were administered to monumental upgrades, where money would allow. The church structure within the community was a symbol of that community and their value, therefore to lavish upgrading to the structure displays how the church building itself is valued to anyone travelling through and/or visiting the landscape. Structural upgrading also displays the community's wealth (Platt 2013, 74), St. Michael's church in Workington is one such parish church with a long history of worship and decoration. Archaeological evidence provides foundation dates of 8th Century (Winchester 2017, 330) but the site was officially granted in 1534 from St. Mary's Abbey at

York to the local rectory, being rebuilt in 1770, it held approximately 1500 people for services, with earlier Medieval architecture and furnishings present (Bulmer 1883, 298; Newman 2006, 105). This displays the community wants and needs for rebuilding this church in the styles of the time, but always keeping the Medieval foundations and Norman tower. This border region created a defensive style of buildings of worship, where even churches and chapels needed to defend themselves during times of unrest. Such fortified churches are a consequence of unsettled relationships and were influenced by fortified dwellings, such as in Medieval Transylvania, where Saxon fortified churches are now a UNESCO World Heritage Site (UNESCO 1999, 178). In 1972 The Council for British Archaeology created a Churches Committee, specifically for encompassing all aspects of church archaeology for study (Rodwell 1989, 14). The Society for Church Archaeology was established in 1996 to aid and promote the study and conservation of ecclesiastical buildings (Society for Church Archaeology 2018). Ecclesiastical sites have therefore many avenues and succour for the benefit of study and theoretical discussion. Church studies form from an interest in historical architecture, history of a certain place or possibly even religious beliefs, with both redundant and living churches that can, and have, been studied to better understand their locations and/or history (Rodwell 1989, 44).

2.7 Summary

The Romans used strategy and took advantage of the landscape when positioning fortifications on a regimental, concise, large scale system across the British Roman Empire. Roman tactics were to increase fortifications (and therefore control, communication and economy of an area) in regions where additional control was needed with a military presence. What is important for this study, is the evidence of a connection to lasting legacy for a Roman military communication network, in order to understand the afterlife of these monuments (Nevell 2012, 17; Collins 2017, 214 and 217). The centuries following the collapse of the Roman Empire in Western Europe saw rulers, architects and those in military positions research and learn tactics from the Roman military (Hingley 1996, 35; Collins 2014, 166-167). English

Government military personnel studied Roman fortifications and communication systems for aids in an unstable border in the 18th Century, where a new military road was built, using parts of Hadrian's Wall as its foundation (Breeze 2006, 106-107; Collins 2014, 25-26) and using those same Roman military tactics in the Highlands of Scotland, placing fortifications within communication distance and in strategic positions in the landscape to control movement of people and the economy (Hingley 2008, 134). Excavations have already informed the archaeological record of immediate post Roman activity continuing on sites from the beginning of the 5th Century, such as at Binchester, Birdoswald and South Shields. Therefore disproving the theory of complete abandonment of all Roman fortifications in 410 AD (Ferris 2011, 165; Collins 2014, 61-162). However, to say every Roman fortification should therefore have evidence (once all sites are excavated or re-excavated to a modern standard) of continued occupation would be presumptuous and not accountable to the evidence, or lack of, for occupation of the Roman fortifications for the project region. Therefore this project will be looking at a wider view of data evidence to understand the continued use of Roman fortification sites.

Monument re-use theories inform of the connections of understanding a historic monuments importance in the past and bringing that importance back to the current time period, but through new connections and uses. The agency, conspicuous consumption and the heritage of such monuments through their later history, informs of how we try to connect to a heritage, whether it be real or manifested by ourselves (Hingley 2001, 12). Roman forts are our heritage of a time past, we each connect to the monuments personally, with different meaning and agency embodiment. With this in mind, the data analysis will now be carried out on the statistics of the project region, to understand at what level these theories of continued use, re-use or abandonment of Roman fortifications can be incorporated and owned through the evidence provided.

3. Methodology and Approach

3.1 Data Types

Qualitative and quantitative data types will be reviewed, quantitative measures will be used in the collation and administration of the data, while qualitative measures will be used to interpret, discuss and conclude on the findings from the quantitative data. The data will be separated into two chapters for analysis, one concentrating on the location of architecture and the other concentrating on the location of artefacts (Chapter 4. Data Analysis), in connection to Roman fortification locations and their buffer zones (see 3.4 Buffer Zones).

3.2 Project Region

Firstly, the project region needed to be established, so that the parameters were known for data collection and handling. The north of England and south Scotland are known to have been a military frontier in the Roman period (see Chapter 2. Literature Review), and therefore having a number of Roman fortifications, with the possibility of being continually used after the Roman Empire left Britain. The region was decided upon to be approximately 50 miles either side of Hadrian's Wall to take into account a sufficient number of Roman stone built fortifications (see figure 1). Therefore the project region incorporates the modern counties of: South Lanarkshire, Dumfries and Galloway, The Scottish Borders, Cumbria, Northumberland, Tyne and Wear, County Durham, North Yorkshire, West Yorkshire, East Riding of Yorkshire and Lancashire.

3.3 Project Sites

There are different types of Roman fortification in the project region (see Chapter 2. Literature Review), and it was decided that stone built Roman Legionary Fortresses, Forts and Fortlets within the project region will be reviewed. These fortification types were chosen for two reasons: 1. being built of stone and therefore having more of a chance of having an impact in the landscape. 2. Therefore having more of a chance of leaving a remaining impact on the landscape, taking longer to decay than timber or smaller stone

built fortifications, such as milecastles. For personal preference, the sites were tabulated by geographical location, north to south or west to east. In order for ease of tabula format of the sites and to help with the knowledge of their location. The Roman fortifications to be reviewed in this project therefore is 113 (see Appendix 1: Methodology Tables, table 29, for listed Roman fortifications to be reviewed). There were other fortification types such as milecastles, milefortlets, signal stations (sometimes named watch towers), and temporary marching camps. Milecastles and milefortlets were significantly smaller than fortlets, providing approximately 370m² internal areas (Breeze 2004, 74). Signal Stations were placed for look out and signalling connections where needed (Goodall 2013, 23). Temporary marching camps were not designed and built to be long term structures in the landscape, but are identified by the defended ramparts left in the landscape, ranging in size from less than 0.5ha to 67 ha (Hanson 2009, 179; Philpott 2006, 63). Due to these structures either not being of stone construction or being small in area, those in the project region will not be reviewed. Two of the Roman fortifications to be studied within the project region are recognised as Listed Buildings; Lancaster and Netherby, the rest of the Roman fortifications are classed as Scheduled Monuments in England and Scotland (see Appendix 1: Methodology Tables, table 29). Therefore the Roman fortifications within the project region that are to be studied are all classified as Monuments through Government legislation, and therefore recognised as historically and archaeologically important sites (The National Archives 2018). Hence the importance in reviewing their afterlives in historical periods through statistical means.

3.4 Buffer Zones

Buffer zones for the Roman fortifications were needed to establish parameters of evidence, in a proximity in relation to the fortifications, it was therefore decided to set two buffer zones at 0.25 kilometres and 3 kilometres. A 0.25 kilometre buffer zone will be set to discuss the immediate area of the fortification structures and their evidence, and a 3 kilometre buffer zone will be set to discuss the close proximity use of the fortification structures with their

evidence. Both 0.25 kilometres and 3 kilometres are distances that the majority of people can walk and, dependant on the terrain, structures can be seen in the landscape, therefore displaying connections to an understanding of the landscape. Within 3 kilometres it is also (as it is within 0.25 kilometres) possible to transport stone building material, and therefore displays the re-use of the Roman fortifications building material (see 2. Literature Review). It should be noted that these buffer zones were chosen for the reasons above by the author and through the authors own interpretation of landscape use.

3.5 Collecting and categorising Data

Public downloadable data was extrapolated from the two relevant historic public bodies; Historic England and Canmore. The data set from Historic England was extracted from Listed Buildings and Scheduled Monuments data, whereas Canmore data was extracted from site searches. Information was separated by using key words and manipulated to identify Roman fortifications, fortified dwellings and ecclesiastical sites to cover the parameters of the type of language used in naming a site.

Key words used in identifying Roman fortifications: fort, Roman.

Key words used in identifying Fortified Dwellings: castle, fortification, tower.

Key words used in identifying Ecclesiastical Sites: church, chapel, cemetery, cross.

The downloaded data from Historic England incorporated all sites of Listed Buildings and Scheduled monuments for England, the downloaded data for the project region within Scotland was downloaded per county. Therefore after separation of data by key word search, the irrelevant data was removed from the parameters, to isolate the evidence for the project region, for Roman fortifications, fortified dwellings and ecclesiastical sites.

Find spot evidence was downloaded from the Portable Antiquities Scheme (PAS) and Canmore. The data was again separated, this time by historic time periods; Early Medieval and Medieval. Further separation of find types into groupings was also carried out on these historic time periods. The grouping of

these objects was decided through the author's interpretation of the use of such objects (see list Appendix 1: Methodology Tables, tables 30, 31 and 32). The group types in the Early Medieval and Medieval historic periods will be used in the Data Analysis chapter, to aid the understanding of the legacy of Roman fortifications in the Post Roman time frame. Due to the amount of data for Post Medieval and Modern finds it was determined not to use this data, and therefore the artefact evidence will concentrate on the earlier historic time periods to aid in the project parameters.

3.6 QGIS

Quantum Geophysical Information Services (QGIS) was used to collate the data within the project region, to map sites with their architectural and artefact evidence, while being able to note any geographical comparisons between the sites. Base maps and data points were downloaded from Digimaps (2017) for background mapping of the region including an outline of Great Britain, boundary lines of counties and countries, an Ordnance Survey map of 1:50 000 raster level, height of land at 50 contours and Ordnance Survey open river systems. The public downloaded data was placed into QGIS to view the data through mapping. Architectural evidence, for fortified dwellings and ecclesiastical sites, was broken down to show the total amount of sites per century, up to the 18th Century. Any evidence dating prior to 1100 AD was amalgamated, due to the small amount of evidence in relation to the rest of the time periods (see table 1).

Separation of data into historical time periods for mapping:	
<i>Fortified Dwellings</i>	<i>Ecclesiastical Sites</i>
Prior to 1100 AD	Prior to 1100 AD
12th Century	12th Century
13th Century	13th Century
14th Century	14th Century
15th Century	15th Century
16th Century	16th Century
17th Century	17th Century
18th Century	18th Century

(Table 1: Table displaying breakdown of time periods for architectural and artefact evidence).

Separating the evidence into centuries was done to aid in the understanding of the Roman fortifications in stages of use. The architectural evidence was broken down as per mentioned in Chapter 3.5 Collecting and Categorising Data. To work with these pieces of evidence the buffer zones of 0.25 kilometres and 3 kilometres were created around each Roman fortification in the project region and the fortified dwellings, ecclesiastical sites and artefact evidence was extracted and amalgamated into tabula format from these buffer zones. Heat maps were also created to display concentrations of evidence for the overview of fortified dwellings, ecclesiastical sites and artefacts. Finally, known Roman roads were downloaded from public downloadable data (The President and Fellows of Harvard College 2018) and placed into QGIS. QGIS was utilised for recording the statistical evidence through mapping, for discussions on the spatial evidence for the total measures of fortified dwellings, ecclesiastical sites and artefact find spots.

3.7 Fisher's Test

Fishers exact tests were ran on the summary data to formulate the significance of the statistics (Fisher 1922. 93). All workings were carried out with the same significance level of .05, to calculate the P value of the formulas (Stangroom 2018). The comparison of data within the individual buffer zones, 0.25 km and

3 km, were ran. These exact tests were ran to determine if there is correlation between the statistics of the project.

3.8 Summary

The project will use both quantitative and qualitative data sets, which will be used in discussing the evidence through chapters of architectural evidence (see 4. Data Analysis, Chapter 1: Architectural Evidence) and artefact evidence (see 4. Data Analysis, Chapter 2: Artefact Evidence). As previously discussed, the quantitative data will include the public downloadable data in its separated forms in tabula and mapping displays, while the qualitative data will approach the quantitative data for discussion and draw conclusions on the evidence of the Roman fortifications historical after lives. This review of quantitative and qualitative data will attempt to shed light on how the Roman fortifications in the project region have been used, continually or in re-use, and how these Roman military structures may have influenced the subsequent continued use or re-use of the sites. The afterlife of Roman Fortifications has not specifically been reviewed on a wider scale of comparing and discussing Roman fortifications and their historical uses as this project for more than one reason, as this project aims to do. Therefore this project is important in the understanding of Roman fortification sites, as monuments in the landscape, leaving a lasting legacy (Hingley 2008, 333; Buchanan 2017, 269) and their continued use and/or re-use in wider archaeological discussions of the re-use of monuments in the landscape through historical time periods (Williams 1998, 102-103; Hamilakis 2008, 192-193).

3.9 Source Criticism

On completion of extrapolating and categorising the data sets from the relevant compiled online catalogues (Canmore, Historic England and PAS), and after breaking down the data for analysis, certain archaeological issues arose.

Firstly, the source material for architectural evidence does not reflect the true archaeological record for the project region, as known through contemporary documentation and excavation reports. For example, there is no Roman fortifications within any ecclesiastical sites within the 0.25 km buffer zones, and only 5 Roman fortifications with ecclesiastical sites dating to Prior 1100 AD within the 3 km buffer zones. The 5 Roman fortifications in question, within the 3 km buffer zone and having ecclesiastical sites dating to Prior 1100 AD, were: Oxton, Learchild, Corbridge, Rudchester and Binchester. However through archaeological investigations it is known that more Roman fortifications within this project region have ecclesiastical sites connected to them. Such as Ribchester, Carlisle (Dark 2002, 195), York (Collins 2014, 81), Binchester (Collins 2014, 102), Hexham (Hills 2009, 234), Bewcastle (Collingwood 1923, 208), Workington (Collingwood 1923, 249-250) and Ilkley (Sanderson and Wrathmell 2005, 3), to name a few known to the writer. Therefore it is noted that on immediate dissection of the data collected, this public downloadable data does not transfer the true reflection of current archaeological investigations and understandings of such sites. It is apparent that the free public archaeological record in Britain is flawed when it comes to corroborating architectural information and archaeological information. To explore ways to view a more detailed data source, the Corpus of Anglo-Saxon Stone Sculpture (Durham University 2019) information for evidence of Early Medieval foundation dates for ecclesiastical sites within the buffer zones of the Roman fortifications could have been incorporated. However there is 12 volumes of published work for Britain, with an increased amount in this Anglo-Scottish region, this would have therefore been too much data to collate for a Masters level thesis. Although The Corpus would be worth adding to the data set for a more detailed analysis of such Roman fortification sites, such as a PhD level thesis.

Secondly, the source material does have biases towards English data sets due to the volume of statistics from the online catalogues (Canmore, Historic England and PAS). In comparing these data sets English sites have stronger evidence, therefore there is a bias in the statistics towards English Roman fortifications and their continuation or re-use evidence.

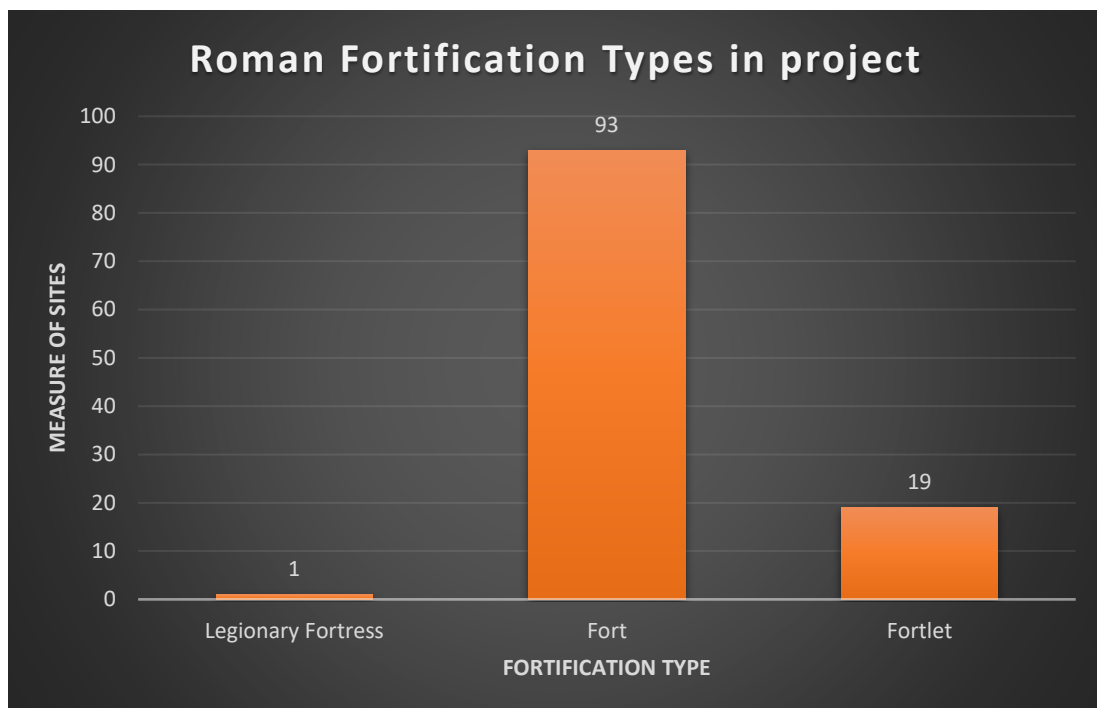
Thirdly, the artefact evidence reflects the finding and collection of artefacts from the PAS (2018) and Canmore (2018) only, artefacts found through excavations may have provided a fuller picture of such artefacts found on Roman fortifications, however this would have been too much data for collection and categorising for a Masters level project. Therefore these two sets of public downloadable information do aid the archaeological records in finds locations, but also has flaws in how and where such artefacts are found and subsequently recorded. Robbins (2012) has completed a PhD study on the distribution data for the PAS (2018), evaluating the representative date through using regions of England for case study. Robbins (2012) study displayed data recorded onto the PAS (2018) to be from known historical patterns of activity and incorporated modern collection patterns by 'human' factor (Robbins 2012, 236). Therefore where land is accessible through ownership allowance, geological layout of the landscape and known historical activity, all will aid in the factor of metal detecting and artefact retrieval. Robbins (2012) discusses the landscapes of each of her case studies, with details of each area in Chapters 5, 6 and 7. Discussing how topography and natural features affects historical activity levels and modern man made features in an area (Robbins 2012, 180), while areas for metal detecting in an area are affected also by protected legislation such as National Parks and Sites of Special Scientific Interest (SSSI), such as Robbins (2012) case study of Hampshire incorporating the New Forest National Park (Robbins 2012, 172). With this in mind it is worth noting that the project region of this study on Roman fortifications after lives incorporates SSSIs and 6 National Parks (with the largest in Britain also being incorporated in this project region, the Lake District National Park) (See Appendix 2: Geographical evidence). Therefore large areas of this project region are protected by legislation with regards to archaeological investigations and metal detecting surveys, which may bias the PAS statistics on artefact finds for the Chapter 2: Artefact Evidence and therefore the overall discussion of the findings.

4. Data Analysis

4.1 Introduction

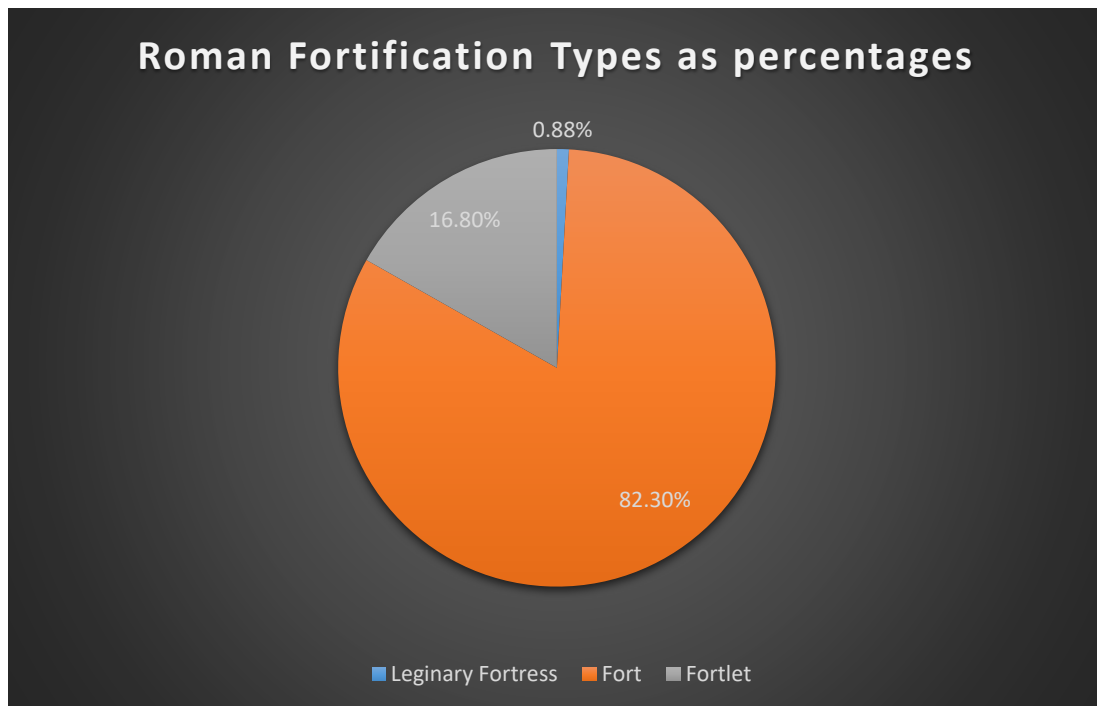
Primarily it is necessary to consider the Roman fortifications which this project is based upon, their location within the project region and what type of Roman fortification they have been classified as by the relevant government bodies (see Appendix 2: Methodology Tables, table 29).

113 fortifications in northern England and southern Scotland were chosen from Historic England and Canmore downloadable public data. In the project region there is 1 Legionary Fortress, 93 Forts and 19 Fortlets (see figures 1 and 6).



(Figure 6: Graph displaying Fortification types in the project region).

This data displays 82.3% of sites are categorised as forts, 16.8% as fortlets and 0.88% as Legionary Fortresses (see figure 7).



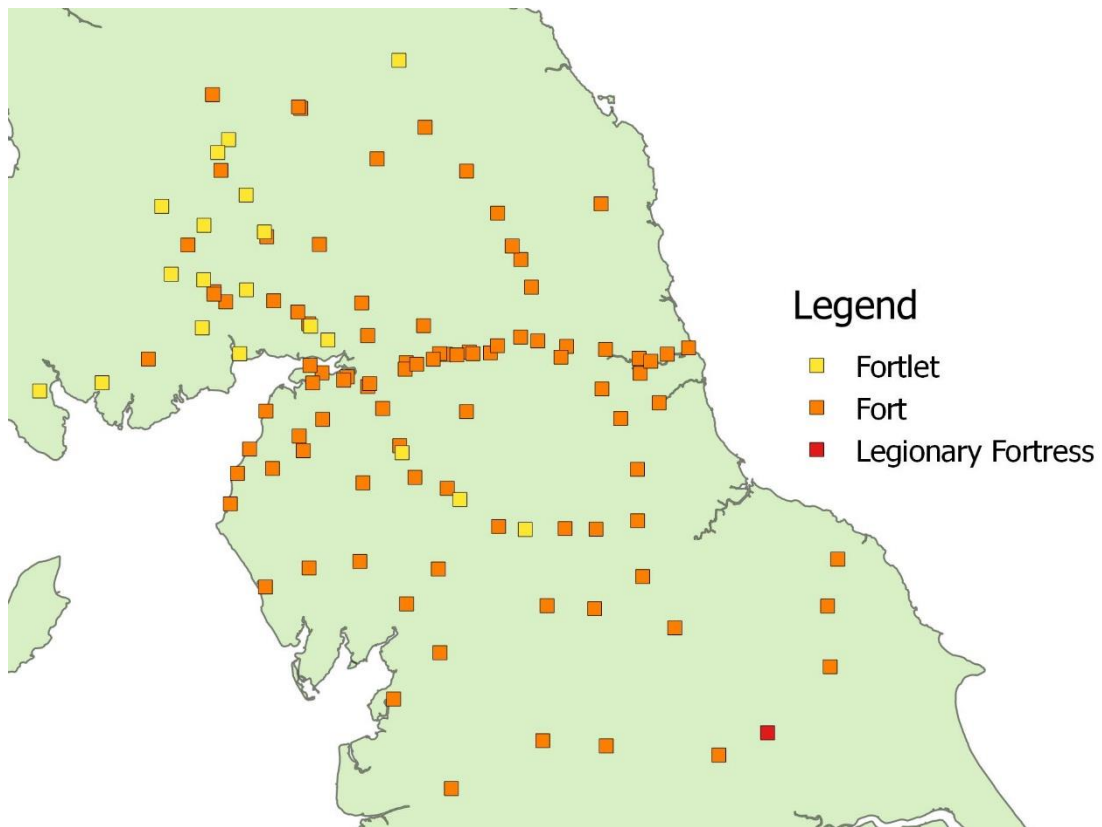
(Figure 7: Pie chart displaying the percentages of fortification type in the project region).

The project region includes the boundary frontier of Hadrian's Wall, therefore this high percentage of fort type for Roman military structures in the region is unconventional, and are fortifications of monitoring stations rather than acquiring sites (Philpott 2006, 63). The fortifications in the project region are all located along travel routes, military routes or are outliers to them, with some locations having more fortifications along their routes than others (see table 2).

Location	Number of Fortifications
Hadrian's Wall	18
Staingate	11
A66	8
A684	2
Pennines	3
South West Scotland	5
Cumbrian Coast	4
A592/A593	3
A595	3
Dere Street	17
A169	3
A6/A74	27
A76	9
Total	113

(Table 2: break down of fortifications in their designated groupings).

The fort locations are spread across the region, with the majority (27) being located along the modern A6/A74 area, Hadrian's Wall (18) and Dere Street (17) having large amounts of forts along their routes also (see figure 8).



(Figure 8: Map of project region, displaying the spread of the Roman fortifications to be studied).

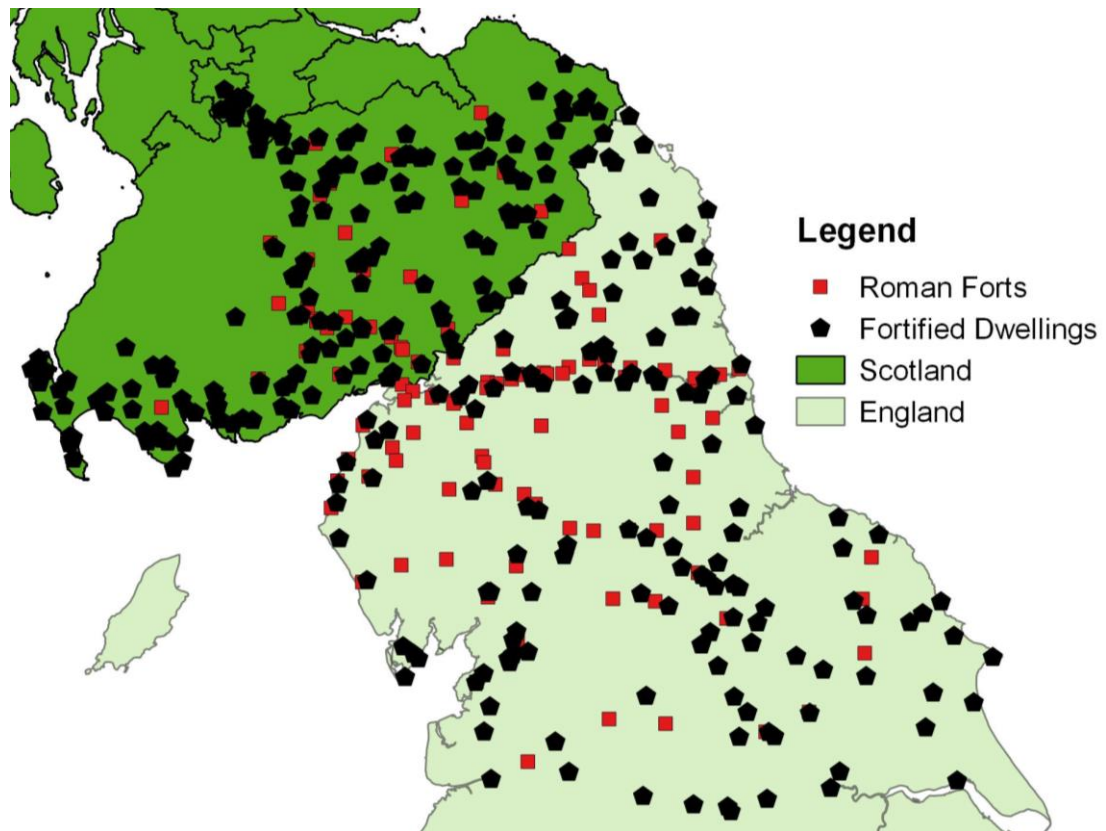
The data will be analysed in two separate chapters; Chapter 1 Architectural evidence of monument legacy, and Chapter 2 Artefact evidence of monument legacy. Focusing on chapter 1 due to the longevity of stone built structures and therefore their lasting memory in the landscape and on peoples.

4.2 Chapter 1: Architectural evidence

4.2.1 Distribution of sites

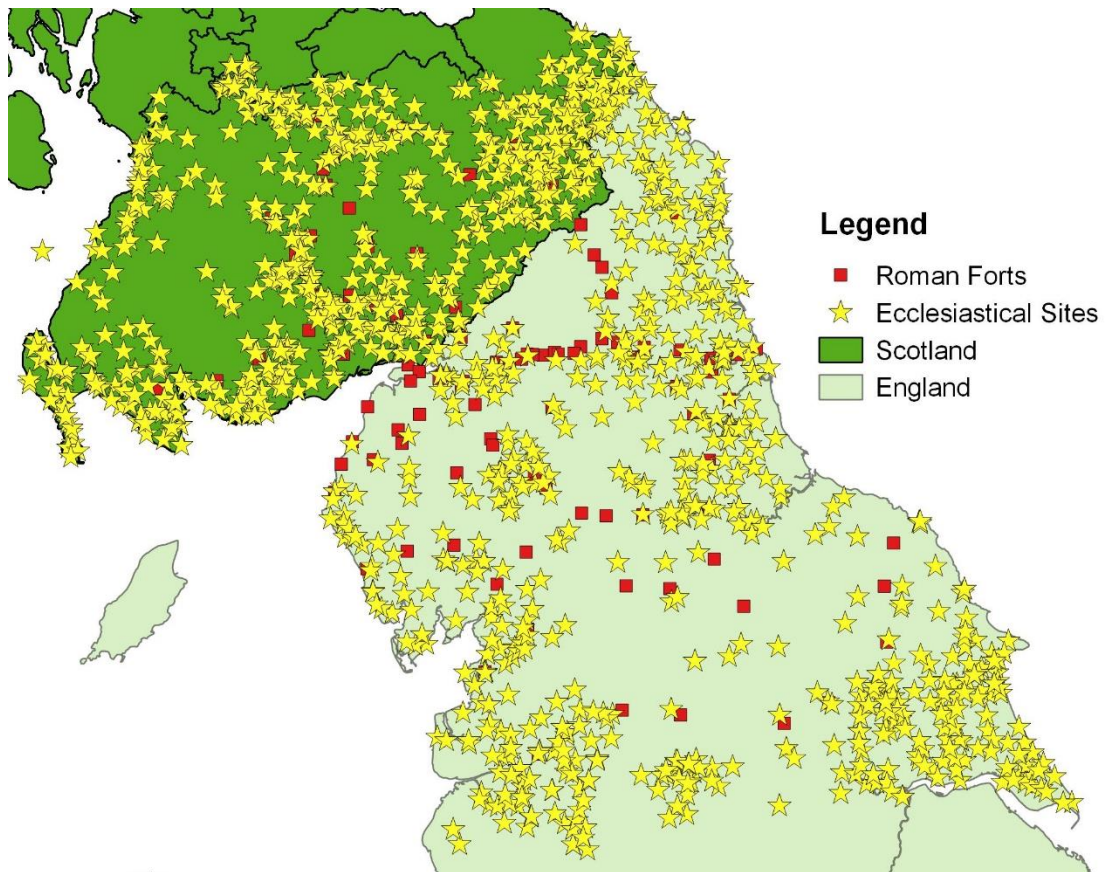
In the project region a total of 514 fortified dwellings and 1,333 ecclesiastical sites were recognised dating from the post Roman period to the late 18th Century. The fortified dwellings data identifies 258 sites in England and 256 sites in Scotland, therefore both Scotland and England are evenly represented in number of dwellings (see figure 9). However when understanding the modern border between the two countries the area of Scotland within the project region is smaller and therefore provides evidence of a concentration of fortified dwellings for Scotland in the project. The distribution of these fortified

dwelling displays a concentration of sites along the Scottish/English border, the south west coast of Scotland and the Glasgow region. Within northern England the distribution of fortified dwellings seems to correlate to the immediate region along Hadrian's Wall and an area aligned north/south from Richmond to York.



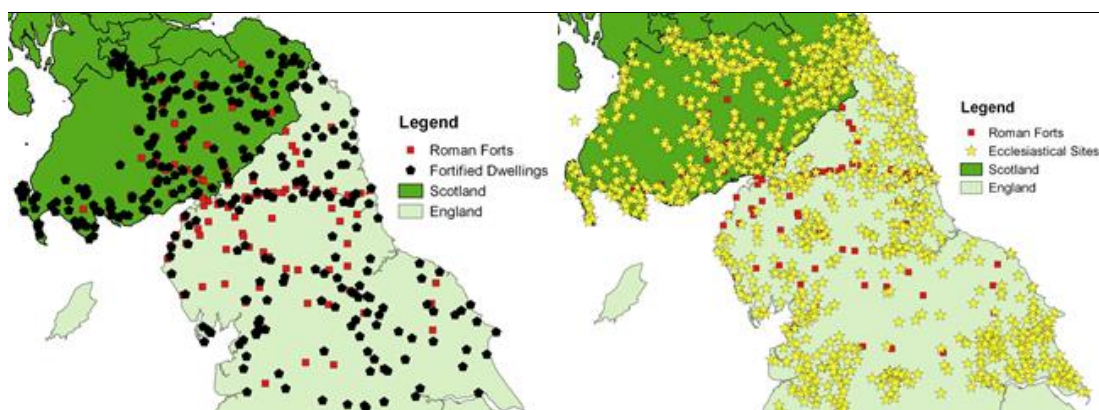
(Figure 9: distribution map of all fortified dwellings in the project region).

On reviewing the spread of the ecclesiastical sites it appears there are significant regional clusters in south west Scotland, Northumbria, the Humber, the Preston to Lancaster region and a pocket of sites in the area of Penrith (see figure 10). The data identifies 654 sites in Scotland and 675 sites in England, comparable to fortified dwellings this data shows an even representation of ecclesiastical sites between both countries.



(Figure 10: distribution map of all ecclesiastical sites in the project region).

These considerations are a synopsis of the data for all fortified dwellings and ecclesiastical sites taken from the Historic England and Canmore downloaded data (see figure 11). A more comprehensible analysis of the data will now be discussed.



(Figure 11: distribution map of all ecclesiastical sites and fortified dwellings in the project region).

4.2.2 Fortified Dwellings

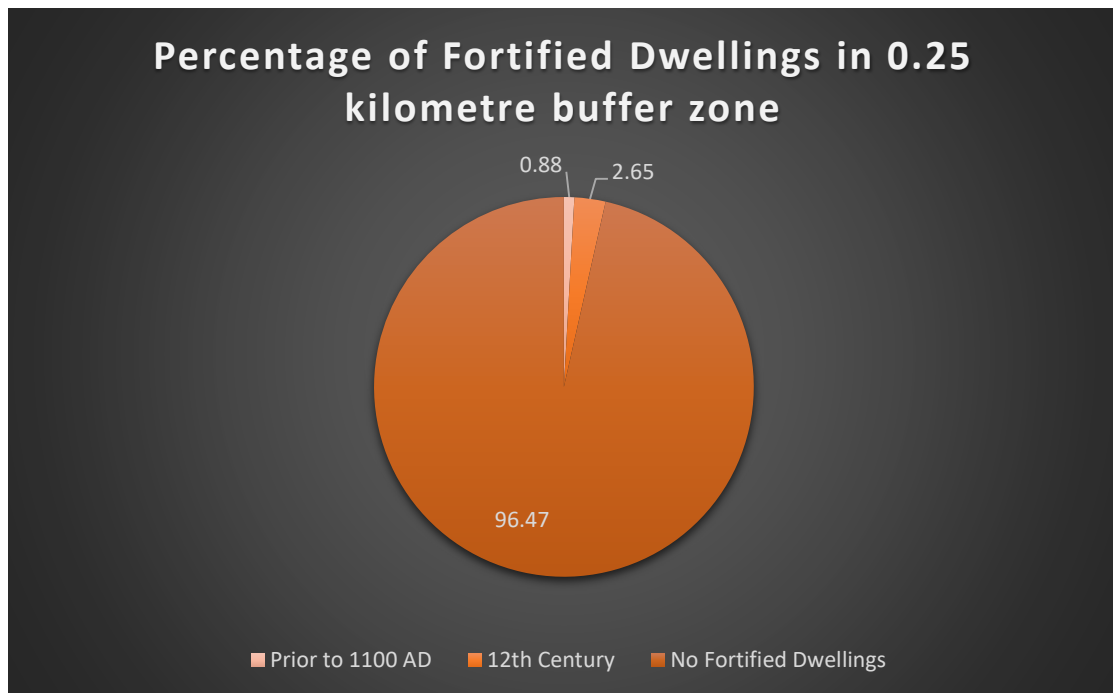
To clarify, the fortified dwellings data incorporates all building styles in the region that have been constructed with defensive purposes in mind (see Chapter 2. Literature Review, 2.5 Castle Studies).

0.25 Kilometre Buffer Zone

The data displays the majority of sites (109 of 113) 96.46 %, have no fortified dwellings within 0.25 kilometres (see table 3 and figure 12).

Fortified Dwellings	0.25 kilometre buffer zone
Historic Period:	No. of forts with dwellings present:
Prior 1100 AD	1
12th Century	3
13th Century	0
14th Century	0
15th Century	0
16th Century	0
17th Century	0
18th Century	0
Unknown Date	0
No Dwellings	109

(Table 3: Displaying the overall totals for fortified dwellings in a 0.25 kilometre buffer zone).



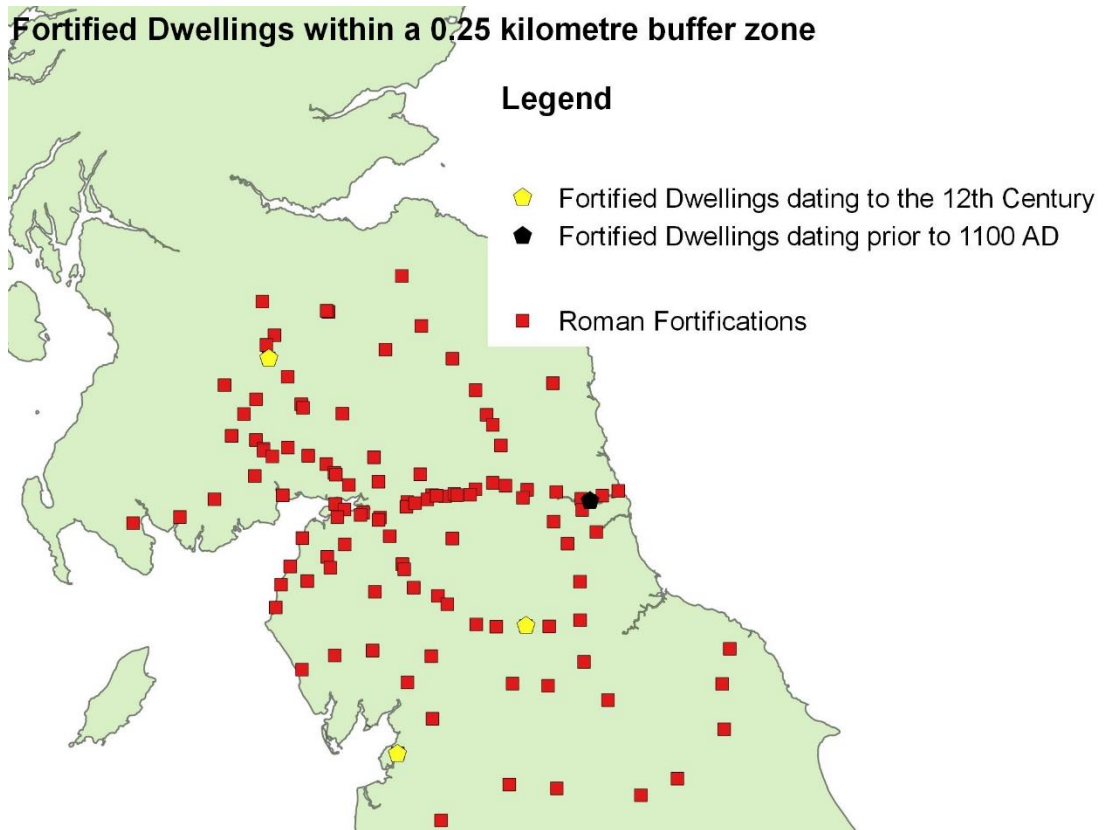
(Figure 12: Displaying the percentages for fortified dwellings in a 0.25 kilometre buffer zone).

Prior to 1100 AD

The only site dated prior to 1100 AD is Newcastle, a coastal location with connections via the River Tyne and earlier Roman structures and roads (see figure 13). The site of the Newcastle fortified Dwelling is directly above the Roman fort structure.

12th Century

There are 3 sites dating to the 12th Century. These sites are in different types of locations: Lancaster a coastal location with connections via the River Lune; Bowes a central high moorlands location with connections via the River Greta; and Crawford a central rolling hills location with connections via the River Clyde. These locations are different in their geography and are not close in proximity to have possible relationship connections (see figure 13). None of these fortified dwellings are directly above the Roman fortifications; Crawford is south east of the fort; Bowes is north of the fort and Lancaster is south west of the fort.



(Figure 13: Displaying the locations of evidence for fortified dwellings dating prior to 1100 AD and the 12th Century).

Conclusion

Within the 0.25 kilometre buffer zones there are no other fortified dwellings of 13th to 18th Century date and each of the Roman fortifications that do have fortified dwellings within 0.25 kilometres only have singular dwellings for these periods. This would suggest the majority (96.47%) of Roman fortifications were not used in the Post Roman period for fortified dwellings, and therefore sites such as Newcastle may be anomalies within the data set.

3 Kilometre Buffer Zone

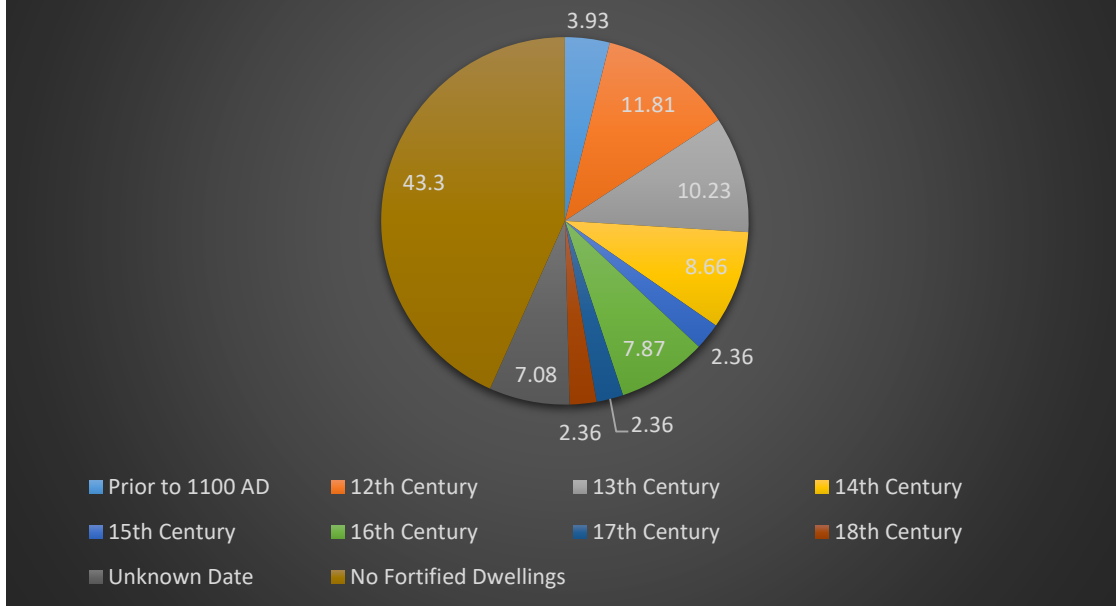
The data displays a median proportion of sites with no fortified dwellings within 3 kilometres (see table 4).

Fortified Dwellings 3 Kilometre buffer zone	
Historic Period:	No. of forts with dwellings present:
Prior 1100 AD	5
12th Century	15
13th Century	13
14th Century	11
15th Century	3
16th Century	10
17th Century	3
18th Century	3
Unknown Date	9
No Dwellings	55

(Table 4: Displaying the overall totals for fortified dwellings in a 3 kilometre buffer zone).

55 sites with no fortified dwellings presents a 43.30% of sites not re-used for dwellings in a 3 kilometre buffer zone. Displaying more than half (56.70%) of the Roman fortifications do have evidence of re-use within 3 kilometres. There is also 9 sites with fortified dwellings but of unknown date, a 7.08% of the total amount of sites (See figure 14).

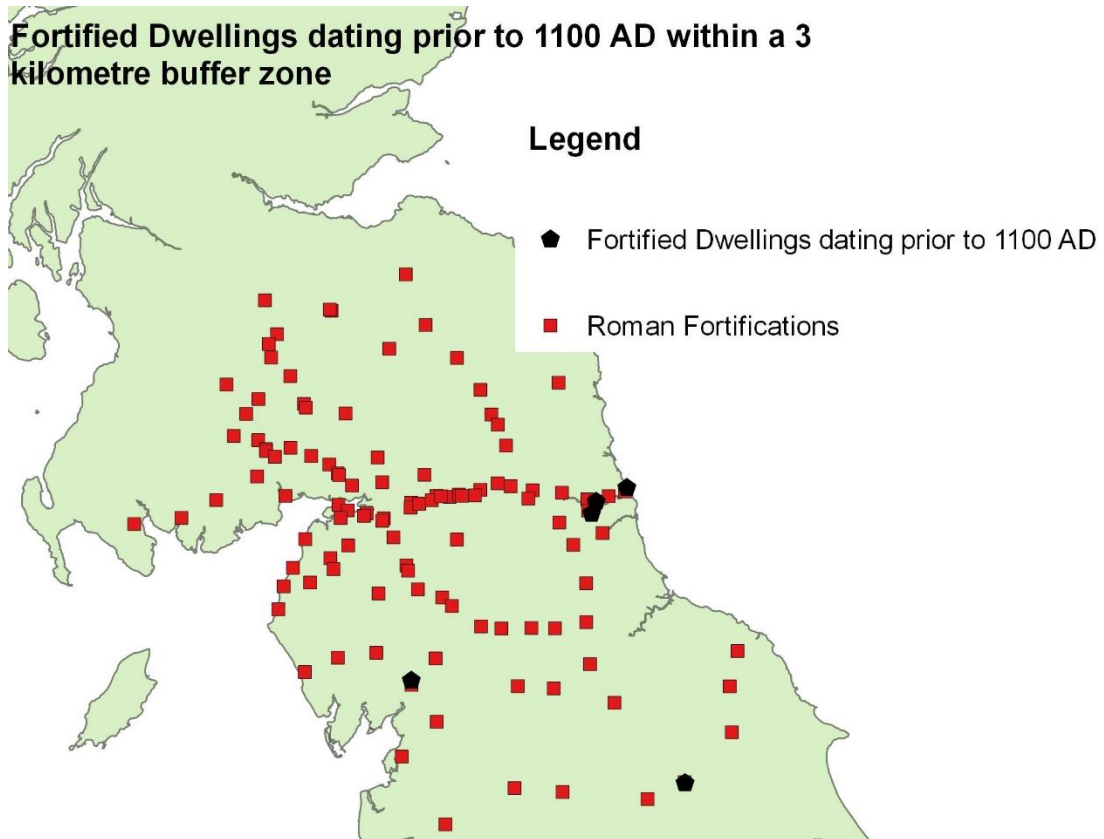
Percentage of fortified dwellings in 3 kilometre buffer zone



(Figure 14: Displaying the percentage for fortified dwellings in a 3 kilometre buffer zone).

Prior to 1100 AD

5 sites have evidence dating prior to 1100 AD; Newcastle, South Shields, Washing Wells, York and Watercreek. Newcastle being the only site with evidence of this period also in a 0.25 kilometre buffer zone. 3 of the sites are clustered along the eastern end of Hadrian's Wall which are all connected to the River Tyne. Watercreek is based at Kendal, which is on the bend of the River Kent. While York is more inland than the other sites, however it too is connected to the River Ouse (see figure 14). Each of these sites through their rivers are connected to the coast. The amount of sites to have a fortified dwelling within 3 kilometres is a low percentage at 3.93% of the 113 sites (see figure 15).



(Figure 15: Displaying the locations of evidence for fortified dwellings dating prior to 1100 AD).

12th Century

15 fortification sites were identified with 12th Century dwellings, being 11.81% of the total (113) Roman fortifications and being the most Roman fortifications with fortified dwellings for a historic period in the 3 kilometre buffer zones (see table 5).

Fort	Location
Burgh by Sands	Hadrian's Wall
Amberfield	Hadrian's Wall
Castlesteads	Hadrian's Wall
Brampton Old Church	The Staingate
Boothby, Castle Hill	The Staingate
Castrigg	A66
Bowes	A66
Maryport	Cumbrian Coast
Cawthorn	A169
Castledykes	A6/A74
Crawford	A6/A74
Ladyward	A6/A74
Watercrook	A6/A74
Lancaster	A6/A74
Sanquhar	A76

(Table 5: List of fortifications with fortified dwellings dating to the 12th Century within a 3 kilometre buffer zone).

The data displays a concentration of fortified dwellings (9) in the region of the modern roads of the A6 and the A74, which are aligned north to south on the west side of Britain. From this data 3 of the sites make exceptions to the rule of all dwellings following the A6/A74, these are the fortified dwellings of Cawthorn fort in North Yorkshire, Bowes fort in County Durham and Maryport fort in Cumbria (see figure 16).

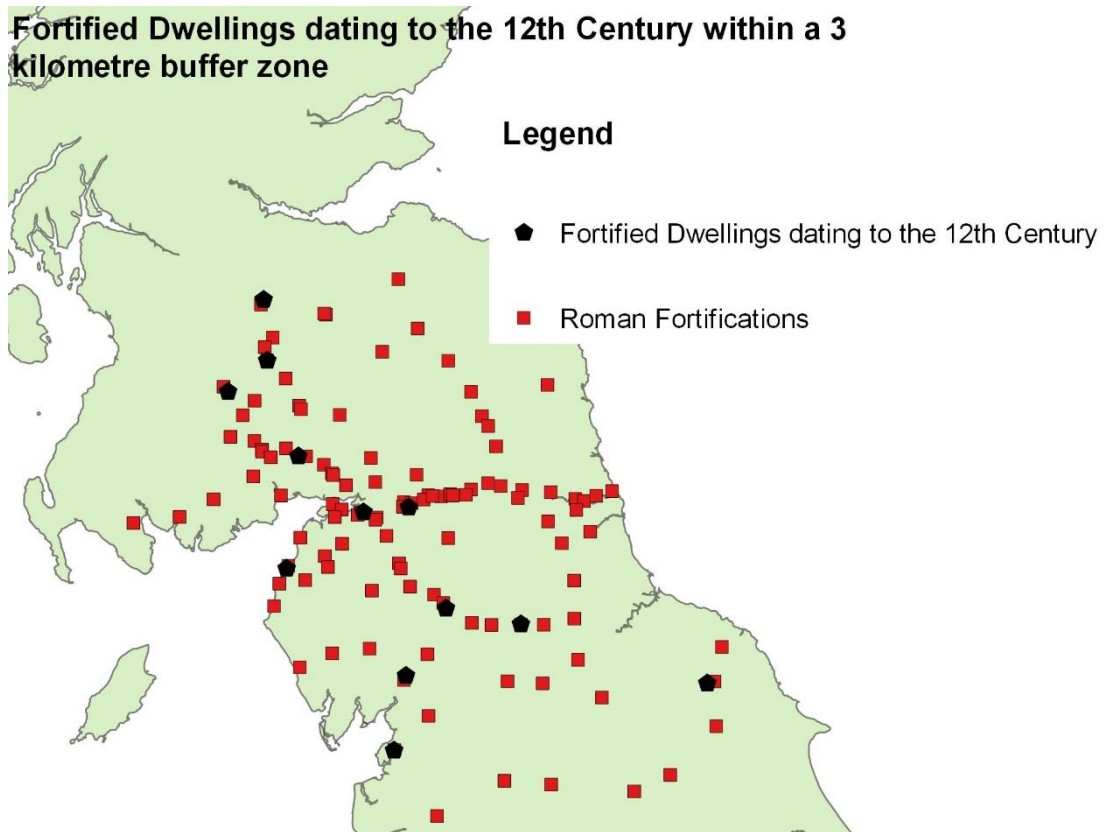
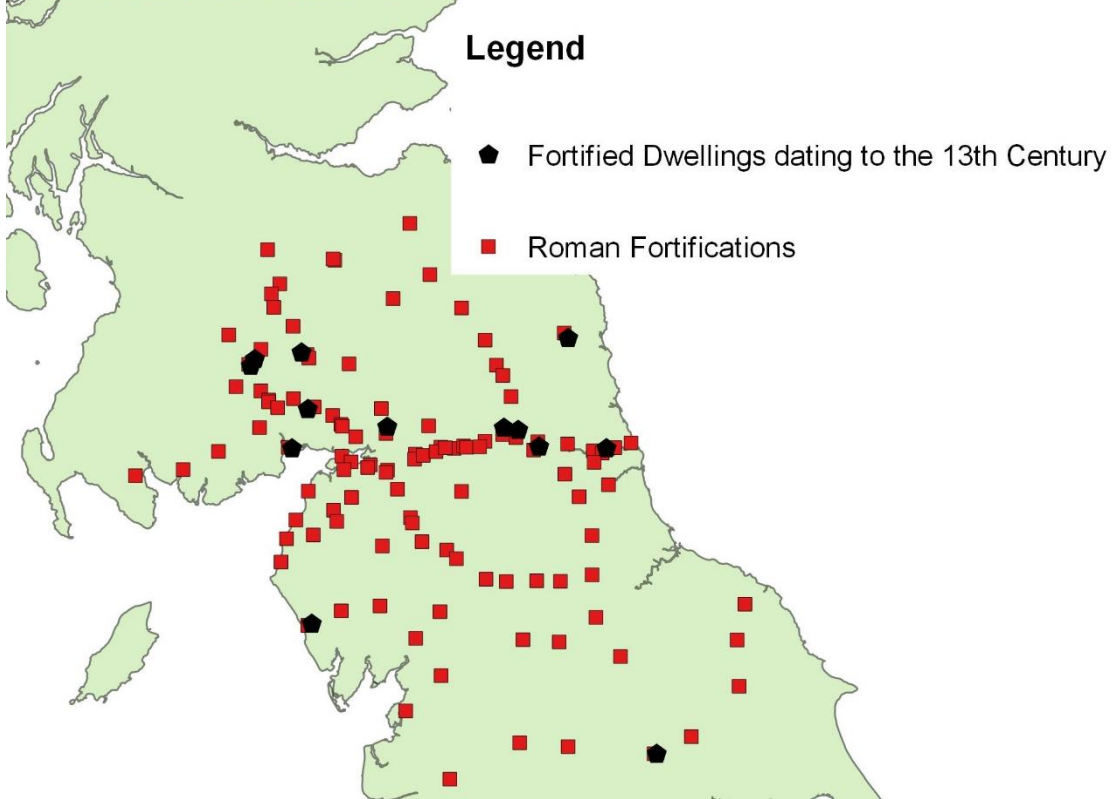


Figure 16: Displaying the locations of evidence for fortified dwellings dating to the 12th Century.

13th Century

13 Roman fortifications were re-used for fortified dwellings, making 10.23% of 113 sites. There are two clusters of forts where dwellings have been built and two outliers to this rule of display. The outliers are Ravenglass fort, on the south west coast of Cumbria and Newton Kyme fort, in North Yorkshire. The two clusters of fortified dwellings dating to the 13th Century are aligned along Hadrian's Wall and north of the World Heritage Site. One cluster of 6 dwellings is located to the west at; Beattock, Drumlanrig, Ladyward, Lantonside and Netherby; with Drumlanrig having two dwellings within 3 kilometres. The second cluster of 6 dwellings is located to the east at; Learchild, Carrowburgh, Chesters, Corbridge and Newcastle. The dwelling at Corbridge is also within 3 kilometres from Haltonchesters fort, located equally between the two forts (see figure 17).

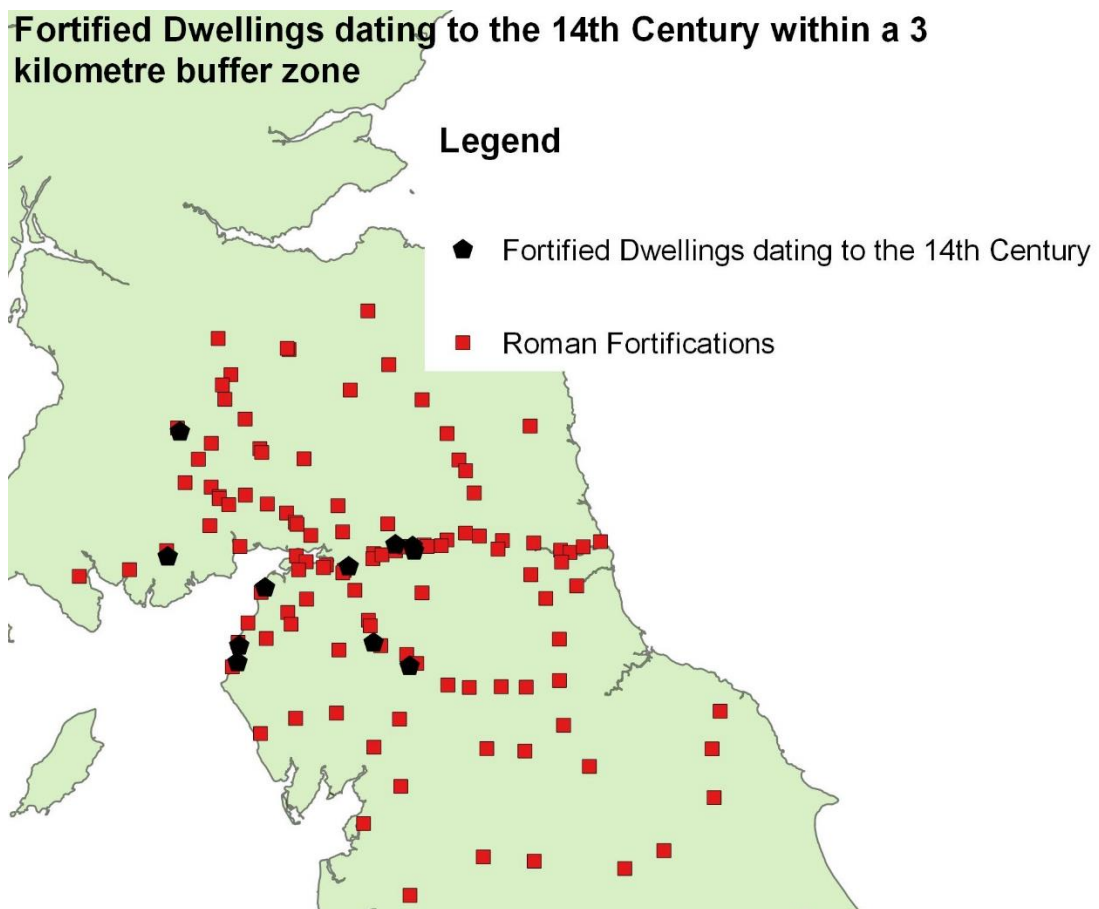
Fortified Dwellings dating to the 13th Century within a 3 kilometre buffer zone



9Figure 17: Displaying the locations of evidence for fortified dwellings dating to the 13th Century).

14th Century

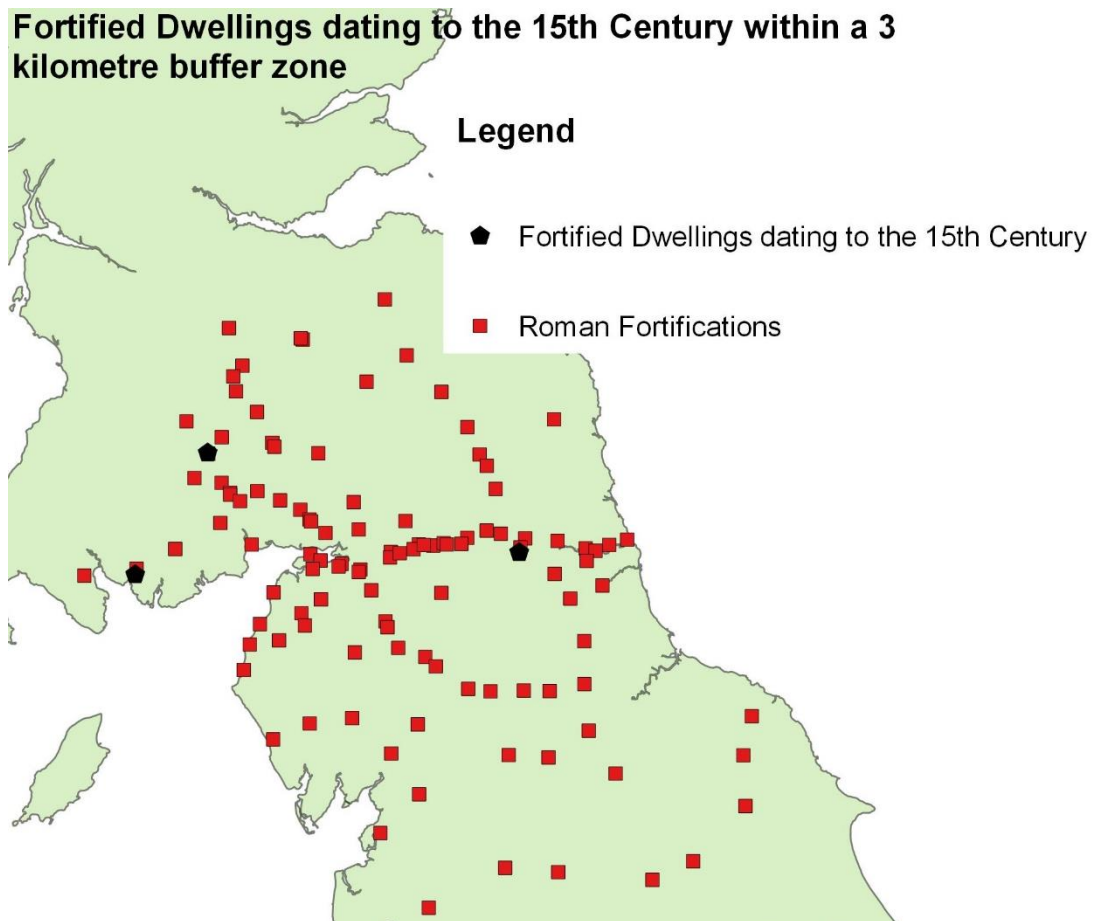
11 sites have evidence of fortified dwellings dating to the 14th Century, being 8.66% of the total (113) amount of Roman fortifications. All sites are located within Cumbria or south West Scotland; Sanquhar, Glenlochar, Birdoswald, Throp, Carvoran, Stanwix, Brougham, Castrigg, Beckfoot, Burrow Walls and Parton. 3 of the sites are located on Hadrian's Wall close to the centre; Birdoswald, Throp and Carvoran. 3 other sites are also located inland; Sanquhar in south west Scotland and Castrigg and Brougham in east Cumbria, on the edge of the Pennines. 5 sites are located inland, the other 6 sites are located close to the coast at; Glenlochar, Stanwix, Beckfoot. Burrow Walls and Parton (see figure 18). Therefore there is no correlation to location of dwellings built in the 14th Century to coastal locations, but the border between the north west of England and south west of Scotland seems to be important enough to build new fortified dwellings in this area in the historic time period.



(Figure 18: Displaying the locations of evidence for fortified dwellings dating to the 14th Century).

15th Century

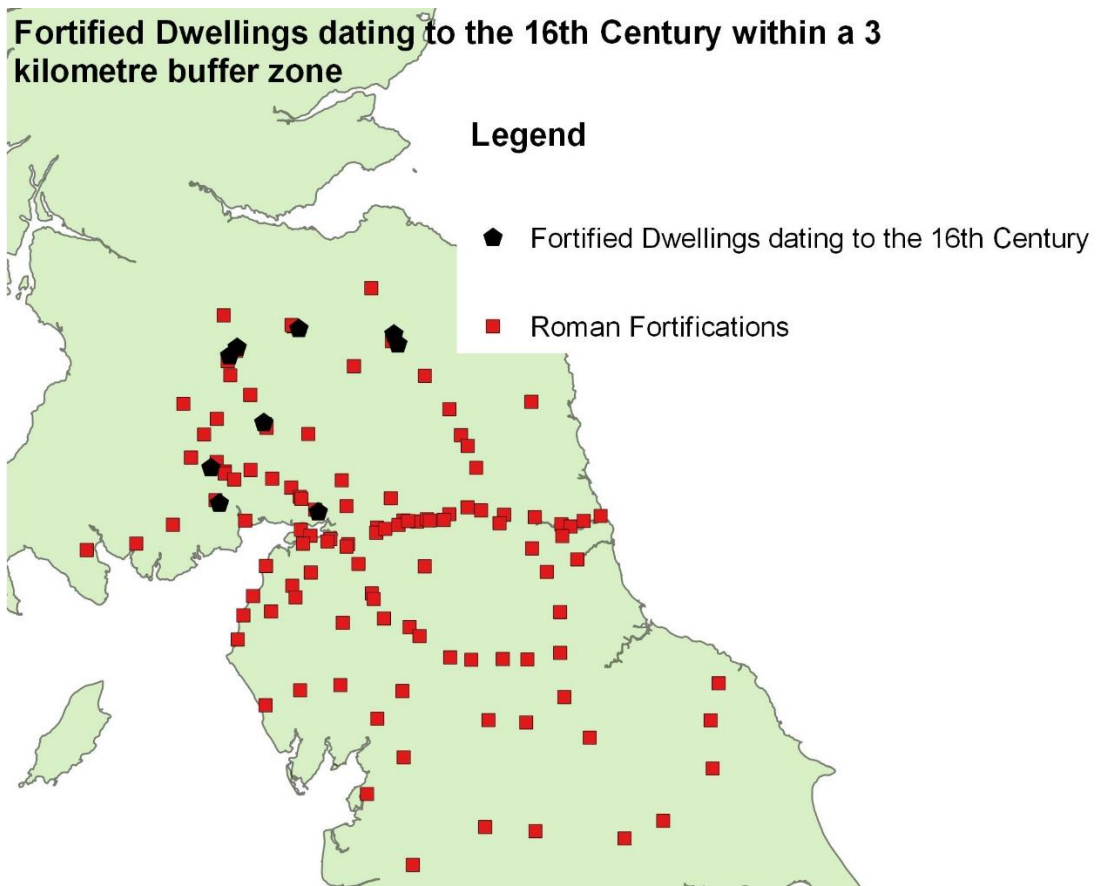
3 sites have evidence of 15th Century fortified dwellings, being 2.36% of the total amount (113) of Roman fortifications. Corbridge in Northumberland, and Gatehouse of Fleet and Drumlanrig, both in Dumfries and Galloway. Drumlanrig and Corbridge fortified dwellings are both inland and both have connections via rivers; Corbridge from a tributary of the River Tyne and Drumlanrig from the River Nith. Gatehouse of Fleet is directly on the south west coast of Scotland (see figure 19).



(Figure 19: Displaying the locations of evidence for fortified dwellings dating to the 15th Century).

16th Century

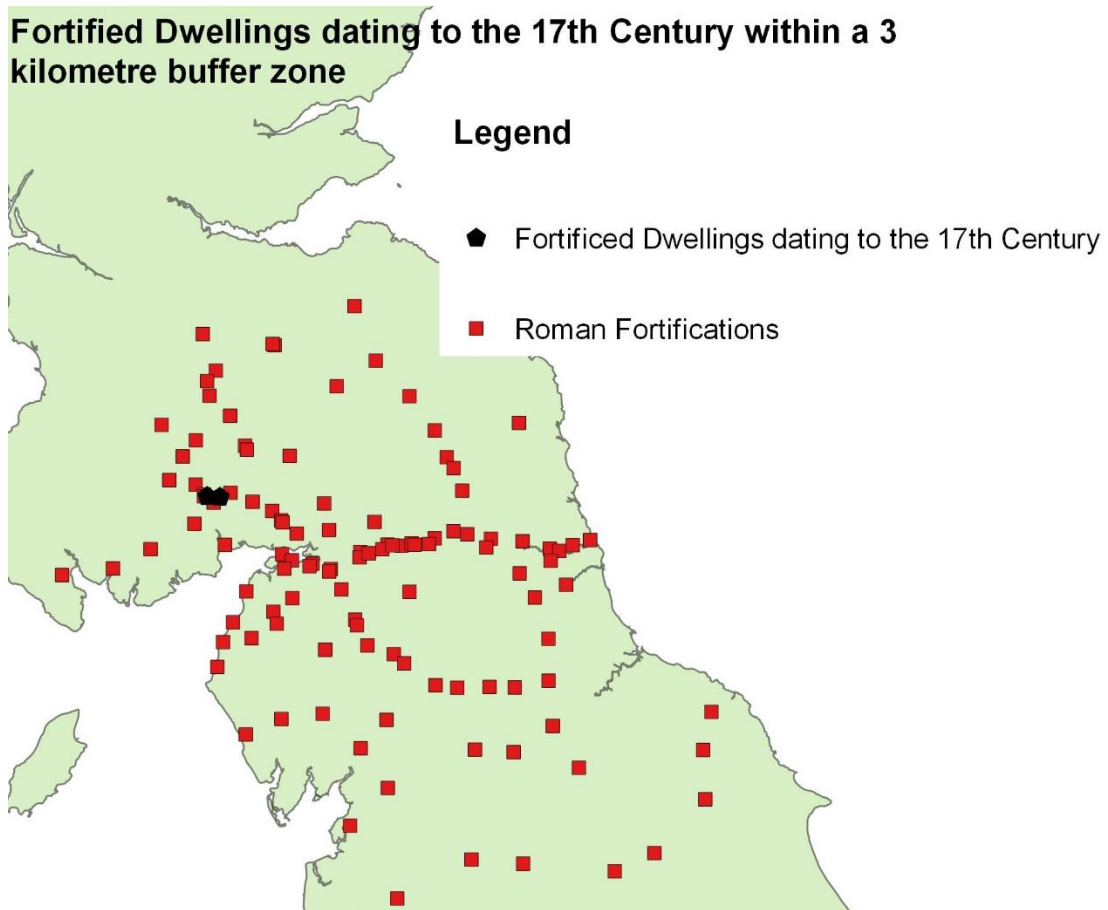
10 sites have evidence of 16th Century fortified dwellings being built within 3 kilometres of the Roman Fortifications, being 7.87% of the total amount (113) of sites. All sites dating to the 16th Century are located in today's boundary of Scotland; Moat of Lochrutton, Newstead (which has 2 fortified dwellings within its 3 kilometre buffer zone), Easter Happrew, Lyne, Lamington, Wandel, Beattock, Milton, Kirkpatrick-Fleming and Barburgh Mill. 7 of these sites are located along the modern roads of the A6 and A74, aligned north-south in the west of Scotland. 2 are located on Dere Street in the east of Scotland. 1 is located along the modern road of the A76 and 1 is located on the south west Scottish coast (see figure 20).



(Figure 20: Displaying the locations of evidence for fortified dwellings dating to the 16th Century).

17th Century

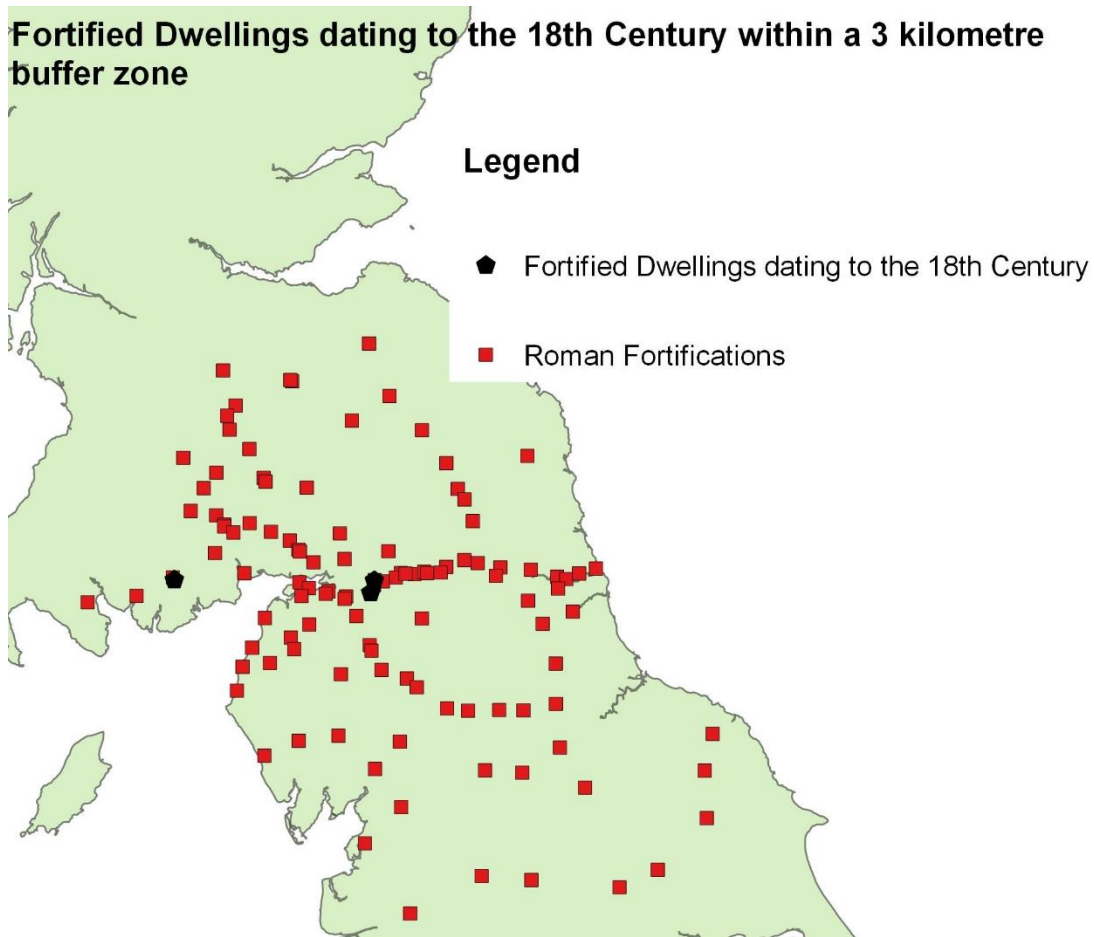
3 sites have evidence of 17th Century fortified dwellings, being 2.36% of the total amount (113) of Roman fortification sites. All 3 sites are located in Dumfries and Galloway, south west Scotland in a small cluster; Dalswinton, Bankhead; Dalwinton, Bankfoot and Carzield. This small cluster of 3 Roman fortifications have two fortified dwellings connecting the sites through their 3 kilometre buffer zones (see figure 21).



(Figure 21: Displaying the locations of evidence for fortified dwellings dating to the 17th Century).

18th Century

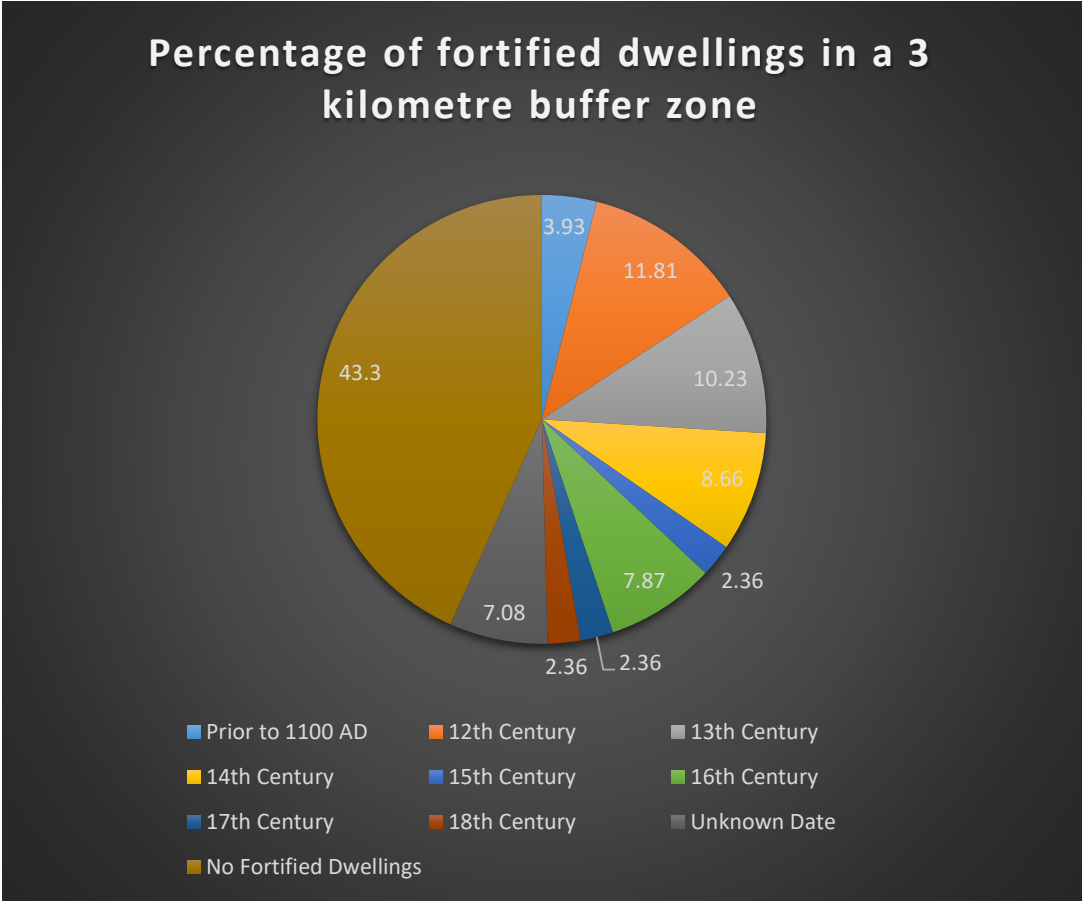
3 sites have evidence of 18th Century fortified dwellings, being 2.36% of the total amount (113) of Roman fortifications. One site is located in South West Scotland, Glenlochar; two sites are located along Hadrian's Wall and the Staingate, Castlesteads and Brampton Old Church (see figure 22).



(Figure 22: Displaying the locations of evidence for fortified dwellings dating to the 18th Century).

Conclusion

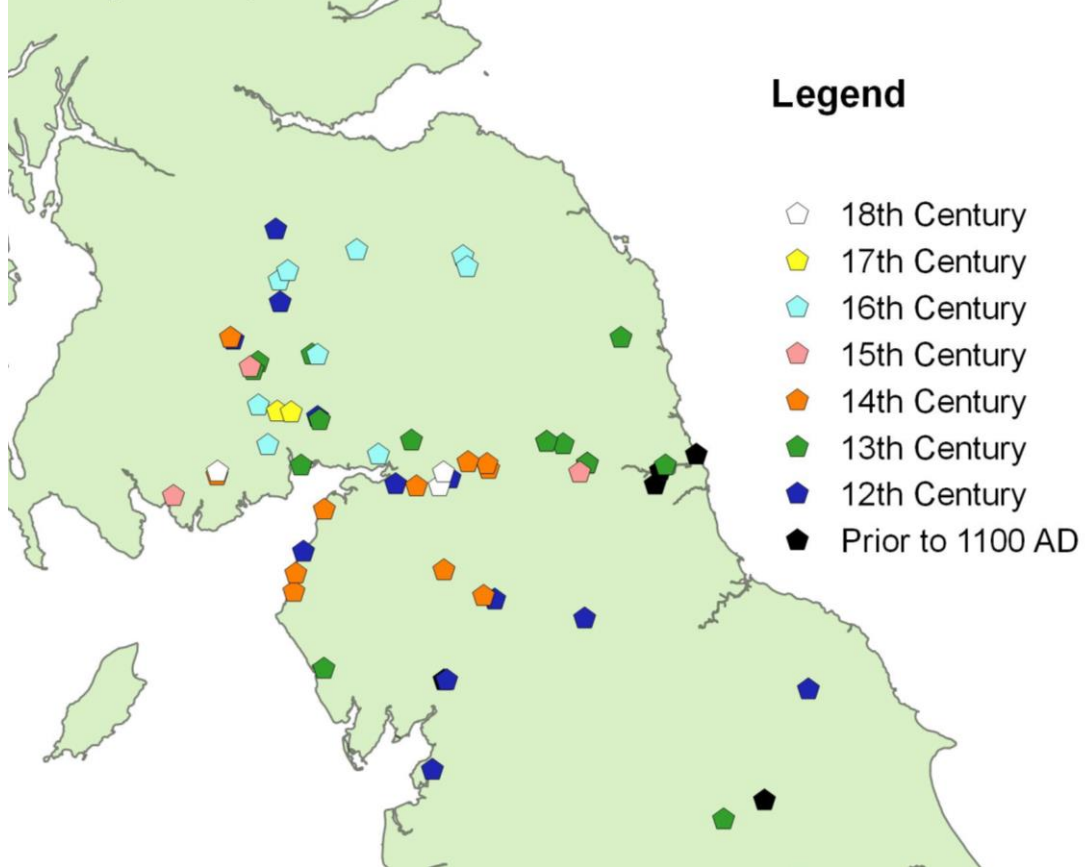
Within 3 kilometre buffer zones of Roman fortifications there is evidence that the proximate areas have been used for some forts in each time period. In total 45.65% have evidence of being used over the historic periods between 410 AD to the late 18th Century, while 43.30% have no fortified dwellings within 3 kilometres and of the 45.65% having evidence, 7.08% have fortified dwellings with no known foundation date. The historic period where the most fortified dwellings were built was the 12th Century with 11.81% of the total amount being built, with the 13th Century total shortly behind at 10.23% (see figure 23). This would conclude that the proximate areas of a Roman fortification of 3 kilometres, is important landscape for re-use in a continued combatant basis for fortified dwellings.



(Figure 23: Graph displaying the percentages of fortified dwellings within a 3 kilometre buffer zone).

Spatially, fortified dwellings have mainly been built across Hadrian’s Wall, the Staingate and the A6/A74. The earliest fortified dwellings are located in the east of England, however in the 12th Century new build dwellings were constructed in the north west of England and the south west of Scotland (see figure 24).

Spread of Fortified Dwellings across project region and time periods, within 3 kilometre buffer zones



(Figure 24: Spread of fortified dwellings within a 3 kilometre buffer zone).

4.2.3 Ecclesiastical Sites

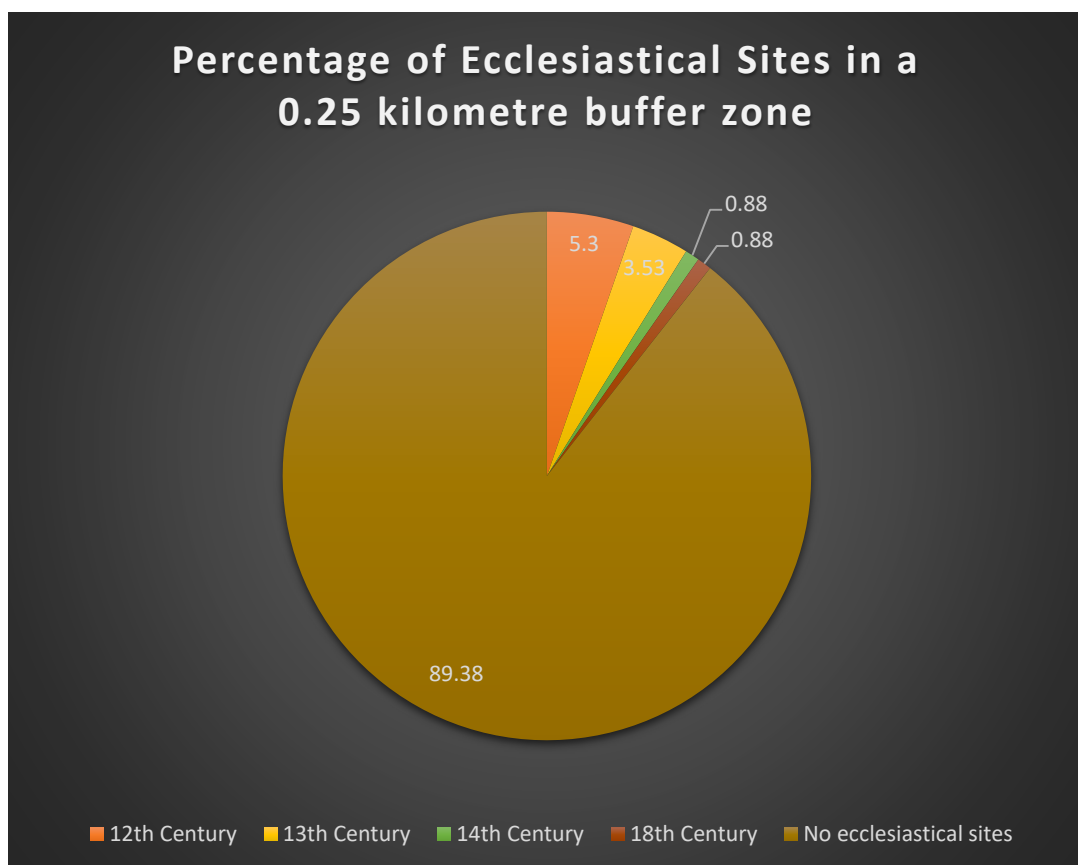
To clarify, the ecclesiastical sites data incorporates all building styles in the region that have been constructed for religious ceremonies in mind (see Chapter 2. Literature Review, 2.6 Church Studies).

0.25 Kilometres

The data displays the majority of sites (101 of 113) 89.38% have no ecclesiastical sites within 0.25 kilometres (see table 6 and figure 25).

Ecclesiastical Sites 0.25 kilometre buffer zone	
Historic Period:	No. of forts with ecclesiastical sites present:
Prior 1100 AD	0
12th Century	6
13th Century	4
14th Century	1
15th Century	0
16th Century	0
17th Century	0
18th Century	1
Unknown Date	0
No Dwellings	101

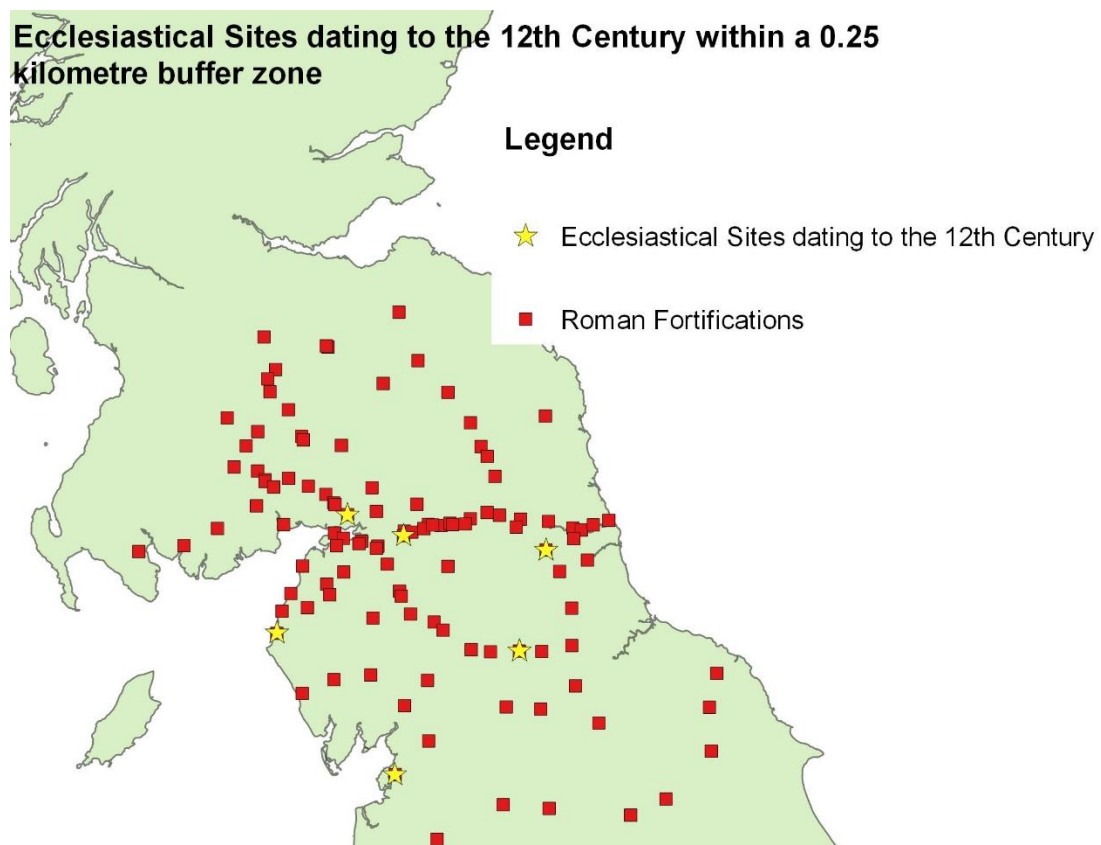
(Table 6: Table displaying the total amounts of ecclesiastical sites within 0.25 kilometres for the historic time periods).



(Figure 25: Figure displaying the percentage of ecclesiastical sites within 0.25 kilometres for the historic time periods).

12th Century

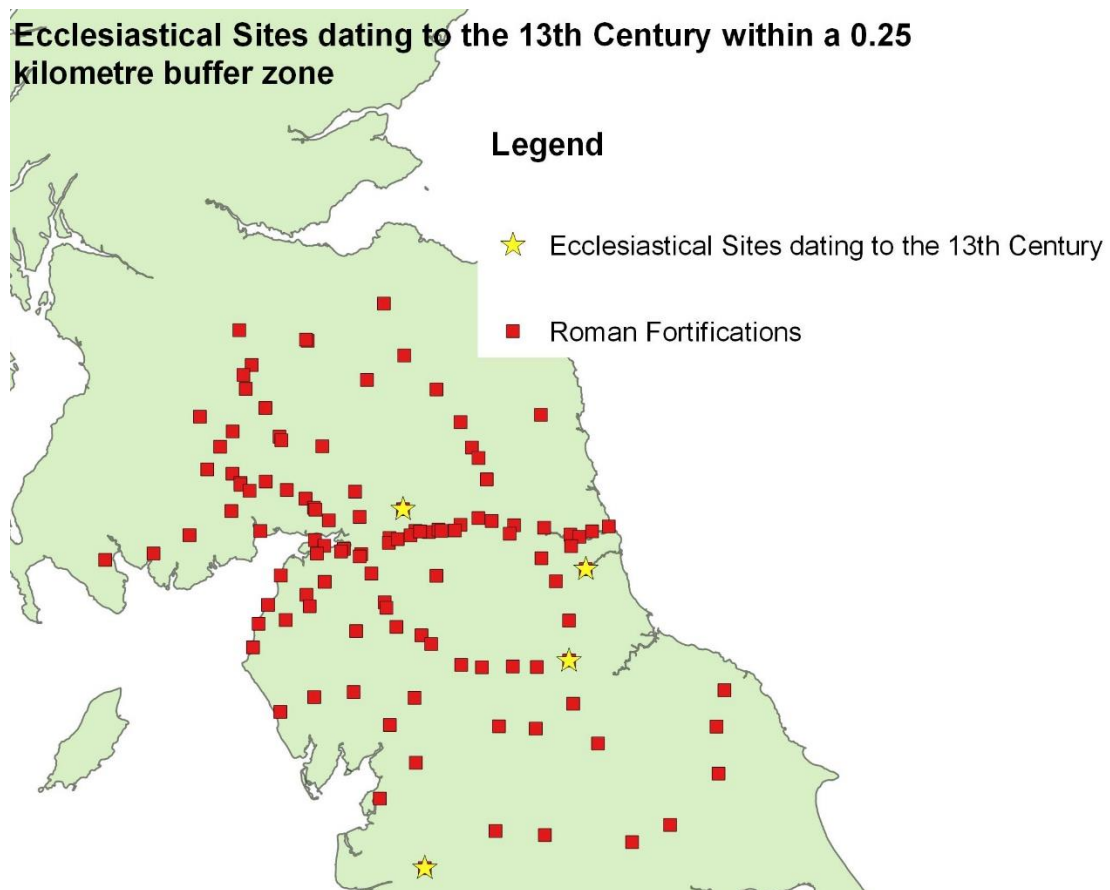
6 Roman fortifications have ecclesiastical sites dating to the 12th Century, being 5.30% of the total amount of Roman fortifications (113). 1 site is on the south west Scottish coastline and the border with England, Kirkpatrick-Fleming. Of the remaining 5 sites in England, two are located on the coast; Parton in Cumbria and Lancaster in Lancashire. 2 sites have connections to the coast through waterways; Brampton Old Church in north Cumbria, connected to the River Irthing which is a tributary of the River Eden, that leads through Carlisle and into the Solway Firth; and Ebchester, connected to the River Derwent, which is a tributary of the River Tyne, that leads through Newcastle and into the North Sea. The remaining site in England is at Bowes, at the height of the Pennines, central England (see figure 26).



(Figure 26: Displaying the locations of evidence for ecclesiastical sites dating to the 12th Century).

13th Century

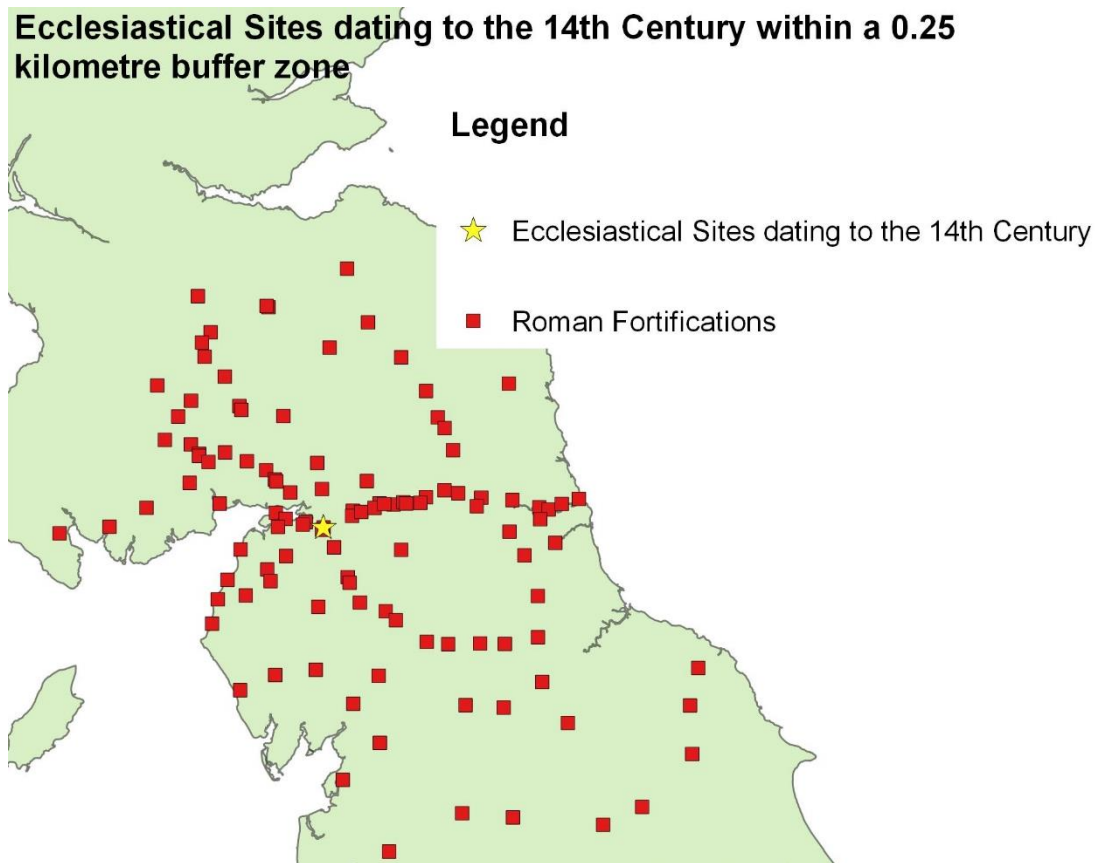
4 Roman fortifications have ecclesiastical sites dating to the 13th Century, being 3.53% of the total amount of Roman fortifications (113). All 4 sites are located in England, 2 of the sites are in similar locations; Ribchester and Chester-Le-Street. Both of these locations are within 10 miles of the coast with access to waterways; Ribchester through the River Ribble that works its way to the coast through Preston and Chester-Le-Street through the River Wear, that works its way to the coast through Sunderland. The other 2 sites are located inland; Piercebridge and Bewcastle. Piercebridge does have connections to the coast through the meanderings of the River Tees which flows into the North Sea, but is further inland than the previous 2 sites and is located to the west of the modern town of Darlington. Bewcastle also has connections to the coast through the tributaries of the River Lyne which flows into the Solway Firth, again it is further inland than the previous 2 sites and is located to the north east of the modern city of Carlisle (see figure 27).



(Figure 27: Displaying the locations of evidence for ecclesiastical sites dating to the 13th Century).

14th Century

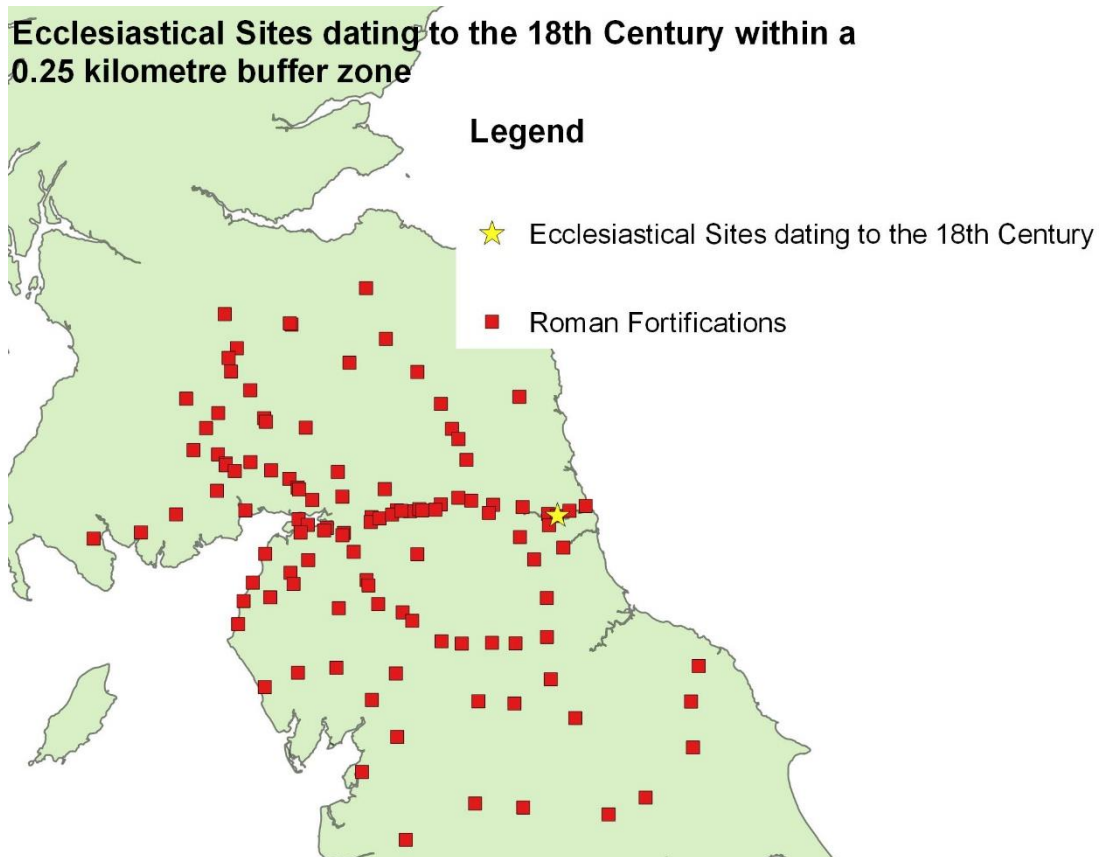
1 Roman fortification has an ecclesiastical site dating to the 14th Century, being 0.88% of the total amount of Roman fortification sites (113). This site is at Stanwix, located on the west side of Hadrian's Wall in north Cumbria. The site is north of the River Eden, which flows into the Solway Firth and is close to the border with Scotland (see figure 28).



(Figure 28: Displaying the locations of evidence for ecclesiastical sites dating to the 14th Century).

18th Century

1 Roman fortification has an ecclesiastical site dating to the 18th Century, being 0.88% of the total amount of Roman fortification sites (113). This site is at Newcastle, located on the east side of Hadrian's Wall in Tyne and Wear and north of the River Tyne, which flows into the North Sea and provides the site with a coastal connection (see figure 29).

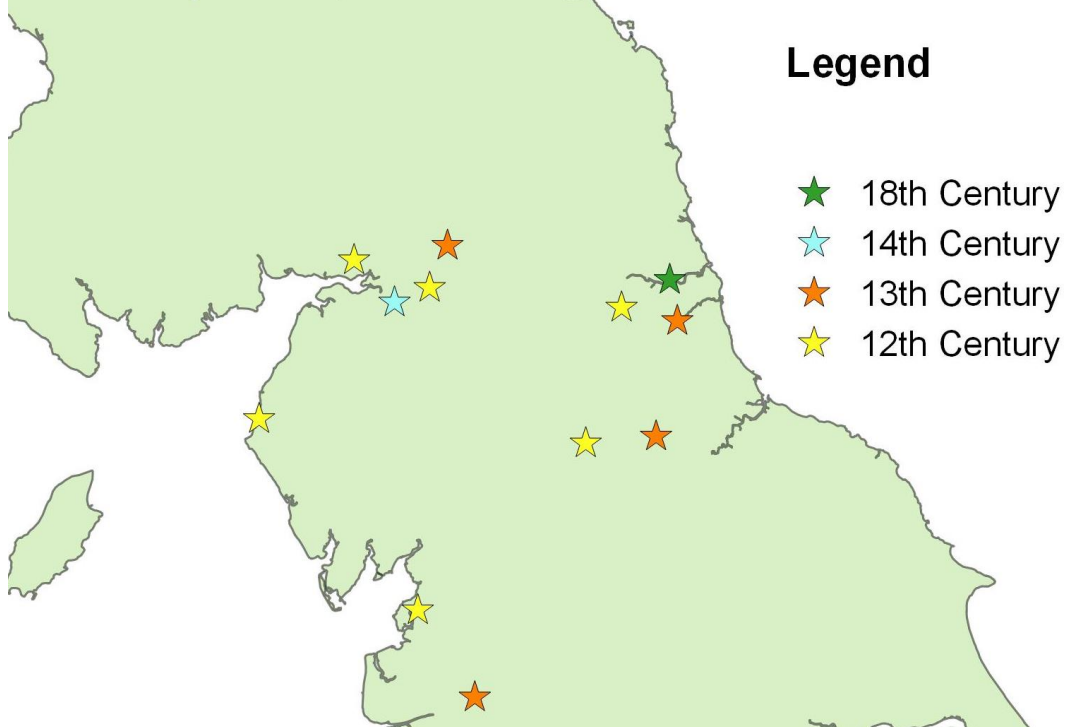


(Figure 29: Displaying the locations of evidence for ecclesiastical sites dating to the 18th Century).

Conclusion

Within the 0.25 kilometre buffer zones there are no ecclesiastical sites dating prior to 1100 AD and between the 14th to 17th Centuries. Each of the Roman fortifications that do have ecclesiastical sites within 0.25 kilometres only have singular sites for these historical periods and buffer zones (see figure 30). Although there is no evidence for sites being used prior to 1100 AD there is 5.3% of the sites that have been used in the 12th Century for ecclesiastical use; suggesting a Medieval re-use of these Roman fortification sites. However there are 89.38% of sites that have no evidence of use in the post Roman period and historically beyond that date, within 0.25 kilometres.

Spread of Ecclesiastical Sites across project region and time periods, within 0.25 kilometre buffer zones



(Figure 30: Spread of ecclesiastical sites across the project region within 0.25 kilometre buffer zones).

3 Kilometre buffer zone

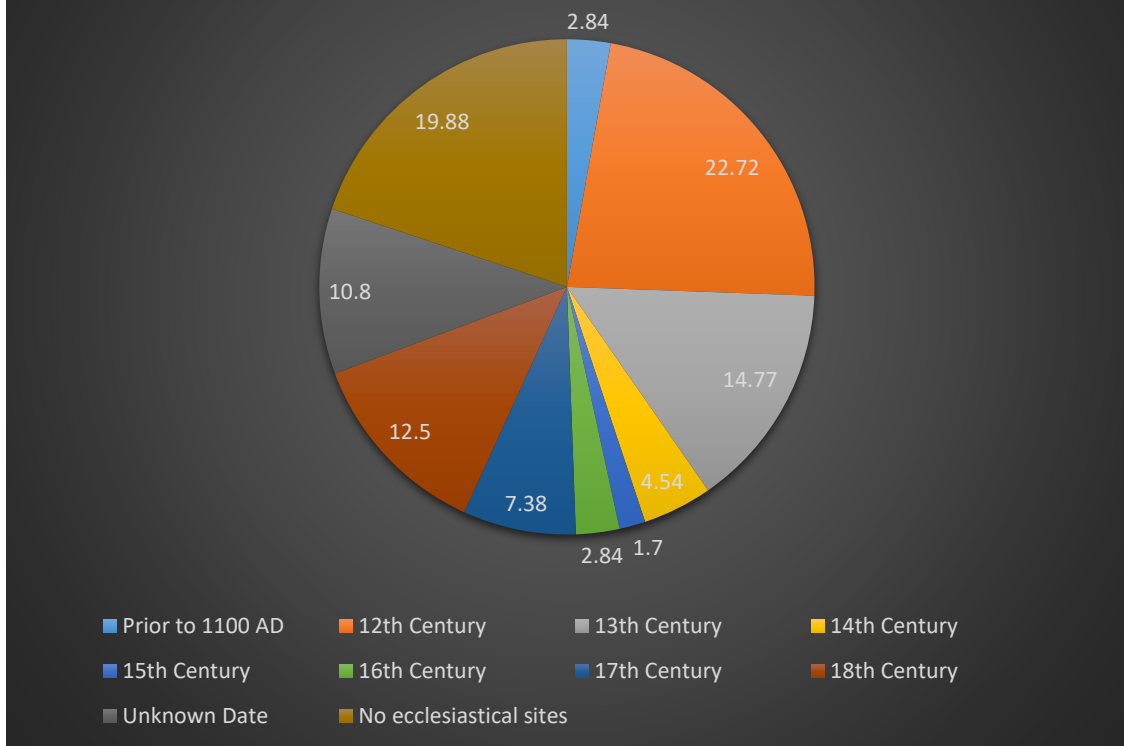
The data displays a high proportion of sites dating to the 12th Century for Ecclesiastical Sites within 3 kilometres, with more sites in each historical period being re-used (see table 7).

Historic Period:	No. of forts with ecclesiastical sites present:
Ecclesiastical Sites	3 kilometre buffer zone
Prior 1100 AD	5
12th Century	40
13th Century	26
14th Century	8
15th Century	3
16th Century	5
17th Century	13
18th Century	22
Unknown Date	19
No Dwellings	35

(Table 7: Table displaying total amount of ecclesiastical sites within 3 kilometre buffer zones in historic time periods).

40 sites with 12th Century foundations presents the highest percent of date of sites re-used at 22.72% in a 3 kilometre buffer zone. There are 35 (19.88%) sites which have no evidence of use for all periods, and 19 sites having ecclesiastical use but of unknown date (10.80%). Therefore there is a 30.68% amount of sites with no or unavailable evidence of the total amount of sites (113) (See figure 31).

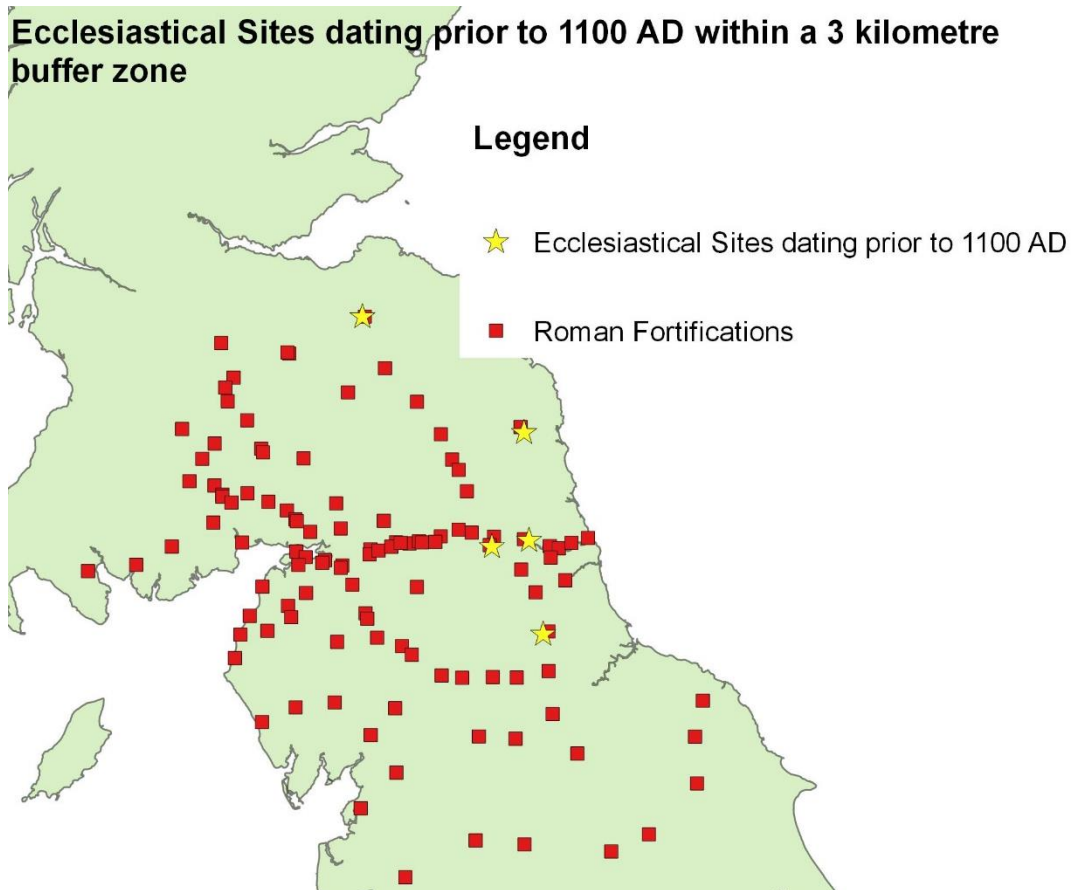
Percentage of Ecclesiastical Sites in a 3 kilometre buffer zone



(Figure 31: Graph displaying percentage of ecclesiastical sites within 3 kilometre buffer zones in historic time periods).

Prior 1100 AD

5 sites have evidence of ecclesiastical use prior to 1100 AD, being 2.84% of the total amount of Roman fortifications (113); 1 site is located in Scotland at Oxtun which is south east of the modern city of Edinburgh, more than 10 miles away from the coast, the other 4 sites are located in the north east of England. 1 at Learchild, west of the modern town of Alnwick and within 10 miles of the North Sea coastline. 1 at Corbridge located along the Staingate and 1 at Rudchester located along Hadrian's Wall, both having connections to the River Tyne. The final 1 is located at Binchester, located along Dere Street with connections to the River Wear, which flows out into the North Sea at Sunderland (see figure 32). All these ecclesiastical sites are concentrated on the eastern side of Britain, mainly within 10 miles of the North Sea coastline, except Binchester which is within 12 miles.



(Figure 32: Displaying the locations of evidence for ecclesiastical sites dating prior to 1100 AD).

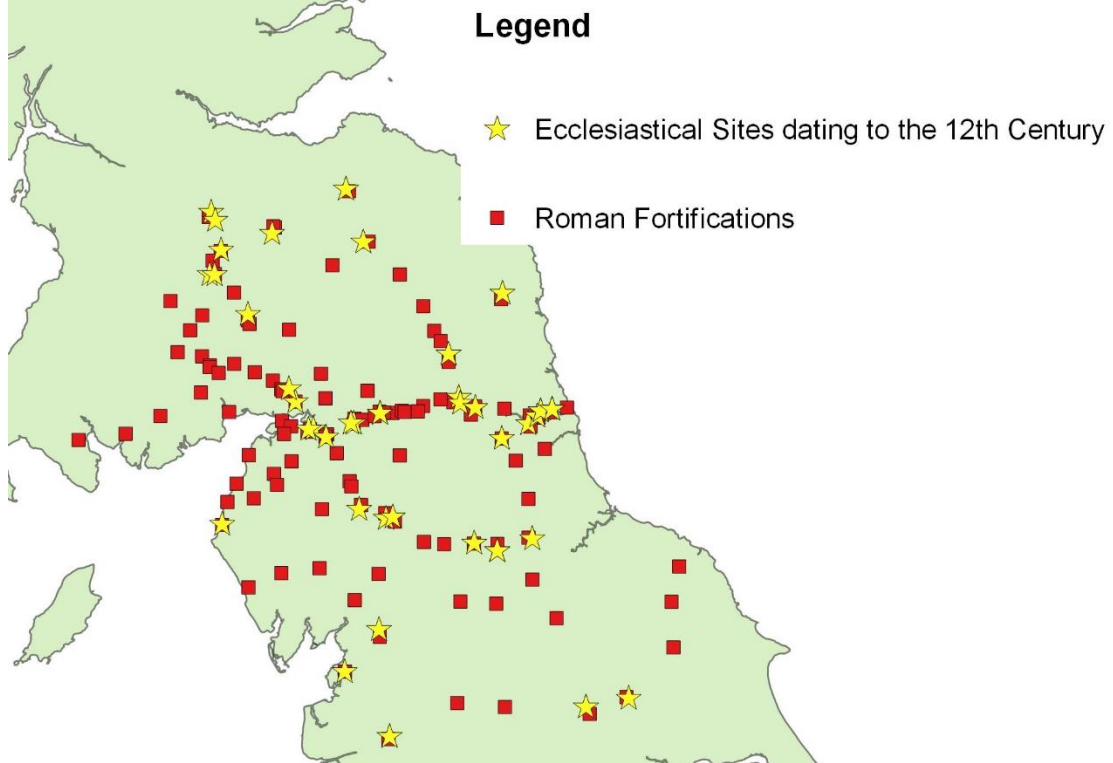
12th Century

40 Roman fortifications have ecclesiastical sites dating to the 12th Century, being 22.72% of the total amount of sites (113). The 40 fortifications are:

Burgh by Sands	Washingwells, Whickham	Easter Happrew
Amberfield	Kirkby Thore	Lyne
Stanwix	Castrigg	Castledykes
Castlesteads	Bowes	Lamington
Birdoswald	Greta Bridge	Crawford
Chesters	York	Beattock, Barnhill
Haltonchesters	Parton	Birrens
Benwell	Oxton	Broadlea
Newcastle	Newstead	Kirkpatrick-fleming
Wallsend	Learchild	Brougham
Carlisle	Risingham	Lancaster
Brampton Old Church	Ebchester	Ribchester
Nether Denton	Piercebridge	
Throp	Newton Kyme	

9 of these Roman fortifications have 2 ecclesiastical sites within 3 kilometres, these are; Castledykes, Crawford, Burgh-By-Sands, Amberfield, Brampton Old Church, Castlesteads, Chesters, Newcastle and Wallsend. Of the 43 ecclesiastical sites within 40 Roman fortification 3 kilometre buffer zones, 29 are located in England and 11 in Scotland. On reviewing the positions of the Roman fortifications with connected ecclesiastical sites there are more sites re-used in the 12th Century along Hadrian's Wall (10) and the A6/A74 (12) (see Appendix 2: Data Analysis Tables, table 33, and figure 33).

Ecclesiastical Sites dating to the 12th Century within a 3 kilometre buffer zone



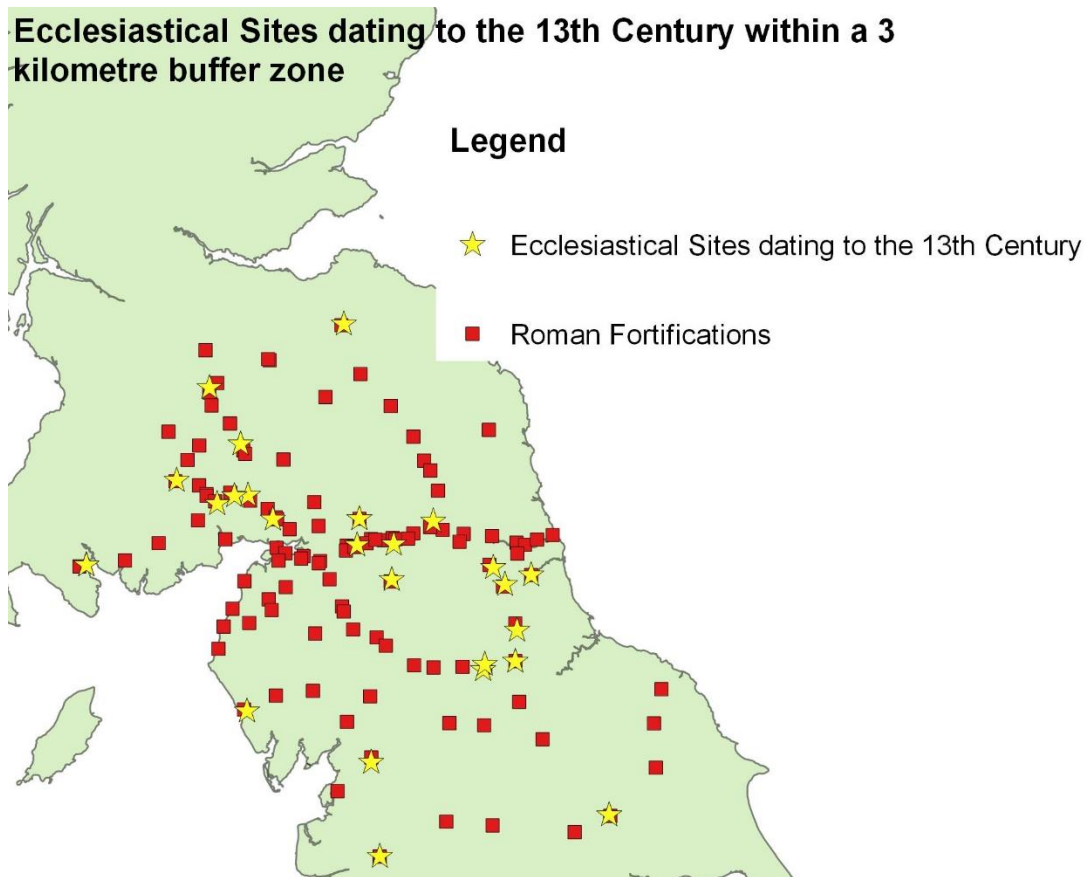
(Figure 33: Displaying the locations of evidence for ecclesiastical sites dating to the 12th Century).

13th Century

26 Roman fortifications have ecclesiastical sites dating to the 13th Century, being 14.77% of the total amount of sites (113). The fortifications are:

Great Chesters	Ravenglass	Ladyward
Carrowburgh	Oxton	Birrens
Chesters	Ebchester	Broadlea
Boothby, Castle Hill	Chester-le-Street	Bewcastle
Haltwhistle Burn	Lanchester	Burrow-By-Burrow
Whitley Castle	Binchester	Ribchester
Greta Bridge	Piercebridge	Carzield
York	Wandel	Murder Loch
Bladnoch	Beattock, Barnhill	

1 Roman fortification has 2 ecclesiastical sites surrounding it, Bladnoch in south west Scotland. Of the 26 ecclesiastical sites 16 are in England and 10 are in Scotland, on viewing the mapped sites there appears to be a band of sites correlated north west to south east from south west Scotland to north east England (see figure 34).

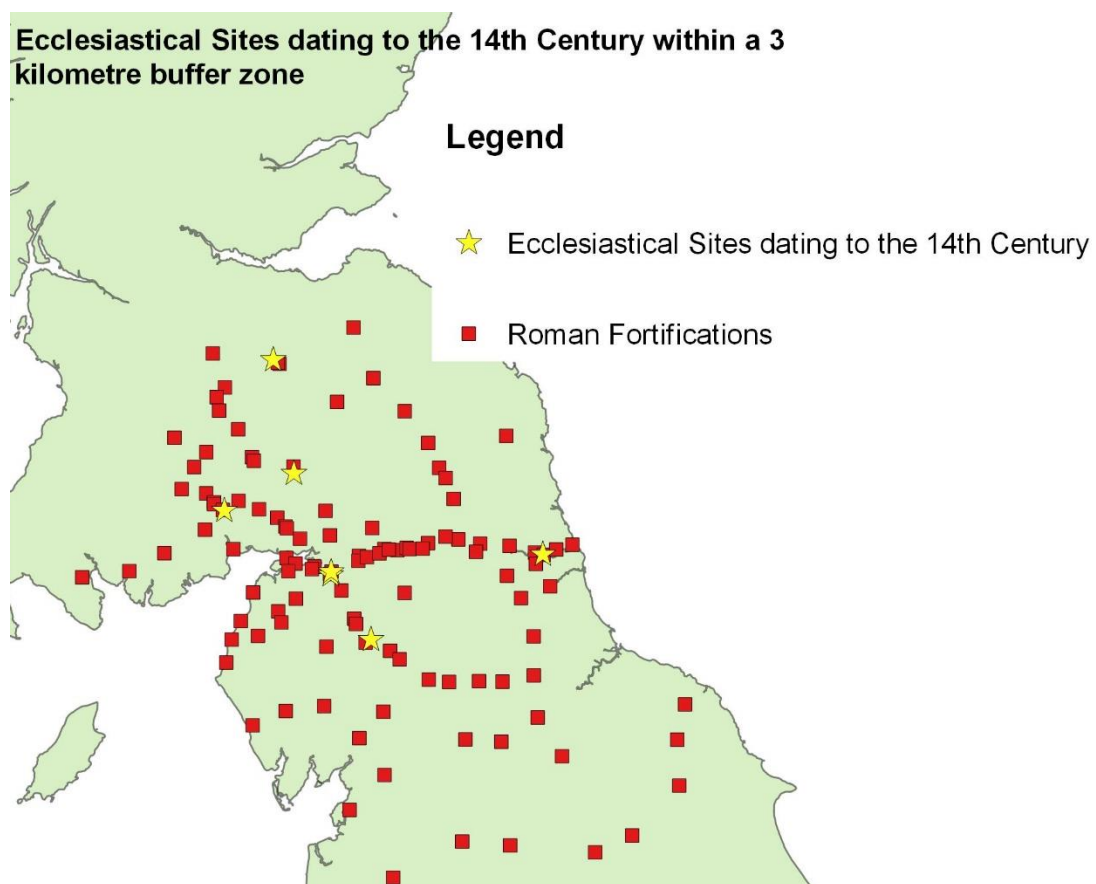


(Figure 34: Displaying the locations of evidence for ecclesiastical sites dating to the 13th Century).

The data displays that 8 sites are aligned along the A6/A74, 6 sites aligned along Dere Street, 3 along Hadrian's Wall and 3 along the Staingate. Providing the evidence to match the appearance in mapping (see Appendix 2: Data Analysis Tables, table 34).

14th Century

8 Roman fortifications have ecclesiastical sites dating to the 14th Century, being 4.54% of the total amount of sites (113). There are 3 ecclesiastical sites in Scotland; 1 being within 3 kilometres from Lyne and Easter Happrew in central south Scotland, 1 being at Raeburnfoot in central south Scotland and 1 being at Carzield south west Scotland. The 4 sites in England are spread across the north with 1 being at Brougham, east Cumbria. 2 being along Hadrian's Wall, Stanwix, Cumbria and Newcastle, Tyne and Wear; and 1 along the Staingate, Carlisle, Cumbria. 6 of the ecclesiastical sites are therefore located on the west of Britain and 1 on the east (see figure 35).

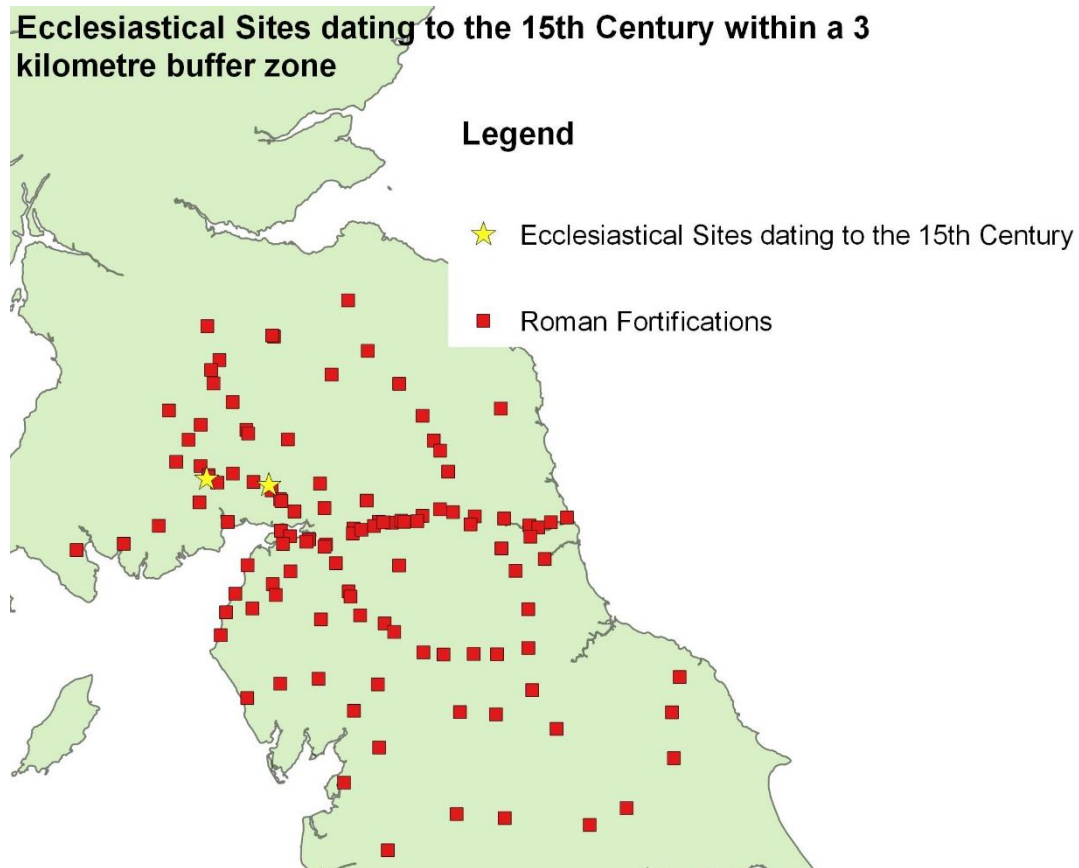


(Figure 35: Displaying the locations of evidence for ecclesiastical sites dating to the 14th Century).

15th Century

3 Roman fortifications have ecclesiastical sites dating to the 15th Century, being 1.70% of the total amount of sites (113). The fortifications are each located in south west Scotland, close to the border with England and the coastline of the Solway Firth. 1 ecclesiastical site is located at Burnswark and

1 is located at Dalswinton Bankhead and Dalswinton Bankfoot, these two fortifications are both within 3 kilometres of the ecclesiastical site (see figure 36). Each site has connections to waterways, the two Dalswinton sites via the River Nith and Burnswark via the Water of Milk, a tributary of the River Annan; and both rivers flow into the Solway Firth.

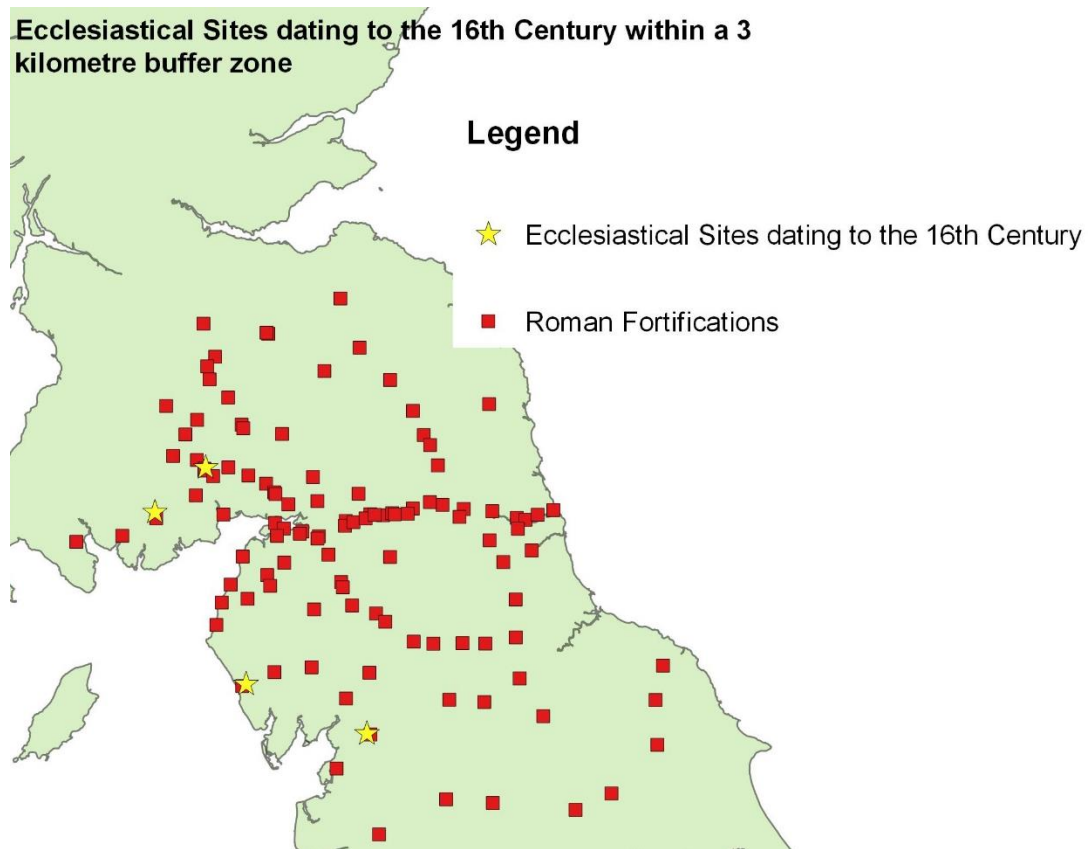


(Figure 36: Displaying the locations of evidence for ecclesiastical sites dating to the 15th Century).

16th Century

5 Roman fortifications have ecclesiastical sites dating to the 16th Century, being 2.84% of the total amount of sites (113). 2 sites are in south Cumbria, Ravenglass which is located on the coastline and Burrow-By-Burrow which is within 10 miles of the coastline. The 2 remaining ecclesiastical sites are in south west Scotland; Glenlochar is north of the modern town of Castle Douglas, with connections to the River Dee and within 10 miles of the coastline. Dalswinton Bankhead and Bankfoot Roman fortifications are both

within 3 kilometres of the same ecclesiastical site, being north of the modern town of Dumfries and with connections to the River Nith (see figure 37).

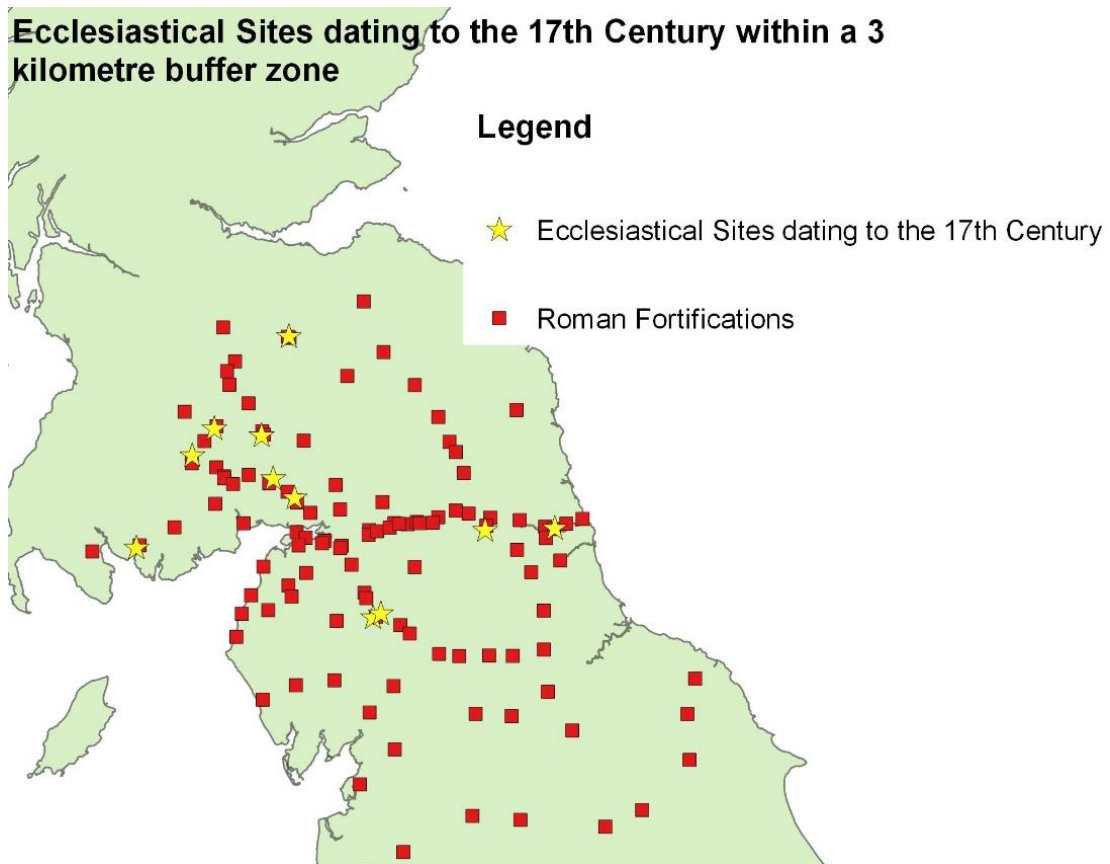


(Figure 37: Displaying the locations of evidence for ecclesiastical sites dating to the 16th Century).

17th Century

13 Roman fortifications have ecclesiastical sites dating to the 17th Century, being 7.38% of the total amount of sites (113). 4 sites are located in England, 2 ecclesiastical sites are within 3 kilometres of the Roman fortification Brougham, east Cumbria. These 2 ecclesiastical sites are located north east and south west of the Roman fort. 2 other sites in England are located along the Staingate (Corbridge) and Hadrian's Wall (Newcastle). The 7 sites in Scotland are spread south central to south west; 1 ecclesiastical site is located at Durisdeer, 1 at Kirkland and 1 at Ladyward, while one is located at Gatehouse of Fleet, along the south west coastline of Scotland. 3 ecclesiastical sites are connected to two Roman fortifications; around Lyne

and Easter Happrew; Beattock and Milton; Birrens and Broadlea (see figure 38).

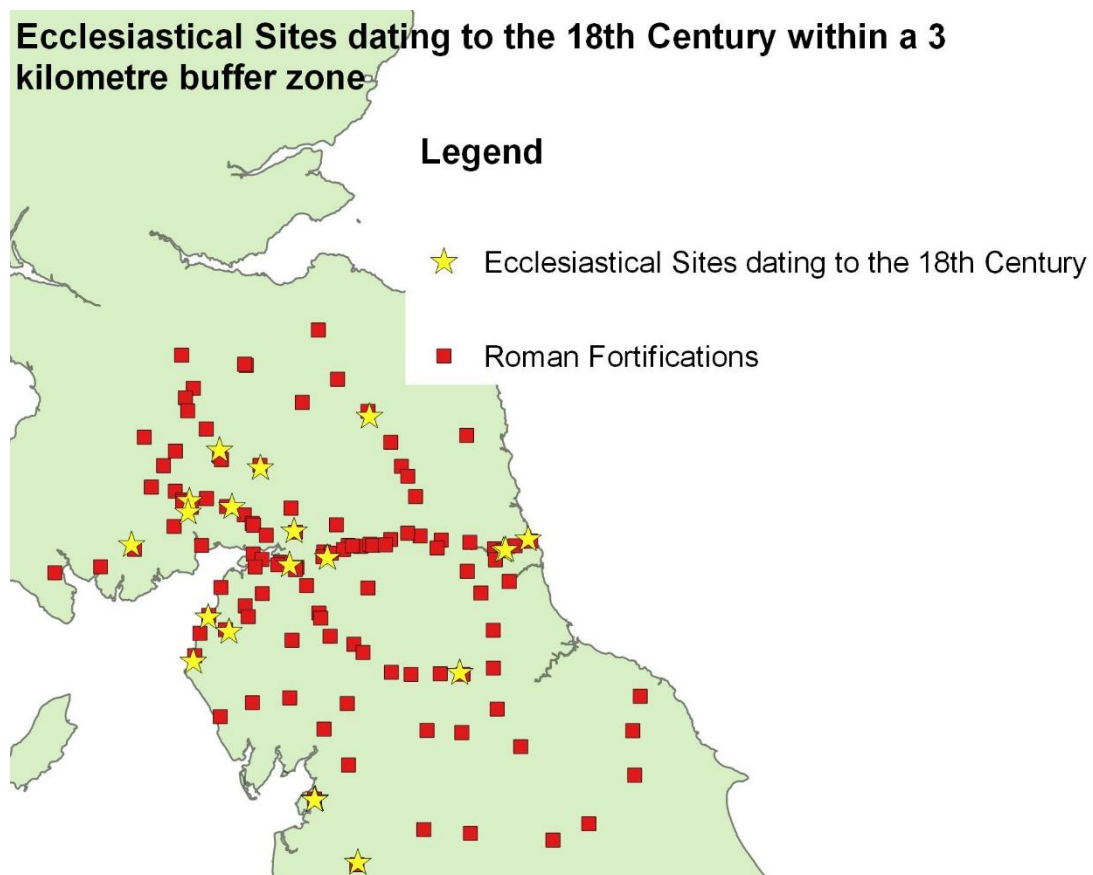


(Figure 38: Displaying the locations of evidence for ecclesiastical sites dating to the 17th Century).

18th Century

22 Roman fortifications have ecclesiastical sites dating to the 18th Century, being 12.50% of the total amount of sites (113). There are 21 ecclesiastical sites connected to Roman fortifications, 7 sites are in Scotland aligned north east to south west; Cappuck, Raeburnfoot, Beattock, Dalswinton Bankhead, Dalswinton Bankfoot, Carzield and Glenlochar. None of the Scottish sites are located within 5 miles of the coastline. 14 sites are located across northern England, with 9 being connected to Hadrian's Wall, the Staingate and the Cumbrian coast routes; South Shields, Newcastle (2 sites), Boothby, Castlesteads, Brampton Old Church, Stanwix, Carlisle, Maryport, Papcastle and Parton. 5 other ecclesiastical sites across northern England are in isolation to the rest of the sites; Greta Bridge, Ribchester and 3 sites in

Lancaster (see figure 39). On viewing the data through mapped sites it first appears as though there is a cluster of ecclesiastical sites around the Solway Firth, however on viewing the statistics this is not the case. There are 13 Roman fortifications within 3 kilometres of the coastline of the Solway Firth in Scotland and England, only 2 of those sites have ecclesiastical evidence dating to the 18th Century.



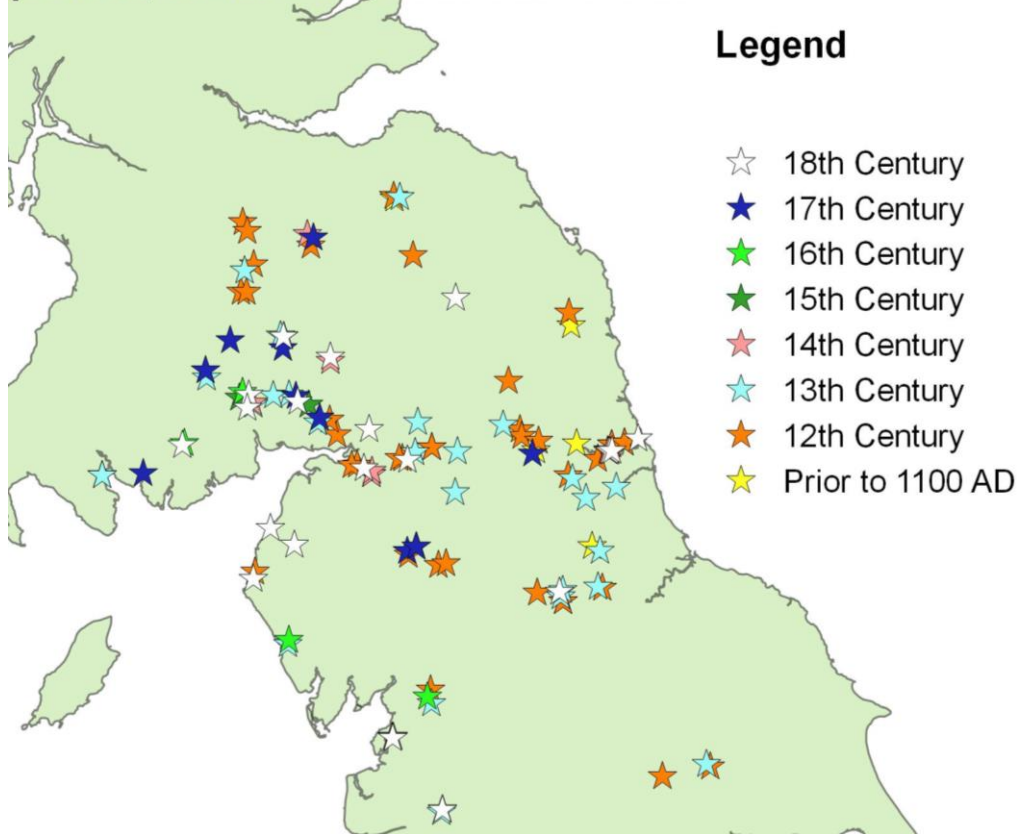
(Figure 39: Displaying the locations of evidence for ecclesiastical sites dating to the 18th Century).

Conclusion

Within the 3 kilometre buffer zones there are ecclesiastical sites in connection to the Roman fortifications of the project region through each time period from prior to 1100 AD to the late 18th Century. With many Roman fortifications having more than one ecclesiastical site in connection to them within 3 Kilometres. The data displays certain time periods had an increase in new ecclesiastical building foundations, with the 12th Century having a high significance for new buildings with 40 fortifications having a connected

ecclesiastical site of 22.72% of the total. If 30.68% of the sites have no evidence, or evidence with no confirmed foundation date for connected ecclesiastical sites it would therefore determine that 69.32% of fortifications have evidence for ecclesiastical use within 3 kilometres (see figure 40).

Spread of Ecclesiastical Sites across project region and time periods, within 3 kilometre buffer zones



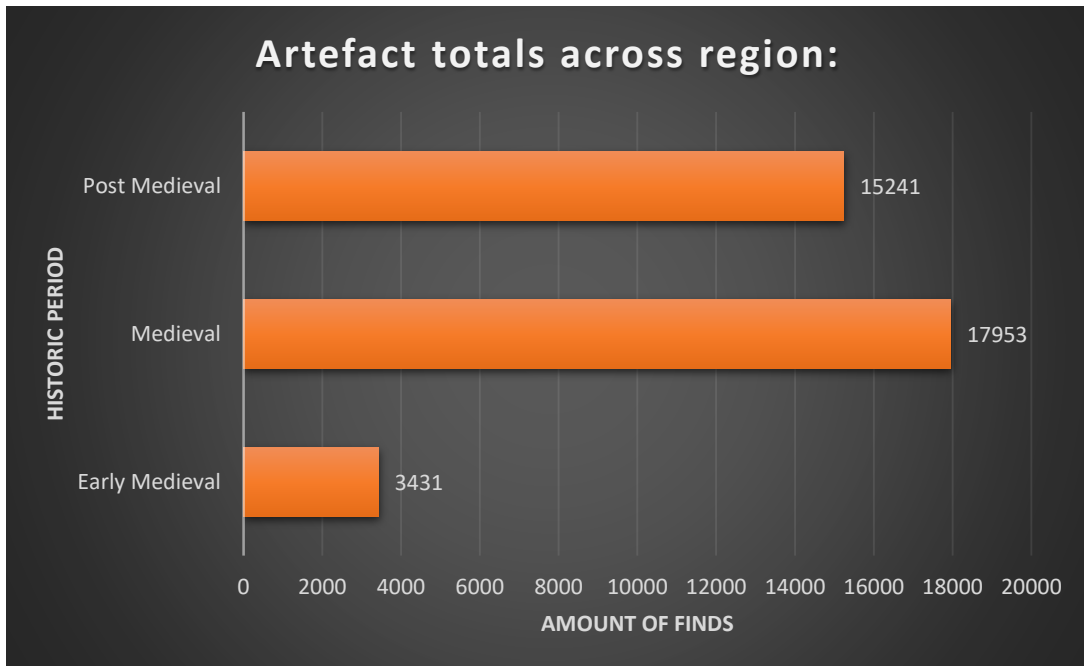
(Figure 40: Spread of ecclesiastical sites within a 3 kilometre buffer zone and historical time periods).

4.3 Chapter 2: Artefact Evidence

4.3.1 Distribution of Sites

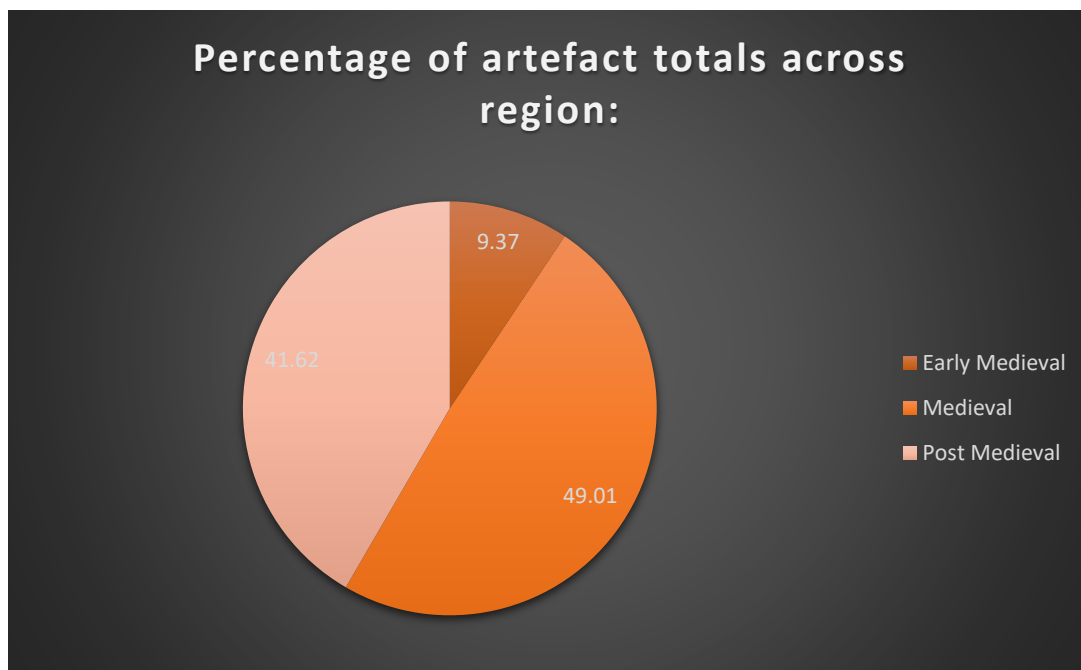
In the project region there are 37,384 total amount of recorded finds from Canmore (295) and PAS (37,089), and these statistics display more recorded finds in England than in Scotland. Therefore it should be noted that the evidence will be biased towards displaying evidence for fortifications located in England than those located in Scotland. The total number of artefacts have been broken down into historic periods, Early Medieval and Medieval (see figure 41). Due to the amount of artefacts recorded for the Post Medieval and

Modern periods it was decided not to review these recorded artefacts, where the Early Medieval and Medieval records will sufficiently aid in the understanding of the Roman fortifications in the project, for the earlier historic periods. Aiding the initial understanding of Roman fortification sites continued use or re-use.



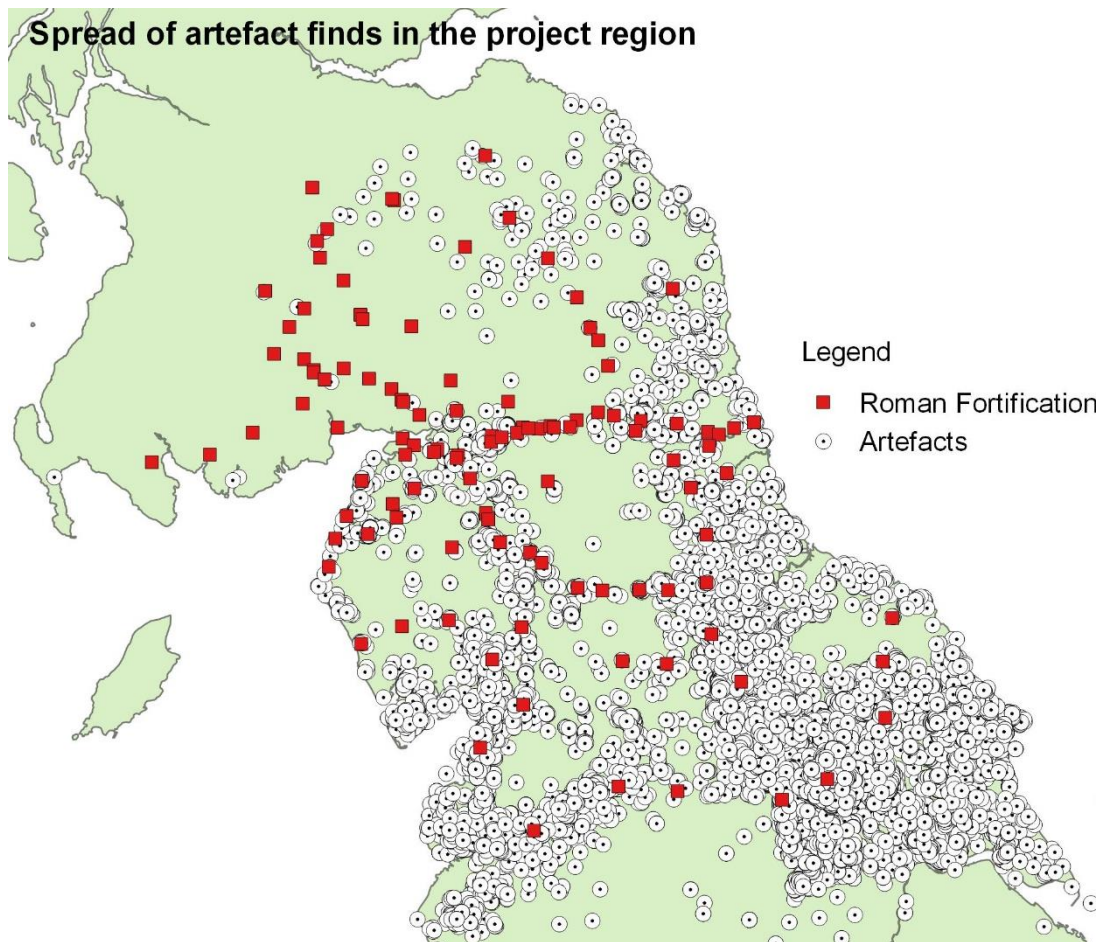
(Figure 41: Graph displaying the total amount of artefacts per historic period).

The breakdown of data per historic period displays more artefacts have been found and registered with the appropriate bodies for the Medieval (49.01%) period, than the Early Medieval period (9.37%). A number of factors will influence these artefact recordings, such as the initial decision of recording artefacts with the relevant bodies, and/or the use of the geographic locations and subsequent find of such artefacts (see figure 42).



(Figure 42: Graph displaying the percentages of artefacts per historic period).

On reviewing the spread of the artefacts it appears there is a concentration of finds in the Humber area, along the east coast and the Fylde area in the west. There are far less artefact finds in the south west of Scotland than the rest of the project region, as well as central north England, which incorporates the Pennines. The data identifies 37089 sites in England and 295 sites in Scotland, therefore Scotland is far less represented in artefact finds than England (see figure 43). These considerations are a synopsis of the data for all artefact finds and taken from the Historic England and Canmore downloaded data. A more comprehensible analysis of the data will now be discussed.



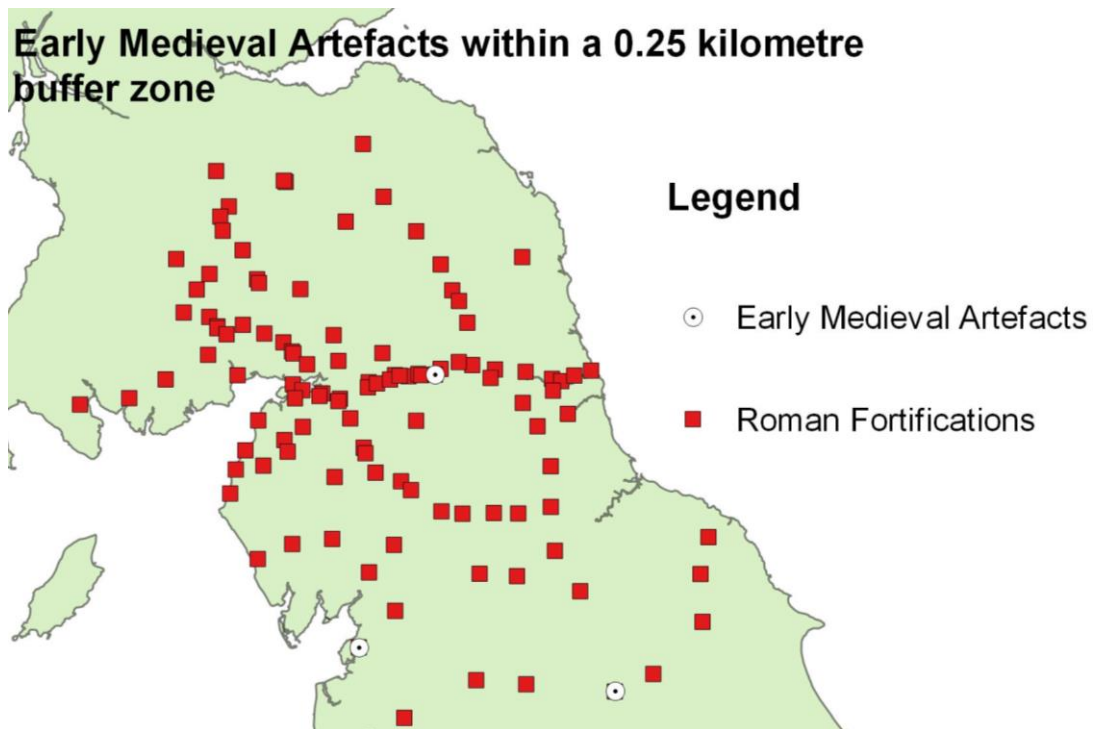
(Figure 43: Map displaying the total spread of artefacts within the project region).

4.3.2 Find spots

0.25 kilometre buffer zone

Early Medieval Period

There are 3 Roman fortifications with 3 artefacts in the Early Medieval period within 0.25 kilometres buffer zones. A personal accessory at Newton Kyme, North Yorkshire, and jewellery pieces both at Lancaster, Lancashire and Chesterholm, Northumberland. There is no correlation between these find spot locations, with the 3 locations being in separate areas in the project region. This artefact evidence displays immediate use of Roman fortifications in the early medieval period was not occurring, except for a minimum number (2.65%) of fortifications (see figure 44).



(Figure 44: Map displaying the spread of Early Medieval artefacts in the project region).

Medieval Period

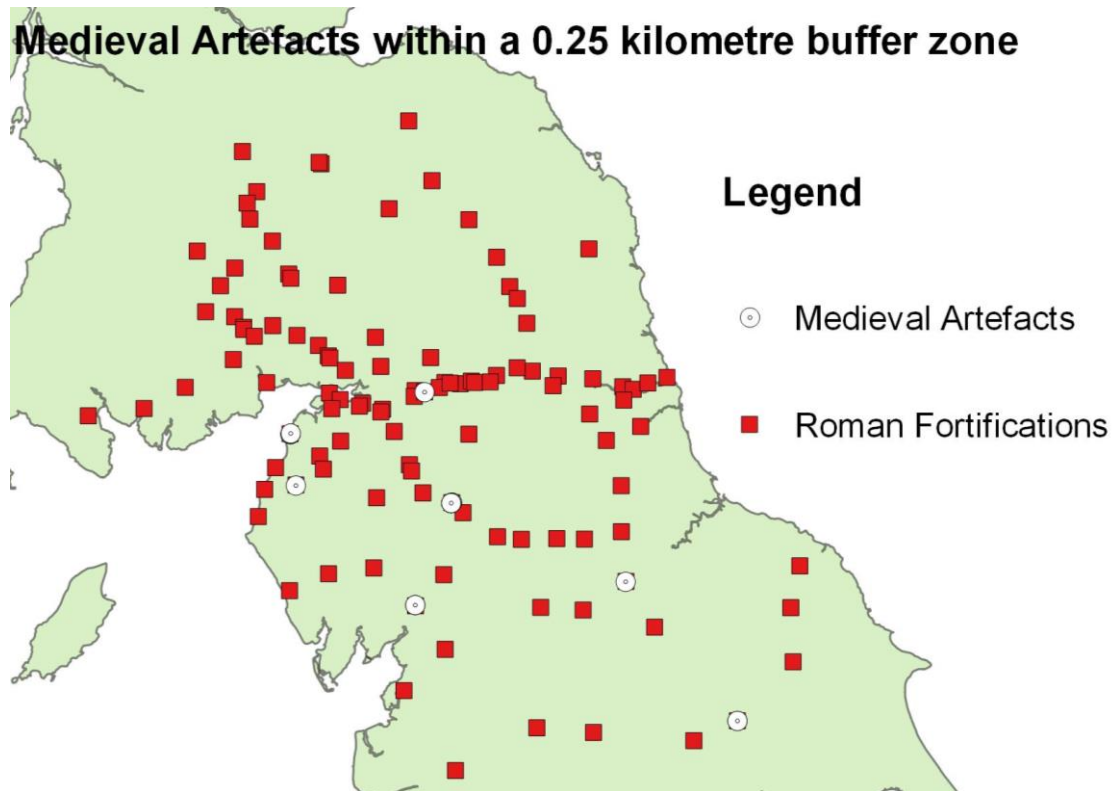
There are 7 Roman fortifications with 11 artefacts in the medieval period within 0.25 kilometre buffer zones (See table 8).

Roman Fortification	Artefacts within 250 metres of Medieval date
Boothby Castle Hill	Manufacturing Accessory
Beckfoot	Weapon Paraphernalia. 3 x Manufacturing Accessories
Papcastle	unknown
Kirkby Thore	Coin. Furniture Fitting
Watercrook	Furniture Fitting
Catterick	Jewellery
York	Coin

(Table 8: Table displaying the Roman fortifications with related artefacts for the Medieval period).

Kirkby Thore has 2 artefacts within 0.25 kilometres, 1 north east and 1 south west of the Roman fortification. Beckfoot has 4 artefacts within 0.25 kilometres, all located east of the Roman fortification. These two locations are not in built up areas, Beckfoot fort being under pasture land and Kirkby Thore

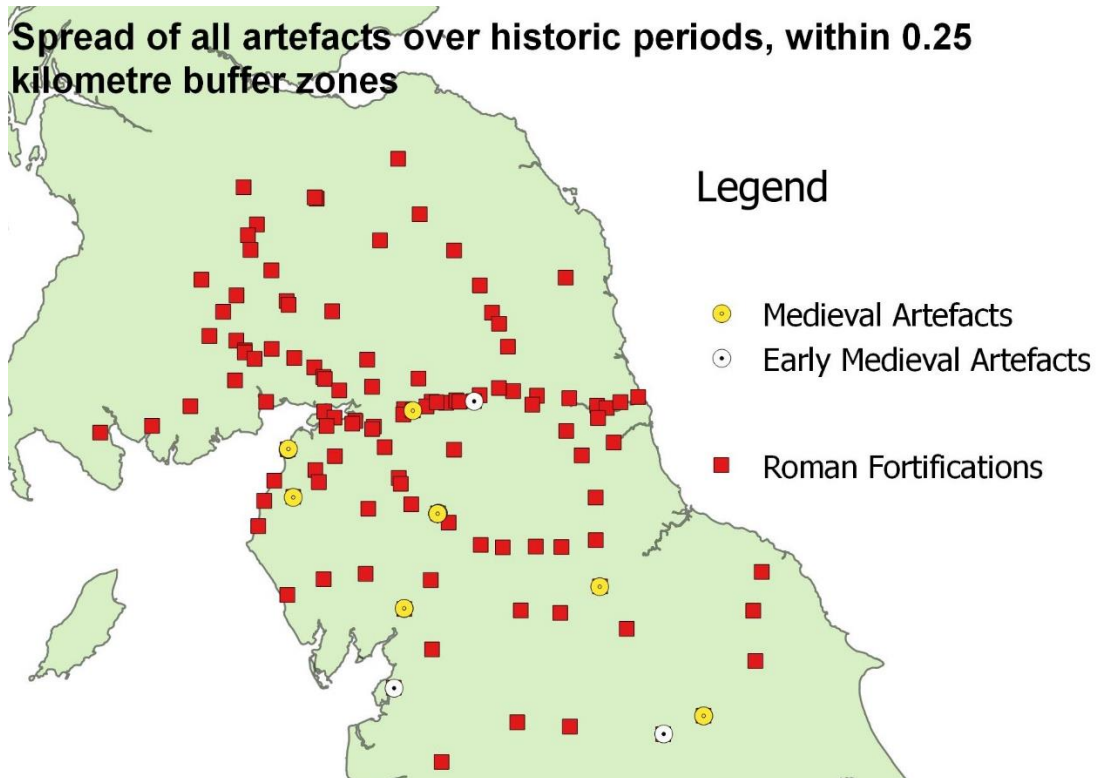
fort being a small town on a used Roman road transect (A66). The finds represent a mixture of working tools, and personal items such as coins and jewellery; providing information that suggests use of the area of the fort in the Medieval period. 5 of the sites are located in Cumbria and 2 in North Yorkshire displaying a use of these 7 Roman fortifications (6.19%) in the Medieval period (see figure 45).



(Figure 45: Map displaying the location of the Medieval artefacts for the project region).

Conclusion

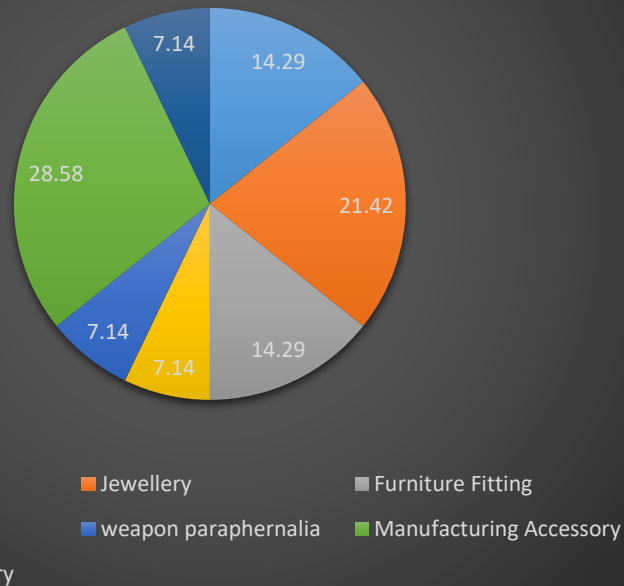
10 Roman fortifications have evidence of use during the Early Medieval and Medieval periods combined within 0.25 kilometres buffer zones. These 10 fortifications are spread across the northern region of England in Cumbria (5), Northumberland (1), Lancashire (1) and North Yorkshire (3) (see figure 46).



(Figure 46: Map displaying the total amount of artefacts for the Early Medieval and Medieval periods within the project region for a 0.25 kilometre buffer zone).

The finds that have been recorded at these locations display 49.99% of the finds as easily transportable objects, which could be carried on an individual when travelling; coins, jewellery, weapon paraphernalia and personal accessories. 42.87% displays more permanent fixtures of furniture fittings and manufacturing accessories, items that would more than likely be kept within a proximity of a building type. Therefore the artefact evidence within a 0.25 kilometre radius of 10 of the Roman fortifications between the Early Medieval and Medieval periods does show some immediate areas of sites have been used after the Roman period. However this is not a substantial amount of sites to conclude on (see figure 47).

Types of artefacts dating from the Early Medieval and Medieval periods



(Figure 47: Graph displaying the percentages of artefact types within a 0.25 kilometre buffer zone).

3 kilometre buffer zone

Early Medieval Period

There are 30 Roman fortifications with 108 artefacts in the Early Medieval period within a 3 kilometre buffer zone (See table 9).

Wandel	Housesteads	Lancaster
Risingham	Chesterholm	Ribchester
Burgh-By-Sands	Chesters	Burwen Castle
Amberfield	Haltonchesters	Wensley
Beckfoot	Corbridge	Catterick
Old Carlisle	Brougham	Healam Bridge
Papcastle	Castrigg	Cawthorn
Park House	Binchester	Malton
Castlesteads	Piercebridge	York
Brampton	Watercrook	Newton Kyme

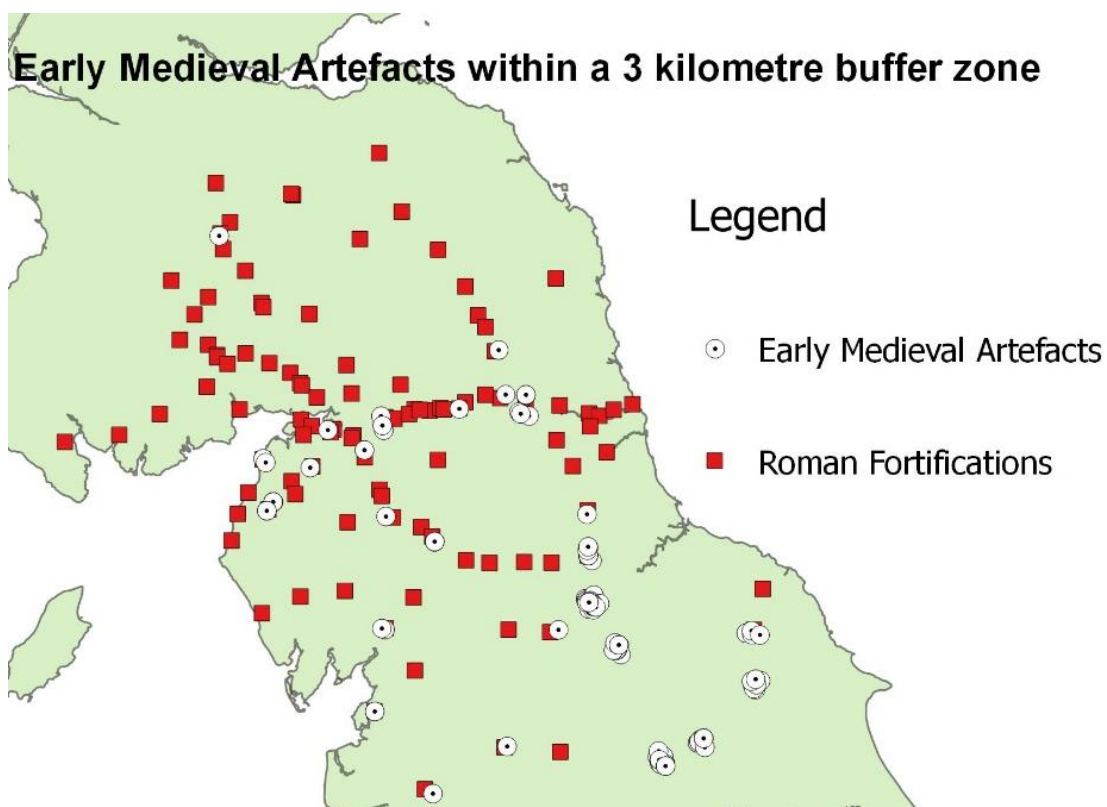
(Table 9: List of fortifications with artefact evidence within 3 kilometres).

15 of the sites have only one find spot (see table 10);

Burwen Castle	Burgh-By-Sands	Housesteads	Castrigg
Wensley	Amberfield	Chesterholm	Binchester
Wandel	Old Carlisle	Chesters	Lancaster
Risingham	Park House	Brougham	Ribchester

(Table 10: List of fortifications that have only one artefact within 3 kilometres).

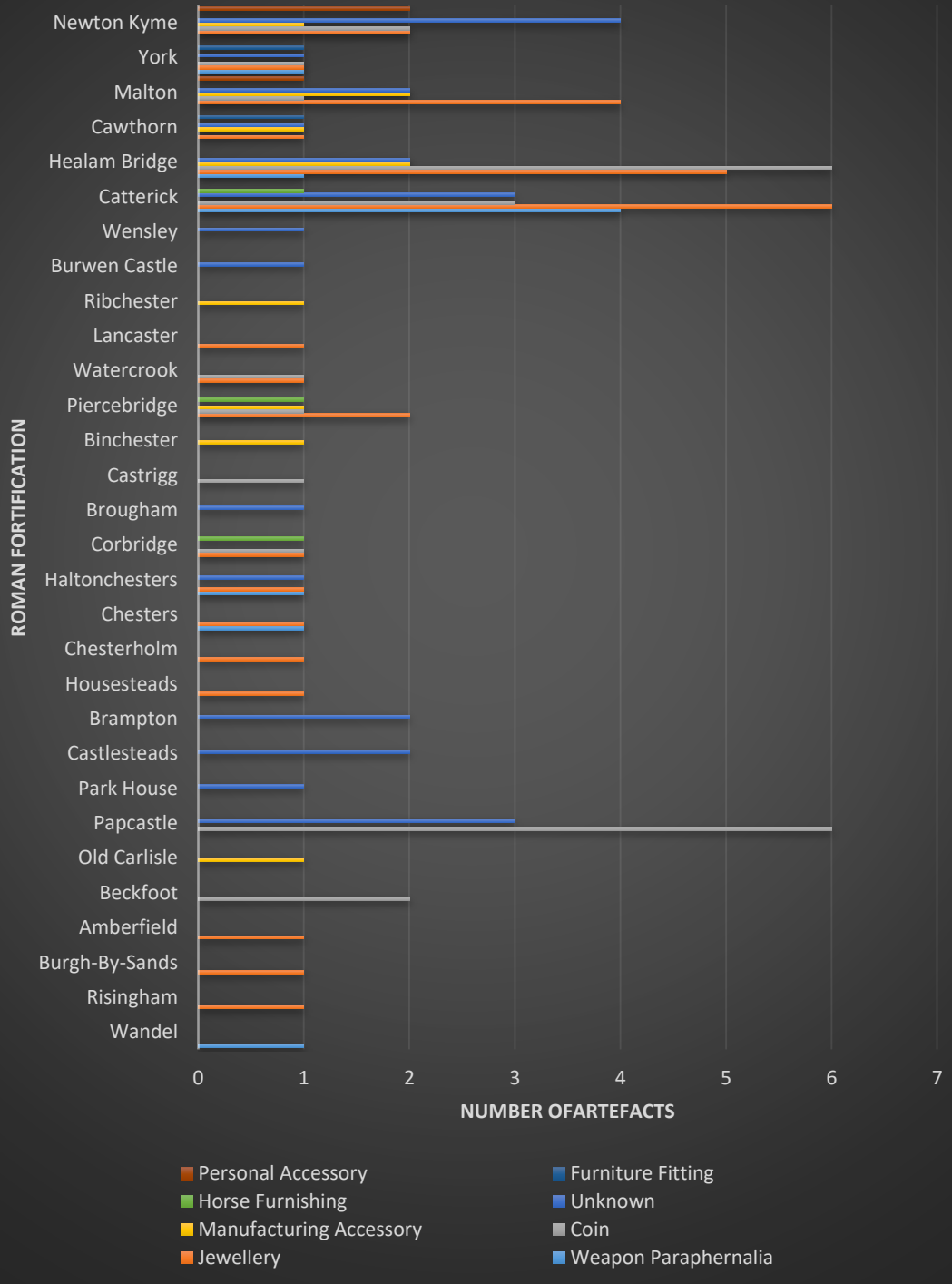
4 sites have 2 find spots; Beckfoot, Castlesteads, Haltonchesters and Watercrook. 2 sites have 3 find spots; Brampton Old Church and Corbridge. 1 site has 4 find spots; Cawthorn. 2 sites have 5 find spots; York and Piercebridge. Papcastle has 9 finds, Malton has 10 finds, Newton Kyme has 11, Healam Bridge has 16 and Catterick has 18 find spots, all within 3 kilometres of the Roman fortifications (see figure 48).



(Figure 48: Map displaying the spread of artefacts within 3 kilometres across the project region).

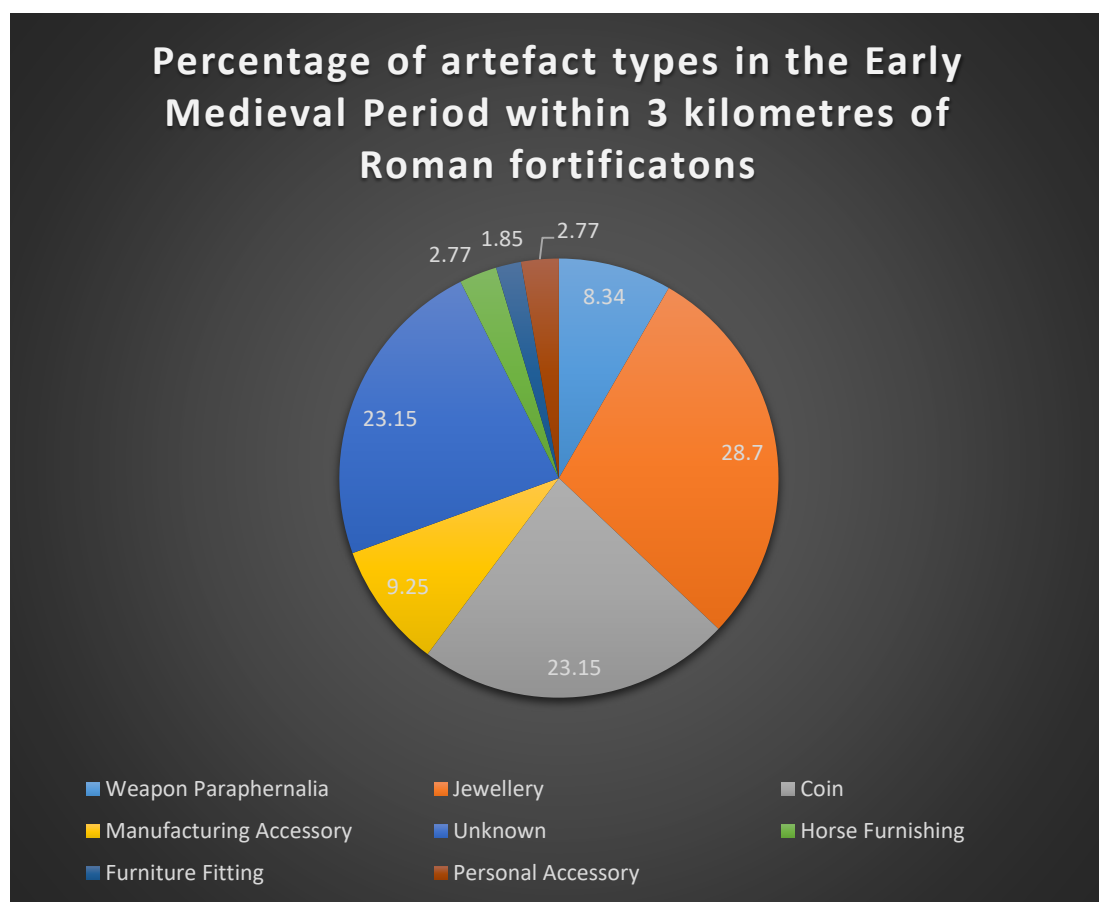
The artefacts registered in the Early Medieval period are for the majority singular finds, whereas Newton Kyme, Malton, Healam Bridge, Catterick and Papcastle appear to have the most finds registered with the relevant government bodies (see figure 49).

Artefact Types found at Roman Fortifications dating to the Early Medieval Period within 3 kilometre buffer zones



(Figure 49: Graph displaying artefact types at fortifications in the project region).

The finds that have been recorded at these locations display 62.96% of the finds as easily transportable objects, which could be carried on an individual when travelling; coins, jewellery, weapon paraphernalia and personal accessories. 2.77% displays the amount of horse furnishings that have been found for this period, where horse furnishings do get moved about when travelling but also horses are stabled when not being used. 32.40% displays more permanent fixtures of furniture fittings and manufacturing accessories, items that would more than likely be kept within a proximity of a building type (see figure 50). Therefore the artefact evidence within a 3 kilometre radius of 30 (26.54%) Roman fortifications in the Early Medieval period shows a minority of sites (9, 7.96%) have been used after the Roman period on a more permanent basis with evidence of Manufacturing Accessories and/or Furniture Fittings.



(Figure 50: Graph displaying the percentage of artefact types at fortifications in the project region).

Medieval Period

There are 65 Roman fortifications with 760 artefacts in the Medieval period within 3 kilometre buffer zones (See table 11).

Rudchester	Brough	Maryport	Ribchester	Cawthorn
Washingwells	Castrigg	Burrow Walls	Burwen Castle	Malton
South Shields	Kirkby Thore	Parton	Ilkely	Oxton
Ebchester	Brougham	Papcastle	Newton Kyme	Newstead
Chester-Le-Street	Salkeld Gate	Ravenglass	York	Learchild
Lanchester	Old Penrith	Ambleside	Bainbridge	High Rochester
Binchester	Park House	Low Borrowbridge	Wensley	Lamington
Piercebridge	Old Carlisle	Watercrock	Catterick	Sanquhar
Greta Bridge	Caermote	Burrow-By-Burrow	Healam Bridge	Durisdeer
Bowes	Beckfoot	Lancaster	Lease Rigg	Birrens
Broadlea	Carlisle	Castlesteads	Haltwhistle Burn	Chesters
Netherby	Stanwix	Boothby Castle Hill	Great Chesters	Corbridge
Kirkbride	Brampton Old Church	Amberfield	Chesterholm	Haltonchesters
Burgh-By-Sands				

(Table 11: List of fortifications with artefacts within 3 kilometres).

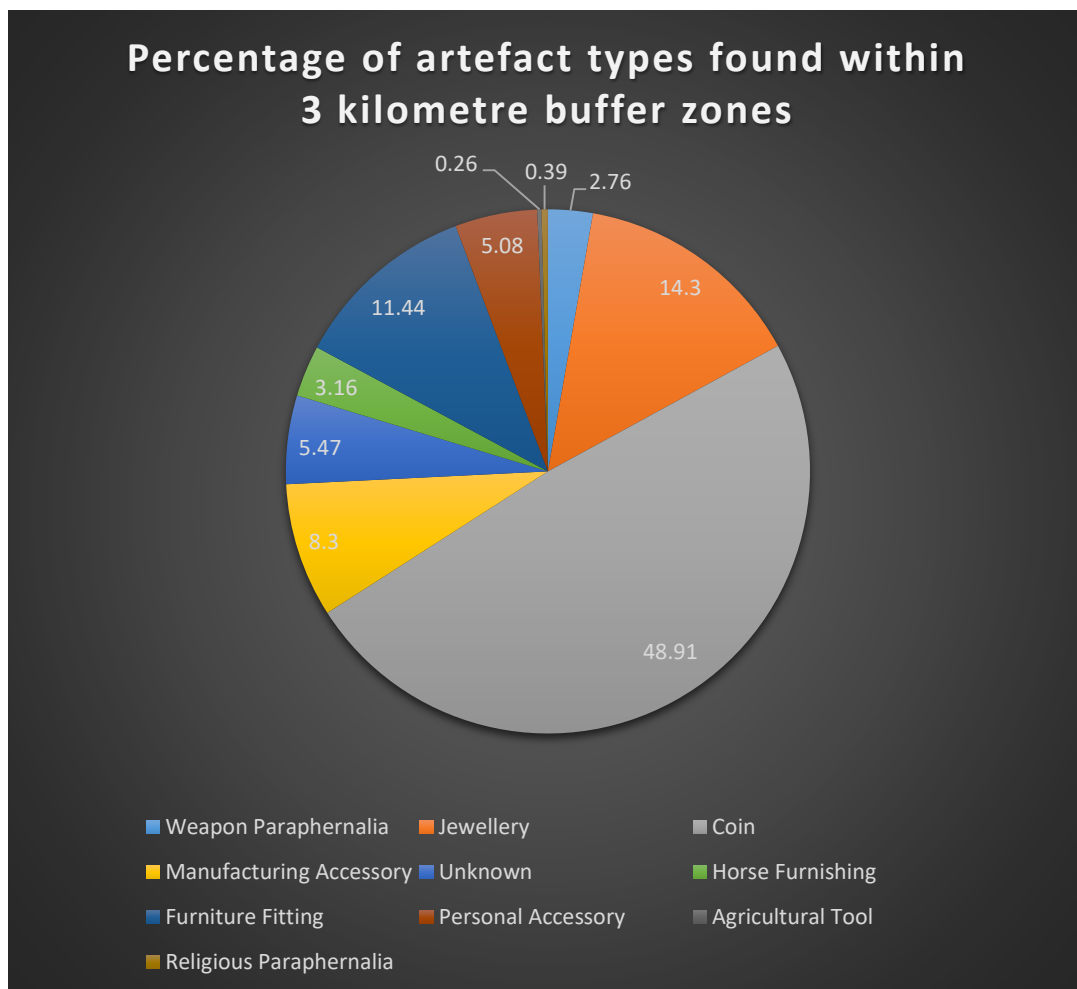
The table below displays the amount of fortifications with their total number of artefacts. For example 17 of the 65 fortifications have only 1 find spot within 3 kilometres and 1 fortification has 113 find spots within 3 kilometres (see table 12).

No. of artefacts	1	2	3	4	5	6	7	8	9	10	12	13	14	15	16	17	21	29	31	32	35	38	44	64	74	113
Total forts	17	7	6	4	1	3	2	3	1	3	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1

(Table 12: List of number of artefacts per fortification).

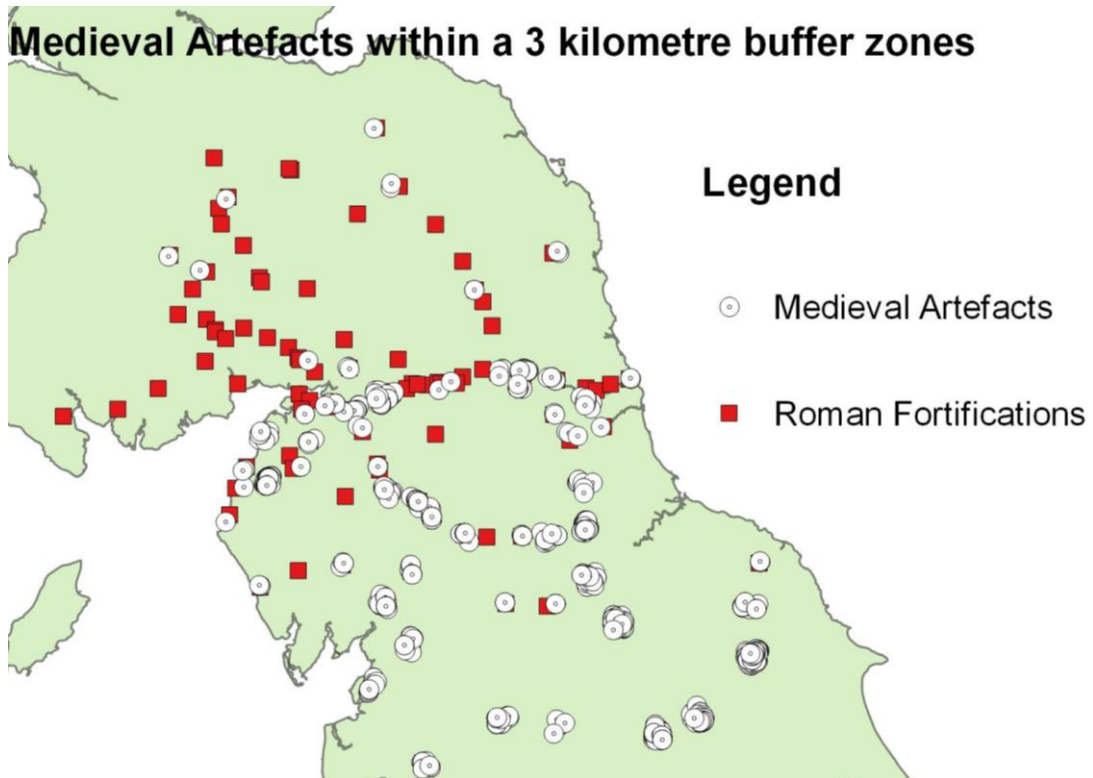
The sites, as per amount of artefacts, within 3 kilometres are listed, please see Appendix 2: Data Analysis Tables, artefact evidence, table 35.

A small minority of finds were of unknown type or historic period 5.47% (42 of 760), meaning that the majority of artefacts were identifiable and therefore able to be used for the awareness of location use. The percentage of artefact types displays a significant amount of coins found at the fortification sites (48.91%), making up almost half the total amount of finds (371 of 760). The second greatest type of artefacts are items of jewellery at 14.30% (109 of 760), while Religious Paraphernalia of 0.26% (3 of 760) and Agricultural Tools of 0.39% (2 of 760) are the items least found at these Roman fortifications (see figure 51).



(Figure 51: Graph displaying the percentage of artefact types within 3 kilometres).

The spread of Medieval artefacts appears to be concentrated around fortifications towards the south of the project region, such as Malton and York, with fewer Scottish sites having registered finds. However, from the above data Papcastle is confirmed as the site with the most Medieval artefacts founds within 3 kilometres. Papcastle is 10 miles from the west Cumbria coastline, on the outskirts of the modern National Park boundary and is only located on one trade route between Penrith and Workington, therefore not in a central dominant location to gain so many finds (see figure 52).



(Figure 52: Map displaying the spread of Medieval artefacts within the project region for 3 kilometre buffer zones).

Conclusion

To recap, there are 30 forts (26.54%) with artefact evidence in the Early Medieval period and 65 forts (57.52%) with artefact evidence in the Medieval period. The evidence for artefacts found within 3 kilometres of Roman fortifications during the Early Medieval and Medieval periods combined provides evidence of 68 fortifications (60.17%) being used out of the total 113, with 26 of these forts (23.00%) used in both historic periods (see table 13).

Roman fortifications with evidence of artefact use in either the Early Medieval or Medieval periods within a 3 kilometre buffer zone:

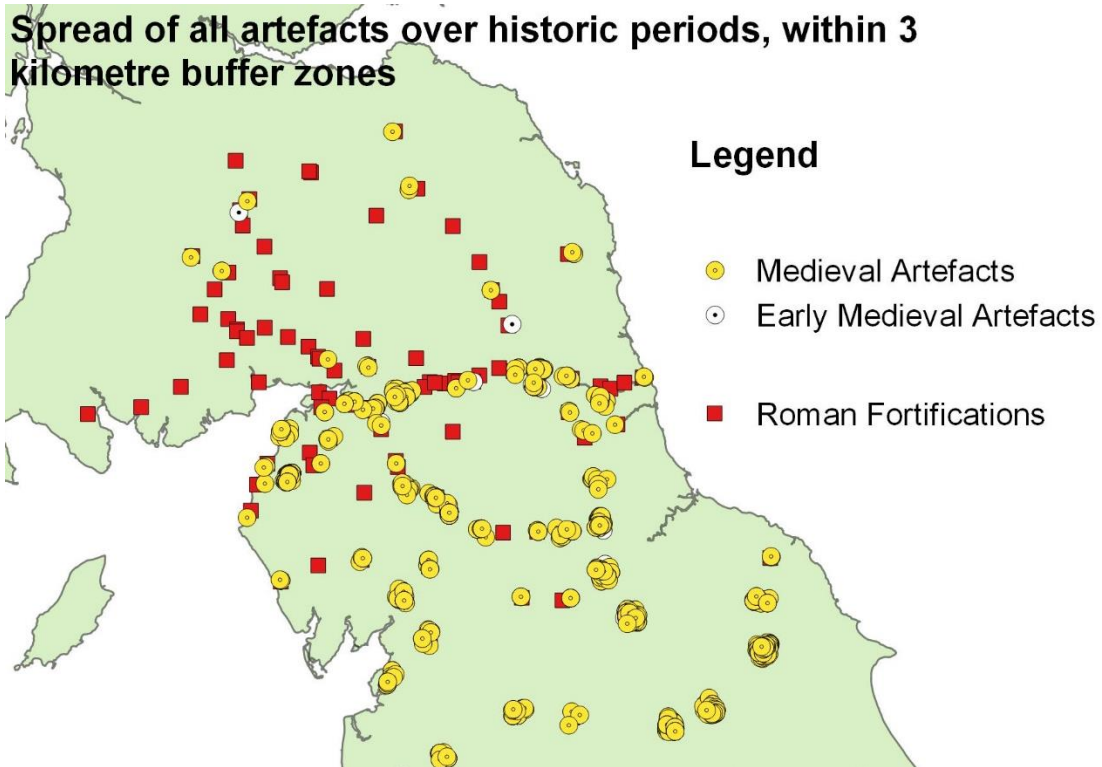
Amberfield	Burrow-by-Burrow	Great Chesters	Lease Rigg	Ravenglass
Ambleside	Burwen Castle	Greta Bridge	Low Borrowbridge	Ribchester
Bainbridge	Caermote	Haltonchesters	Malton	Risingham
Beckfoot	Carlisle	Haltwhistle Burn	Maryport	Rudchester
Binchester	Castlesteads	Healam Bridge	Netherby	Salkeld Gate
Birrens	Castrigg	High Rochester	Newstead	Sanquhar
Boothby Castle Hill	Catterick	Housesteads	Newton Kyme	South Shields
Bowes	Cawthorn	Ilkley	Old Carlisle	Stanwix
Brampton Old Church	Chesterholm	Kirkbride	Old Penrith	Wandel
Broadlea	Chester-le-Street	Kirkby Thore	Oxton	Washingwells
Brough	Chesters	Lamington	Papcastle	Watercrook
Brougham	Corbridge	Lancaster	Park House	Wensley
Burgh-by-Sands	Durisdeer	Lanchester	Parton	York
Burrow Walls	Ebchester	Learchild	Piercebridge	

Roman fortifications with artefact evidence of use in the Early Medieval and Medieval periods within a 3 kilometre buffer zone:

Amberfield	Burwen Castle	Chesters	Newton Kyme	Watercrook
Beckfoot	Castlesteads	Corbridge	Old Carlisle	Wensley
Binchester	Castrigg	Haltonchesters	Papcastle	York
Brampton Old Church	Catterick	Healam Bridge	Park House	
Brougham	Cawthorn	Lancaster	Piercebridge	
Burgh-by-Sands	Chesterholm	Malton	Ribchester	

(Table 13: Lists of fortifications with artefact evidence within 3 kilometres).

The spread of find spots across the project region are congregated more in England than Scotland and more in North Yorkshire than any other county (see figure 53).



(Figure 53: Map displaying the spread of artefacts within the project region).

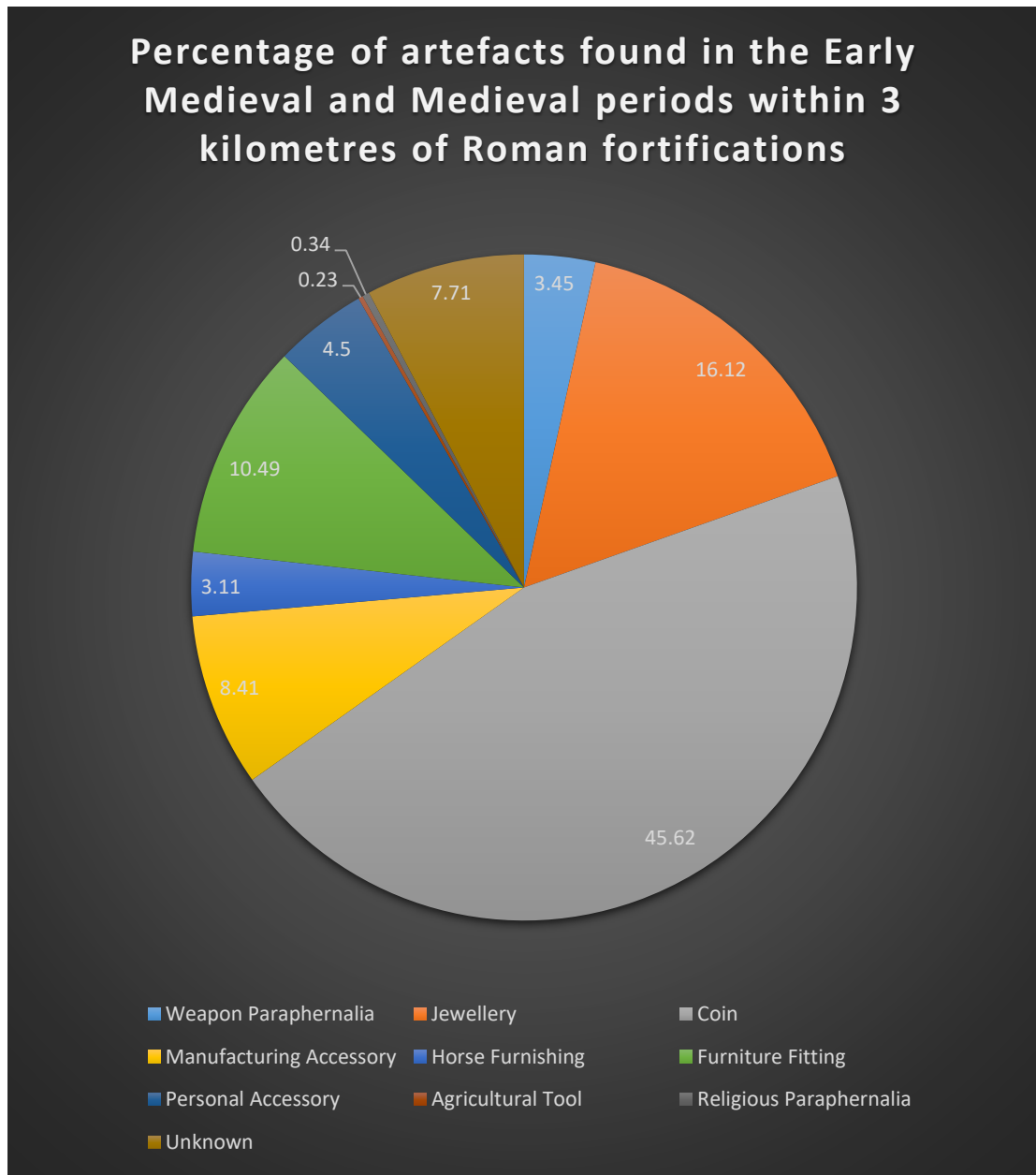
The artefacts that have been recorded at these locations displays 69.70% of the finds as easily transportable objects, which could be carried on an individual when travelling; coins, jewellery, weapon paraphernalia and personal accessories. 22.59% displays more permanent fixtures of furniture fittings, horse furnishing, agricultural tools, religious paraphernalia and manufacturing accessories, items that would more than likely be kept within a proximity of a building type (see table 14).

Artefact:	Weapon Paraphernalia	Jewellery	Coin	Manufacturing Accessory	Horse Furnishing	Furniture Fitting	Personal Accessory	Agricultural Tool	Religious Paraphernalia	Unknown	Total
Early Medieval	9	31	25	10	3	2	3	0	0	25	108
Medieval	21	109	371	63	24	89	36	2	3	42	760
Total	30	140	396	73	27	91	39	2	3	67	868
Percentage	3.45	16.12	45.62	8.41	3.11	10.49	4.5	0.23	0.34	7.71	99.98

(Table 14: List of artefact types as per historic period).

Therefore the artefact evidence within a 3 kilometre radius of 68 of the Roman fortifications in the Early Medieval and Medieval periods interprets 60.17% of the Roman fortifications are being used in these historical periods, possibly

with movement of people and therefore smaller artefacts involved (see figure 54). Or it could be interpreted as artefacts lost when travelling and people passing the site by and not correlated to the location in a conceivable way.



(Figure 54: Graph displaying the percentage of artefact types within 3 kilometres).

4.4 Summary of evidence

The overview of data displays the closer to the Roman fortification in distance, the less evidence exists for use of a site. Within 0.25 kilometres of Roman fortifications 4 have fortified dwellings (3.53%), 12 have ecclesiastical sites

(10.61%) and 10 have artefact finds (8.84%). 3 fortifications have both fortified dwellings and ecclesiastical sites (2.65%) and 1 fortification has fortified dwelling, ecclesiastical site and artefact finds (0.88%) (See table 15).

0.25 kilometre	Fortifications With	Fortifications Without	Total	Percentage
Fortified Dwelling	4	109	113	3.53
Ecclesiastical Site	12	101	113	10.61
Artefact Find	10	103	113	8.84
Fortified Dwelling and Ecclesiastical Site	3	110	113	2.65
Fortified Dwelling, Ecclesiastical Site and Artefact Find	1	112	113	0.88
Total	30	535	565	26.51

(Table 15: List displaying the number of fortifications with and without the three types of evidence studied).

These percentages produce 26.51% of a total amount of Roman fortifications with evidence within their 0.25 kilometre radius. The evidence informs that Lancaster, Newcastle and Bowes are the 3 sites with most evidence for use. Lancaster and Newcastle Roman fortifications are both located under later fortified dwellings in the centre of cities, which are located on rivers and within 3 kilometres of the coast. Bowes is located in the central Pennines with a surrounding village of the same name, this location being land locked and therefore significantly different to Lancaster and Newcastle, suggests the survival of the site in use due to the central location in the country, a stopping place for traveling purposes and a central location to dominate and control the surrounding landscape (see table 16).

Fortifications with evidence in 0.25 kilometres:				
Fortified Dwelling Evidence	Ecclesiastical Evidence	Artefact Evidence	Dwelling and Ecclesiastical Evidence	Dwelling, Ecclesiastical and Artefact
Lancaster	Lancaster	Lancaster	Lancaster	Lancaster
Newcastle	Newcastle		Newcastle	
Bowes	Bowes		Bowes	
Crawford	Stanwix	Boothby, Castle Hill		
	Brampton Old Church	Chesterholm		
	Parton	Kirkby Thore		
	Ebchester	York		
	Chester-le-Street	Beckfoot		
	Binchester	Catterick		
	Kirkpatrick-fleming	Newton Kyme		
	Bewcastle	Watercrock		
	Ribchester	Papcastle		

(Table 16: List displaying the fortifications with evidence within 0.25 kilometres).

Lancaster is the 1 site with all three pieces of evidence (fortified dwelling, ecclesiastical site and artefact), but only has 1 Early Medieval piece of jewellery as evidence and both the fortified dwelling and ecclesiastical sites are dated from the 12th Century. This displays the Norman re-use of the immediate site within 0.25 kilometres, but with possible earlier evidence in the piece of jewellery find spot?

Newcastle has 1 fortified site dating prior to 1100 AD and has an ecclesiastical site dating to the 18th Century, therefore the two sites cannot be related in use and displays a disparaging re-use again and again of the Roman fort location.

Bowes has both fortified dwelling and ecclesiastical sites dating to the 12th Century and therefore shows the Norman use of the site. How castle and church came to be placed together and connected one and the same for the benefit of the controlling elite of the area (Rowley 1997, 118-119; Platt 2013, 19; Lilley 2017, 53) (see table 17).

Fortifications with evidence in 0.25 kilometres:		
Fortified Dwelling Evidence:	Ecclesiastical Evidence:	Artefact Evidence:
Lancaster (12th C)	Lancaster (12th C)	Lancaster (EM 1 Jew)
Newcastle (Prior 1100 AD)	Newcastle (18th C)	
Bowes (12th C)	Bowes (12th C)	
Crawford (12th C)	Stanwix (14th C)	
	Brampton Old Church (12th C)	
	Parton (12th C)	
	Ebchester (12th C)	
	Chester-le-Street (13th C)	
	Binchester (Prior 1100 AD)	
	Kirkpatrick-fleming (12th C)	
	Bewcastle (13th C)	
	Ribchester (13th C)	
		Boothby, Castle Hill (M 1 Manu Aces)
		Chesterholm (EM 1 Jew)
		Kirkby Thore (M 1 Coin, 1 Furn Fit)
		York (M 1 Coin)
		Beckfoot (M 1 Weap, 2 Manu Aces)
		Catterick (M 1 Jew)
		Newton Kyme (EM 1 Per Aces)
		Watercrook (M 1 Furn Fit)
		Papcastle (M 1 Unid)

(Table 17: List displaying the fortifications with evidence within 0.25 kilometres. EM = early medieval. M = medieval. Jew = jewellery. Manu Aces = manufacturing accessory. Furn Fit = furniture fitting. Weap = Weapon Paraphernalia. Per Aces = personal accessory).

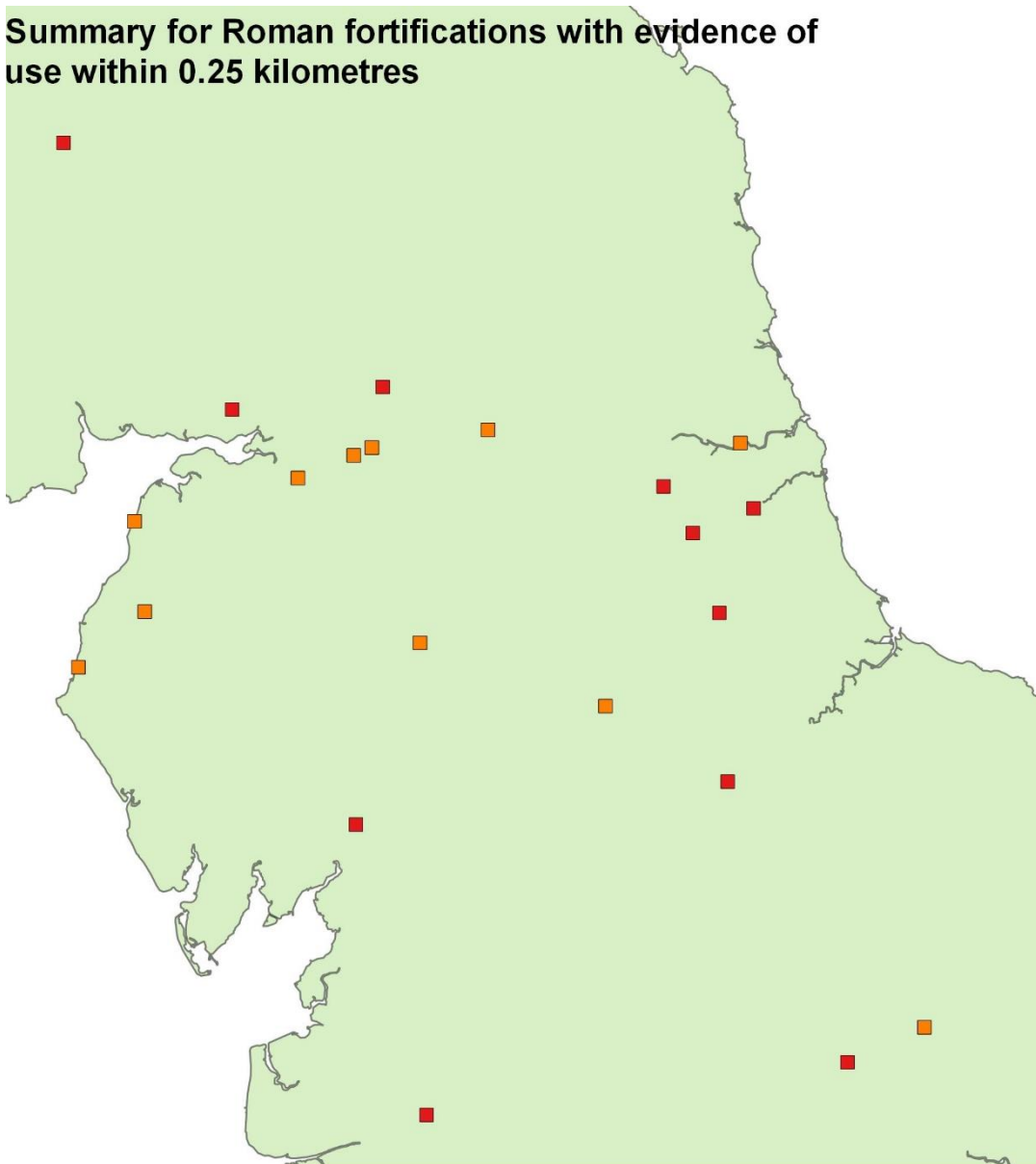
There are 22 fortifications in total that have three different types of evidence within 0.25 kilometres and the spread of these fortifications across Britain displays 2 are located in Scotland (Kirkpatrick-fleming and Crawford), while 20 are located in England (see table 18).

Fort	Location	Evidence
Lancaster	A6/A74	(12th C cast & chur. EM 1 Jew)
Kirkpatrick-fleming	A6/A74	(12th C chur)
Bewcastle	A6/A74	(13th C chur)
Ribchester	A6/A74	(13th C chur)
Crawford	A6/A74	(12th C cast)
Watercrock	A6/A74	(M 1 Furn Fit)
Bowes	A66	(12th C cast & chur)
Kirkby Thore	A66	(M 1 Coin 1 Furn Fit)
Papcastle	A66	(M 1 Unid)
Parton	Cumbrian Coast	(12th C chur)
Beckfoot	Cumbrian Coast	(M 1 Weap 3 Manu Aces)
Ebchester	Dere Street	(12th C chur)
Chester-le-Street	Dere Street	(13th C chur)
Binchester	Dere Street	(Prior 1100 AD chur)
Catterick	Dere Street	(M 1 Jew)
Newton Kyme	Dere Street	(EM 1 Per Aces)
Newcastle	Hadrian's Wall	(Prior 1100 AD cast & 18th C chur)
Stanwix	Hadrian's Wall	(14th C chur)
York	The Pennines	(M 1 Coin)
Brampton Old Church	The Staingate	(12th C chur)
Boothby, Castle Hill	The Staingate	(M 1 Manu Aces)
Chesterholm	The Staingate	(EM 1 Jew)

(Table 18: List of fortifications with evidence, as per their locations across the region).

The majority of these sites are located along the A6/A74 and Dere Street, the two main travel routes north-south on the west and east sides of the country. With the A6/A74 and Dere Street being the longest routes in the project area, then the majority of sites with evidence found along these routes is not surprising. The rest of the locations are spread across the mid-section of the project region of north Cumbria, Durham and Northumberland, except for 1 outlier fortification, York (see figure 55).

Summary for Roman fortifications with evidence of use within 0.25 kilometres



Legend

- A66, Cumbrian Coast, Hadrian's Wall, Pennines and Staingate fortifications
- Dere Street and A6/A74 fortifications

(Figure 55: Map displaying the spread of fortifications with evidence across the project region).

Within 3 kilometres of Roman fortifications 53 have fortified dwellings (46.90%), 75 fortifications have ecclesiastical sites (66.37%) and 10 fortifications have artefact finds (60.17%). 46 fortifications have both fortified dwellings and ecclesiastical sites (40.70%) and 26 fortifications have fortified dwelling, ecclesiastical site and artefact finds (23.00%) (See table 19).

3 kilometres	Fortifications With	Fortifications Without	Total	Percentage
Fortified Dwelling	53	60	113	46.9
Ecclesiastical Site	75	38	113	66.37
Artefact Find	68	45	113	60.17
Fortified Dwelling and Ecclesiastical Site	46	67	113	40.7
Fortified Dwelling, Ecclesiastical Site and Artefact Find	26	87	113	23
Total	268	297	565	237.14

(Table 19: List displaying the number of fortifications with and without the three types of evidence studied).

These percentages produce 173.44% (from 237.14%) of a total amount of Roman fortifications with evidence within their 3 kilometre radius. The evidence informs that there are 26 (23.00%) sites with all three types of evidence; fortified dwelling, ecclesiastical site and artefact find spots. Lancaster, Newcastle, Bowes and Crawford being the 4 sites with evidence for use within 0.25 kilometres, which also have evidence within 3 kilometres. Crawford having an ecclesiastical site, Newcastle remaining the same with a fortified dwelling and ecclesiastical site, Bowes having additional artefact evidence and Lancaster remaining the same with fortified dwelling, ecclesiastical site and artefact find spot. With 46 sites having evidence of fortified dwellings and ecclesiastical sites, a 40.70% of 113 sites used within 3 kilometres for architectural use is a 38.05% increase in use of Roman fortifications in the project region from a 0.25 kilometre radius. 5 fortifications have evidence of fortified dwellings and artefact find spots, being 4.42%, while 30 fortifications have evidence of ecclesiastical sites and artefact find spots, 26.54%. 2 fortifications have evidence of only fortified dwelling use, being 1.76% and 7 fortifications only have evidence of artefact find spots, being 6.19%. With evidence in 3 kilometres of Roman fortifications (103 of 113 fortifications) 91.15% of the fortifications display use after the Roman period (see Appendix 2: Data Analysis Tables, Summary, table 38).

The historic evidence displays 5 fortifications have evidence dating prior to 1100 AD for fortified dwellings (4.42%), 4 fortifications have ecclesiastical evidence (3.53%), and 27 fortifications with artefact find evidence (23.89%).

Corbridge and Binchester are the only 2 Roman fortifications with evidence of ecclesiastical use and Early Medieval artefact evidence, 2 of 113 fortifications, providing a 1.76% evidence use for these 2 sites after the Roman period. 14 fortifications have evidence of fortified dwellings dating to the 12th Century, 12.38% and 38 fortifications have evidence of ecclesiastical sites dating to the 12th Century, 33.62%. While 13 fortifications have both fortified dwellings and ecclesiastical sites within 3 kilometres, 11.50%. Therefore an increase in use during the 12th Century (13 Roman fortifications, 11.50%) compared to sites dating prior to 1100 AD (2 Roman fortifications, 1.76%) for both fortified dwellings and ecclesiastical sites each within a 3 kilometre radius, displays a known acknowledgement of Roman fortification sites and a choice to use those particular sites when building in the project region. However the percentages inform of less than a quarter of the sites have been used in Post Roman periods and therefore there is no correlation for fortified dwellings and ecclesiastical sites on the same locations as Roman fortifications. 13th Century data displays the same pattern as the 12th Century, with 12 fortifications having fortified dwellings (10.61%), 26 having ecclesiastical sites (23.00%) and 5 having both fortified dwellings and ecclesiastical sites (4.42%), within 3 kilometres. 14th Century data displays a turnaround in Roman fortification site use however, with 11 sites having fortified dwellings (9.73%), 7 sites having ecclesiastical use (6.19%) and 2 sites having both fortified dwellings and ecclesiastical sites (6.19%) within 3 kilometres (see table 20).

There are 63 Roman fortifications with Medieval artefacts, being 55.75% of the total (113) and displaying half of the sites in the project region having artefact evidence. The data displays the same correlation of Roman fortification use over the centuries as does the architectural evidence. These statistics display, in a 3 kilometre radius, Roman fortification sites are being re-used, significantly (compared to the rest of the historical periods) in the 12th Century for fortified dwellings and ecclesiastical sites, being a total of 37.16% of the fortifications in the project region. 42 fortifications (37.16%) in the 12th Century is less than half of the Roman fortifications in the project region, however it does display a reuse of some sites through artefact evidence. The same evidence pattern can be seen for the 13th Century with sites for architectural and artefact

evidence as per the 12th Century, with more ecclesiastical sites with artefacts found in the project region than with fortified dwellings. The same turnaround pattern of evidence can also be seen for the 14th Century with artefacts than those when looking at only architectural evidence, with more fortified dwellings than ecclesiastical sites having artefact evidence also (see table 20).

Medieval Artefacts	Total	Percentage
Roman fortifications with medieval artefacts	63	55.75%
Sites with 12th C fortified dwellings and artefacts	19	16.81%
Sites with 12th C ecclesiastical sites and artefacts	23	20.35%
Sites with 12th C fortified dwellings, ecclesiastical sites and artefacts	7	6.19%
Sites with 13th C fortified dwellings and artefacts	7	6.19%
Sites with 13th C ecclesiastical sites and artefacts	16	14.15%
Sites with 13th C fortified dwellings, ecclesiastical sites and artefacts	2	1.76%
Sites with 14th C fortified dwellings and artefacts	8	7.07%
Sites with 14th C ecclesiastical sites and artefacts	5	4.42%
Sites with 14th C fortified dwellings, ecclesiastical sites and artefacts	2	1.76%

(Table 20: List of numbers of fortifications with evidence).

Within 3 kilometres of Roman fortifications the radius of the buffer zones provides a greater amount of evidence than 0.25 kilometres, with more later datable architectural evidence. Within 0.25 kilometres there were 4 sites with fortified dwellings, none dating later than the 12th Century, while there were 12 fortifications with ecclesiastical sites none dating later than the 14th Century, except one 18th century ecclesiastical site within 0.25 kilometres of Newcastle. The wider radius of 3 kilometres has therefore provided the data with a wider scope of evidence for each fortification and its landscape being re-used (see Appendix 2: Data Analysis Tables, Summary, table 37).

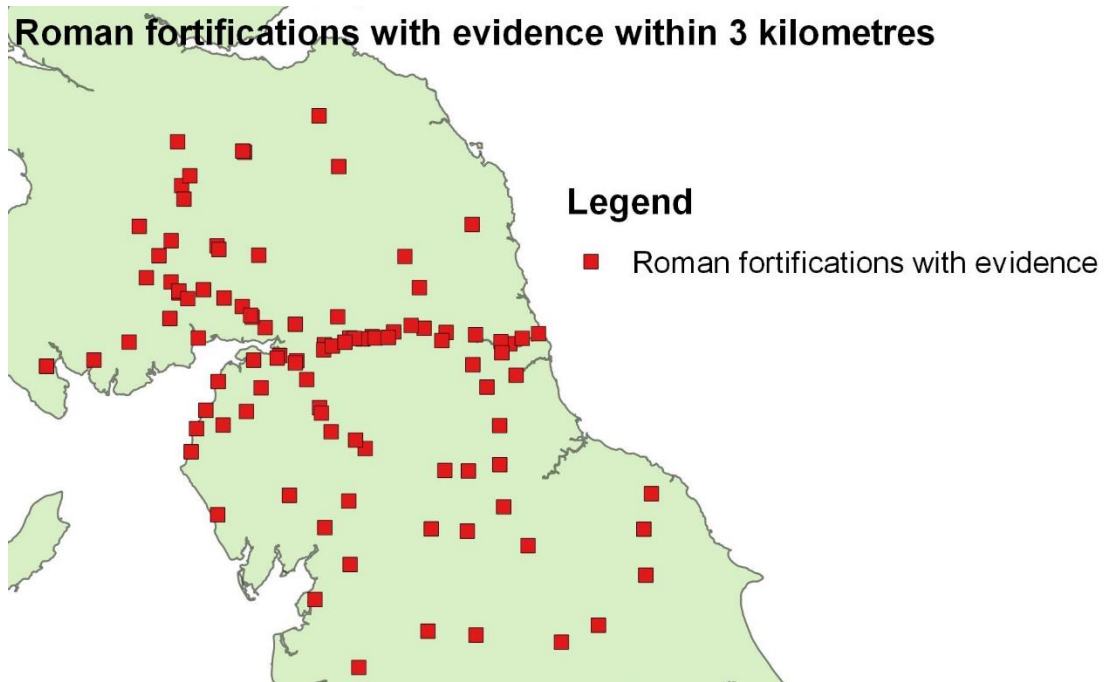
Within 3 kilometres there are 102 (90.26%) Roman fortifications with evidence for either fortified dwellings, ecclesiastical sites or artefact finds, or a mixture of the three types of evidence, in the project region. 30 (29.42%) of the 102 sites with evidence in 3 kilometres are located in Scotland, while 72 (70.58%) are located in England. The spread of these fortifications across Britain displays the majority of fortifications are located along the A6/A74 with 25 fortifications, 24.50%. Dere Street and Hadrian's Wall also have concentrations of evidence for the re-use of fortifications, with sites along Dere

Street used, being 13.72%, and 16 sites along Hadrian's Wall, and being 15.69%. Dere Street and the A6/A74 are the main travel routes north-south on the west and east sides of the country, therefore these three locations have the higher amount of sites along the routes, and therefore to have the higher percentage of sites with evidence is not uncommon (see table 21).

Fortification locations with evidence within 3 kilometres:		
Location	Total	Percentage
A169	3	2.95
A592/A593	2	1.96
A595	2	1.96
A6/A74	25	24.5
A66	6	5.88
A684	2	1.96
A76	9	8.82
Cumbrian Coast	4	3.92
Dere Street	14	13.72
Hadrian's Wall	16	15.69
South West Scotland	5	4.9
Pennines	3	2.95
Staingate	11	10.79
Total	102	100

(Table 21: List displaying the location of fortifications with evidence).

The rest of the locations are spread across the project region of Dumfries and Galloway, The Scottish Borders, Cumbria, Durham, Northumberland and North Yorkshire (see figure 56).



(Figure 56: Map displaying the locations of fortifications with evidence across the project region).

The historic periods in 3 kilometres buffer zones, displayed the 14th Century data to have more fortified dwellings than ecclesiastical sites. Whereas the data for prior to 1100 AD, 12th Century and the 13th Century displayed more ecclesiastical sites than fortified dwellings within 3 kilometres. Therefore the pattern for architectural evidence shows within each buffer zone the 14th Century having a greater number of fortified dwellings built than ecclesiastical sites in the project region, but the 12th and 13th Centuries to have more ecclesiastical sites built than ecclesiastical sites.

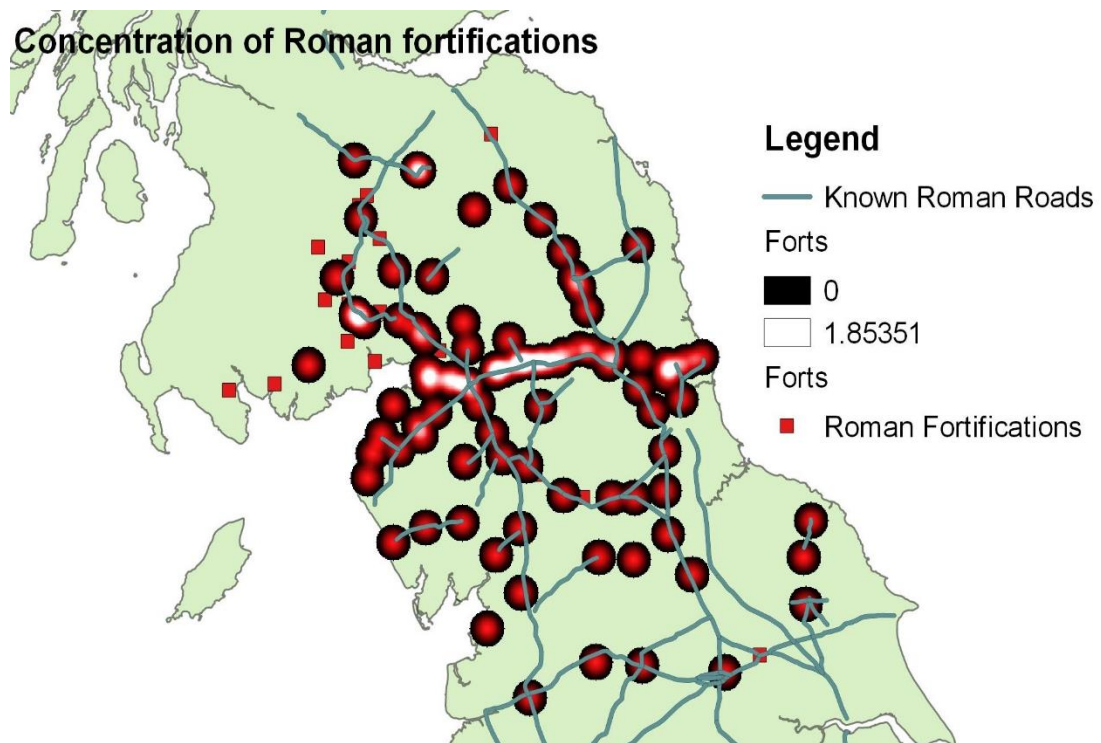
4.5 Heat mapping evidence

The data was Heat mapped on QGIS (see chapter 3.6 QGIS) to view areas of extensive evidence for discussion on a wider scale than those surrounding the Roman fortifications within the two buffer zones of 0.25 kilometres and 3 kilometres.

Roman Fortifications

The spread of the Roman fortifications being studied within the project region first needs to be reviewed through heat mapping, to discern where the

concentrations of these fortifications are located. The largest concentration of clustered Roman fortifications is along the Staingate and Hadrian's Wall region, with smaller concentrations of clustered sites in mid Scotland, close to the border in south west Scotland along the A76 and A74, mid north west Cumbria along the A595 and in north mid Northumbria along Dere Street. This displays that the concentration of Roman fortifications are within the centre of the project region (see figure 57).

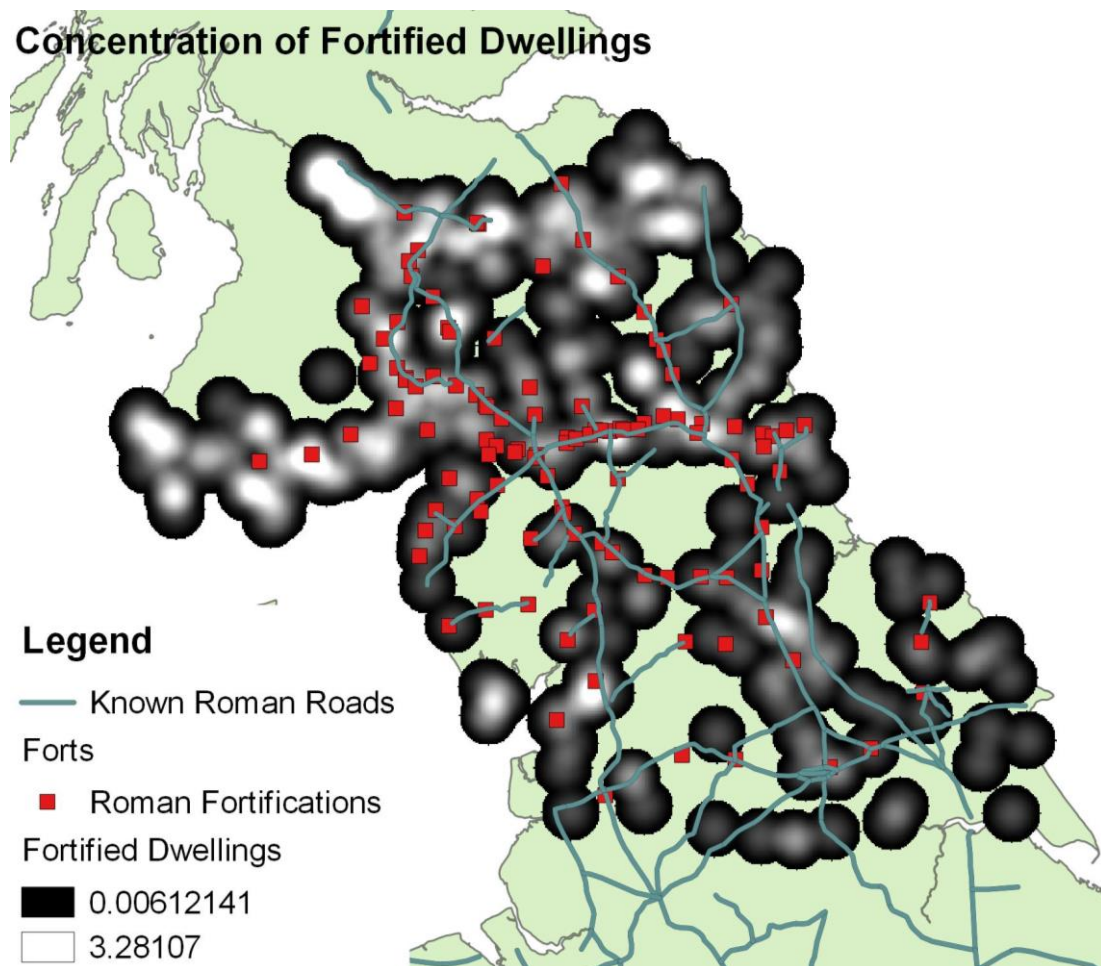


(Figure 57: Heat map of the fortifications in the project region).

Fortified Dwellings

The largest concentration of clustered fortified dwellings is in Glasgow and south east of the city to mid Scotland. In the east of Scotland there are two clusters of fortified dwellings in the area of Dun and Coldstream, west of Berwick Upon Tweed, both clusters are on the east side of the English/Scottish border. There is also a concentration of fortified dwellings along the south west coast of Scotland, up to the English/Scottish border near Carlisle. The most northerly concentration of fortified dwellings in England are located centrally along Hadrian's Wall and the Staingate, at Corbridge, Walwick and Greenhaugh areas and at Greenhead west of Haltwhistle. Further south in the project region there is a cluster of fortified dwellings around the area of

Catterick, Wennington north east of Lancaster the area around Barrow-In-Furness the peninsula of south Cumbria. The areas of clustered fortified dwellings display some areas to be correlated to locations of Roman fortifications such as the areas surrounding Corbridge, Catterick, Wennington, mid Scotland and some of the area of south west Scotland. The heat mapping of fortified dwellings therefore displays some areas that have Roman fortifications were re-used through historic periods, whereas other areas became increasingly important in the building of fortified dwellings such as Barrow In Furness, Berwick Upon Tweed and the south west Scottish coast (see figure 58).

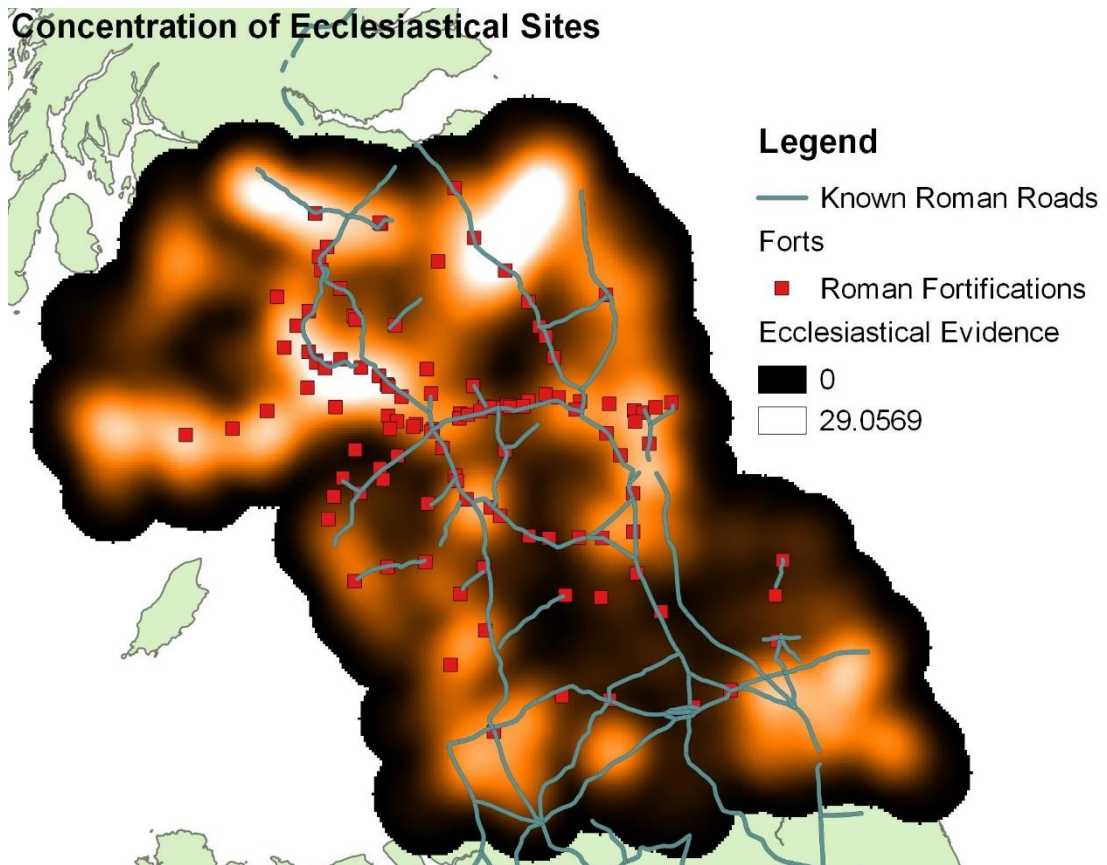


(Figure 58: Heat map of the fortified dwellings in the project region).

Ecclesiastical Sites

There are three large cluster concentrations of ecclesiastical sites, each located in Scotland in the shape of elongated bands, with two following Roman roads and therefore Roman fortifications. The furthest north concentrated

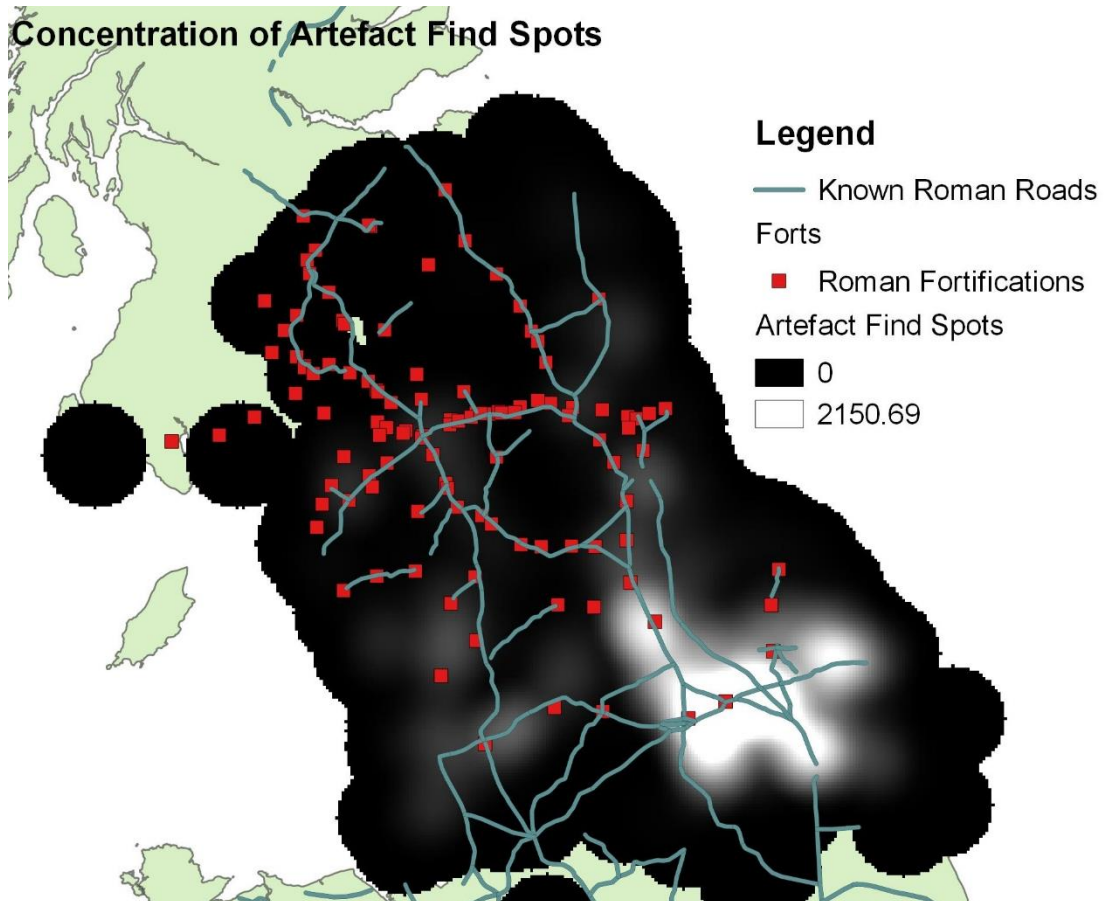
cluster is located in Glasgow and follows the modern road of A721 south east towards Peebles. The second concentrated cluster is aligned between Jedburgh and Eyemouth, aligned north east. The third concentrated cluster is in the south west of Scotland, following the modern roads of the A74 and the A76, this cluster is aligned north west from the English/Scottish border, concentrated around the modern towns of Dumfries and Lockerbie. There are a further four clusters that are less concentrated but still show significant areas of ecclesiastical sites clustered together. One is along the south west Scottish coastline from Dumfries to Stranraer, where there are 5 Roman fortifications located. The second is on the east coast of England, the area of Newcastle and south of the city to Bishop Auckland, incorporating 10 Roman fortifications surrounding and within this cluster area. The final two concentrations of ecclesiastical site clusters are located in the south west and south east of the project region, around the modern city of Preston (in the west) and within a triangle of the city of York and towns of Driffield and Beverley (in the east). The cluster areas of York, Driffield and Beverley, the furthest west area of the south west coast of Scotland and the area between Jedburgh and Eyemouth are all locations that do not hold Roman fortifications, or have known Roman roads. This heat mapping statistical data of ecclesiastical sites in the project region therefore displays a mix of Roman fortifications in the region being re-used, while 'new' areas have been explored and utilised for the construction of ecclesiastical sites in the region (see figure 59).



(Figure 59 Heat map of the ecclesiastical sites in the project region).

Artefact Find Spots

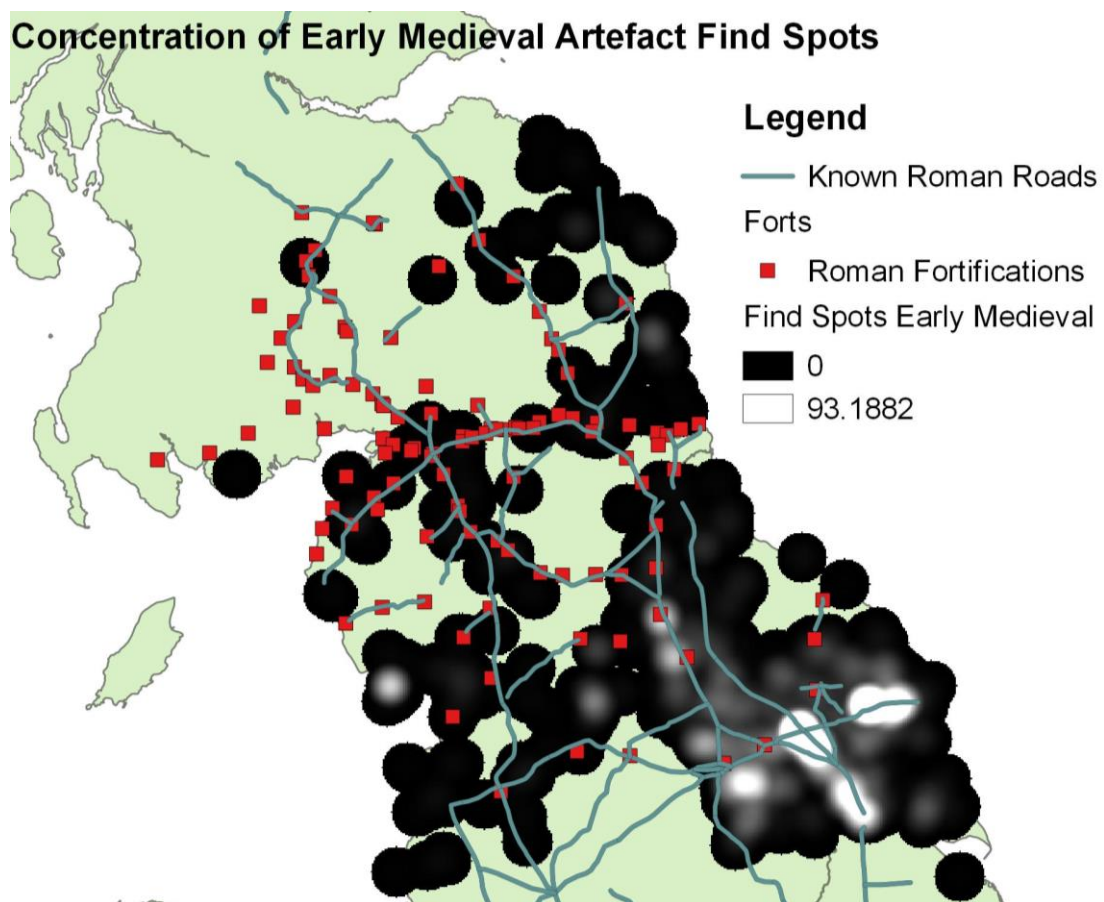
There is a high concentration of artefacts in the north Humber region, incorporating Healam Bridge, Malton, York and Newton Kyme Roman fortifications within this high artefact finds region. From the heat mapped evidence smaller clusters of artefacts can be traced with a spread being connected to the large concentration from Healam Bridge up the east side of the country to Learchild Roman fortification. Other clusters are around Carlisle, Lancaster and Ribchester Roman fortifications (see figure 60).



(Figure 60 Heat map of the artefacts in the project region).

Artefacts were broken down into Early Medieval and Medieval date, as per previous chapters, due to the amount of data, as can be seen in the above figure (60), and therefore a breakdown in the evidence will aid in seeing and understanding the spread and any concentration of artefacts. There are fewer Early Medieval statistical artefact finds for the region, with a concentration again in the north Humber area and less recorded finds the further north the project region is travelled. The cluster concentration of Early Medieval artefacts is located south of the Roman fortifications of Malton, York and Newton Kyme, connecting to the coastline of the River Humber. Lesser clusters can also be seen across the project region, a smaller cluster zone wraps the concentrated cluster zone of Malton, York and Newton Kyme and follows north up to Catterick. There is a small cluster between Burwen Castle and Bainbridge in the Pennines, with no Roman fortifications associated to the immediate area. There is also a smaller cluster concentrated in the area of Barrow, on the south Cumbrian peninsula. The final, most northern, and

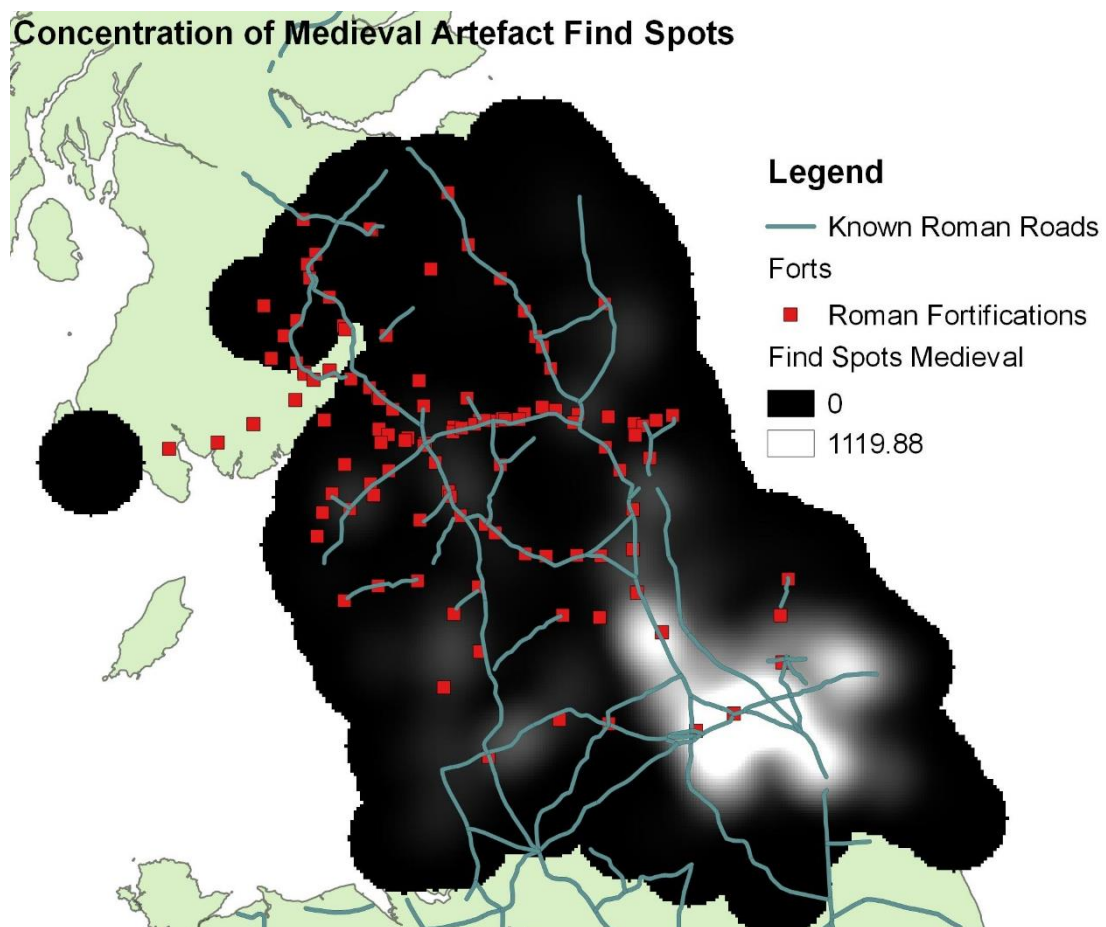
smallest cluster, is located south of Alnwick and aligned to the modern road of the A1, east of Dere Street. The west and south west of Scotland is the sparsest area of artefacts, with two small clusters around Kirkcudbright on the south west coast, having no Roman fortifications associated with the area, but located south east of the Gatehouse of Fleet. Also, the area around the modern town of Abington located along the A74(M), with three Roman fortifications connected to this cluster, Lamington, Wandel and Crawford has no artefact find spots (see figure 61).



(Figure 61 Heat map of the Early Medieval artefacts in the project region).

There is a significant amount of Medieval artefact finds, as discussed in earlier chapters of the Data Analysis. When these artefacts are viewed through Heat mapping they appear as a mass of small clusters across most of the project region. Once again, there is a significant concentration cluster in the north Humber area, surrounding the Roman fortifications of Healam Bridge, Malton, York and Newton Kyme. There are, also once again, smaller cluster concentrations in the project region. One being connected to the significantly

large cluster concentration, located from Healam Bridge to Chester-Le-Street, aligned along Dere Street. Another small cluster is located from Burwen Castle, Ribchester and up the modern road of the A6 to Watercrock. There are three other small clusters of artefact finds, one associated with the Roman fortification of Papcastle, one between the two Roman fortifications of Salkeld Gate and Park House and the final, and most northern one, is located between Carvoran and Learchild. This displays no heavy concentrations of artefacts clusters in Scotland (see figure 62).



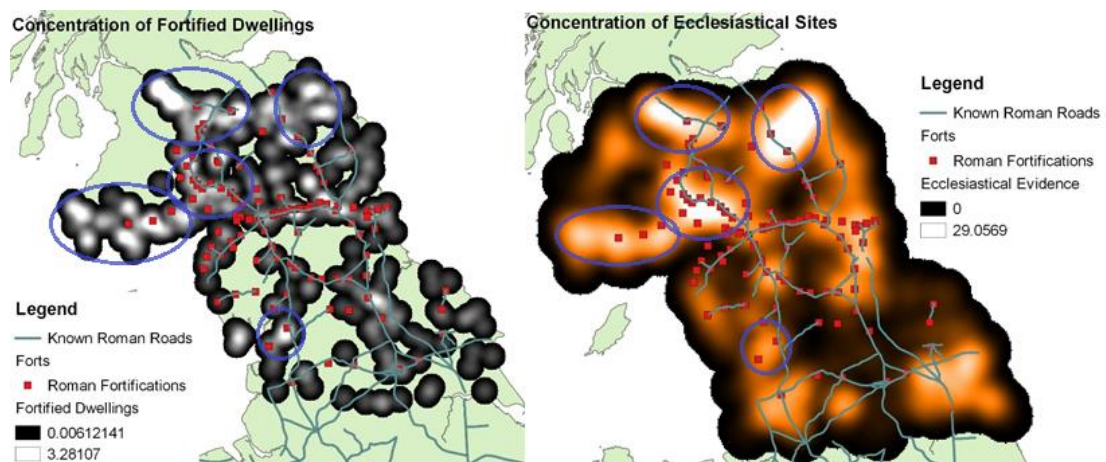
(Figure 62 Heat map of the Medieval artefacts in the project region).

Summary

Firstly, it is important to remember the amount of data being looked at within the project region. There are a total of 514 fortified dwellings, with 258 being located in England and 256 being located in Scotland, while there are a total of 1,333 ecclesiastical sites, with 675 being located in England and 654 being located in Scotland. Therefore both fortified dwellings and ecclesiastical sites

are evenly represented in the project region between both countries, however as discussed (see 4.2.1 Distribution of sites) it is important to remember the area of Scotland being represented in the project region is less than England and therefore the data provides evidence of a concentration for both fortified dwellings and ecclesiastical sites in the area of Scotland within the project region. The total amount of artefacts for the project region is 37,384, with 37,089 from the PAS and 295 from Canmore. While 3,431 (9.17%) are dating to the Early Medieval period and 17,953 (48.02%) are dating to the Medieval period. Therefore the artefact statistics being looked at through Heat mapping is biased towards a majority of English find spots.

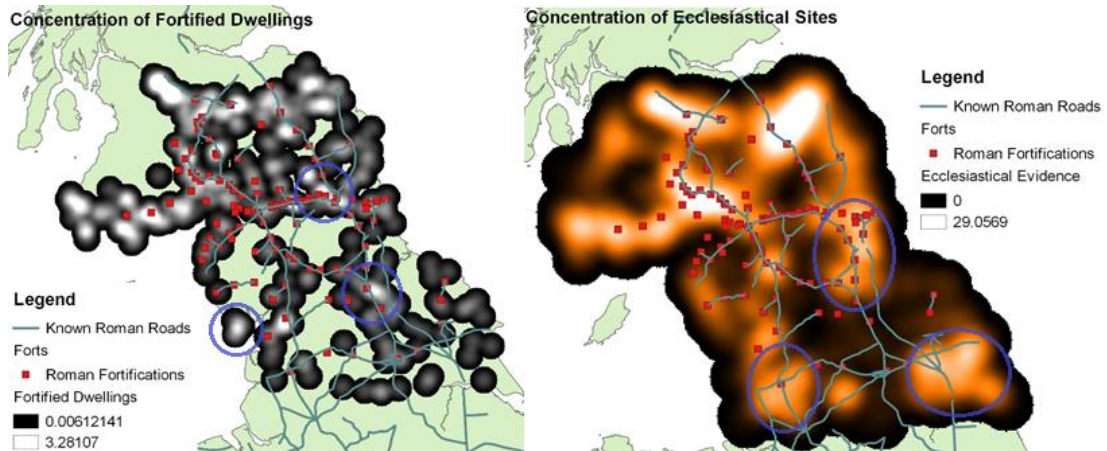
Patterns can be determined for landscape use through the heat mapping, areas of the project region can be seen to have been used for both types of architectural evidence; South east of Glasgow, south west Scottish coast, east Scotland border Jedburgh to Eyemouth, north east of Lancaster and south Scotland border region from Gretna Green to Sanquhar (see figure 63).



(Figure 63 Heat map of the fortified dwellings and ecclesiastical sites for comparison in the project region).

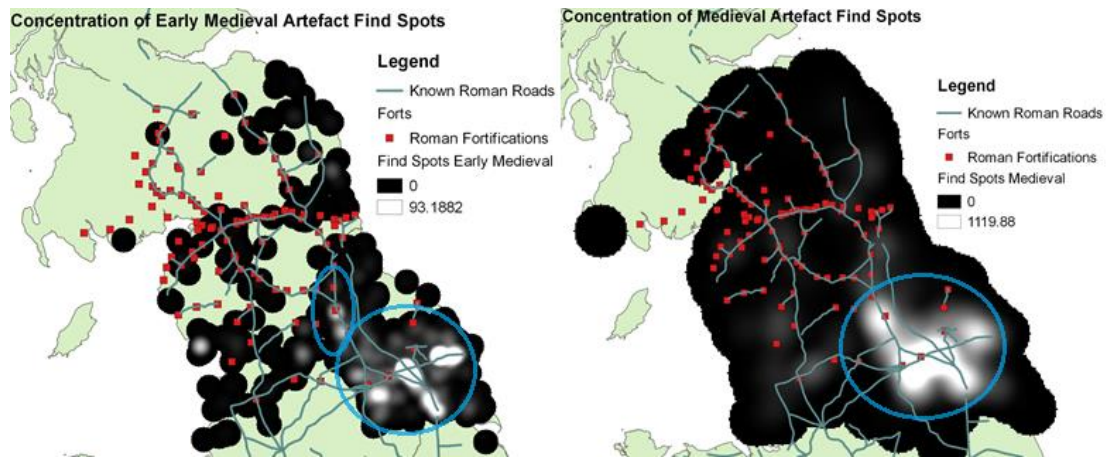
However the heat mapped evidence also displays areas of the project region where architectural evidence for fortified dwellings and ecclesiastical sites differ. Such as in the areas of Corbridge, Catterick and Barrow where there are more fortified dwellings than ecclesiastical sites. Also Preston, Newcastle to Bishop Auckland and the triangle of York, Driffield and Beverley have more

ecclesiastical sites than fortified dwellings, according to heat mapping evidence (see figure 64).



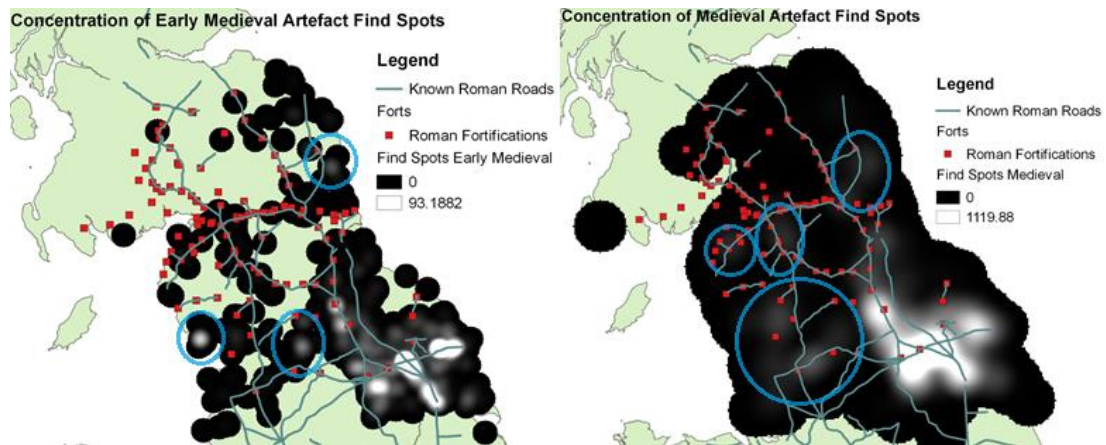
(Figure 64 Heat map of the fortified dwellings and ecclesiastical sites for comparison in the project region).

The artefact evidence is similar to the architectural evidence, in that similar locations can be seen with evidence over both periods as per the fortified dwellings and ecclesiastical sites. There are also some areas with evidence for only Early Medieval or Medieval artefact finds. The area north of the Humber and leading north to Catterick has a high concentration of clustered Early Medieval and Medieval find spots. This concentration continues in the Medieval period up to Chester-Le-Street. This high concentration, in comparison to the rest of the project region, is distorting the evidence for the rest of the project region, where registration of finds in this area maybe a high concentration (see figure 65).



(Figure 65 Heat map of the Early Medieval and Medieval artefacts for comparison in the project region).

However, there are more areas in these two historic periods where there are concentrations of one or the other historic period artefact finds, but not a concentration of both historic periods. The Early Medieval period displays concentrations of artefacts found between Burwen Castle and Bainbridge Roman fortifications, there are also two pockets of small concentrations in and around Barrow and Alwick. These pockets of small concentrated Early Medieval find spots are not connected to any Roman fortifications. The other Medieval period find spots where no Early Medieval find spots are recorded are along the region of Burwen Castle, Ribchester and Watercrock Roman fortifications, between Salkeld and Park House Roman fortifications, between Carvoran and Learchild Roman fortifications and around Papcastle Roman fortification (see figure 66).



(Figure 66 Heat map of the Early Medieval and Medieval artefacts for comparison in the project region).

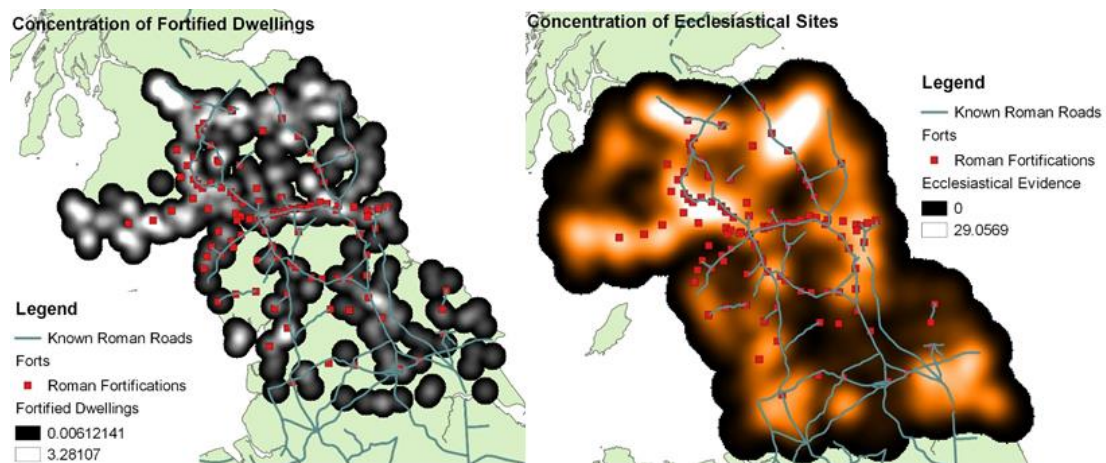
Heat mapping the volume of data displays the areas where there is concentrations of architectural and artefact evidence that is not connected to Roman fortifications. Areas such as the south west Scottish peninsula and the south east Scottish border, where both fortified dwellings and ecclesiastical sites are high in concentration. While the south Cumbrian peninsula is dominated by fortified dwellings, being a strategic place where fortified dwellings may be needed for defensive and offensive situations, in showing and maintaining the power of the said persons living at the dwelling (Thurley 2013, 102). The concentrated areas of Catterick, north east of Lancaster and the south Cumbrian peninsula would perhaps reflect trading and travelling areas having importance in the need for establishing a fortified dwelling, Catterick being strategically placed along Dere Street, north east Lancaster being placed along the modern A6 road. Both being areas of important routes for travelling, while the south peninsula of Cumbria having connections to sea trade and travel and therefore continent connections, such as Piel Castle, south of Barrow, where the monks of nearby Furness Abbey had been smelting iron as early as the 13th C, and therefore would need secure fortified residences in the vicinity to maintain and control movement of goods (Pevsner 1969, 55 & 189-190).

The ecclesiastical site evidence displays excessive concentrations in the Humber region and areas of Glasgow to Peebles aligned NW to SE, Jedburgh to Eyemouth aligned SW to NE, Carlisle to Lockerbie aligned NW to SE. There

were further moderate concentrations in the areas of Dumfries to Stranraer aligned W to E, Newcastle to Bishop Auckland aligned N to S, the Preston surroundings and a triangular area between and including York, Driffield and Beverley in the Humber region. These concentrations of ecclesiastical sites display the building of such sites in connection to communities, or that communities have risen up and been built around such ecclesiastical sites, which there will be a mixture of such types of foundation across the region, such as the Cistercian movement in the 12th Century which saw new monasteries being built in secluded locations (Thurley 2013, 92), or such as the establishment of new nonconformist places of worship in communities during the 17th and 18th Centuries (McNeil and Newman 2006, 156). From the wider evidence of ecclesiastical sites in the project region, it is evident that although a lot of Roman fortifications within 3 kilometres had been re-used through these means (78 of 113, being 69.02%), over the entire project region a substantial amount of ecclesiastical sites have been built (1,333 sites within the project region), therefore Roman fortifications are not the only locations sought out for ecclesiastical use. The heat mapping evidence substantiates this claim, with clusters of ecclesiastical sites in the regions of Jedburgh to Eyemouth, the furthest west point of the south west coast of Scotland and the triangular area of York, Driffield and Beverley are locations with no known Roman fortifications or roads and yet have a concentration of ecclesiastical sites.

This data displays evidence that Roman fortifications, or their immediate vicinities, were not always used or re-used through the historical periods and therefore the building material may not have been taken for re-use either. Simultaneously areas of the project region where there is a lack of evidence may be distorting the evidence also, it must be remembered that the artefact evidence is taken from the PAS and each area covered by the PAS may be different in their recording, productivity and outreach to the people who find such artefacts. If the north Humber high density of artefacts is taken out of the equation, then six areas display moderate concentration of artefacts. Dere Street around the areas of Catterick and up to Chester-Le-Street and Carvoran to Learchild, the mid Pennines around Burwen Castle, Bainbridge and

Ribchester, Papcastle area, the south Cumbrian peninsula and The A6 Park House to Salkeld Gate. Each of these regions have connections to Roman fortifications, except the south Cumbrian peninsula, which saw a cluster of ecclesiastical sites in the same area (see figure 67).



(Figure 67 Heat map of fortified dwellings and ecclesiastical sites for comparison in the project region).

5. Discussion

Introduction

The Data Analysis chapter approached the subject through statistics of architectural and artefact find spots and through spatial awareness of the Roman fortifications in relation to this data. Discussing this quantitative and qualitative data to illustrate the key evidence will be used in answering the project aim and set questions (see 1. Introduction). These questions will set the framework for the discussion of this data, drawing on the previous chapter to identify the historical use of Roman fortifications in the project region.

5.1 Question 1 – Statistical evidence

What evidence has been presented statistically in the use of the Roman fortifications and what do these statistics infer within the project region?

Architectural Evidence

Within 0.25 kilometres, 4 (3.54%) Roman fortifications have fortified dwellings and 12 (10.62%) have ecclesiastical sites, from 113 (89.38%) fortifications in the project region. This identifies less than a quarter percent of Roman fortifications have architectural evidence and therefore displays an

abandonment of the Roman fortifications and their immediate surroundings. Therefore not all Roman fortifications and their immediate areas have been continually used or re-used up to the end of the 18th Century. The evidence of use for the fortifications displays a majority of ecclesiastical sites dating to the 12th Century, being 50% of the ecclesiastical sites within 0.25 kilometres. The evidence for fortified dwellings for the 4 Roman fortifications all date to the 12th Century, except for Newcastle which has evidence dating prior to 1100 AD. Therefore 100% of the 4 Roman fortifications with fortified dwelling evidence displays an early or Norman foundation date for the structures, marking the possibility of a connection to prior masonry structures of Roman fortifications (see Literature Review) (see table 22).

Fortification	Fortified Dwelling	Ecclesiastical Site
Newcastle	Prior 1100 AD	18th C
Lancaster	12th C	12th C
Bowes	12th C	12th C
Crawford	12th C	
Brampton Old Church		12th C
Kirkpatrick-fleming		12th C
Parton		12th C
Ebchester		12th C
Ribchester		13th C
Piercebridge		13th C
Chester-Le-Street		13th C
Bewcastle		13th C
Stanwix		14th C

(Table 22: List of fortifications with evidence).

Within 3 kilometres of the Roman fortifications 58 (51.32%) sites had fortified dwellings and 78 (69.02%) had ecclesiastical sites from the 113 (30.97%) total. This identifies half to three quarter percent of Roman fortifications and their immediate areas have evidence of architectural historical use, the evidence summary displays a use or re-use for the majority of the Roman fortifications and their immediate surroundings, with up to a three quarter majority of such sites having evidence of use. Therefore a majority of half to three quarters of Roman fortifications and their immediate areas have been continually used or re-used up to the end of the 18th Century. The evidence of use for the fortifications displays a high concentration of ecclesiastical sites dating to the 12th Century, being 61.53% of the 78 ecclesiastical sites within 3 kilometres.

The evidence of fortified dwellings for the 58 Roman fortifications displays the highest proportion, a quarter of the fortified dwellings date to the 12th Century (25.86%), displaying a significant increase in building on the proximate area of Roman fortifications during the 12th Century. Therefore 25.86% of the known fortified dwellings dating to the 12th Century for 58 Roman fortifications with evidence displaying an increase in the use of these sites during the Norman period. Marking the possibility of a connection to prior masonry structures, on these locations, the prior buildings being Roman fortifications (see Literature Review), as did the evidence for fortified dwellings within a 0.25 kilometres buffer zone (see Appendix 3: Discussion, table 39).

Artefact Evidence

Within 0.25 kilometres of the Roman fortifications 3 (2.65%) fortifications have evidence of Early Medieval period finds, and 7 (6.19%) sites have evidence of Medieval period finds. This identifies less than one quarter percent of Roman fortifications and their immediate areas have evidence of historical use. 49.99% of these artefacts were discerned as easily transportable, and 42.87% were discerned as permanent fixtures and fittings.

Within 3 kilometres of the Roman fortifications 30 (26.54%) sites have evidence of Early Medieval period finds and 65 (57.52%) sites have evidence of Medieval period finds. This identifies between one quarter and half of Roman fortifications have finds evidence in their proximate area for Early Medieval and Medieval finds. 69.70% of these artefacts were discerned as easily transportable, and 22.59% were discerned as permanent fixtures and fittings.

Within 0.25 kilometres a minority of sites, less than one quarter of 113 Roman fortifications, have evidence for both historic periods, with less than half of the artefacts (42.87%) being distinguished as permanent fixtures and fittings. This statement also applies to evidence within 3 kilometres, where between one quarter and a half of 113 Roman fortifications, have evidence for both historic periods, with less than a quarter of the total artefacts (22.59%) for both historic periods being distinguished as permanent fixtures and fittings.

Abandonment of artefacts at sites provides added leverage of evidence for a sites use, this artefact data set therefore displays a minor to moderate use for the Roman fortifications in the projection region. With the moderate amount of Roman fortifications having evidence dating to the Medieval period within a 3 kilometre buffer zone (65 fortifications being 57.52% of the total 113), and the minor amount of Roman fortifications having evidence dating to the Early Medieval period within a 0.25 kilometres buffer zone (3 fortifications being 2.65% of the total 113).

This minor to moderate rating for the artefact evidence of the Roman fortifications in the project region highlights the availability of such evidence. The reader is reminded that the artefact evidence comes from the Canmore (2018) and PAS (2018), and therefore is a record of artefacts found and recorded onto such databases since the mid-1990s, therefore previous artefact finds and excavation records are missing from this public downloadable data. In consideration of this and knowing from such public downloadable data from Canmore (2018) and Historic England (2018) that 61 (53.98%) of the Roman fortifications have had excavations (see Appendix 7: Data Analysis, Archaeological Investigations), this artefact data from PAS (2018) does show a marginal use of the Roman fortifications within the project region, but cannot be used alone to conclusively prove this statement.

Summary

These patterns display the landscape surrounding Roman fortifications in the project region have up to three quarters of the sites utilised in architecture through their monumental legacies. Within 0.25 kilometres evidence displays more ecclesiastical sites in connection to Roman fortifications than fortified dwellings, 12 (10.62%) ecclesiastical sites within 0.25 kilometres and 78 (69.02%) ecclesiastical sites within 3 kilometres. This reflects studies and discussions on the connection between early established churches and known Roman sites, particularly Roman forts in the centuries following the Roman Empire abandonment in 410 AD (see chapter 2.6 Church Studies). However not all ecclesiastical sites are dated prior to 1100 AD; Newcastle ecclesiastical

site within 0.25 kilometres and South Shields, Washingwells, York and Watercrock ecclesiastical sites within 3 kilometres. These are the only Roman fortifications with evidence of ecclesiastical sites dating prior to 1100 AD. Therefore 5 Roman fortifications with ecclesiastical sites dating prior to 1100 AD out of 113 is not sufficient evidence (4.42%) to say that Roman fortifications have a strong connection to early ecclesiastical site foundation dates, but in the longevity of the fortifications use, the sites may be said to have been seen as a piece of land sufficient for building a religious structure.

To conclude the overall data displays a distinct pattern for ecclesiastical re-use of Roman fortifications within the two buffer zones of 0.25 kilometres and 3 kilometres, with the 12th and 13th Centuries being the most prominent periods of construction. Ecclesiastical sites dating to the 12th Century total 6 within 0.25 kilometres and 40 within 3 kilometres, while sites dating to the 13th Century total 4 within 0.25 kilometres and 26 within 3 kilometres. With the minor to moderate artefact evidence from the Early Medieval and Medieval periods, this would suggest when a Roman fortification has been used (10.59% within 0.25 kilometres and 69.29% within 3 kilometres), it is being re-used with a new purpose in mind from that of a military base.

This conclusion does need to be considered with source criticism (see Chapter 3.9 Source Criticism). Many ecclesiastical sites in these statistics have a foundation date of such dates of the 12th and 13th Centuries, however known archaeological investigations have noted that such foundation dates are of stone construction and there may have been an earlier established church on the same site made of different building materials, and such established foundation dates of the 12th and 13th Centuries are those that have been contemporary recorded and such records survives. Where archaeological reports could be used for such further study the conclusion of a connection to 12th and 13th Century ecclesiastical sites within a buffer zone of Roman forts may change and may increase the re-use known for the fort locations.

5.2 Question 2 – Spatial evidence

What evidence has been presented spatially in the distribution of the use of Roman fortifications within the project region?

Architectural Evidence

In collating the statistics there is one Roman fortification which has the highest concentration of architectural sites (8) within its 3 kilometre buffer zone, Beattock Barnhill, in Dumfries and Galloway (see Appendix: Roman fortification details, A6/74 sites). The fortlet is located north east of the village, which is situated along the M74 road, aligned north/south from the modern cities of Glasgow to Carlisle and has several other scheduled monuments and sites in the area surrounding the village. Beattock fortlet does not have any architectural evidence within 0.25 kilometres, however it does have 8 architectural sites within 3 kilometres; 3 fortified dwellings dating to the 13th, 16th Centuries and 1 of unknown date, and 5 ecclesiastical sites dating to the 12th, 13th, 17th, 18th Centuries and 1 of unknown date. These architectural sites display a majority of ecclesiastical sites (62.5%) over fortified dwellings (37.5%) for the fortlet at Beattock. On viewing these associated architectural structures the majority of them are located west and north of the Roman fortification, with one church to the south. Beattock Barnhill is not located close to any modern cities, and is south west of the town of Moffat, the fortification is located close to the River Annan and the main Roman road aligned north/south between Carlisle and Glasgow. Yet there are other sites where further locational benefits display the potential of such locations and have evidence of continued use from the Roman period. Coastal locations such as Newcastle (Breeze 2006, 144), higher ground to that of Beattock Barnhill such as Burnswark (Gifford 1996, 139), and locations where from the Roman period an economy have built up and a settlement formed such as York (Wenham 1972, 54) (see figure 67).

2 of the Roman fortifications have 6 architectural sites within 3 kilometres; Newcastle in Northumbria and Ladyward in Dumfries and Galloway.

Ladyward is similar to Beattock in that none of the architectural evidence is within 0.25 kilometres of the Roman fort. Ladyward is also located on the M74

road west of the town of Lockerbie and also has several scheduled monuments and sites in the area surrounding the town and fort. Ladyward has 2 fortified dwellings dating to the 12th and 13th Centuries, and 4 ecclesiastical sites dating 13th, 17th, 18th Centuries and 1 of unknown date. These architectural sites display a majority of ecclesiastical sites (66.67%) over fortified dwellings (33.34%) for the fort at Ladyward.

Newcastle fortification is located inland along the River Tyne, at the centre of the city of the same name, on Hadrian's Wall and within 10 miles of the East coast of England. Newcastle does have architectural evidence within 0.25 kilometres, a fortified dwelling dating prior to 1100 AD and an ecclesiastical site dating to the 18th Century. Within 3 kilometres Newcastle also has 1 other fortified dwelling dating to the 13th Century, therefore having 2 fortified dwellings within 3 kilometres in total. Newcastle also has another 3 ecclesiastical sites dating to the 12th, 14th and 17th Centuries, therefore having 4 ecclesiastical sites within 3 kilometres in total. These architectural sites display a majority of ecclesiastical sites (66.67%) over fortified dwellings (33.34%) for the fort at Newcastle.

Ladyward and Newcastle are not located close together, with Newcastle being a modern city and having evidence for continued use throughout the centuries, it is not surprising such a site has the evidence as discussed. Ladyward is located west of the modern town of Lockerbie along the Modern M74 and the Roman road, therefore the evidence of the site also is not surprising (see figure 68).

Spread of Roman Fortifications with a high amount of architectural evidence



(Figure 68: map displaying locations in the project region with high amounts of architectural evidence).

5 Roman fortifications have evidence of having 5 architectural sites within 3 kilometres; Stanwix, Easter Happrew, Dalswinton Bankhead, Dalswinton Bankfoot and Carzield are located close together along the A76 modern road, within 8 kilometres. Easter Happrew is located at the very beginning of the A6/74 for our project region, while Stanwix is located within north Carlisle, along Hadrian's Wall. Only Stanwix has evidence of 1 ecclesiastical site within 0.25 kilometres of the Roman fortification, dating to the 14th Century, while the rest of the architectural evidence for these sites are within 3 kilometres. Stanwix having 1 fortified dwelling dating to the 14th Century and 3 ecclesiastical sites dating 12th, 18th centuries and 1 of unknown date. Easter Happrew having 1 fortified dwelling dating to the 16th Century and 4 ecclesiastical sites dating 12th, 14th, 17th Centuries and 1 of unknown date. Carzield having 1 fortified dwelling dating to the 17th Century and 4 ecclesiastical sites dating 13th, 14th, 18th Centuries and 1 of unknown date. Dalwinton Bankhead and Dalswinton Bankfoot, being so close in proximity have the same architectural evidence of 1 fortified dwelling dating to the 17th Century and 4 ecclesiastical sites dating 15th, 16th, 18th Centuries and 1 of unknown date. Each of these sites have the same percentages of fortified

dwellings (1 at each location) 20%, and ecclesiastical sites (4 at each location) 80% (see figure 69).



(Figure 69: map displaying locations in the project region with high amounts of architectural evidence).

The spatial data for the Roman fortifications thus far displays the Roman fortifications with the most architectural evidence to be in Scotland, with Newcastle and Stanwix being the only fortifications with 6 and 5 (latterly) structural sites of re-use for the Roman fortifications. This may be due to two factors, the sites are continuously known after the Roman period and selected for re-use for a purpose of connectivity to the Roman Empire. Or with the sites being abandoned the knowledge of previous use no longer survives the human memory and the site is used a-new, with no known connection. The data displays a significant measure of the Roman fortifications, with more ecclesiastical sites, than fortified dwellings located within 3 kilometres. It should be noted that this data is for any architecture dating from prior to 1100 AD to the end of the 18th Century and therefore more communal ecclesiastical sites than fortified dwellings that would have been built for a single family unit may be expected, due to the communal use of such ecclesiastical sites.

The majority of Roman fortifications have either 2 or 1 sites of architectural evidence within 3 kilometres; 25 Roman fortifications having 2 types of

architectural evidence, and 24 Roman fortifications having 1 type of architectural evidence. Of the 25 Roman fortifications with 2 sites of architectural evidence there are 2 Roman fortifications with only fortified dwelling evidence; Watercreek having 1 dating prior to 1100 AD and 1 dating to the 12th Century, and Moat of Lochrutton having 1 dating to the 16th Century and 1 with an unknown date. These 2 Roman fortifications are 8% of the total 25 Roman fortifications with 2 sites of architectural evidence within 3 kilometres. Of the 25 Roman fortifications with 2 sites of architectural evidence there are 6 Roman fortifications with only ecclesiastical site evidence; Piercebridge having 1 dating to the 13th Century within 0.25 kilometres, and 1 dating to the 12th Century. Ebchester having 1 dating to the 12th Century within 0.25 kilometres and 1 dating to the 13th Century. Cappuck having 1 dating to the 18th Century and 1 with an unknown date. Kirkland having 1 dating to the 17th Century and 1 with an unknown date. Binchester having 1 dating prior to 1100 AD and 1 dating to the 13th Century. Raeburnfoot having 1 dating to the 14th Century and 1 dating to the 18th Century. These 6 Roman fortifications are 24% of the total 25 Roman fortifications with 2 sites of architectural evidence within 3 kilometres.

Of the 25 Roman fortifications with 2 sites of architectural evidence there are a majority of 17 Roman fortifications that have evidence for both fortified dwellings and ecclesiastical sites. 2 of these Roman fortifications have architectural evidence within 0.25 kilometres; Bowes having both fortified dwelling and ecclesiastical site and Kirkpatrick-fleming having an ecclesiastical site (see table 23).

Roman Fortification	Fortified Dwelling	Ecclesiastical Site
Washingwells	Prior 1100 AD	12th C
South Shields	Prior 1100 AD	18th C
Bowes	12th C (within 0.25 Km)	12th C (within 0.25 Km)
Burgh-by-Sands	12th C	12th C
Amberfield	12th C	12th C
Castledykes	12th C	12th C
Maryport	12th C	18th C
Haltonchesters	13th C	12th C
Newton Kyme	13th C	12th C
Carrowburgh	13th C	13th C
Netherby	13th C	18th C
Lantonside	13th C	Unknown
Birdoswald	14th C	12th C
Throp	14th C	12th C
Kirkpatrick-fleming	16th C	12th C (within 0.25 Km)
Wandel	17th C	13th C
Papcastle	Unknown	18th C

(Table 23: List of sites with evidence).

These 17 Roman fortifications are 68% of the 25 fortifications that have 2 sites of architectural evidence, however reviewing the foundation dates of these architectural sites there does not seem to be any patterns of re-use for Roman fortifications and foundation dates. The Roman fortifications of Bowes, Burgh-By-Sands, Amberfield and Castledykes all have a fortified dwelling and ecclesiastical site dating to the 12th Century. As each of these Roman fortifications are spread across the project region and therefore not connected in distance and more than likely ownership, it can be assumed as English and Scottish lords and Monarchs establishing their rule in these areas, and not as part of a wider campaign of dominance, and therefore where a fortified dwelling is built people live and therefore need somewhere to practice their religion

communally. However, not all of these Roman fortifications have fortified dwellings built first, 6 fortifications are known to have had an ecclesiastical foundation within 3 kilometres of them prior to any fortified dwelling being built: Birdoswald, Throp, Kirkpatrick-fleming, Haltonchesters, Newton Kyme and Wandel. Therefore 35.29% of these 17 sites with both fortified dwelling and ecclesiastical site displays that while ecclesiastical sites may dominate the statistical evidence for use of Roman fortifications, when viewing the data historically and geographically it appears that ecclesiastical sites following, or are jointly constructed with fortified dwellings at Roman fortification sites.

24 Roman fortifications have evidence for only 1 type of architectural site within 3 kilometres, 6 (25%) having fortified dwellings and 18 (75%) having ecclesiastical sites. This evidence shows an over whelming amount of singular architectural evidence, having ecclesiastical sites and therefore displaying evidence for the theory of churches being sited within, or connected to abandoned Roman fortifications, with the over whelming majority of these sites in discussion having 12th and 13th Century foundation dates (see table 24).

Fortified Dwelling	Date	Ecclesiastical Site	Date
Cawthorn	12th C	Rudchester	Prior 1100 AD
Carvoran	14th C	Benwell	12th C
Beckfoot	14th C	Wallsend	12th C
Burrow Walls	14th C	Nethern Denton	12th C
Milton	16th C	Kirkby Thore	12th C
Healam Bridge	Unknown	Risingham	12th C
		Great Chesters	13th C
		Haltwhistle Burn	13th C
		Whitley Castle	13th C
		Bladnoch	13th C
		Lanchester	13th C
		Murder Loch	13th C
		Bewcastle	13th C (within 0.25 Km)
		Chester-Le-Street	13th C (within 0.25 Km)
		Durisdeer	17th C
		Catterick	Unknown
		Malton	Unknown
		Barburgh Mill	Unknown

(Table 24: List of sites with evidence).

Artefact Evidence

The 3 (2.65%) Roman fortifications with Early Medieval artefact evidence within 0.25 kilometres are Newton Kyme, Chesterholm and Lancaster. The 7 (6.19%) Roman fortifications with Medieval artefact evidence within 0.25 kilometres are Watercrock, Boothby Castlehill, Beckfoot, Papcastle, Kirkby Thore, Catterick and York. The 30 (24.39%) Roman fortifications with Early Medieval artefact evidence within 3 kilometres are listed below (see table 25).

Burgh by Sands	Castrigg	Healam Bridge
Amberfield	Wensley	Newton Kyme
Castlesteads	Burwen Castle	Cawthorn
Housesteads	York	Malton
Chesters	Beckfoot	Wandel
Haltinchesters	Old Carlisle	Park House
Brampton Old Church	Risingham	Brougham
Chesterholm	Binchester	Watercrock
Corbridge	Piercebridge	Lancaster
Papcastle	Catterick	Ribchester

(Table 25: List of sites with artefact evidence).

The 65 (57.52%) Roman fortifications with Medieval artefact evidence within 3 kilometres are listed below (see table 26).

Burgh by Sands	Washingwells, Whickham	Ambleside	Malton
Amberfield	Papcastle	Old Carlisle	Lamington
Stanwix	Kirkby Thore	Caermote	Broadlea
Castlesteads	Castrigg	Oxton	Netherby
Great Chesters	Brough	Newstead	Park House
Chesters	Bowes	Learchild	Old Penrith/Plumpton
Haltinchesters	Greta Bridge	High Rochester	Salkeld Gate
Rudchester	Bainbridge	Ebchester	Brougham
South Shields	Wensley	Chester-le-Street	Low Borrowbridge
Kirkbride	Burwen Castle	Lanchester	Watercrock
Carlisle	Ilkley	Binchester	Burrow-By-Burrow
Brampton Old Church	York	Piercebridge	Lancaster
Boothby, Castle Hill	Beckfoot	Catterick	Ribchester
Haltwhistle Burn	Maryport	Healam Bridge	Sanquhar
Chesterholm	Burrow Walls	Newton Kyme	Durisdeer
Corbridge	Parton	Lease Rigg	
	Ravenglass	Cawthorn	

(Table 26: List of sites with Medieval artefact evidence).

There are 48 (42.47%) fortifications that have no evidence for artefact find spots within 3 kilometres, and their locations within the project region also need to be reviewed (see table 27). 42.47% of the fortifications without any artefact evidence displays the majority of the fortifications, certainly within 3 kilometres have evidence and therefore half to three quarters of the fortifications have a majority of use.

Bowness on Solway	Glenlochar	Beattock, Barnhill
Drumburgh	Moat Of Lochrutton	Milton
Birdoswald	Lantonside	Raeburnfoot
Carvoran	Hardknott	Ladyward
Housesteads	Blennerhasset	Burnswark
Carrowburgh	Oakwood	Birrens
Benwell	Cappuck	Kirkpatrick-fleming
Newcastle	Chew Green	Broomholm
Wallsend	Blakehope	Bewcastle
Nether Denton	Risingham	Drumlanrig
Throp	Easter Happrew	Kirkland
Whitley Castle	Lyne	Barburgh Mill
Troutbeck	Castledykes	Dalswinton, Bankhead
Maiden Castle	Wandel	Dalswinton, Bankfoot
Bladnoch	Crawford	Carzield
Gatehouse Of Fleet	Redshaw Burn	Murder Loch

(Table 27: List of fortifications with artefact evidence within 3 kilometres).

Summary

The data through historical timescales displays a majority of ecclesiastical sites being placed within 3 kilometres of Roman fortifications and a lack of evidence for known use within 0.25 kilometres of Roman fortifications for either type of architectural evidence. The spatial evidence of the locations for these Roman fortifications with data does not display a relationship between these Roman fortifications with architectural evidence, nor connections across the landscape and project region. Therefore it would be astute to conclude that there are no patterns in overall use of Roman fortifications and that it is on an individual basis whether the fortifications have been continued in use, or re-used through the centuries up to the end of the 18th Century. Also the overall evidence displays a majority of re-use for the Roman fortifications as ecclesiastical use.

The spatial evidence also needs to be understood within a geographical content, locational evidence for re-use was more abundant in urban areas where Roman forts have been built and the topography of the area has been re-used through the centuries, such as Carlisle, Newcastle, York and Lancaster. Whereas the Roman forts in modern rural areas have less evidence of the geographical location being re-used, such as Hardknott, Whitley Castle, Ilkley, Easter Haprew and Sanquhar Roman forts. This evidence bias is also due to the relative amount of archaeological investigations completed on such sites, for example Lancaster Roman fort is situated on the same location as the castle, at the centre of the city and therefore archaeological excavations have taken place due to community digs and building work regulations (Historic England 2018). Whereas Hardknott Roman fort is on Hardknott Pass, which does not need to be travelled by many people, and therefore is in a remote part of the Lake District National Park. Archaeological investigations on such a site have therefore been less than Lancaster Roman fort, with the most recent archaeological investigations being conservation work, surveys and post graduate dissertation evaluations within the last 50 years (Heritage Gateway 2012).

The statistics from the two public downloadable data sets summaries a majority (57.53%) of evidence within a 3 kilometre buffer zone for artefact find spots within the project region, with a mixture of these Roman forts and their evidence being in urban and rural settings (see table 27). The evidence for artefact finds within the buffer zone of 0.25 kilometres (8.84% for both Early Medieval and Medieval finds) was a less significant amount of evidence for conclusion however. This evidence, or lack of, is again for geographical reasons, within the project region we have National and forest parks, where metal detecting rules are restricted. These locals are also different topography and settings to low land areas, with forests and pasture land rather than arable fields (see Chapter 3.9 Source Criticism), making metal detecting and landscape surveying less likely.

5.3 Question 3 – monument re-use evidence

What do these pieces of evidence reflect with regards to archaeological studies of monument re-use?

Architecture

0.25 kilometres

The data displays within 0.25 kilometres more ecclesiastical sites were placed upon Roman fortifications than fortified dwellings, with the majority of sites (6) having ecclesiastical sites dating to the 12th Century. However, 109 fortifications have no fortified dwellings and 101 fortifications have no ecclesiastical sites, making the case for abandonment of Roman fortifications a pre-eminence. It should be added that where architecture has been placed in connection to Roman fortifications that re-use has taken place for ecclesiastical sites in the 12th century, with the 13th century also having new ecclesiastical buildings built within 0.25 kilometres of Roman fortifications (see table 28).

3 kilometres

The data displays within 3 kilometres more ecclesiastical sites were placed upon Roman fortifications than fortified dwellings, with the majority of sites (40) having ecclesiastical sites dating to the 12th Century. However, 9 fortifications have fortified dwellings of unknown date and 19 fortifications have ecclesiastical sites of unknown date, therefore representation of the true amount of architectural evidence for Roman fortifications is not expressed through this data. Also, 55 fortifications have no fortified dwellings and 35 fortifications have no ecclesiastical sites, making the case for abandonment one quarter to half that of 0.25 kilometres buffer zone of Roman fortifications. The 12th and 13th Centuries for both fortified dwellings and ecclesiastical sites is when the majority of these buildings have been constructed, with a surge of ecclesiastical sites also being built in the 18th Century. Within 3 kilometres the case for how these monuments have been historically used determines the majority of sites being re-used, specifically in the 12th and 13th Centuries for both fortified dwellings and ecclesiastical sites, and with a resurgence of re-use again in the 18th Century for ecclesiastical sites (see table 28).

Artefacts

Within 0.25 kilometres there is less than a quarter of the Roman fortifications with evidence of artefact find spots and within 3 kilometres a quarter to a third of the fortifications have evidence of artefact find spots. In both buffer zones the Early Medieval period does not reflect a continuation of use through the data for a majority of the sites and would therefore be determined as abandoned, with only a small minority of the sites within the project region to have evidence of artefact loss and therefore possibly use of the site. The evidence for the Medieval period within 3 kilometre buffer zones determines a probable re-use of such sites, with a 57.52% artefact find spots (see table 28).

0.25 kilometres			
Historic Period:	Roman Fortifications with evidence	Percentage	Total pieces of evidence
Early Medieval	3	2.65	3
Medieval	7	6.19	11
3 kilometres			
Historic Period:	Roman Fortifications with evidence	Percentage	Total pieces of evidence
Early Medieval	30	26.54	108
Medieval	65	57.52	760

(Table 28: list of statistics for totals of artefacts within 0.25 kilometres).

Fishers Test

The Fisher's Testing was ran and determined a significance between data nodules at a 3 kilometre buffer zone, for fortifications with and without; fortified dwellings and ecclesiastical sites, and fortified dwellings, ecclesiastical sites and artefacts (see Appendix 2: Data Analysis Tables, Fishers Exact Test). This outcome reflects in data discussed in this chapter and therefore determines monuments can be connected through their re-uses, in a statistical aspect. This test outcome also determines that the data reviewed through these chapters has been correct to statistical analysis for the wider buffer zone

of the Roman fortifications. Unfortunately the rest of the exact tests that were ran were not significant data nodules for the parameters, which also does reflect in the data discussed thus far, with 0.25 kilometres buffer zone having less statistical information than 3 kilometres and no locational connections of the sites.

Summary

The statistics of these Roman fortifications and their historical uses can determine how such monuments were continued in use or re-used and why. Monument re-use studies for Roman fortifications concentrate on Early Medieval ecclesiastical connections (Rodwell 1984, Morris and Roxan 1980, Brooke 2000, Newman 2006, Bell 1998) or Norman military tactical use of the landscape connections (Prior 2006, Rowley 1997, Newman 2006, Thurley 2013 Hingley et al 2012), due to these two types of architectural buildings being seen as connected to forts in the landscape. This question will address the evidence found through this study and if this data can provide a clear cut continuation, re-use or abandonment of Roman fortifications and their immediate areas in their post Roman period afterlives (see Appendix 3: Discussion, table 40).

It is firstly important to remember that there is a total of 514 fortified dwellings and 1,333 ecclesiastical sites spread across this project region, therefore a majority of ecclesiastical sites may unbalance the data on review. The theoretical consensus of how Roman fortifications have been used through their historical time periods, as monuments, is of early Christian ecclesiastical sites, for physical connections to the Roman church, or through re-use as military sites for fortified dwellings in the High Medieval period for controlling a landscape (see 2. Literature Review).

This data displays monument re-use over these historic periods have been used for ecclesiastical use, but Medieval rather than Early Medieval. However it is important to remember the source criticism on the statistics from the public downloadable data sets (see Chapter 3.9 Source Criticism). If archaeological investigations and evaluations were added to this thesis, the results may show

a different pattern of Early Medieval ecclesiastical sites being established in connection to Roman fort locations, and thus verifying theoretical discussions of a known Early Medieval physical Roman connection to fort locations by the Roman church (see Chapter 2.6 Church Studies).

The data also displays re-use for fortified dwellings in the High Medieval period, displaying the connection for military use for both types of Roman and Norman monuments on the fort site locations. This evidence does corroborate theoretical discussions on Norman re-use of Roman fortification sites and how this project region continued to be an Anglo/Scottish border with disputed land and Marshes after the Roman period had ended (see Chapter 2.5 Castle Studies). There is an important point to note however that not all Roman fortification sites in this project region do have a locational connection to fortified dwellings, with 43.30% of Roman fortifications within a 3 kilometre buffer zone not having any connected fortified dwellings. Therefore the geographical location of such Roman fortifications may have been a reason why 56.70% have evidence of re-use in the High Medieval period, with topography, waterways, fresh water sources and road systems most likely being important in the locational re-use of the Roman fortifications for fortified dwellings.

Artefact find spots also display a Medieval re-use of the Roman fortifications within a 3 kilometre buffer zone, displaying a wider connection and re-use of the landscape of a monument. It is determined that from this data that abandonment of such monument sites over rules re-use and continuation of such monuments, with re-use of Roman fortifications as monuments in the landscape being chosen for siting ecclesiastical sites and fortified dwellings at these locations for a small minority of the Roman fortifications, particularly within a 3 kilometre buffer zone (see Appendix 3: Discussion, table 40). Discussions on reasons for artefact find spots again should be noted with this conclusion (see Chapter 3.9 Source Criticism), with the data having a significantly increased amount of statistics for the Humber region, more than likely due to metal detecting rules of allowance, low arable land for such metal detecting to be carried out and within this particular Humber region no National or Forest parks.

With these final conclusions of the data in mind, and theories of re-use for monuments in their landscape setting (see Chapter 2. Literature Review), the Fisher's Test which was carried out does reflect on the same connections as per the statistics and their buffer zones used in this thesis. Within 3 kilometre buffer zones for Roman fortifications the data for Roman fortifications with and without evidence does reflect on a connection to a wider adoption of the location of a monuments landscapes for re-use. Therefore statistical tests corroborate the evidence of re-use for monuments and their re-use within their landscape settings.

6. Conclusion

6.1 Project summary

The data has identified that the maximum amount (78, 69.02%) of evidence is for ecclesiastical sites in connection to Roman fortifications within 3 kilometre buffer zones, with the majority (22.72%) being of 12th Century date. Also within 3 kilometres a little over half of the artefacts to be found in proximity to Roman fortifications (65, 57.52%) are Medieval in date. Finally, within 3 kilometres there is just over half of the Roman fortifications that have evidence of fortified dwellings within 3 kilometres (58, 51.32%), with the majority being of 12th and 13th Century date (15, 11.81% for 12th Century and 13, 10.23% for the 13th Century). An overall majority of abandonment is present however, for the immediate area of Roman fortifications within 0.25 kilometre buffer zones (96.47% for fortified dwellings and 89.38% for ecclesiastical sites). A significant key pattern of utilisation for Roman military sites is in their re-use in the 12th and 13th centuries for ecclesiastical buildings. The same evidence spatially did not discern any key patterns of distribution re-use across the project region, but did show a majority of fortifications having more than one type of architectural evidence.

This project therefore concludes that a significant amount of Roman fortifications have evidence of utilisation in the High Medieval period (12th and 13th Centuries), with re-use evidence being more abundant than continued

use. The entirety of recorded ecclesiastical sites (1,333) and fortified dwellings (514) in the area, display that within the project region, 4 fortified dwellings and 12 ecclesiastical sites are connected to Roman fortifications within 0.25 kilometres. Therefore the majority of these structures are not related to Roman fortifications whatsoever and abandonment and coincidence for use of the areas perimeter therefore rule the majority of Roman fortifications, unlike theory discussion of re-use for connections to the Roman Empire's symbolism and power for both ecclesiastical and military operations (Morris and Roxan 1980; Rodwell 1984; Thurley 2013 and Prior 2006). The evidence presents the landscape of the Roman fortifications being more significant than the fortification buildings themselves, with 69.02% of fortifications having evidence of utilisation for ecclesiastical sites and 51.32% of the fortifications having evidence of utilisation for fortified dwellings within 3 kilometres. Whereas less than a quarter of the Roman fortifications have evidence for utilisation for both ecclesiastical sites (10.61%) and fortified dwellings (3.53%) within 0.25 kilometres (see chapter 2. Literature Review). In summary the aim of the project (to investigate and identify the historical use of Roman fortifications in the project region and to draw conclusions on the sites post Roman use), with the set project questions, indicated that the statistical evidence concludes on the wider proximity (3 Kilometres) of a Roman fortification will have more evidence of use, with that evidence being a majority of ecclesiastical sites over fortified dwellings, and with more artefacts being found in a wider buffer zone in relation to the Roman fortification. Whereas the close proximity (0.25 kilometres) has a much less significant amount of utilisation evidence for both ecclesiastical sites and fortified dwellings (see chapter 4. Data Analysis). This finding, of more evidence for the wider buffer zone of 3 kilometres, may not be surprising, the wider the parameters of statistical collection points, the more data may be collected. However, it is important to remember that the widest buffer zone is only 3 kilometres and that approximately 10 fortifications (Stanwix, Carlisle, Newcastle, South Shields, Wallsend, Benwell, Chester-le-Street, Lancaster and York) of the 113 total, are located under modern densely urban areas, being 8.84% of the fortifications reviewed in this project (see Appendix: Roman fortification details), therefore barely any of these sites can be said to be in close proximity to modern urban locals. The patterns in site

distribution and geographic evidence (see Appendix 7: Data Analysis, Geographical Evidence) conclude to a connection between sites and the importance of connection to fresh waterways, and high ground. Which was determined through the placement of the initial Roman military fortification and displays an acknowledgement of needing these facilities at a site for comestibles and combatant reasons.

This evidence is important for the archaeological record as it firstly correlates with theoretical studies so far discussed for Roman monument re-use (Morris and Roxan 1980; Rodwell 1984; Hingley et al 2012 and Prior 2006). In that there is a majority of evidence for ecclesiastical re-use for some Roman fortifications in the project region and that the proximate area of many Roman fortifications has also been re-used by fortified dwellings. So a Roman church connection has sought Roman monuments for that power connection, while fortified dwellings have sought the optimum defensive topographic location, which was previously used for Roman fortifications. An affluence of masonry material within proximity from the Roman fortification may have also helped for the fortified dwellings or ecclesiastical sites, as discussed previously (see chapter 2. Literature Review, 2.4 Monument Studies). With ruins of previous occupations being seen in the landscape centuries after initial use, and their known connection to an intellectual and cultural legacy (Thurley 2013, 2; Hingley 2008, 333). Making known Roman sites important positions culturally and practically within their landscape setting and leaving a lasting legacy for re-interpretation. This connection of landscape and position, or space and place as Tuan (1977) discusses the concept, presents these Roman fortifications through their lasting legacy, monumentality and perspective (Owoc 2008, 68). Therefore providing understanding as to why half to three quarters of fortifications do have evidence of use within 3 kilometres, displaying the wider area of a site is important. The Fishers Exact test determined that there was a statistical connection to the data nodules of fortifications with or without; fortified dwellings and ecclesiastical sites; and fortified dwellings, ecclesiastical sites and artefacts. This significant testing determines for a wider landscape, 3 kilometre, buffer zone of Roman

fortifications that the data is relevant to each category and therefore results discussed do have a relevance to the outcome of a monuments re-use in the landscape. The data is important as it concludes the majority of Roman fortifications were initially abandoned and re-used heavily in the 12th and 13th Centuries by both fortified dwellings and ecclesiastical sites, with the latter being more dominant in their re-use of Roman fortifications. The project has therefore helped understand the wider studies of Roman fortifications and their heritage of monument re-use.

6.2 Project Interpretation and Evaluation

This project intended to understand the use of Roman fortifications from 410 AD to the end of the 18th Century, in order to establish an understanding of how these sites were used in their afterlife. A project region was chosen to carry out these investigations and to enable a representation of Roman fortifications and their historical uses within Great Britain. The project aim and questions investigated patterns of use in site distribution for Roman fortifications and associated fortified dwellings, ecclesiastical sites and artefact find spots within distal inclusion zones. This connection of unrelated types of monuments from different historical periods, and their relationships to one another in the landscape, had not previously been examined in a detailed statistical matter. Therefore this project brought existing theoretical discussions of fortified dwellings, ecclesiastical sites and artefact locations together to review a particular type of monument and its re-use. Focusing on understanding the historical relationship between these monuments and their locals, with the significance of the data indicating moderate patterns of re-use for Roman fortification sites. The Roman fortifications of the project region were evenly distributed, and through Roman military studies it was known prior to carrying out this project that the Roman military standardised sites, layouts and distances between these military establishments (James 2002, 2-3).

The Data Analysis Chapters indicated a wider re-use of the Roman fortifications within the 3 kilometre buffer zones, principally through a new use by ecclesiastical sites (Petts 2003, 168; Bell 1998, 2). Displaying the

connection of Roman military sites with ecclesiastical sites of Norman foundation. However the Data Analysis Chapters also determined the closer proximity, of 0.25 kilometres, of a Roman fortification will be more than likely not re-used with the maximum of 11.50% of the sites having evidence for re-use. Therefore presenting evidence that the landscape of a Roman fortification is the important point to the sites re-use, rather than the immediate fortification structure and that abandonment outweighs continued use. The spatial information of the fortifications displays many of the Roman fortifications to have more than one architectural structure and types of artefacts within 3 kilometres, reiterating the variety of multiple uses for the sites. The geographical locations of the fortifications are spread across the project region, with no significant clusters of localised fortifications being re-used. Therefore geographical reasons can be determined as to why some fortifications have been used and others not so, with 84 fortifications being located on lower ground and 64 being within 0.25 kilometres of a fresh waterway (see Appendix: Roman fortification details).

Through Roman studies it is known that fortifications were built in strategic places, where a heavier military presence was needed more fortifications were built, with communication systems in place to aid controlling the landscape and the communities. In north England and south Scotland an increase of fortifications were built, in comparison to the rest of Great Britain, for border control reasons (English Heritage 2011, 5). This systematic fortifying of this border control zone continued through the historical periods, magnifying in the 12th and 13th Centuries as per the data displays. However the statistical evidence from this project determines a different use for these Roman military establishments, taking into account the re-use of the available masonry on site and their geographical locations, of locational route ways, fresh waterways and topographical points in the landscape. Ecclesiastical establishments and their connections to Roman fortifications have been studied, and the statistics from the project would concur with these theoretical discussions of Roman military establishments and their re-use in later centuries for non-military purposes. With the Roman church of the 12th and 13th Centuries perhaps wanting to establish a connection to the memory of Roman elites, policy and power, and

therefore seeking the agency of previous Roman buildings (Bell 1998, 5; Walas 2015, 31; Wilson 2011, 3).

6.3 Limitations and areas of improvement

The quantity of the data meant that limitations had to be in place when sorting the data into categories within the set parameters of the time scale for the project. Statistically the time period between 410 AD and 1066 AD possessed less sites and artefacts dating to the Early Medieval period, which in itself confined the project in the categorisation and understanding of continuation rather than re-use of sites. Bringing the excavation reports into the project would aid understanding for the Roman fortifications and their uses in this early period named as, Prior to 1100 AD. This project would be of benefit for many disciplines within British and European archaeology, such as; Roman military, post Roman, historical mapping and the agency of monuments in the landscape.

6.4 Future research

If this project could be developed further, at a higher educational level, then the project would be valuable in aiding the archaeological record in regards to specific monument re-use studies for Roman fortifications. Further studies could incorporate more detailed reviews of data analysis such as Ripley K and L testing, the inclusion of excavation reports and a more detailed breakdown of the statistics. These would aid in reviewing and understanding the wider data available and to ask further questions, such as evidence of building material re-use and creation and abandonment date of such architectural buildings connected to the Roman fortifications, did such buildings live in longevity?. The addition of documented and physical evidence to the project, for the re-use of Roman fortification masonry, could also add a dimension to the project for understanding abandonment and re-use of a Roman fortification, amalgamating the evidence of site re-use and material re-use. This may bring into account more details of the earlier post Roman and pre Norman Conquest periods, to aid enlightenment of the Early Medieval period through the study. Considering theoretical approaches for the project will also

raise the level of study, not just in data analysis, but in theoretical discussions of monument re-use. The agency of such monuments can be reviewed through ethno archaeology and post-processual theories, to understand historical uses of these monuments through the intentional actions of the peoples living in and using the same landscape. Finally to expand this project and to understand the wider connection for Roman military sites and ecclesiastical locals, the parameters of the project region could be expanded to nationwide.

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Appendix 1: Methodology Tables

(Table 29: List of Roman fortifications within the project region to be studied with Canmore or Historic England entry number, name of site, Location as per author's lists, type of fortification and scheduling type as per Canmore or Historic England).

List					Scheduling
Entry	Name	Location	Type	Type	
1014702	Bowness on Solway	Hadrian's Wall	Fort	Scheduled	
1014699	Drumburgh	Hadrian's Wall	Fort	Scheduled	
1018457	Burgh by Sands	Hadrian's Wall	Fort	Scheduled	
1007067	Amberfield	Hadrian's Wall	Fort	Scheduled	
1017948	Stanwix	Hadrian's Wall	Fort	Scheduled	
1010985	Castlesteads	Hadrian's Wall	Fort	Scheduled	
1010994	Birdoswald	Hadrian's Wall	Fort	Scheduled	
1010991	Carvoran	Hadrian's Wall	Fort	Scheduled	
1010976	Great Chesters	Hadrian's Wall	Fort	Scheduled	
1018585	Housesteads	Hadrian's Wall	Fort	Scheduled	
1015914	Carrawburgh	Hadrian's Wall	Fort	Scheduled	
1010959	Chesters	Hadrian's Wall	Fort	Scheduled	
1010624	Haltonchesters	Hadrian's Wall	Fort	Scheduled	
1017533	Rudchester	Hadrian's Wall	Fort	Scheduled	
1003499	Benwell	Hadrian's Wall	Fort	Scheduled	
1020126	Newcastle	Hadrian's Wall	Fort	Scheduled	
1005914	Wallsend	Hadrian's Wall	Fort	Scheduled	
1005910	South Shields	Hadrian's Wall	Fort	Scheduled	
1018653	Kirkbride	Staingate	Fort	Scheduled	
1014579	Carlisle	Staingate	Fort	Scheduled	
1014586	Brampton Old Church	Staingate	Fort	Scheduled	
1014585	Boothby	Staingate	Fort	Scheduled	
1018501	Nether Denton	Staingate	Fort	Scheduled	
1010611	Throp	Staingate	Fort	Scheduled	
1010945	Haltwhistle Burn	Staingate	Fort	Scheduled	
1014820	Chesterholm	Staingate	Fort	Scheduled	
1006611	Corbridge	Staingate	Fort	Scheduled	
1018645	Washingwells	Staingate	Fort	Scheduled	
1006621	Whitley Castle	Staingate	Fort	Scheduled	
1007760	Papcastle	A66	Fort	Scheduled	
1010827	Troutbeck	A66	Fort	Scheduled	
1012183	Kirkby Thore	A66	Fort	Scheduled	

1007174	Castrigg	A66	Fortlet	Scheduled
1007148	Brough	A66	Fort	Scheduled
1007183	Maiden Castle	A66	Fortlet	Scheduled
1002316	Bowes	A66	Fort	Scheduled
1019074	Greta Bridge	A66	Fort	Scheduled
1012608	Burwen Castle	Pennines	Fort	Scheduled
1013674	Ilkley	Pennines	Fort	Scheduled
			Legionary	
1004174	York	Pennines	Fortress	Scheduled
318944	Bladnoch	South West Scotland	Fortlet	Scheduled
63631	Gatehouse Of Fleet	South West Scotland	Fortlet	Scheduled
64687	Glenlochar	South West Scotland	Fort	Scheduled
65020	Moat Of Lochrutton	South West Scotland	Fortlet	Scheduled
66089	Lantonside	South West Scotland	Fortlet	Scheduled
1013013	Ravenglass	A592/3	Fort	Scheduled
1009349	Hardknott	A592/3	Fort	Scheduled
1009348	Ambleside	A592/3	Fort	Scheduled
1017920	Bainbridge	A684	Fort	Scheduled
1012004	Wensley	A684	Fort	Scheduled
1007170	Beckfoot	Cumbrian Coast	Fort	Scheduled
1015415	Maryport	Cumbrian Coast	Fort	Scheduled
1007161	Burrow Walls	Cumbrian Coast	Fort	Scheduled
1007179	Parton	Cumbrian Coast	Fort	Scheduled
1007249	Old Carlisle	A595	Fort	Scheduled
1019017	Blennerhasset	A595	Fort	Scheduled
1014285	Caermote	A595	Fort	Scheduled
54576	Oxton	Dere Street	Fortlet	Scheduled
55621	Newstead	Dere Street	Fort	Scheduled
54330	Oakwood	Dere Street	Fort	Scheduled
57050	Cappuck	Dere Street	Fort	Scheduled
1015847	Chew Green	Dere Street	Fort	Scheduled
1006440	Learchild	Dere Street	Fort	Scheduled
1006610	High Rochester	Dere Street	Fort	Scheduled
1006507	Blakehope	Dere Street	Fort	Scheduled
1008561	Risingham	Dere Street	Fort	Scheduled
1002336	Ebchester	Dere Street	Fort	Scheduled
1003575	Chester-le-Street	Dere Street	Fort	Scheduled
1002361	Lanchester	Dere Street	Fort	Scheduled
1002362	Binchester	Dere Street	Fort	Scheduled
1002365	Piercebridge	Dere Street	Fort	Scheduled

1021181	Catterick	Dere Street	Fort	Scheduled
1021211	Healam Bridge	Dere Street	Fort	Scheduled
1017693	Newton Kyme	Dere Street	Fort	Scheduled
1428339	Lease Rigg	A169	Fort	Scheduled
1007988	Cawthorn	A169	Fort	Scheduled
1004885	Malton	A169	Fort	Scheduled
50032	Easter Haprew	A6/74	Fort	Scheduled
50065	Lyne	A6/74	Fort	Scheduled
47721	Castledykes	A6/74	Fort	Scheduled
47544	Lamington	A6/74	Fortlet	Scheduled
47366	Wandel	A6/74	Fortlet	Scheduled
47396	Crawford	A6/74	Fort	Scheduled
48503	Redshaw Burn	A6/74	Fortlet	Scheduled
48407	Beattock, Barnhill	A6/74	Fortlet	Scheduled
48383	Milton	A6/74	Fort	Scheduled
67274	Raeburnfoot	A6/74	Fort	Scheduled
69368	Ladyward	A6/74	Fort	Scheduled
66626	Burnswark	A6/74	Fort	Scheduled
67099	Birrens	A6/74	Fort	Scheduled
67156	Broadlea	A6/74	Fortlet	Scheduled
262472	Kirkpatrick-fleming	A6/74	Fortlet	Scheduled
67709	Broomholm	A6/74	Fort	Scheduled
1204948	Netherby Hall	A6/74	Fort	Listed
1015728	Bewcastle	A6/74	Fort	Scheduled
1007182	Park House	A6/74	Fort	Scheduled
1007190	Old Penrith	A6/74	Fort	Scheduled
1008234	Salkeld Gate	A6/74	Fortlet	Scheduled
1007186	Brougham	A6/74	Fort	Scheduled
1007240	Low Borrowbridge	A6/74	Fort	Scheduled
1007178	Watercrock	A6/74	Fort	Scheduled
1005101	Burrow by Burrow	A6/74	Fort	Scheduled
1195059	Lancaster	A6/74	Fort	Listed
1005110	Ribchester	A6/74	Fort	Scheduled
45490	Sanquhar	A76	Fortlet	Scheduled
47285	Durisdeer	A76	Fortlet	Scheduled
65200	Drumlanrig	A76	Fort	Scheduled
70823	Kirkland	A76	Fortlet	Scheduled
65789	Barburgh Mill	A76	Fortlet	Scheduled
65893	Dalswinton, Bankhead	A76	Fort	Scheduled
65920	Dalswinton, Bankfoot	A76	Fort	Scheduled

65890	Carzield	A76	Fort	Scheduled
66263	Murder Loch	A76	Fortlet	Scheduled

(Table 30: below, Early Medieval artefact groupings.)

Early Medieval Period Find Spot Groupings:		
Weapon Paraphernalia	Manufacturing Accessory	Furniture Fitting
Armour	Loom Weight	Bell
Weapons	Adze	Bucket
Chape	Awl	Cauldron
Dagger	Balance	Chain
Drawknife	Die	Fitting
Knife	Die Stamp	Fittings
Pommel Cap	Ferrule	Fix and Fittings
Scabbard	Girdle Hanger	Hanger
Seax	Glass Working Debris	Hanging Bowl
Shield	Metal Working Debris	Locking Key
Shield Boss	Mount	Latchlifter
Spear	Nail	Locking Mechanism
Spike	Net Sinker	Plaque
Sword	Rod	Slide Key
Sword Guard	Spike	
Sword Pommel	Tongs	
Strap Ends	Trial Piece	
	Vat	
	Waste	
	Weaving Batten	
	Weight	
Jewellery	Horse Furnishing	Personal Accessories
Chain	Harness Fitting	Aestel
Buckle	Harness Mount	Book Fitting
Ring	Harness Pendant	Box
Ingot	Harness Ring	Drinking Horn
Annular Brooch	Horse Trapping	Gaming Chip
Armlet	Horse Shoe	Gaming Piece
Bead	Bridle Bit	Stylus
Bracelet	Stirrup	Skillet
Bracteate	Bridle Fitting	Toilet Article
Brooch		Token

Chatelaine		Tweezers
Clasp		Whetstone
Fastening		Vessel
Finger Ring		Workbox
Hair Pin		
Hooked Tag		
Jewellery		
Neck Ring		
Pin		
Pin Head		
Spangle		
Agricultural Tool	Human Remains	Coins
Plough	Cremation	Coins
Shears	Human Remains	Hoard
Sickle		Assemblage
Hoe		
Bill Hook		
Scythe		
Religious Paraphernalia	Unidentified Objects	
Aestel		
Stylus		

(Table 31: below, Medieval artefact groupings.)

Medieval Period Find Spot Groupings:		
Furniture Fittings	Pot	Jewellery
Aquamanile	Ewer	Finger Ring
Architectural Element	Jug	Brooch
Architectural Fragment	Key	Ring
Barrel Padlock Key	Implement	Annular Brooch
Bowl	Skillet	Badge
Dish		Bead
Box	Coins	Belt
Brass	Coin	Belt Fitting
Brick	Coins	Belt Hook
Came	Coin Hoard	Belt Mount
Candle Holder	Assemblage	Brooch/Pin
Candle Snuffer	Coin Mould	Buckle

Candlestick	Hoard	Buckle Frame
Casket		Button
Cauldron	Unidentified Object	Button Cover
Cauldron Foot	Unidentified Object	Chatelaine
Chain	Uncertain	Clothing Fastening
Cooking Vessel	Unassigned	Dress Fastener
Cross		Dress Hook
	Religious	
Curtain Fitting	Paraphernalia	Fastening
Cutlery	Cross	Hair Pin
Dressed Stone	Crucifix	Lace Tag
Escutcheon	Religion or Ritual	Medal
	Religious Personal	
Figurine	Accessory	Medallion
Fixtures and Fittings	Reliquary Cross	Pendant
Floor Tile	Stylus	
Food and Drink serving containers		Weapon
		Paraphernalia
	Manufacturing	
Frame	Accessory	Armour
Furniture Fittings	Quern	Weapons
Hanger	Balance	Arrowhead
Hasp	Casting Waste	Axehead
Heraldic Device	Die	Caltrop
Hinge	Die Stamp	Crossbow Bolt
Hook	File	Dagger
Hooked Tag	Fish Hook	Hunting Object
Jug	Hook	Knife
Key Locking	Hooked Tag	Mace
Music Key	Manufacturing Debris	Mail Armour
Lamp	Marking Tool	Musket Ball
Hanger	Metal Working Debris	Prick Spur
Laver	Mould	Rowel Spur
Lock	Nail	Scabbard
Miniature Object	Needle	Shield
Mortar	Needle Holder	Shot
Mount	Net Sinker	Stirrup
Padlock	Nocturnal	Sword
Plaque	Off Cut	Sword Belt
Plate	Plumb Bob	Sword Chape

Pot	Sheet	Whetstone
Pricket	Spindle Whorl	
Processional Cross	Stamp	Horse Furnishing
Pruning Knife	Steelyard Weight	Animal Equipment
Roof Tile	Tag	Bridle Bit
Rotary Key	Tap	Harness Fitting
Spoon	Tools and Equipment	Harness Hook
Spoon Bit	Vice	Harness Mount
Statue	Waste	Pendant
Strainer	Weight	Ring
Swivel		Heraldic Device
Tenterhook	Agricultural Tool	Horse Trapping
Vessel	Plough Pebble	Horse Shoe
Window	Axe	Saddle
Window Pane	Axehead	Stirrup
Tripod Vessel	Spade	Tack

(Table 32: below, Medieval artefact groupings, continued.)

Personal Accessory		
Bell	Jetton	Seal
Pipe	Jews Harp	Matrix
Bone Object	Mirror Case	Shoe
Book Clasp	Musical Instrument	Stamp
Book Fitting	Ox Shoe	Stud
Bulla	Personal Accessory	Thimble
Cloth Seal	Pilgrim Badge	Toilet Article
Clothing Fastening	Pipe	Token
Comb	Pipe Tamper	Dodecahedron
Container	Pomander	Ear Scoop
Cosmetic Article	Purse	Gaming Piece
Cosmetic Set	Purse Bar	Toy
Cosmetic Spoon	Crucifix	Tumbrel
Cross Pendant	Cuff Link	Tweezers
Crotal		Vinaigrette

Appendix 2: Data Analysis Tables

(Table 33: list of Roman fortifications in the project. Column 1, author's numbering of sites. Column 2, list entry from relevant government body of Canmore or Historic England. Column 3, name of site as per relevant government body of Canmore or Historic England. Column 4, Location as per author's systematic layout of sites. Column 5, type of Roman fortification as designated from the relevant government body of Canmore or Historic England).

Number	List Entry	Name	Location	Type
1	1014702	Bowness on Solway	Hadrian's Wall	Fort
2	1014699	Drumburgh	Hadrian's Wall	Fort
3	1018457	Burgh by Sands	Hadrian's Wall	Fort
4	1007067	Amberfield	Hadrian's Wall	Fort
5	1017948	Stanwix	Hadrian's Wall	Fort
6	1010985	Castlesteads	Hadrian's Wall	Fort
7	1010994	Birdoswald	Hadrian's Wall	Fort
8	1010991	Carvoran	Hadrian's Wall	Fort
9	1010976	Great Chesters	Hadrian's Wall	Fort
10	1018585	Housesteads	Hadrian's Wall	Fort
11	1015914	Carrawburgh	Hadrian's Wall	Fort
12	1010959	Chesters	Hadrian's Wall	Fort
13	1010624	Haltonchesters	Hadrian's Wall	Fort
14	1017533	Rudchester	Hadrian's Wall	Fort
15	1003499	Benwell	Hadrian's Wall	Fort
16	1020126	Newcastle	Hadrian's Wall	Fort
17	1005914	Wallsend	Hadrian's Wall	Fort
18	1005910	South Shields	Hadrian's Wall	Fort
19	1018653	Kirkbride	Staingate	Fort

20	1014579	Carlisle	Staingate	Fort
21	1014586	Brampton Old Church	Staingate	Fort
22	1014585	Boothby	Staingate	Fort
23	1018501	Nether Denton	Staingate	Fort
24	1010611	Throp	Staingate	Fort
25	1010945	Haltwhistle Burn	Staingate	Fort
26	1014820	Chesterholm	Staingate	Fort
27	1006611	Corbridge	Staingate	Fort
28	1018645	Washingwells	Staingate	Fort
29	1006621	Whitley Castle	Staingate	Fort
30	1007760	Papcastle	A66	Fort
31	1010827	Troutbeck	A66	Fort
32	1012183	Kirkby Thore	A66	Fort
33	1007174	Castrigg	A66	Fortlet
34	1007148	Brough	A66	Fort
35	1007183	Maiden Castle	A66	Fortlet
36	1002316	Bowes	A66	Fort
37	1019074	Greta Bridge	A66	Fort
38	1012608	Burwen Castle	Pennines	Fort
39	1013674	Ilkley	Pennines	Fort
40	1004174	York	Pennines	Legionary Fortress
41	318944	Bladnoch	South West Scotland	Fortlet
42	63631	Gatehouse Of Fleet	South West Scotland	Fortlet
43	64687	Glenlochar	South West Scotland	Fort
44	65020	Moat Of Lochrutton	South West Scotland	Fortlet
45	66089	Lantonside	South West Scotland	Fortlet
46	1013013	Ravenglass	A592/3	Fort

47	1009349	Hardknott	A592/3	Fort
48	1009348	Ambleside	A592/3	Fort
49	1017920	Bainbridge	A684	Fort
50	1012004	Wensley	A684	Fort
51	1007170	Beckfoot	Cumbrian Coast	Fort
52	1015415	Maryport	Cumbrian Coast	Fort
53	1007161	Burrow Walls	Cumbrian Coast	Fort
54	1007179	Parton	Cumbrian Coast	Fort
55	1007249	Old Carlisle	A595	Fort
56	1019017	Blennerhasset	A595	Fort
57	1014285	Caermote	A595	Fort
58	54576	Oxton	Dere Street	Fortlet
59	55621	Newstead	Dere Street	Fort
60	54330	Oakwood	Dere Street	Fort
61	57050	Cappuck	Dere Street	Fort
62	1015847	Chew Green	Dere Street	Fort
63	1006440	Learchild	Dere Street	Fort
64	1006610	High Rochester	Dere Street	Fort
65	1006507	Blakehope	Dere Street	Fort
66	1008561	Risingham	Dere Street	Fort
67	1002336	Ebchester	Dere Street	Fort
68	1003575	Chester-le-Street	Dere Street	Fort
69	1002361	Lanchester	Dere Street	Fort
70	1002362	Binchester	Dere Street	Fort
71	1002365	Piercebridge	Dere Street	Fort
72	1021181	Catterick	Dere Street	Fort
73	1021211	Healam Bridge	Dere Street	Fort

74	1017693	Newton Kyme	Dere Street	Fort
75	1428339	Lease Rigg	A169	Fort
76	1007988	Cawthorn	A169	Fort
77	1004885	Malton	A169	Fort
78	50032	Easter Happrew	A6/74	Fort
79	50065	Lyne	A6/74	Fort
80	47721	Castledykes	A6/74	Fort
81	47544	Lamington	A6/74	Fortlet
82	47366	Wandel	A6/74	Fortlet
83	47396	Crawford	A6/74	Fort
84	48503	Redshaw Burn	A6/74	Fortlet
85	48407	Beattock, Barnhill	A6/74	Fortlet
86	48383	Milton	A6/74	Fort
87	67274	Raeburnfoot	A6/74	Fort
88	69368	Ladyward	A6/74	Fort
89	66626	Burnswark	A6/74	Fort
90	67099	Birrens	A6/74	Fort
91	67156	Broadlea	A6/74	Fortlet
92	262472	Kirkpatrick-fleming	A6/74	Fortlet
93	67709	Broomholm	A6/74	Fort
94	1204948	Netherby Hall	A6/74	Fort
95	1015728	Bewcastle	A6/74	Fort
96	1007182	Park House	A6/74	Fort
97	1007190	Old Penrith	A6/74	Fort
98	1008234	Salkeld Gate	A6/74	Fortlet
99	1007186	Brougham	A6/74	Fort
100	1007240	Low Borrowbridge	A6/74	Fort

101	1007178	Watercrock	A6/74	Fort
102	1005101	Burrow by Burrow	A6/74	Fort
103	1195059	Lancaster	A6/74	Fort
104	1005110	Ribchester	A6/74	Fort
105	45490	Sanquhar	A76	Fortlet
106	47285	Durisdeer	A76	Fortlet
107	65200	Drumlanrig	A76	Fort
108	70823	Kirkland	A76	Fortlet
109	65789	Barburgh Mill	A76	Fortlet
110	65893	Dalswinton, Bankhead	A76	Fort
111	65920	Dalswinton, Bankfoot	A76	Fort
112	65890	Carzield	A76	Fort
113	66263	Murder Loch	A76	Fortlet

Architectural Evidence

(Table 34: List of 12th Century ecclesiastical sites with evidence in a 3 kilometres buffer zone, and their geographical locations).

Fort	Location
Burgh by Sands	Hadrian's Wall
Amberfield	Hadrian's Wall
Stanwix	Hadrian's Wall
Castlesteads	Hadrian's Wall
Birdoswald	Hadrian's Wall
Chesters	Hadrian's Wall
Haltonchesters	Hadrian's Wall
Benwell	Hadrian's Wall
Newcastle	Hadrian's Wall

Wallsend	Hadrian's Wall
Carlisle	The Staingate
Brampton Old Church	The Staingate
Nether Denton	The Staingate
Throp	The Staingate
Washingwells, Whickham	The Staingate
Kirkby Thore	A66
Castrigg	A66
Bowes	A66
Greta Bridge	A66
York	The Pennines
Parton	Cumbrian Coast
Oxton	Dere Street
Newstead	Dere Street
Learchild	Dere Street
Risingham	Dere Street
Ebchester	Dere Street
Piercebridge	Dere Street
Newton Kyme	Dere Street
Easter Haprew	A6/A74
Lyne	A6/A74
Castledykes	A6/A74
Lamington	A6/A74
Crawford	A6/A74
Beattock, Barnhill	A6/A74
Birrens	A6/A74
Broadlea	A6/A74

Kirkpatrick-fleming	A6/A74
Brougham	A6/A74
Lancaster	A6/A74
Ribchester	A6/A74

(Table 35: List of 13th Century ecclesiastical sites with evidence in a 3 kilometres buffer zone, and their geographical locations).

Fort	Location
Great Chesters	Hadrian's Wall
Carrowburgh	Hadrian's Wall
Chesters	Hadrian's Wall
Boothby, Castle Hill	The Staingate
Haltwhistle Burn	The Staingate
Whitley Castle	The Staingate
Greta Bridge	A66
York	The Pennines
Bladnoch	South West Scotland
Ravenglass	A592/3
Oxton	Dere Street
Ebchester	Dere Street
Chester-le-Street	Dere Street
Lanchester	Dere Street
Binchester	Dere Street
Piercebridge	Dere Street
Wandel	A6/A74
Beattock, Barnhill	A6/A74
Ladyward	A6/A74

Birrens	A6/A74
Broadlea	A6/A74
Bewcastle	A6/A74
Burrow-By-Burrow	A6/A74
Ribchester	A6/A74
Carzield	A76
Murder Loch	A76

Artefact evidence

(Table 36: list of sites as per amount of Medieval artefacts within 3 kilometres).

Fortifications with 1 artefact found within 3 kilometres:			
Wensley	Oxton	High Rochester	Lamington
Sanquhar	Durisdeer	Birrens	Broadlea
Haltwhistle Burn	Great Chesters	Chesterholm	Chester-Le-Street
Salkeld Gate	Bainbridge	Burrow Walls	Parton
Caermote			
Fortifications with 2 artefacts found within 3 kilometres:			
Newstead	Learchild	Kirkbride	South Shields
Ebchester	Park House	Maryport	
Fortifications with 3 artefacts found within 3 kilometres:			
Lease Rigg	Netherby	Lanchester	Bowes
Ambleside	Ilkley		
Fortifications with 4 artefacts found within 3 kilometres:			
Burgh-By-Sands	Amberfield	Brough	Old Carlisle

Fortifications with 5 artefacts found within 3 kilometres:

Chesters

Fortifications with 6 artefacts found within 3 kilometres:

Corbridge Rudchester Low Borrowbridge

Fortifications with 7 artefacts found within 3 kilometres:

Castrigg Ravenglass

Fortifications with 8 artefacts found within 3 kilometres:

Carlisle Binchester Kirkby Thore

Fortifications with 9 artefacts found within 3 kilometres:

Washingwells

Fortifications with 10 artefacts found within 3 kilometres:

Stanwix Brougham Ribchester

Fortifications with 12 artefacts found within 3 kilometres:

Cawthorn Burwen Castle

Fortifications with 13 artefacts found within 3 kilometres:

Lancaster

Fortifications with 14 artefacts found within 3 kilometres:

Castlesteads Burrow-By-Burrow

Fortifications with 15 artefacts found within 3 kilometres:

Boothby Castle Hill

Fortifications with 16 artefacts found within 3 kilometres:

Greta Bridge

Fortifications with 17 artefacts found within 3 kilometres:

Beckfoot

Fortifications with 22 artefacts found within 3 kilometres:

Brampton Old Church

Fortifications with 29 artefacts found within 3 kilometres:

Healam Bridge

Fortifications with 31 artefacts found within 3 kilometres:

York

Fortifications with 32 artefacts found within 3 kilometres:

Watercrock

Fortifications with 35 artefacts found within 3 kilometres:

Catterick

Fortifications with 38 artefacts found within 3 kilometres:

Piercebridge

Fortifications with 44 artefacts found within 3 kilometres:

Haltonchesters

Fortifications with 64 artefacts found within 3 kilometres:

Newton Kyme

Fortifications with 74 artefacts found within 3 kilometres:

Malton

Fortifications with 113 artefacts found within 3 kilometres:

Papcastle

Summary

(Table 37: List of Roman fortification sites with evidence within 3 kilometres).

Fortifications with evidence in 3 kilometres:		
Fortified Dwelling evidence	Ecclesiastical evidence	Artefact Find evidence
Lancaster	Lancaster	Lancaster
Bowes	Bowes	Bowes
Burgh by Sands	Burgh by Sands	Burgh by Sands
Amberfield	Amberfield	Amberfield
Stanwix	Stanwix	Stanwix
Castlesteads	Castlesteads	Castlesteads
Chesters	Chesters	Chesters
Haltonchesters	Haltonchesters	Haltonchesters
South Shields	South Shields	South Shields
Brampton Old Church	Brampton Old Church	Brampton Old Church

Boothby, Castle Hill	Boothby, Castle Hill	Boothby, Castle Hill
Corbridge	Corbridge	Corbridge
Washingwells, Whickham	Washingwells, Whickham	Washingwells, Whickham
Castrigg	Castrigg	Castrigg
Papcastle	Papcastle	Papcastle
York	York	York
Maryport	Maryport	Maryport
Parton	Parton	Parton
Ravenglass	Ravenglass	Ravenglass
Newstead	Newstead	Newstead
Learchild	Learchild	Learchild
Newton Kyme	Newton Kyme	Newton Kyme
Brougham	Brougham	Brougham
Sanquhar	Sanquhar	Sanquhar
Durisdeer	Durisdeer	Durisdeer
Wandel	Wandel	Wandel
Newcastle	Newcastle	
Crawford	Crawford	
Birdoswald	Birdoswald	
Carrowburgh	Carrowburgh	
Throp	Throp	
Gatehouse Of Fleet	Gatehouse Of Fleet	
Glenlochar	Glenlochar	
Lantonside	Lantonside	
Easter Happrew	Easter Happrew	
Lyne	Lyne	
Castledykes	Castledykes	

Beattock, Barnhill	Beattock, Barnhill	
Milton	Milton	
Ladyward	Ladyward	
Kirkpatrick-fleming	Kirkpatrick-fleming	
Drumlanrig	Drumlanrig	
Barburgh Mill	Barburgh Mill	
Dalswinton, Bankfoot	Dalswinton, Bankfoot	
Dalswinton, Bankhead	Dalswinton, Bankhead	
Carzield	Carzield	
	Great Chesters	Great Chesters
	Carlisle	Carlisle
	Kirkby Thore	Kirkby Thore
	Greta Bridge	Greta Bridge
	Risingham	Risingham
	Ebchester	Ebchester
	Chester-le-Street	Chester-le-Street
	Lanchester	Lanchester
	Binchester	Binchester
	Piercebridge	Piercebridge
	Catterick	Catterick
	Broadlea	Broadlea
	Malton	Malton
	Lamington	Lamington
	Burrow-By-Burrow	Burrow-By-Burrow
	Ribchester	Ribchester
	Haltwhistle Burn	Haltwhistle Burn
	Oxton	Oxton

Cawthorn

Beckfoot

Burrow Walls

Carvoran

Moat Of Lochrutton

Watercrock

Netherby

Raeburnfoot

Burnswark

Birrens

Bewcastle

Kirkland

Murder Loch

Benwell

Wallsend

Nether Denton

Whitley Castle

Bladnoch

Cappuck

Cawthorn

Beckfoot

Burrow Walls

Park House

Old Penrith/Plumpton

Salkeld Gate

Low Borrowbridge

Housesteads

Rudchester

Kirkbride

Chesterholm

Brough
Bainbridge
Wensley
Burwen Castle
Ilkley
Ambleside
Old Carlisle
Caermote
High Rochester
Healam Bridge
Lease Rigg

(Table 38: List of Roman fortification sites with dating evidence within 3 kilometres).

Fortifications with evidence in 3 kilometres:		
Fortified Dwelling evidence	Ecclesiastical evidence	Artefact evidence
Lancaster (12th)	Lancaster (12th C) (18th C x 3)	EM. 1 Jew. M. 1 Weap. 4 Coin. 1 Manu Aces. 3 Furn Fit. 2 Per Aces. 1 Unid
Bowes (12th C)	Bowes (12th C)	M. 2 Coin. 1 Manu Aces
Burgh by Sands (12th C)	Burgh by Sands (12th C)	EM. 1 Jew. M. 4 Coin
Amberfield (12th C)	Amberfield (12th C)	EM. 1 Jew. M. 4 Coin
Stanwix (14th C)	Stanwix (14th C) (12th) (18th C) (Unknown)	M. 1 Jew. 4 Coin. 2 Manu Aces. 1 Horse Furn. 2 Per Aces

Castlesteads (12th) (18th C)	Castlesteads (12th C) (18th C)	EM. 2 Unid. M. 3 Jew. 4 Coin. 6 Furn Fit. 1 Unid
Chesters (13th C)	Chesters (12th C) (13th C)	EM. 1 Weap. 1 Jew. M. 2 Jew. 2 Coin. 1 Horse Furn. 1 Furn Fit
Haltonchesters (13th C)	Haltonchesters (12th C)	EM. 1 Weap. 1 Jew. 1 Unid. M. 5 Jew. 24 Coin. 11 Manu Aces. 2 Furn Fit. 1 Per Aces. 1 Unid
South Shields (Prior 1100 AD)	South Shields (18th C)	M. 2 Coin
Brampton Old Church (12th C) (18th C)	Brampton Old Church (12th C) (18th C)	EM. 2 Unid. M. 3 Jew. 6 Coin. 7 Furn Fit. 1 Per Aces. 4 Unid
Boothby, Castle Hill (12th C)	Boothby, Castle Hill (13th C) (18th C)	M. 3 Jew. 5 Coin. 6 Manu Aces. 1 Horse Furn
Corbridge (13th C) (15th C)	Corbridge (Prior 1100 AD) (17th C)	EM. 1 Jew. 1 Coin. 1 Horse Furn. M. 4 Coin. 1 Furn Fit. 1 Per Aces
Washingwells, Whickham (Prior 1100 AD)	Washingwells, Whickham (12th C)	M. 1 Jew. 5 Coin. 2 Manu Aces. 1 Per Aces
Castrigg (12th C) (14th C)	Castrigg (12th C) (unknown)	EM. 1 Coin. M. 2 Jew. 4 Coin. 1 Manu Aces
Papcastle (unknown)	Papcastle (unknown)	EM. 6 Coin. 3 Unid. M. 2 Weap. 5 Jew. 88 Coin. 3 Manu Aces. 1 Horse Furn. 5 Furn Fit. 2 Per Aces. 8 Unid
York (Prior 1100 AD)	York (12th C) (13th C)	EM 1 Weap. 1 Jew. 1 Coin. 1 Furn Fit. 1 Unid. M. 1 Weap. 5 Jew. 17 Coin. 1 Hore Furn. 6 Furn Fit. 2 Unid
Maryport (12th C)	Maryport (18th C)	M. 1 Coin. 1 Horse Furn
Parton (14th C)	Parton (12th C) (18th C)	M. 1 Per Aces
Ravenglass (13th C)	Ravenglass (13th C) (16th C)	M. 6 Coin. 1 Furn Fit
Newstead (16th C x 2)	Newstead (12th C) (Unknown)	M. 1 Agri. 1 relig

Learchild (13th C)	Learchild (Prior 1100 AD) (12th C)	M. 1 Jew. 1 Coin
Newton Kyme (13th C)	Newton Kyme (12th C)	EM. 2 Jew. 2 Coin. 1 Manu Aces. 3 Per Aces. 4 Unid. M. 1 Weap. 13 Jew. 32 Coin. 3 Manu Aces. 5 Horse Furn. 8 Furn Fit. 2 Per Aces
Brougham (14th C)	Brougham (12th C) (14th C) (17th C x 2)	EM. 1 Unid. M. 2 Jew. 4 Coin. 4 Furn Fit
Sanquhar (12th C) (14th C)	Sanquhar (Unknown x 3)	M. 1 Coin
Durisdeer (Unknown)	Durisdeer (17th C)	M. 1 Coin
Wandel (16th C)	Wandel (13th C)	EM. 1 Weap
Newcastle (Prior 1100 AD) (13th C)	Newcastle (12th C) (14th C) (17th C) (18th C x 2)	
Crawford (12th C)	Crawford (12th C) (Unknown)	
Birdoswald (14th C)	Birdoswald (12th C)	
Carrowburgh (13th C)	Carrowburgh (13th C)	
Throp (14th C)	Throp (12th C)	
Gatehouse Of Fleet (15th C)	Gatehouse Of Fleet (17th C)	
Glenlochar (14th C) (18th C)	Glenlochar (16th C) (18th C)	
Lantonside (13th C)	Lantonside (unknown)	
Easter Haprew (16th C)	Easter Haprew (12th C) (14th C) (17th C x 3) (Unknown)	
Lyne (16th C)	Lyne (12th C) (14th C) (17th C x 3)	
Castledykes (12th C)	Castledykes (12th C)	

Beattock, Barnhill (13th C) (16th C)	Beattock, Barnhill (12th C) (13th C) (17th C x 3) (18th C) (Unknown)	
Milton (16th C)	Milton (17th C x 3)	
Ladyward (12th C) (13th C)	Ladyward (13th C) (17th C) (Unknown x 2)	
Kirkpatrick-fleming (16th C)	Kirkpatrick-fleming (12th C)	
Drumlanrig (13th C) (15th C)	Drumlanrig (unknown)	
Barburgh Mill (16th C)	Barburgh Mill (unknown x 4)	
Dalswinton, Bankfoot (17th C)	Dalswinton, Bankfoot (15th C) (16th C) (18th C) (Unknown)	
Dalswinton, Bankfoot (17th C)	Dalswinton, Bankfoot (15th C) (16th C) (18th C) (Unknown)	
Carzield (17th C)	Carzield (13th C) (14th C) (18th C) (Unknown x 2)	
	Great Chesters (13th C)	M. 1 Manu Aces
	Carlisle (12th C) (14th C) (18th C)	M. 1 Jew. 3 Coin. 1 Manu Aces. 1 Furn Fit. 2 Per Aces
	Kirkby Thore (12th C)	M. 1 Coin. 1 Furn Fit. M. 2 m. 3 Jew. 3 Coin. 1 Furn Fit. 1 Per Aces
	Greta Bridge (12th C) (13th C) (18th C)	M. 3 Jew. 6 Coin. 2 Manu Aces. 1 Furn Fit. 4 Per Aces
	Risingham (12th C)	EM. 1 Jew
	Ebchester (12th C) (13th C)	M. 1 Coin. 1 Manu Aces
	Chester-le-Street (13th C)	M. 1 Manu Aces
	Lanchester (13th C)	M. 1 Jew. 1 Coin. 1 Manu Aces

	Binchester (Prior 1100 AD) (13th C)	EM. 1 Manu Aces. M. 1 Jew. 3 Coin. 1 Horse Furn. 2 Furn Fit. 1 Unid
	Piercebridge (12th C) (13th C)	EM. 2 Jew. 1 Coin. 1 Manu Aces. 1 Horse Furn. M. 1 Weap. 6 Jew. 24 Coin. 1 Manu Aces. 1 Horse Furn. 1 Furn Fit. 1 Per Aces. 1 Relig. 2 Unid
	Catterick (unknown)	M. 1 Jew. EM 4 Weap. 6 Jew. 3 Coin. 1 Horse Furn. 3 Unid. M. 1 Weap. 5 Jew. 14 Coin. 3 Manu Aces. 3 Horse Furn. 4 Furn Fit. 4 Per Aces. 1 Unid
	Broadlea (12th C) (13th C) (17th C x 3)	M. 1 Weap
	Malton (unknown)	EM. 4 Jew. 1 Coin. 2 Manu Aces. 1 Per Aces. 2 Unid. M. 3 Weap. 16 Jew. 29 coin. 5 Manu Aces. 6 Horse Furn. 6 Furn Fit. 1 Agri. 8 Unid
	Lamington (12th C) (Unknown)	M. 1 Jew
	Burrow-By-Burrow (13th C) (16th C)	M. 1 Weap. 1 Jew. 4 Coin. 2 Manu Aces. 3 Furn Fit. 1 Per Aces. 2 Unid
	Ribchester (12th C) (13th C)	EM. 1 Manu Aces. M. 1 Weap. 2 Jew. 3 Coin. 1 Manu Aces. 1 Furn Fit. 2 Unid
	Haltwhistle Burn (13th C)	M. 1 Manu Aces
	Oxton (Prior 1100 AD) (12th C) (13th C)	M. 1 Unid
Cawthorn (12th C)		EM. 1 Jew. 1 Manu Aces. 1 Furn Fit. 1 Unid. M. 1 Weap. 3 Jew. 5 Coin. 1 Furn Fit. 2 Per Aces
Beckfoot (14th C)		M. 1 Weap. 3 Manu Aces. EM. 1 Coin. M. 2 m. 1 Weap. 2 Jew. 4 Coin. 6 Manu Aces. 4 Furn Fit
Burrow Walls (14th C)		M. 1 Coin

Carvoran (14th C)		
Moat Of Lochrutton (16th C)		
Watercrook (Prior 1100 AD) (12th C)		
Netherby (13th C)		
	Raeburnfoot (14th C) (18th C)	
	Burnswark (15th C) (Unknown)	
	Birrens (12th C) (13th C) (17th C x 3)	
	Bewcastle (13th C)	
	Kirkland (17th C) (Unknown x 4)	
	Murder Loch (13th C)	
	Benwell (12th C)	
	Wallsend (12th C)	
	Nether Denton (12th C)	
	Whitley Castle (13th C)	
	Bladnoch (13th C)	
	Cappuck (18th C) (Unknown)	
		EM. 1 Unid. M. 1 Coin. 2 Unid
		M. 1 Weap
		M. 1 Weap
		M. 2 Weap. 1 Jew. 2 Coin. 1 Per Aces
		EM. 1 Jew
		M. 2 Jew. 3 Coin. 1 Manu Aces

		M. 2 Coin
		EM. 2 Jew. M. 1 Coin
		M. 3 Coin. 1 Horse Furn
		M. 1 Per Aces
		EM. 1 Unid. M. 1 Jew
		EM. 1 Unid. M. 4 Jew. 4 Coin. 2 Manu Aces. 1 Furn Fit. 1 Per Aces
		M. 2 Furn Fit. 1 Unid
		M. 2 Horse Furn. 1 Per Aces
		EM. 1 Manu Aces. M. 3 Coin. 1 Unid
		M. 1 Coin
		M. 1 Furn Fit
		EM. 1 Weap. 5 Jew. 6 Coin. 2 Manu Aces. 2 Unid. M. 3 Jew. 16 Coin. 1 Manu Aces. 6 Furn Fit. 2 Per Aces. 1 Relig
		M. 1 Weap. 1 Jew. 1 Manu Aces

(EM = early medieval. M = medieval. Jew = jewellery. Manu Aces = manufacturing accessory. Furn Fit = furniture fitting. Weap = Weapon Paraphernalia. Per Aces = personal accessory. Unid = unidentified Object. Relig = religious paraphernalia. Horse Furn = horse furniture. Agri = agricultural accessories).

Fishers Exact Test

The statistics for fortified dwellings **or** ecclesiastical site evidence within 0.25 kilometres and 3 kilometres were ran (see table below).

Success! The Fisher exact test statistic and statement of significance appear beneath the table. Blue means you're dealing with dependent variables; red, independent.

Results			
	0.25 km Fortification With	0.25 km Fortification Without	Marginal Row Totals
Fortified Dwelling	4	109	113
Ecclesiastical Site	12	101	113
Marginal Column Totals	16	210	226 (Grand Total)

The Fisher exact test statistic value is 0.0665. The result is not significant at $p < .05$.

Error!

Sorry, due to the limitations of the algorithm that drives this calculator, we are unable to calculate the Fisher statistic for the set of values you entered. If your expected cell values are greater than 5, you might want to try our [chi-square calculator](#).

Results			
	3 km Fortification With	3 km Fortification Without	Marginal Row Totals
Fortified Dwelling	53	60	113
Ecclesiastical Site	75	38	113
Marginal Column Totals	128	98	226 (Grand Total)

Error! Sorry, that didn't work out.

The results for fortifications with and without fortified dwellings or ecclesiastical sites in a 0.25 kilometre buffer zone displays there is no significance to these values and the statistics are independent of each other. Unfortunately the statistics for the 3 km buffer zone for fortifications with and without fortified dwellings or ecclesiastical sites could not be ran for these values.

The statistics for fortified dwellings **and** ecclesiastical site evidence within 0.25 kilometres and 3 kilometres were ran (see table below).

Success! The Fisher exact test statistic and statement of significance appear beneath the table. Blue means you're dealing with dependent variables; red, independent.

Results			
	0.25 km Fortification With	0.25 km Fortification Without	Marginal Row Totals
Fortified Dwelling and Ecclesiastical Site	3	110	113
Fortified Dwelling, Ecclesiastical Site and Artefacts	1	112	113
Marginal Column Totals	4	222	226 (Grand Total)

The Fisher exact test statistic value is 0.6216. The result is not significant at $p < .05$.

Success! The Fisher exact test statistic and statement of significance appear beneath the table. Blue means you're dealing with dependent variables; red, independent.

Results			
	3 km Fortification With	3 km Fortification Without	Marginal Row Totals
Fortified Dwelling and Ecclesiastical Site	46	67	113
Fortified Dwelling, Ecclesiastical Site and Artefacts	26	87	113
Marginal Column Totals	72	154	226 (Grand Total)

The Fisher exact test statistic value is 0.0045. The result is significant at $p < .05$.

The statistics for the 0.25 km buffer zone for fortifications with and without fortified dwellings and ecclesiastical sites and fortified dwellings, ecclesiastical sites and artefacts; displays there is no significance to these values and the statistics are independent of each other. The results for fortifications with and without fortified dwellings and ecclesiastical sites and fortified dwellings, ecclesiastical sites and artefacts in a 3 kilometre buffer zone; displays there is a significance to these values and the statistics are dependent of each other.

The overview of statistics for fortified dwellings and ecclesiastical sites found within both buffer zones were ran. These displayed no significance and are independent of each other (see table below).

Success! The Fisher exact test statistic and statement of significance appear beneath the table. Blue means you're dealing with dependent variables; red, independent.

Results			
	0.25 km buffer zone	3 km buffer zone	Marginal Row Totals
Fortified Dwelling	4	63	67
Ecclesiastical Site	12	122	134
Marginal Column Totals	16	185	201 (Grand Total)

The Fisher exact test statistic value is 0.586. The result is not significant at $p < .05$.

The statistics for fortified dwellings and artefacts, and ecclesiastical sites and artefacts were ran. These displayed no significance and are independent of each other (see table below).

Success! The Fisher exact test statistic and statement of significance appear beneath the table. Blue means you're dealing with dependent variables; red, independent.

Results			
	0.25 km buffer zone	3 km buffer zone	Marginal Row Totals
Fortified Dwelling and Ar	14	158	172
Ecclesiastical Site and Artefacts	22	217	239
Marginal Column Totals	36	375	411 (Grand Total)

The Fisher exact test statistic value is 0.728. The result is *not* significant at $p < .05$.

Artefact evidence was also ran to determine the significance of these statistics also. Artefacts split into the two historical time frames of Early Medieval and Medieval periods for both 0.25 kilometres and 3 kilometres buffer zones. The test displayed that the artefact statistics were not significant and were independent of each other (see table below).

Success! The Fisher exact test statistic and statement of significance appear beneath the table. Blue means you're dealing with dependent variables; red, independent.

Results			
	0.25 km buffer zone	3 km buffer zone	Marginal Row Totals
early medieval	3	30	33
medieval	7	65	72
Marginal Column Totals	10	95	105 (Grand Total)

The Fisher exact test statistic value is 1. The result is *not* significant at $p < .05$.

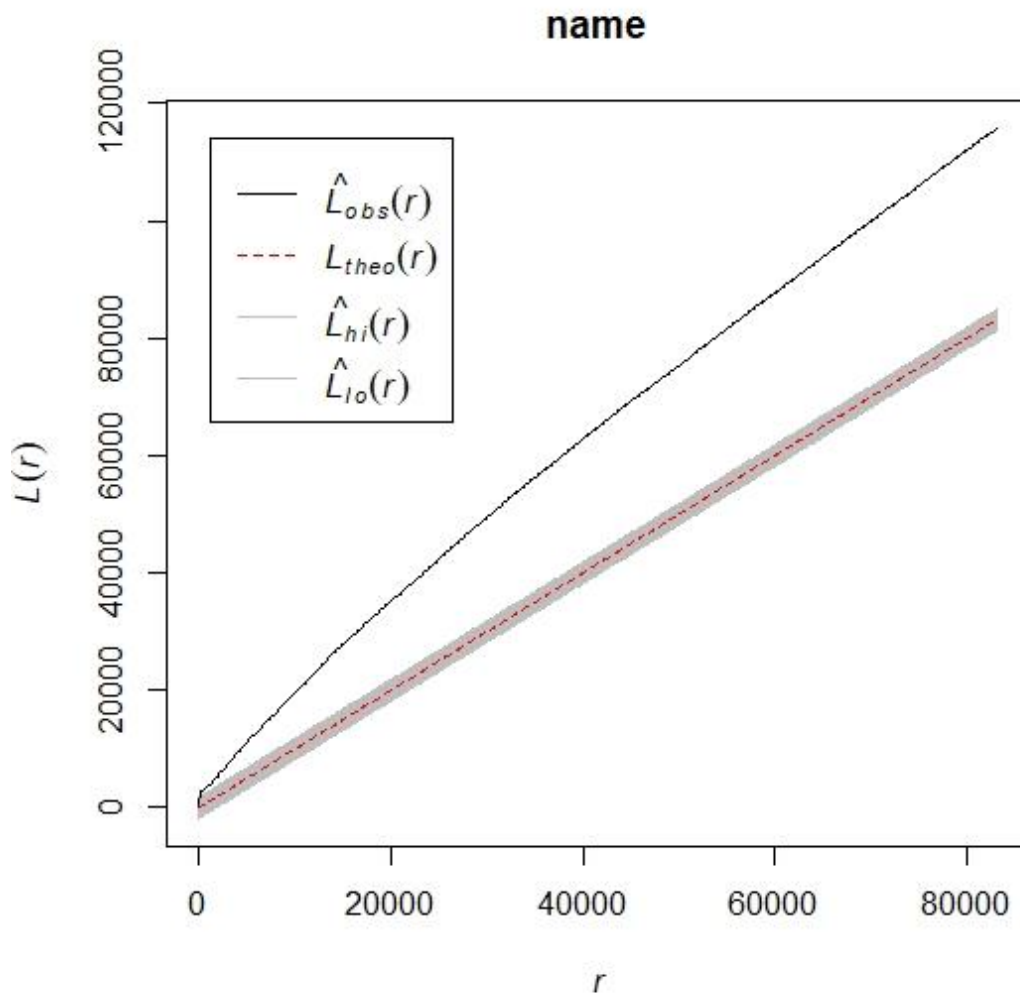
Therefore on running the statistics of the project region through a Fishers Exact Test only one set of data was confirmed as a significant value and dependant, the 3 kilometres evidence for Roman fortifications with; fortified dwellings and ecclesiastical sites, and Roman fortifications with fortified dwellings, ecclesiastical sites and artefacts. While it has to be noted that the 3 kilometres data for comparing fortified dwellings and ecclesiastical sites did not run through the test, the amalgamation of the pieces of data did work at 3 kilometres. To conclude, the Fishers Exact Test statistical evidence; under the mathematical rules (Yates 1984, 434) it is confirmed that the statistical data for sites within 3 kilometres of a Roman fortification with fortified dwellings and ecclesiastical sites for evidence; and fortified dwellings, ecclesiastical sites and

artefacts for evidence are related and therefore these classifications are associated.

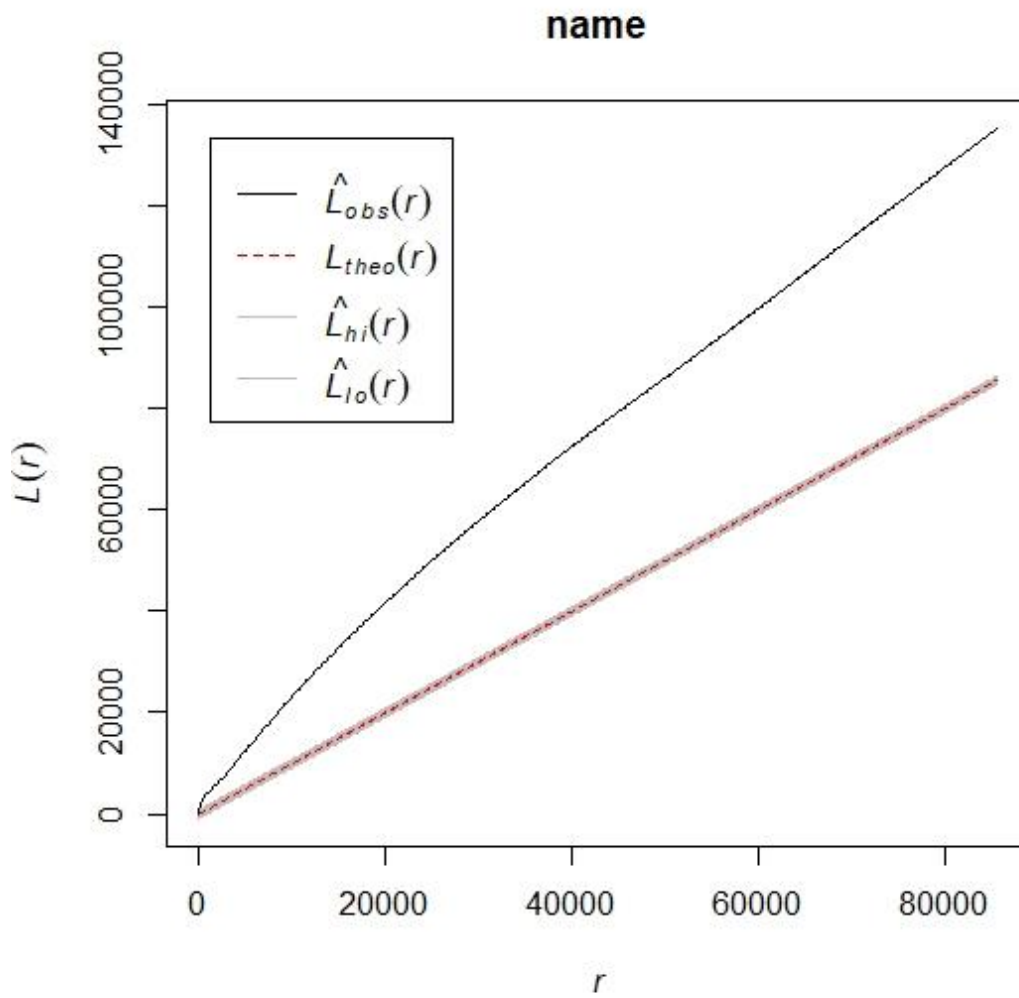
Ripley Probability Model Testing

Ripley K Testing was carried out, however the results returned inconclusive and therefore have been placed in an appendices for statistical information only. As the buffer zones for the project were chosen on the author's personal choice and reasoning's (see Chapter 3.4 Buffer Zones), a Ripley K test was undertaken, to discern whether the observed conclusions of the author were consistent with the spatial awareness tests as set out in the Ripley K spatial testing (Dixon 2002, 1797). The testing was carried out on the total spread of fortified dwellings, ecclesiastical sites and find spots. These tests were carried out to determine if there were any spatial correlations for the evidence groups, by using the descriptive statistics for detecting anomalous data across the project region. Coding was discerned and used for running the Ripley K testing via a run administrator programme and results were retrieved.

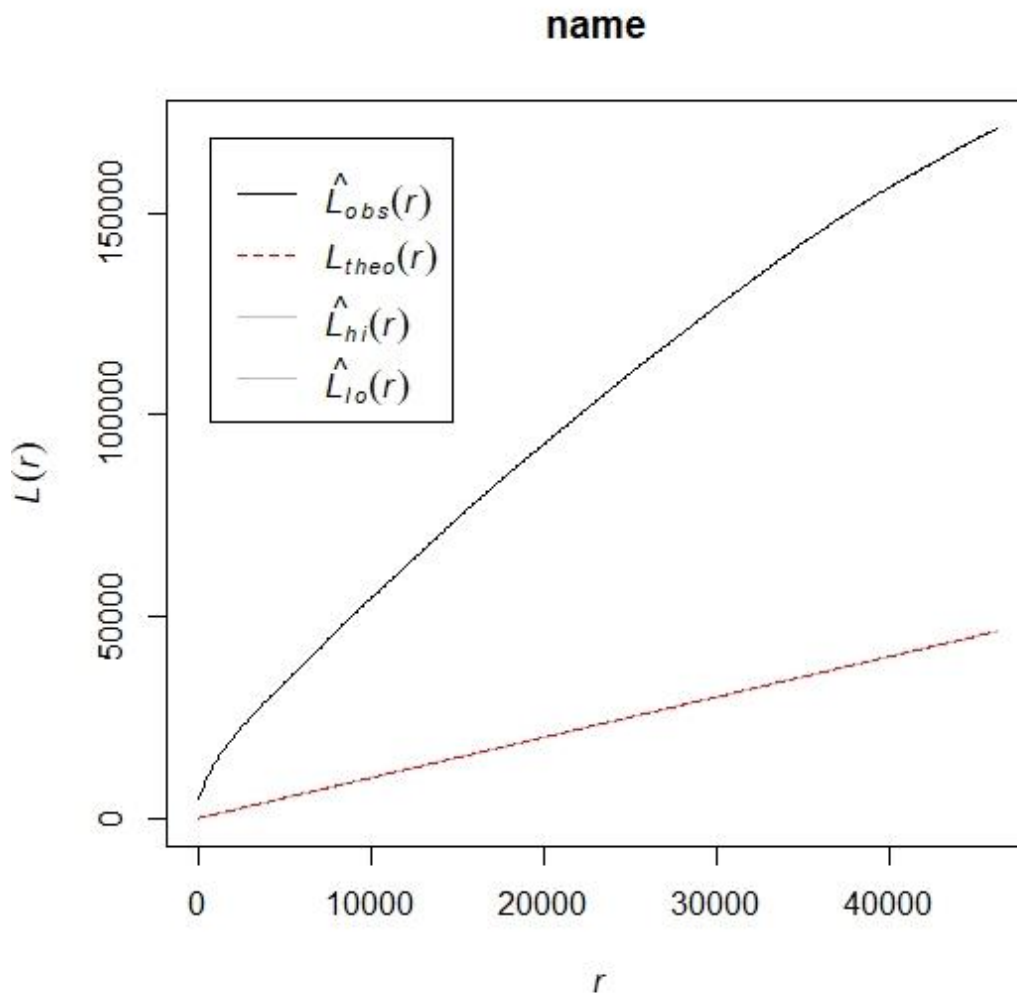
The probability modelling of fortified dwellings in the project region was ran and the results returned a complete spatial randomness (CSR) probability of all sites (see graph below).



The coding was ran for the probability modelling of ecclesiastical sites in the project region and the results returned a complete spatial randomness (CSR) probability of all sites (see graph below).



The coding was ran for the probability modelling of artefact find spots in the project region and the results returned a complete spatial randomness (CSR) probability of all sites (see graph below).



These probability tests for fortified dwellings, ecclesiastical sites and artefact find spots display no spatial correlation within the project region for each of the group's evidence. Artefact find spots displays the least spatial correlation within the grouping evidence. Therefore any anomalies detected within the data analysis chapter of statistical breakdown, is not conclusive of evidence for spatial patterning within the project region.

Geographical Evidence

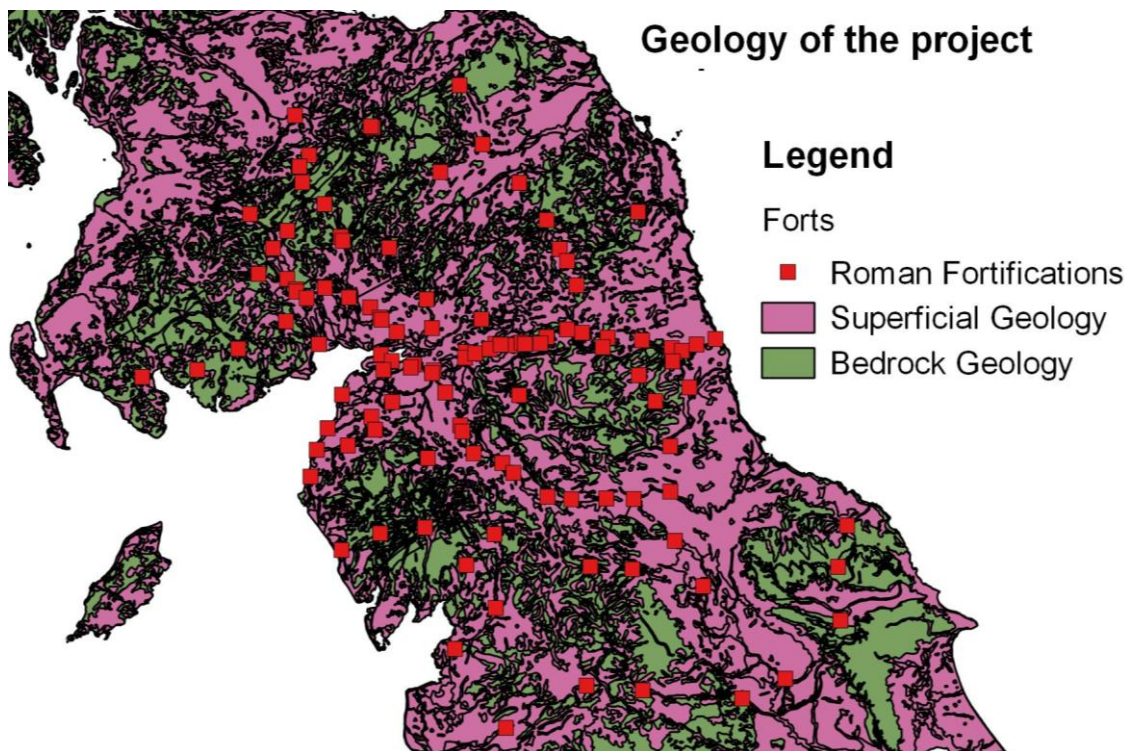
Is there geographical reasons as to why some sites have evidence for use and others not?

Geographical factors may possibly aid in determining which Roman fortifications continued in use, and which remained abandoned in the post

Roman period and in later centuries. These factors will therefore now be reviewed.

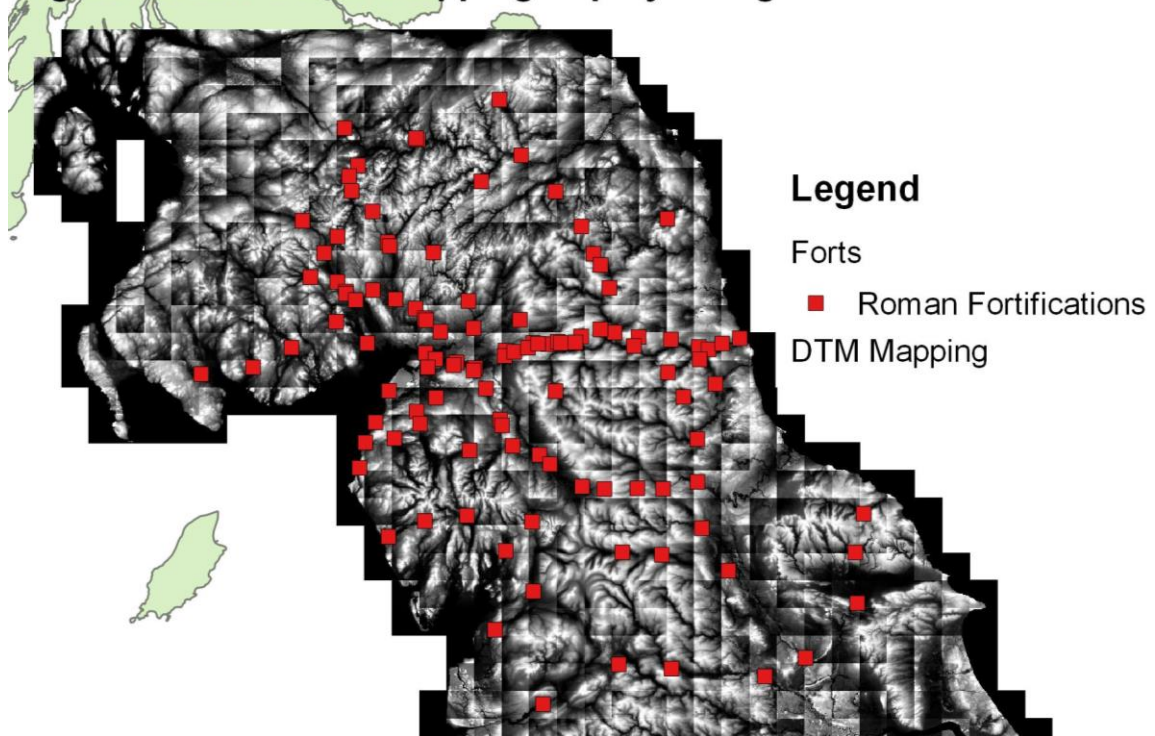
Geology

With being a broad area, the terrain of the project region varies, including the highest mountain in England and 6 forest national parks (Tweed Valley, Galloway, Northumberland, Lake District, North Yorkshire Moors and Yorkshire Dales). It is firstly important to understand the underlying terrain of the project region, to understand the terrain the overall geology will be looked into. The project region has areas of low and high ground, with different types of geology across the region, while the majority (84, 74.33%) of Roman fortifications placed on lower lying superficial geology to that of high, harder bedrock (see figure below).



Digital Terrain Model mapping exhibits the project regions topography, understanding and viewing the complete region, white land signifies high ground (see figure below).

Digital Terrain Model Mapping of project region



Fresh Waterways

All fortifications are confirmed as being located within 3 kilometres of one or more fresh waterways. Maintaining the knowledge of fresh water needed to sustain a community, and a possible reason why, within the wider 3 kilometre buffer zone of the Roman fortifications, such locals were continued in use through the historic periods. 64 (56.63%) of the Roman fortifications were noted to have been positioned within 0.25 kilometres of fresh watercourses, being slightly over half of the total amount of Roman fortifications in the project region (see table below), while 49 (43.36%) fortifications do not have fresh waterways within 0.25 kilometres of their positions.

Oxton	Murder Loch	Nether Denton	Wensley
Cappuck	Ladyward	Birdoswald	Lancaster
Learchild	Moat of Lochrutton	Throp	Greta Bridge
High Rochester	Birrens	Haltwhistle Burn	Bowes
Risingham	Kirkpatrick-fleming	Chesterholm	Brough
Easter Happrew	Lantonside	Chesters	Watercreek
Lyne	Bladnoch	Corbridge	Low Borrowbridge
Wandel	Gatehouse of Fleet	Newcastle	Old Penrith
Crawford	Bewcastle	Chester-le-Street	Ambleside
Sanquhar	Bowness-On-Solway	Piercebridge	Hardknott
Durisddeer	Drumburgh	Healam Bridge	Ravenglass
Drumlanrig	Burgh-by-Sands	Malton	Troutbeck
Raeburnfoot	Carlisle	York	Burrow Walls
Kirkland	Brampton Old Church	Ilkely	Blennerhasset
Barburgh Mill	Castlesteads	Burwen Castle	Old Carlisle
Dalswinton Bankhead	Boothby, Castle Hill	Ribchester	Kirkbride

Roman fortification sites that have fresh waterways within 0.25 kilometres and have evidence of fortified dwellings and/or ecclesiastical sites are 10 in total (8.85%). These statistics display fortifications have a majority of 9 ecclesiastical sites (7.96%), and 4 fortified dwellings (3.53%) (See table below).

Roman Fortification	Fortified Dwelling	Ecclesiastical Site
Newcastle	Prior 1100 AD	18th C
Bowes	12th C	12th C
Lancaster	12th C	12th C
Crawford	12th C	
Brampton Old Church		12th C
Kirkpatrick-fleming		12th C
Chester-Le-Street		13th C
Piercebridge		13th C
Bewcastle		13th C
Ribchester		13th C

Summary

On review of the geographical area it can be determined that 84 (74.33%) of the Roman fortifications were positioned on lower ground and 64 (56.63%) were located within 0.25 kilometres of a fresh waterway. 10 (8.85%) of these fortifications with fresh waterways have architectural evidence, with 9 (7.96%) ecclesiastical sites and 4 (3.53%) fortified dwellings between them. The evidence demonstrates the more geographically ideal a Roman fortification is, the less evidence there is for occupation, which would determine that Roman

fortifications were not selected consciously as sites for re-occupation for any architectural type within 0.25 kilometres. The geographical evidence for the totals of architectural and artefact evidence data demonstrates that although the concentration of Roman fortifications are along the Staingate, Hadrian's Wall and the south west Scottish border, no concentration of fortified dwellings, ecclesiastical sites or artefacts are in high concentration within these same areas. This heat mapping evidence displays moderate connections to Roman fortifications of architecture evidence to the south west coast of Scotland and its border through ecclesiastical sites, and the Catterick area through fortified dwellings. While artefact evidence can distinguish moderate connections to Roman fortification sites in the north east of England, east Scotland, the Pennines, Papcastle and east Cumbria. The majority of Roman fortifications being 78 (69.02%) within 3 kilometres having an ecclesiastical site, displays a 0 to ¾ percentage of sites have evidence of use throughout the centuries (see table below).

Roman fortifications 113 in total	0.25 Km	%	3 Km	%
Fortified Dwellings	4	3.54	58	51.32
Ecclesiastical Sites	12	10.62	78	69.02
Artefacts - Early Medieval	3	2.65	7	6.19
Artefacts - Medieval	30	26.54	65	57.52

Displaying the connection of Roman military sites with ecclesiastical sites of Norman foundation.

Archaeological Investigations

What archaeological investigations have taken place, and what does this data inform in respect of the data analysis of the Roman fortifications?

61 of the Roman fortifications out of the total 113 have had excavations, being 53.98% of the fortifications, with 45 of these being post World War II. Some sites are not listed as being excavated, however the author, through their own knowledge, does know of at least two fortifications that have been excavated, post-World War II (Ribchester fort up to 2018 with the University of Central Lancashire and Burrow Walls fort in 1955 by Bellhouse and geophysics in 2016

by Grampus Heritage). This would increase the amount of sites excavated to 55.75%, just over half the Roman fortifications in this study for the project region.

Appendix 3: Discussion

(Table 39: List of fortifications with evidence within 3 kilometres).

Fortification	Fortified Dwelling	Ecclesiastical Site
Newcastle	Prior 1100 AD (0.25 km)/13th C	12th/14th/17th/18th C
Washingwells	Prior 1100 AD	12th C
South Shields	Prior 1100 AD	18th C
Watercrock	Prior 1100 AD/12th C	
Lancaster	12th C (0.25 km)	12th C (0.25 km)
Bowes	12th C (0.25 km)	12th C (0.25 km)
Castledykes	12th C	12th C
Burgh-By-Sands	12th C	12th C
Amberfield	12th C	12th C
Crawford	12th C (0.25 km)	12th C/Unknown
Ladyward	12th/13th C	13th/17th/18th C/Unknown
Brampton Church	Old 12th/18th C	12th/18th C
Castlesteads	12th/18th C	12th/18th C
Castrigg	12th/14th C	12th C/Unknown
York	12th C	12th/13th C
Maryport	12th C	18th C
Sanquhar	12th/14th C	Unknown
Cawthorn	12th C	
Corbridge	13th/15th C	Prior 1100 AD/17th C
Newton Kyme	13th C	12th C
Haltonchesters	13th C	12th C
Chesters	13th C/Unknown	12th/13th C
Beattock Barnhill	13th/16th C/Unknown	12th/13th/17th/18th C/Unknown
Carrowburgh	13th C	13th C
Ravenglass	13th C	13th/16th C
Boothby	13th C	13th/18th C
Netherby	13th C	18th C
Lantonside	13th C	Unknown
Drumlanrig	13th/15th C	Unknown
Learchild	14th C	Prior 1100 AD/12th C
Throp	14th C	12th C
Birdoswald	14th C	12th C
Brougham	14th C	12th/14th/17th C
Glenlochar	14th/18th C	16th/18th C
Carvoran	14th C	
Beckfoot	14th C	
Burrow Walls	14th C	
Stanwix	15th C	12th/14th/18th C/Unknown
Parton	15th C	12th (0.25 km)/18th C/Unknown
Gatehouse of Fleet	15th C/Unknown	17th C
Kirkpatrick-fleming	16th C	12th C (0.25 km)

Easter Happrew	16th C	12th/14th/17th C/Unknown
Lyne	16th C	12th/14th/17th C
Lamington	16th C	12th C/Unknown
Newstead	16th C	12th C/Unknown
Milton	16th C	17th C
Barburgh Mill	16th C	Unknown
Moat of Lochrutton	16th C/Unknown	
Wandel	17th C	13th C
Carzield	17th C	13th/14th/18th C/Unknown
Dalswinton		
Bankhead	17th C	15th/16th/18th C/Unknown
Dalswinton Bankfoot	17th C	15th/16th/18th C/Unknown
Burrow-By-Burrow	Unknown	13th/16th C
Burnswark	Unknown	15th C/Unknown
Durisdeer	Unknown	17th C
Papcastle	Unknown	18th C
Healam Bridge	Unknown	
Rudchester		Prior 1100 AD
Oxton		Prior 1100 AD/12th/13th C
Binchester		Prior 1100 AD/13th C
Ebchester		12th (0.25 km)/13th C
Piercebridge		12th (0.25 km)/13th C
Ribchester		12th/13th (0.25 km)/18th C
Birrens		12th/13th/17th/Unknown
Broadlea		12th/13th/17th C/Unknown
Greta Bridge		12th/13th/18th C
Carlisle		12th/14th/18th C
Kirkby Thore		12th C
Risingham		12th C
Benwell		12th C
Wallsend		12th C
Nether Denton		12th C
Chester-Le-Street		13th C
Bewcastle		13th C
Haltwhistle Burn		13th C
Great Chesters		13th C
Whitley Castle		13th C
Bladnoch		13th C
Lanchester		13th C
Murder Loch		13th C
Raeburnfoot		14th/18th C
Kirkland		17th C/Unknown
Cappuck		18th C/Unknown
Malton		Unknown
Catterick		Unknown

(Table 40: Statistics for 0.25 kilometres and 3 kilometres historical dates).

Fortified Dwellings 0.25 kilometres			Ecclesiastical Sites 0.25 kilometres		
No. of forts with dwellings present:			No. of forts with dwellings present:		
Historic Period:	present:	Percent :	Historic Period:	present:	Percent :
Prior 1100 AD	1	0.88	Prior 1100 AD	0	0
12th Century	3	2.65	12th Century	6	5.3
13th Century	0	0	13th Century	4	3.53
14th Century	0	0	14th Century	1	0.88
15th Century	0	0	15th Century	0	0
16th Century	0	0	16th Century	0	0
17th Century	0	0	17th Century	0	0
18th Century	0	0	18th Century	1	0.88
Unknown Date	0	0	Unknown Date	0	0
No Dwellings	109	96.47	No Dwellings	101	89.38
Fortified Dwellings 3 kilometres			Ecclesiastical Sites 3 kilometres		
No. of forts with dwellings present:			No. of forts with dwellings present:		
Historic Period:	present:	Percent :	Historic Period:	present:	Percent :
Prior 1100 AD	5	3.93	Prior 1100 AD	5	2.84
12th Century	15	11.81	12th Century	40	22.72
13th Century	13	10.23	13th Century	26	14.77
14th Century	11	8.66	14th Century	8	4.54
15th Century	3	2.36	15th Century	3	1.7
16th Century	10	7.87	16th Century	5	2.84
17th Century	3	2.36	17th Century	13	7.38
18th Century	3	2.36	18th Century	22	12.5

Unknown			Unknown		
Date	9	7.08	Date	19	10.8
No Dwellings	55	43.3	No Dwellings	35	19.88

Appendix: Roman fortification details

Fortification measurements are in metres and hectares.

Hadrian's Wall Sites

Name:	Location:	County:
Bowness-On-Solway	Hadrian's Wall	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1014702	Fort
Roman Name:	Fort Size:	Location:
Maia	128m N to S. 186m E to W. 2.38 ha.	on a clay knoll
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1930 Birley 1973 Potter 1976 Potter 1984 Caruana observations 1988 Austen	Castles – Pele Tower, ruin in 1539. Churches – St. Michael's church.
Second largest after Stanwix on Hadrian's Wall. Internal buildings remained timber construction. (Historic England 2018).		

Name:	Location:	County:
Drumburgh	Hadrian's Wall	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1014699	Fort
Roman Name:	Fort Size:	Location:
Congavata		outlook n and e over inner Solway
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1899 Haverfield 1947 Simpson & Richmond	None
Least known fort on wall. Latest Roman evidence – Late Roman pottery (Historic England 2018)		

Name:	Location:	County:
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Burgh-By-Sands	Hadrian's Wall	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1018457	Fort
Roman Name:	Fort Size:	Location:
Aballava		
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1922 Collingwood 1950 – castle 1980 Jones 1982 Jones 1991 geophysics 1993 Flynn	Castles – Burgh Castle. Motte and Bailey. Medieval Grange. Late 12 th C stone castle. 13 th C Hall, destroyed circa 1339. Churches – St. Mary's
Fort size – w and s not confirmed (Historic England 2018)		

Name:	Location:	County:
Amberfield	Hadrian's Wall	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1007067	Fort
Roman Name:	Fort Size:	Location:
Unknown	140m across	
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	Partial excavation	
(Historic England 2018)		

Name:	Location:	County:
Stanwix	Hadrian's Wall	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1017948	Fort
Roman Name:	Fort Size:	Location:
Uxelodunum	176m N to S. 213m E to W. Expanded 194m N to S. 3.96 ha.	crest of ridge on north of River Eden.

	(Largest fort on Wall)	
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	<p>1932 Simpson</p> <p>1940 Simpson and Richmond</p> <p>1976 Smith</p> <p>1984 Carlisle Archaeological Unit</p> <p>1986 Caruana</p> <p>1991/92 Carlisle Archaeological Unit</p> <p>1997 Carlisle Archaeological Unit</p>	<p>Castles – Grade II listed house dating to early 19th Century. Richard Lowry, attorney (1196968). Now part of college.</p> <p>Churches – St. Michael's 1841-3 AD. Original late medieval. Tower second highest point in Carlisle.</p>
<p>Petriana, only 1,000 strong auxiliary unit in Britain based here.</p> <p>(Historic England 2018)</p>		

Name:	Location:	County:
Castlesteads	Hadrian's Wall	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1010985	Fort
Roman Name:	Fort Size:	Location:
Camboglanna	<p>114m2.</p> <p>1.3 ha</p>	On high bluff, commanding Cam Beck valley. 1791 surface remains damaged by landscaping. Ornamental garden.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	<p>1934 Richmond & Hodgson</p> <p>1991 Survey</p>	
<p>(Historic England 2018)</p>		

Name:	Location:	County:
Birdoswald	Hadrian's Wall	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1010994	Fort
Roman Name:	Fort Size:	Location:

Banna	178.5m N to S. 123m E to W. 2.2 ha	on slope of ridge with steep scarp to south, guarding bridge point of R. Irthing to e.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1850 Potter 1898 Haverfield 1928 Richmond 1930 Richmond 1945 Simpson & Richmond 1980s Wilmott	n/e corner farm buildings. Early Medieval hall.
(Historic England 2018)		

Name:	Location:	County:
Carvoran	Hadrian's Wall	Northumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1010991	Fort
Roman Name:	Fort Size:	Location:
Magna	135m x 111m. 1.5 ha	Crest of steep west facing slope, overlooking gap in tipalt valley, river crossing and junction of Staingate and Maiden Way.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	None	
1599 recorded as substantial buildings and streets in fort. S/e angle bath house with plaster on. (Historic England 2018)		

Name:	Location:	County:
Great Chesters	Hadrian's Wall	Northumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1010976	Fort
Roman Name:	Fort Size:	Location:
Aesica	129m x 109m. 1.36 ha	on a low ridge overlooking Cawburn to the west.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:

No	1894 1897 Gibson 1908 Simpson and Gibson 1939 Simpson & Richmond	Great Chesters farm in n/e corner.
(Historic England 2018)		

Name:	Location:	County:
Housesteads	Hadrian's Wall	Northumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1018585	Fort
Roman Name:	Fort Size:	Location:
Vercovicium	2 ha	on prominent crest of When Sill, on escarpment west of Knag Burn.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	1822 to 1988	Castles – 16 th C Bastle House, over tower of south gateway
(Historic England 2018).		

Name:	Location:	County:
Carrowburgh	Hadrian's Wall	Northumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1015914	Fort
Roman Name:	Fort Size:	Location:
Brocolitia	139.5m N to S. 109m E to W. 1.4 ha	slight terrace, gentle e facing slope.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	None	
(Historic England 2018)		

Name:	Location:	County:
Chesters	Hadrian's Wall	Northumbria
Scheduling Type:	List Entry:	Type:

Scheduled	1010959	Fort
Roman Name:	Fort Size:	Location:
Cilurnum	2.1 ha	guarding n Tyne crossing of wall
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1796 to 1991	Castles – 18 th C Chesters House, n/w of fort. Part of its landscaped garden.
(Historic England 2018)		

Name:	Location:	County:
Haltinchesters	Hadrian's Wall	Northumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1010624	Fort
Roman Name:	Fort Size:	Location:
Onnum	2 ha	on crest of e bank of Fence Burn
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	1959 1989 survey	
(Historic England 2018)		

Name:	Location:	County:
Rudchester	Hadrian's Wall	Northumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1017533	Fort
Roman Name:	Fort Size:	Location:
Vindovala	1.8 ha	
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	1897	Castles – Rudchester farm buildings cover part of vicus
18 th C stone robbed. Ploughed and cultivated (Historic England 2018)		

Name:	Location:	County:
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Benwell	Hadrian's Wall	Northumbria Newcastle Upon Tyne
Scheduling Type:	List Entry:	Type:
Scheduled	1003499	Fort
Roman Name:	Fort Size:	Location:
Cordercum		
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	None	
(Historic England 2018)		

Name:	Location:	County:
Newcastle	Hadrian's Wall	Northumbria Newcastle Upon Tyne
Scheduling Type:	List Entry:	Type:
Scheduled	1020126	Fort
Roman Name:	Fort Size:	Location:
Pons Aelius		On promontory, steep escarpments s/e and w. Bounded by River Tyne on s, e and n Lort Burn and its tributary.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1929, 1973, 1974, 1976, 1977, 1985, 1987, 1992, 1995	Cemetery – 8 th to mid-12 th C cemetery. 660 inhumations, men/women/children. Some disarticulated. E-w aligned. Associated building, possible church. Castles – Documented 1080 motte and bailey, associated bank made with Roman remains and bones from 8 th C cemetery. 1168-1178 AD stone tower keep replaced motte and bailey buildings, additions in 13 th c, and 19 th c. 13 th C barbican added, remodelled 1611 and 18 th and 19 th C. 1644 siege of city, castle was Royalist garrison and re-fortified. 18 th C majority of civil war defences levelled.

		Churches – chapel within castle.
Latest Roman evidence – 5 th C evidence of occupation, structure and native pottery. (Historic England 2018)		

Name:	Location:	County:
Wallsend	Hadrian's Wall	Northumbria North Tyneside
Scheduling Type:	List Entry:	Type:
Scheduled	1005914	Fort
Roman Name:	Fort Size:	Location:
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	None	
(Historic England 2018)		

Name:	Location:	County:
South Shields	Hadrian's Wall	Northumbria South Tyneside
Scheduling Type:	List Entry:	Type:
Scheduled	1005910	Fort
Roman Name:	Fort Size:	Location:
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	None	
(Historic England 2018)		

Staingate Sites

Name:	Location:	County:
Kirkbride	Staingate	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1018653	Fort
Roman Name:	Fort Size:	Location:

	190m x 175m	low, commanding position, overlooking River Wampool and Moricambe Bay.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)		Castles – Bank House Farm, Rectory, Two Hoots house. Churches – St. Bride's church and churchyard
Latest Roman evidence – Believed abandoned once Wall was built. (Historic England 2018)		

Name:	Location:	County:
Carlisle	Staingate	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1014579	Fort
Roman Name:	Fort Size:	Location:
Luguvalium		at north end of steep bluff overlooking confluence of Rivers Caldew and Eden. Located northern tip of city centre.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	Castles – over central and northern part of fort. 1092 timber castle. 1122 rebuilt in stone. 1130s city walls built. 12 th , 14 th , 16 th and 19 th c alterations and additions. Late 15 th C prison carvings. 16 th c battery. 1153 AD King David of Scotland died in oratory of castle. 1135 – 1153 Scottish city. 1157 AD English again and has been since. 1645 siege by Scots. 1745 Jacobite's, saw military action. 1959 no longer military base, headquarters of King's Own Royal Border Regiment. Churches – castle chapel
Latest Roman evidence – 330s AD unknown use after this date. Late 4 th century stone buildings over barracks. (Historic England 2018)		

Name:	Location:	County:
Brampton Old Church	Staingate	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1014586	Fort
Roman Name:	Fort Size:	Location:
	125m N to S. 118m E to W	on spur of ground, falls steeply to River Irthing on n and w.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1935 Simpson & Richmond	Churches – in north half of fort. St. Martin's. Church documented in 169 as gift to Lanercost Priory. 14 th c fortified tower added. 1861 and 1889 oval church yard extended. 1960s church yard officially closed. 1978 church declared redundant. Grade II listed. 1789 new church built in town of Brampton, this church closed and partial demolition of tower and nave, only chancel remained in use. St. Martin is named as the teacher of St. Ninian, from the late 4 th , early 5 th C and local tradition states Martin used the fort as shelter.
Latest Roman evidence – deliberate dismantlement, with sealed post holes, possibly when Wall was built. (Historic England)		

Name:	Location:	County:
Boothby, Castle Hill	Staingate	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1014585	Fort
Roman Name:	Fort Size:	Location:
		on edge of scar overlooking River Irthing to the north.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1933 Simpson	
(Historic England)		

Name:	Location:	County:
Nether Denton	Staingate	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1018501	Fort
Roman Name:	Fort Size:	Location:
	200m x 160m	on hill top, on the bend of the River Irthing
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	Castles – Church Hill House. Rectory. Churches – St. Cuthbert's church and church yard.
Latest Roman evidence – Believed abandoned when Wall operational. (Historic England)		

Name:	Location:	County:
Throp	Staingate	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1010611	Fortlet
Roman Name:	Fort Size:	Location:
	55m ² . 0.25 ha	Occupies n/e end of spur, overlooking Poltross Burn to the e and a shallow valley with Irthing to n/w.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1910	
Land is ploughed. (Historic England)		

Name:	Location:	County:
Haltwhistle Burn	Staingate	Northumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1010945	Fortlet
Roman Name:	Fort Size:	Location:
		on a gentle sloping ground before a steep drop into

		Haltwhistle Burn to the w, guards a crossing of the Burn.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1907-08	
(Historic England 2018)		

Name:	Location:	County:
Chesterholm	Staingate	Northumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1014820	Fort
Roman Name:	Fort Size:	Location:
Vindolanda	154m x 93m. 1.43 ha	on edge of scarp descending to e to Chainley Burn, and s to Doe Sike on a prominent platform.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1930 to 1980 1991	
Latest Roman evidence – early 5 th c occupation. Pottery and coins (Historic England 2018)		

Name:	Location:	County:
Corbridge	Staingate	Northumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1006611	Fort
Roman Name:	Fort Size:	Location:
Corstopitum		
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	
(Historic England 2018)		

Name:	Location:	County:
Washingwells	Staingate	Northumbria Gatehead

Scheduling Type:	List Entry:	Type:
Scheduled	1018645	Fort
Roman Name:	Fort Size:	Location:
	1.88 ha	on spur overlooking Team valley. S and w slopes steep, gentle slope on e and level ground n/w.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No		
(Historic England 2018)		

Name:	Location:	County:
Whitley Castle	Staingate	Northumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1006621	Fort
Roman Name:	Fort Size:	Location:
Epiacum		on e facing slope overlooking valley of River South Tyne.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	1810	
Latest Roman evidence – evidence for 4 th century occupation. (Historic England 2018)		

A66 Sites

Name:	Location:	County:
Papcastle	A66	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1007760	Fort
Roman Name:	Fort Size:	Location:
Derventio	250m x 200m	on hill overlooking crossing of River Derwent.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	1912 1961-2	
At junction of 5 Roman roads (Old Carlisle, Burrow Walls, Moresby, Keswick, S.W Coast).		

Latest Roman evidence – 1st to 4th c evidence of occupation.
(Historic England 2018)

Name:	Location:	County:
Troutbeck	A66	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1010827	Fort
Roman Name:	Fort Size:	Location:
	120m x 110m	on high ground, at the head of the River Glenderamackin and the Trout Beck.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)		
(Historic England 2018)		

Name:	Location:	County:
Kirkby Thore	A66	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1012183	Fort
Roman Name:	Fort Size:	Location:
Bravoniacum	2.2 ha	
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	1960s	
Main Street within fort area has slight bend, suggestion of Roman buildings remaining at time. Ploughed areas Latest Roman evidence – late 4 th c. (Historic England 2018)		

Name:	Location:	County:
Castrigg	A66	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1007174	Fortlet
Roman Name:	Fort Size:	Location:

	0.5 ha	On a slight rise, with view of Roman road from Brougham to Scotch Corner.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No		
(Historic England 2018)		

Name:	Location:	County:
Brough	A66	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1007148	Fort
Roman Name:	Fort Size:	Location:
Verteris	1.2 ha	on a ridge on the south bank of Swindale Beck, a tributary of River Eden. On the Stainmore Pass old Roman Road.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1923 HM Office of Works 1954 Birley 1970s 1976 geophysical survey 1990s	Castles – Brough Castle Farm. Castle, late 11 th C stone tower, re-use of Roman ditches. 12/13 th c alterations and additions. 12 th c planned town. 1659 restored by Lady Anne Clifford. 17 th c walled garden. 1714 roof and fittings sold, 1730s ruin. Churches – 12 th C St. Michael's church.
Latest Roman evidence – 4 th C occupation. (Historic England 2018)		

Name:	Location:	County:
Maiden Castle	A66	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1007183	Fortlet
Roman Name:	Fort Size:	Location:
	40m x 50m	on s w facing slope of Beldoo Hill

Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	Yes – no dates	
Latest Roman evidence – 4 th c occupation. (Historic England 2018)		

Name:	Location:	County:
Bowes	A66	County Durham
Scheduling Type:	List Entry:	Type:
Scheduled	1002316	Fort
Roman Name:	Fort Size:	Location:
Lavatris		
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	Castles – Late 12 th c. in north east corner of fort. Grade I listed (1002318). Tower keep. James I of England sold castle. Destruction in Civil War. Dismantled and stone robbed.
(Historic England 2018)		

Name:	Location:	County:
Greta Bridge	A66	County Durham
Scheduling Type:	List Entry:	Type:
Scheduled	1019074	Fort
Roman Name:	Fort Size:	Location:
	140m x 95m	on raised terrace on left bank of River Greta, along Dere Street and Stainmore Pass.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1970s	
North section of fort Morris Arms hotel and Burns Cottage 17 th C Greta Bridge (Historic England 2018)		

Pennines Sites

Name:	Location:	County:
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Burwen Castle	Pennines	North Yorkshire
Scheduling Type:	List Entry:	Type:
Scheduled	1012608	Fort
Roman Name:	Fort Size:	Location:
		Disused railway runs through right hand side
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	
(Historic England 2018)		

Name:	Location:	County:
Ilkley	Pennines	West Yorkshire Bradford
Scheduling Type:	List Entry:	Type:
Scheduled	1013674	Fort
Roman Name:	Fort Size:	Location:
		on roads between Ribchester to York and Manchester to Aldborough. Placed to control crossing point of River Wharfe, on plateau above river. Watercourses to e and w and rising ground to s. Most of fort below modern buildings. North part of fort is landscaped.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	Castles – Manor House museum and castle yard. In west side of fort. Churches – All Saints church and church yard. 3 cross shafts. In central and south part of fort.
Latest Roman evidence – late 4 th C. (Historic England 2018)		

Name:	Location:	County:
York	Pennines	North Yorkshire

		York
Scheduling Type:	List Entry:	Type:
Scheduled	1004174	Legionary Fortress
Roman Name:	Fort Size:	Location:
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	Churches – Cathedral church of St. Peter 13 th C (1257222)
(Historic England 2018)		

South West Scotland Sites

Name:	Location:	County:
Bladnoch	South West Scotland	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	318944	Fortlet
Roman Name:	Fort Size:	Location:
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	
(Canmore 2018)		

Name:	Location:	County:
Gatehouse Of Fleet	South West Scotland	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	63631	Fortlet
Roman Name:	Fort Size:	Location:
	58m x 50m	
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1960-1 Joseph	
Latest Roman evidence – Flavian occupation evidence (Canmore 2018)		

Name:	Location:	County:
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Glenlochar	South West Scotland	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	64687	Fort
Roman Name:	Fort Size:	Location:
	3.3 ha	On e bank of River Dee
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	1952 Richmond and Joseph	Castles – Glenlochar House. Abbey Yard
Latest Roman evidence – 3 forts. Flavian – burnt. Antonine. Later Antonine, modifications to 2 nd fort. (Canmore 2018)		

Name:	Location:	County:
Moat of Lochrutton	South West Scotland	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	65020	Fortlet
Roman Name:	Fort Size:	Location:
		Ploughed.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	Castles – Moat Farm next to site.
(Canmore 2018)		

Name:	Location:	County:
Lantonside	South West Scotland	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	66089	Fortlet
Roman Name:	Fort Size:	Location:
	42m x 37m	On Solway Coast.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	Castles – Caerlaverock castle close by. Solway

		Cottage and Lantonside village next to site.
(Canmore 2018)		

A592/3 Sites

Name:	Location:	County:
Ravenglass	A592/3	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1013013	Fort
Roman Name:	Fort Size:	Location:
Glannaventa		on a low flat eminence, on coast, shallow ravines to north and south. Western edge has coastal erosion and railway line runs n/s through fort. Guards estuaries for Rivers Esk, Mite and Irt.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	
<p>Latest Roman evidence – 122 AD first fort constructed. 130 AD 2nd fort constructed. 197, 296 & 367 AD evidence of fires.</p> <p>(Historic England 2018)</p>		

Name:	Location:	County:
Hardknott	A592/3	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1009349	Fort
Roman Name:	Fort Size:	Location:
Mediobogdum	1.2 ha	on a s. w project spur of Hardknott Fell, on a gradually sloping fell.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	
<p>Latest Roman evidence – 117-38 AD built. 138-61 AD reduced manpower. Mid 2nd c reoccupied. End of 2nd c abandoned.</p> <p>(Historic England 2018)</p>		

Name:	Location:	County:
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Ambleside	A592/3	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1009348	Fort
Roman Name:	Fort Size:	Location:
Galava	1.54 ha	on head of lake Windermere, e of River Brathay on raised platform.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1914-20 1960s 1980s 1990s	
<p>Grade I listed.</p> <p>Dock facilities s/e on lake side.</p> <p>Latest Roman evidence – 1st fort 90s AD turf and timber. 117-38 AD stone fort. 138-61 AD reduced man power. 161-80 AD re-occupied. Late 4th C abandoned. Latest coin dated 378 AD.</p> <p>(Historic England 2018)</p>		

A684 Sites

Name:	Location:	County:
Bainbridge	A684	North Yorkshire
Scheduling Type:	List Entry:	Type:
Scheduled	1017920	Fort
Roman Name:	Fort Size:	Location:
Virosidum	91m N to S. 111m E to W. 1.01 ha	On summit of Brough Hill, above the Rivers Bain and Ure, with views across Wensleydale. Controls pass through the Pennines. Medieval rabbit warrens. Field systems.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	1925/26 Collingwood 1928/29 Droop 1950/53 Wade 1956/69 Hartley	
<p>Latest Roman evidence – 90-105 AD Flavian. 205 AD rebuild. Late 4th C rebuilding.</p>		

(Historic England 2018)

Name:	Location:	County:
Wensley	A684	North Yorkshire
Scheduling Type:	List Entry:	Type:
Scheduled	1012004	Fort
Roman Name:	Fort Size:	Location:
	130m NW to SE. 100m NE to SW. 1.3 ha	On north bank of River Ure, west of Wensley village.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	
(Historic England 2018)		

Cumbrian Coast Sites

Name:	Location:	County:
Beckfoot	Cumbrian Coast	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1007170	Fort
Roman Name:	Fort Size:	Location:
Bibra	123m E to W. 84m N to S. 1.1 ha	on Cumbrian coast.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	Yes – no dates	Modern house in north west corner of fort.
Latest Roman evidence – 2 nd to 4 th C. (Historic England 2018)		

Name:	Location:	County:
Maryport	Cumbrian Coast	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1015415	Fort

Roman Name:	Fort Size:	Location:
Alavna	140m2	On sandstone ridge, with view over Solway Firth.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	1966	
Latest Roman evidence – Early 5 th C in use. (Historic England 2018)		

Name:	Location:	County:
Burrow Walls	Cumbrian Coast	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1007161	Fort
Roman Name:	Fort Size:	Location:
		On raised bank, guarding mouth of River Derwent. Old railway line, now cycle path runs through fort.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	Castles – Medieval Hall, with re-used Roman masonry.
(Historic England 2018)		

Name:	Location:	County:
Parton	Cumbrian Coast	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1007179	Fort
Roman Name:	Fort Size:	Location:
	122m x 109m	On level ground, raised above the coast, with higher ground to north.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	Yes – no date	Castles – Moresby Hall to east of site.

		Churches – St. Bridget's church, and earlier church foundations.
Latest Roman evidence – 128 AD to 4 th C occupation. (Historic England 2018)		

A595 Sites

Name:	Location:	County:
Old Carlisle	A595	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1007249	Fort
Roman Name:	Fort Size:	Location:
	2 ha	on high ground, e of Wiza Beck, w of Old Carlisle Farm.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	
(Historic England 2018)		

Name:	Location:	County:
Blennerhasset	A595	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1019017	Fort
Roman Name:	Fort Size:	Location:
	170m NW to SE. 200m NE to SW.	on bluff to s of River Ellen.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1989 field walking	
Apparently largest Cumbrian fort. Field walking pottery found, 65-75 AD. (Historic England 2018)		

Name:	Location:	County:
Caermote	A595	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1014285	Fort

Roman Name:	Fort Size:	Location:
	73m x 65m (2 nd fort). In NW corner of first fort location	view south, positioned to control access into northern lakes. Torpenhow to Bewaldeth road crosses fort. Water logging evidence.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	1901 1959	
(Historic England 2018)		

Dere Street Sites

Name:	Location:	County:
Oxton	Dere Street	The Scottish Borders
Scheduling Type:	List Entry:	Type:
Scheduled	54576	Fortlet
Roman Name:	Fort Size:	Location:
	46m x 46m	Under plough
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	
(Canmore 2018)		

Name:	Location:	County:
Newstead	Dere Street	The Scottish Borders
Scheduling Type:	List Entry:	Type:
Scheduled	55621	Fort
Roman Name:	Fort Size:	Location:
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	None	
(Canmore 2018)		

Name:	Location:	County:
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Oakwood	Dere Street	The Scottish Borders
Scheduling Type:	List Entry:	Type:
Scheduled	54330	Fort
Roman Name:	Fort Size:	Location:
	1.42ha	on a flat top of a knoll, made of boulder clay, with n and e sharp sides and w and s more gentle inclines. Under rough pasture.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	Yes - no date	
<p>Latest Roman evidence – 86 AD, no evidence of occupation after 100 AD. Burning evidence, unknown if deliberate or attack. Suggests abandonment.</p> <p>(Canmore 2018)</p>		

Name:	Location:	County:
Cappuck	Dere Street	The Scottish Borders
Scheduling Type:	List Entry:	Type:
Scheduled	57050	Fort
Roman Name:	Fort Size:	Location:
		on e bank of Oxnam Water, overlooking crossing of same by Dere St.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1886 Laidlaw 1912 Stevenson and Miller 1949	
(Canmore 2018)		

Name:	Location:	County:
Chew Green	Dere Street	Northumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1015847	Fort
Roman Name:	Fort Size:	Location:

	2.7 ha	
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	1883 1936-7	Churches – Norman chapel and DMV partly overlie fort. DMV. Pottery dating 13 th to 15 th C. Documents say resting place for travellers. 1249 site est. as setting for cross border criminal cases. 1456 named Kemplepath. 1550 Kemylpeth.
(Historic England 2018)		

Name:	Location:	County:
Learchild	Dere Street	Northumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1006440	Fort
Roman Name:	Fort Size:	Location:
Alavna	231.6m x 39.6m	
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	Yes – no date	
Latest Roman evidence – pot 1 to 2 nd c (Historic England 2018)		

Name:	Location:	County:
High Rochester	Dere Street	Northumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1006610	Fort
Roman Name:	Fort Size:	Location:
Bremenium	147m x 136m	on w facing slope overlooking Sills Burn
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	19 th and 20 th C	
Latest Roman evidence – mid 4 th c destroyed. Grade II listed. Standing remains. (Historic England 2018)		

Name:	Location:	County:
Blakehope	Dere Street	Northumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1006507	Fort
Roman Name:	Fort Size:	Location:
	128m x 119m	on gentle sloping ground
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	Yes – no dates	
(Historic England 2018)		

Name:	Location:	County:
Risingham	Dere Street	Northumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1008561	Fort
Roman Name:	Fort Size:	Location:
Habitancum	135m NW to SE. 117m NE to SW.	on low knoll, surrounded by low ground, above River Rede.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1840s	Castles – Medieval settlement. Medieval ridge and furrows surround fort. 1604 survey, holding on site with named person. 1826 last resident leaves.
Latest Roman evidence – Early 3 rd C. Early 2 nd c pot.		
(Historic England 2018)		

Name:	Location:	County:
Ebchester	Dere Street	County Durham
Scheduling Type:	List Entry:	Type:
Scheduled	1002336	Fort
Roman Name:	Fort Size:	Location:
Vindomora		
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	None	

(Historic England 2018)

Name:	Location:	County:
Chester-Le-Street	Dere Street	County Durham
Scheduling Type:	List Entry:	Type:
Scheduled	1003575	Fort
Roman Name:	Fort Size:	Location:
Concangium		
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	
(Historic England 2018)		

Name:	Location:	County:
Lanchester	Dere Street	County Durham
Scheduling Type:	List Entry:	Type:
Scheduled	1002361	Fort
Roman Name:	Fort Size:	Location:
Longovicium		
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	None	
(Historic England 2018)		

Name:	Location:	County:
Binchester	Dere Street	
Scheduling Type:	List Entry:	Type:
Scheduled	1002362	Fort
Roman Name:	Fort Size:	Location:
Vinovia		
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	None	
(Historic England 2018)		

Name:	Location:	County:
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Piercebridge	Dere Street	County Durham
Scheduling Type:	List Entry:	Type:
Scheduled	1002365	Fort
Roman Name:	Fort Size:	Location:
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	
(Historic England 2018)		

Name:	Location:	County:
Catterick	Dere Street	North Yorkshire
Scheduling Type:	List Entry:	Type:
Scheduled	1021181	Fort
Roman Name:	Fort Size:	Location:
Cataractonium	2 ha	on high ground, guarding a crossing point on River Swale for Dere Street.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	1958-9 1958-97	44 Anglian burials. 3 x 6 th c buildings (SF).
<p>Latest Roman evidence – early 4th c fort re-established.</p> <p>C.600 AD Battle of Catraeth in poem Y Gododdin, supposed to be here. 7th C Bede says is Royal Northumbrian settlement</p> <p>(Historic England 2018)</p>		

Name:	Location:	County:
Healam Bridge	Dere Street	North Yorkshire
Scheduling Type:	List Entry:	Type:
Scheduled	1021211	Fort
Roman Name:	Fort Size:	Location:
	130m x 130m	
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1993-4	
<p>Latest Roman evidence – Fort abandoned soon after build. Evidence incorporated into civil settlement or by Imperial Mail Service.</p>		

(Historic England 2018)

Name:	Location:	County:
Newton Kyme	Dere Street	North Yorkshire
Scheduling Type:	List Entry:	Type:
Scheduled	1017693	Fort
Roman Name:	Fort Size:	Location:
	220m E to W. 300m N to S. 5 ha.	on a raised terrace, s of River Wharfe, defending crossing of river.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	1908 1956 1979	
Latest Roman evidence – into 4 th C. (Historic England 2018)		

A169 Sites

Name:	Location:	County:
Lease Rigg	A169	North Yorkshire
Scheduling Type:	List Entry:	Type:
Scheduled	1428339	Fort
Roman Name:	Fort Size:	Location:
	170m N to S. 70m E to W. 1 ha	N and S overlooking steep valleys. House Bessie Garth near centre, possibly above Commander's House. Grosmont Lane (road) travels through centre.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	1976 survey	
Latest Roman evidence – deliberate dismantling evidence. (Historic England 2018)		

Name:	Location:	County:
Cawthorn	A169	North Yorkshire
Scheduling Type:	List Entry:	Type:

Scheduled	1007988	Fort
Roman Name:	Fort Size:	Location:
	150m x 150m	on crest of gentle south facing slope at the northern end of the Vale of Pickering. South is a steep slope to Cawthorn Banks.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	1920s	Medieval packhorse track, named Portergate in area.
Latest Roman evidence – 120 AD, buildings possibly continued in use later. (Historic England 2018)		

Name:	Location:	County:
Malton	A169	North Yorkshire
Scheduling Type:	List Entry:	Type:
Scheduled	1004885	Fort
Roman Name:	Fort Size:	Location:
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	
(Historic England 2018)		

A6/74 Sites

Name:	Location:	County:
Easter Happrew	A6/74	The Scottish Borders
Scheduling Type:	List Entry:	Type:
Scheduled	50032	Fort
Roman Name:	Fort Size:	Location:
	115m2. 1.42ha	
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1956 1961	
Abandoned shortly after 86 AD (Canmore 2018)		

Name:	Location:	County:
Lyne	A6/74	The Scottish Borders
Scheduling Type:	List Entry:	Type:
Scheduled	50065	Fort
Roman Name:	Fort Size:	Location:
	165m e-w. 137m n-s.	
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1900 1959-63 1961	
<p>Latest Roman evidence – Occupied for a few years only. Late Antonine period. Tiber and stone mix of structures. (Canmore 2018)</p>		

Name:	Location:	County:
Castledykes	A6/74	South Lanarkshire
Scheduling Type:	List Entry:	Type:
Scheduled	47721	Fort
Roman Name:	Fort Size:	Location:
	174m x 160m	Ploughed land.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	1937-1955	
<p>Latest Roman evidence – Late 2nd C. (Canmore 2018)</p>		

Name:	Location:	County:
Lamington	A6/74	South Lanarkshire
Scheduling Type:	List Entry:	Type:
Scheduled	47544	Fortlet
Roman Name:	Fort Size:	Location:
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	None	Churches – Lamington church 170m south.

(Canmore 2018)

Name:	Location:	County:
Wandel	A6/74	South Lanarkshire
Scheduling Type:	List Entry:	Type:
Scheduled	47366	Fortlet
Roman Name:	Fort Size:	Location:
	33.2m NE to SW. 31.4m NE to SE.	on a summit of a low knoll on arable ground.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1966	
(Canmore 2018)		

Name:	Location:	County:
Crawford	A6/74	South Lanarkshire
Scheduling Type:	List Entry:	Type:
Scheduled	47396	Fort
Roman Name:	Fort Size:	Location:
	91m x 117m. 1.1 ha	on summit of narrow gravel plateau, guarding River Clyde crossing and positioned on its right bank.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1938 1961-6	Castles – Medieval castle close.
Latest Roman evidence – 163 AD approximate. (Canmore 2018)		

Name:	Location:	County:
Redshaw Burn	A6/74	South Lanarkshire
Scheduling Type:	List Entry:	Type:
Scheduled	48503	Fortlet
Roman Name:	Fort Size:	Location:
	19.8m E to W. 17.4m N to S.	view of narrow valley, Evan Water. West side eroded.

Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	None	
Latest Roman evidence – 2 nd /3 rd c occupation period. (Canmore 2018)		

Name:	Location:	County:
Beattock	A6/74	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	48407	Fortlet
Roman Name:	Fort Size:	Location:
	30 m2	On left bank of Evan Water
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	1984	
(Canmore 2018)		

Name:	Location:	County:
Milton	A6/74	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	48383	Fort
Roman Name:	Fort Size:	Location:
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	1938 to 1950	
(Canmore 2018)		

Name:	Location:	County:
Raeburnfoot	A6/74	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	67274	Fort
Roman Name:	Fort Size:	Location:
	73m x 64m	On a plateau above the River Esk and Rae Burn, close to assumed crossing of River Esk for Roman road.

Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1897 1946 1959-60	
Eroded on west side. Timber internal buildings. Latest Roman evidence – 2 nd C pot and evidence. Believed brief phase of use. (Canmore 2018)		

Name:	Location:	County:
Ladyward	A6/74	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	69368	Fort
Roman Name:	Fort Size:	Location:
	180m x 110m. 2 ha	On the left bank of Dryfe Water. NW erosion to fort.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	
(Canmore 2018)		

Name:	Location:	County:
Burnswark	A6/74	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	66626	Fort
Roman Name:	Fort Size:	Location:
	30m n-s. 21m w-e.	on the summit of Burnswark Hill, with associated Roman siege camps nw and se flanks of the hill.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	1898 1966-68	
155 AD occupation ceased. (Canmore 2018)		

Name:	Location:	County:
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Birrens	A6/74	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	67099	Fort
Roman Name:	Fort Size:	Location:
Blatobvlgivm	2.1 ha	Original fortlet, rebuilt to fort. 184 AD abandoned. S end eroded by Mein Water.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1895 1936-7 1962-7 2012/3 Survey	
(Canmore 2018)		

Name:	Location:	County:
Broadlea	A6/74	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	67156	Fortlet
Roman Name:	Fort Size:	Location:
	45m NW to SE. 35m NE to SW.	on flat arable land.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	None	
(Canmore 2018)		

Name:	Location:	County:
Kirkpatrick-fleming	A6/74	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	262472	Fortlet
Roman Name:	Fort Size:	Location:
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	
(Canmore 2018)		

Name:	Location:	County:
Broomholm	A6/74	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	67709	Fort
Roman Name:	Fort Size:	Location:
	99m x 82m	on south slope of Broomholm Knowe. SW of Broomholmshiels Farmhouse.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	Daniels 1960s Truckell 1950s	Road to west is 18 th C in date. Road to east was destroyed by medieval works.
<p>Latest Roman evidence – 80 to 120 AD occupation. Fort ended in destruction. Round house built in fort after abandonment.</p> <p>(Canmore 2018)</p>		

Name:	Location:	County:
Netherby Hall	A6/74	Cumbria
Scheduling Type:	List Entry:	Type:
Listed	1204948	Fort
Roman Name:	Fort Size:	Location:
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	None	Castles – 15 th C Tower House, with 17 th , 18 th and 19 th C alterations and additions. Currently occupied. Roman masonry used in construction.
<p>(Historic England 2018)</p>		

Name:	Location:	County:
Bewcastle	A6/74	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1015728	Fort
Roman Name:	Fort Size:	Location:

(Possibles) Banna or Fanum Cocidi Cocidius, native god honoured on Roman frontier, dedications on plaques in headquarters (where second name comes from).	Not rectangular, fort built to fit natural plateau.	on natural hexagonal plateau, with all sides naturally having scarps. S Kirk Beck. W Hall Sike. E Bride Gill. Connected to Birdoswald by Maiden Way.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	Yes – no dates	Castles – in NE corner of fort. Bew Castle. Shell keep 1296 to 1307 AD built. Ed I campaign into Scotland. N & E ditches widened and deepened, added cross ditches, formed moat to isolate castle. 15 th C additions. 1639 AD last garrisoned during border issues. 1641 AD dismantled by parliamentary troops, when they moved to Carlisle. Churches – in south of fort. (1087539). In use. Grade II listed. 13 th Century, with late 18 th C tower and early 20 th C alterations. Early 8 th C cross shaft. Demesne Farm in NW corner of fort, Grade II listed.
Latest Roman evidence – Early 4 th C abandoned. (Historic England 2018)		

Name:	Location:	County:
Park House	A6/74	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1007182	Fort
Roman Name:	Fort Size:	Location:
	115m sub-rectangular	On top of low hill, commanding views. Directly N is Park House Farm.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	Yes – no dates	
Wooden internal buildings and roads discovered.		

(Historic England 2018)

Name:	Location:	County:
Old Penrith	A6/74	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1007190	Fort
Roman Name:	Fort Size:	Location:
Voreda		
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	
(Historic England 2018)		

Name:	Location:	County:
Salkeld Gate	A6/74	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1008234	Fortlet
Roman Name:	Fort Size:	Location:
	48m x 50m	on summit of low hillock
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	None	
(Historic England 2018)		

Name:	Location:	County:
Brougham	A6/74	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1007186	Fort
Roman Name:	Fort Size:	Location:
Brocavum	1.37 ha	on s bank of River Eamont, overlooking rover crossing for N-S and E-W Roman roads. Close to River Lowther entering River Eamont.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:

No	No excavations completed in fort. 1987 1991 survey 2007	Castles – in NW corner of fort. 1214 built. 3 storey keep. Roman fort possibly provided readymade outer bailey. One of Lady Anne Clifford's estates that were refurbished during her life time. 1714 in ruin and material sold off. 1930s moat cleared and site consolidated.
Latest Roman evidence – late 4 th C abandoned. (Historic England 2018)		

Name:	Location:	County:
Low Borrowbridge	A6/74	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1007240	Fort
Roman Name:	Fort Size:	Location:
	140m x 105m	on a spur of land formed by the River Lune and Barrow Beck.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1950	
(Historic England 2018)		

Name:	Location:	County:
Watercrock	A6/74	Cumbria
Scheduling Type:	List Entry:	Type:
Scheduled	1007178	Fort
Roman Name:	Fort Size:	Location:
	136m x 117m	in a pronounced bend of the River Kent, being protected on all sides except the S by the river.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	Yes – no date	
Latest Roman evidence – 369 AD. (Historic England 2018)		

Name:	Location:	County:
Burrow by Burrow	A6/74	Lancashire
Scheduling Type:	List Entry:	Type:
Scheduled	1005101	Fort
Roman Name:	Fort Size:	Location:
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	None	
(Historic England 2018)		

Name:	Location:	County:
Lancaster	A6/74	Lancashire
Scheduling Type:	List Entry:	Type:
Listed	1195059	Fort
Roman Name:	Fort Size:	Location:
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1970s	
Fort is of 'Saxon Shore' type. Which cut through earlier bath house. Walls mentioned in 11 th C documentation as a boundary.		
(Historic England 2018)		

Name:	Location:	County:
Ribchester	A6/74	Lancashire
Scheduling Type:	List Entry:	Type:
Scheduled	1005110	Fort
Roman Name:	Fort Size:	Location:
Bremetennacum		
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	
(Historic England 2018)		

A76 Sites

Name:	Location:	County:
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Sanquhar	A76	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	45490	Fortlet
Roman Name:	Fort Size:	Location:
	54m NW to SE. 39m NE to SW.	near meeting of River Nith and Crawick Water.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	
(Canmore 2018)		

Name:	Location:	County:
Durisddeer	A76	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	47285	Fortlet
Roman Name:	Fort Size:	Location:
	18m x 24m	on a steep sided ridge, guarding a road pass.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1938	
(Canmore 2018)		

Name:	Location:	County:
Drumlanrig	A76	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	65200	Fort
Roman Name:	Fort Size:	Location:
	150m N to S. 100m E to W. 1.2 ha.	on bank of the River Nith, on the summit of a low plateau.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	2004	Castles – 350m NW of fort. 1429 AD first recorded, possibly earlier. 1618 AD quadrangular castle. 1690 AD refurbishment into palace.

Latest Roman evidence – No evidence pasted Antonine period. Burning and therefore believed deliberate slighting or abandonment. Robbed stone foundations. Ploughing evidence after abandonment.

(Canmore 2018)

Name:	Location:	County:
Kirkland	A76	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	70823	Fortlet
Roman Name:	Fort Size:	Location:
	62m NE to SW. 50m NW to SE.	
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	Yes – no date	
<p>Latest Roman evidence – 69 to 96 AD occupation period. Deliberate demolition evidence. Plough damage.</p> <p>(Canmore 2018)</p>		

Name:	Location:	County:
Barburgh Mill	A76	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	65789	Fortlet
Roman Name:	Fort Size:	Location:
	34.5m N to S. 35.5m E to W.	On a hillock.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	1946 1971 Breeze	
<p>Timber buildings.</p> <p>Latest Roman evidence – 162 AD. Believed only Antonine period occupation. Possibly deliberately slighted. Ditch infilled 14th C. Quarrying has removed N side of fortlet.</p> <p>(Canmore 2018)</p>		

Name:	Location:	County:
Dalswinton, Bankhead	A76	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	65893	Fort

Roman Name:	Fort Size:	Location:
	183m x 235m	Under cultivated fields.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	
(Canmore 2018)		

Name:	Location:	County:
Dalswinton, Bankfoot	A76	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	65920	Fort
Roman Name:	Fort Size:	Location:
		on flood plain of River Nith. SW defences eroded by river.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	2009 geophysics	
(Canmore 2018)		

Name:	Location:	County:
Carzield	A76	Dumfries and Galloway
Scheduling Type:	List Entry:	Type:
Scheduled	65890	Fort
Roman Name:	Fort Size:	Location:
	152m x 170m	
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
No	1939 1952 1956 1967-8 2011 Watching Brief	
(Canmore 2018)		

Name:	Location:	County:
Murder Loch	A76	Dumfries and Galloway

Scheduling Type:	List Entry:	Type:
Scheduled	66263	Fortlet
Roman Name:	Fort Size:	Location:
	102m ENE to WSW. 85m NWN to ESE. 0.84 ha	on a summit of a knoll, south of the Water of Ae.
Fresh Waterway, within 0.25 km:	Excavations:	Architectural evidence:
Yes (DigiMap 2018)	None	
(Canmore 2018)		