A Roman Netherby Hall

A visitor arriving at Netherby Hall today will see nothing to suggest that this was once ever a significant Roman site owing to the extensive alterations that have taken place since the middle of the 18th century. These included the movement of large quantities of earth and changes to ground levels as part of the creation of the landscape gardens around the house.

Earlier visitors saw something very different. The oldest surviving account is that of John Leland who visited sometime between 1539 and 1543[1]:

> Netherby is a vii. myles north fro Cairluel, and Eske
> ryver rynneth on the north side of yt. Ther hath bene
> mervelus buyldinges, as appere by ruinus walles, and men
> alyve have sene rynges and staples yn the walles, as yt had
> bene stayes or holdes for shyppes. On the one side of yt is
> the Eatable ground; so that it is as a limes Angliae et Scotiae.
> The ruines be now a iii. myles at the lest from the flowyng
> water of Sulway sandes. The gresse groweth now on the
> ruines of the walles.

Leland did not specifically identify these ruins of 'marvellous buildings' on which grass was growing as Roman, but the antiquary William Camden who drew on Leland's notes as well making his own visit to the region in 1599 was in no doubt, and in his epic work Britannia (first edition 1586 followed by numerous later editions with extensive additions) he wrote of Netherby:

> Upon this we see Netherby, a little village of two or three cottages, the ruins of some ancient City are so wonderful and great, and the name of Esk running by does so well second it, that I imagine the old Aesica stood there, where-in formerly the Tribune of the first Cohort of Astures kept garrison against the Barbarians.[2]

Camden's identification of the ruins as Roman was reinforced by the discovery of an inscription to the Emperor Hadrian in the walls of the house of Walter Graham at Netherby which he included in updated editions of Britannia. This inscription is now lost, but the Roman occupation of Netherby is established beyond any doubt by the numerous other inscriptions[3] and artifacts found in subsequent years and now housed in Tullie House Museum.

The description of the lost inscription was provided to Camden by one of his correspondents, Reginald Bainbrigg, the master of the school at Appleby. In addition to this inscription, which he copied during a visit in 1601, he had the following to say about Netherby:

> I argue with confidence that the port of Aesica survives here because the sides of ships, anchors and iron rings which by which ships are accustomed to be moored are found. But because of the build-up of sandbanks which are cast up from the sea, the sea is further kept out by several miles and the port which normally gives access to ships is now blocked off. The ancient city lies there like a corpse. There are many towns in Britain which lay on the coast but are now separated from the sea by many miles.'[4]

Modern scholars disagree with Camden and Bainbrigg's identification of Netherby with Roman Aesica and instead identify Netherby with *Castra Exploratorum* ('Fort of the Scouts') and Great Chesters on Hadrian's Wall with *Aesica*. Of particular interest here is the reported evidence of the presence of a port at Netherby.

Impact of eighteenth century landscaping

There is a clear break in the accounts of visitors to Netherby in the 18th century. When Dr Robert Graham inherited the Netherby estate from his aunt, Lady Witherington, in 1757 he engaged in a large-scale remaking of the grounds as well as re-building Netherby Hall itself.

Visitors prior to this time remark on the extensive Roman ruins to be seen, while those visiting later, such as Thomas Pennant, who visited in 1769 and 1772, wrote of the extensive collection of artifacts found on site, many apparently in the course of the landscaping works, displayed in the house by Dr Graham and his successors, but do not report seeing any of the ruins that impressed earlier visitors.

In the History of Cumberland, William Hutchinson reproduces an account of the means by which some of this remodelling of the site was accomplished:

> The house at Netherby stands on an eminence, with higher grounds about it. A little on the side of the front stood a knoll, which made a disagreeable appearance before the windows. Being desirous therefore of removing it, he sent to Newcastle for a person accustomed to works of this kind. The undertaker came, surveyed the ground and estimated the expense at £1300.

Baulking at this price Dr Graham turned to a man called John Wilson who was described as being 'unrivalled in his ingenuity in draining, banking etc.'.

> While the affair was in agitation, Dr. Graham heard, that Wilson had said, that the earth might be removed at a much easier rate. He was examined on the subject; and his answers appeared to be rational, he was set to work. He had already surveyed the higher grounds, where he collected all the springs he found in two reservoirs from which he cut a precipitate channel, pointed at an abrupt corner of the knoll. He cut also a channel of communication between the reservoirs. These both being filled, he opened his sluices, and let out such a torrent of water, (the upper pool feeding the lower) that he soon carried away the corner of the knoll, against which he had pointed his artillery. He then charged again and levelled another part with equal success. In short, by a few efforts of this kind he carried away the whole hill: and told Dr. Graham, with an air of triumph, that if he pleased, he would carry away his house next. The work was completed in a few days; and the whole expense did not amount to twenty pounds.[5]

Unfortunately the account does not specify clearly the location of the knoll but the implication is that a large volume of material was removed by this process of 'hushing' and this probably included a part of the Roman fort.

The ground level on the west-facing side of the house was also raised substantially as part of Dr Graham's landscaping works. What was once part of the ground level of the seventeenth century house became a cellar and is now well below ground level. The effect of this on the west-facing side of the house is shown in the following photographs. The door at the bottom of the steps was at ground level in the 17th century:

The impact of Dr Graham's landscaping activities on the site has been extensive and has largely obliterated the evidence seen by earlier visitors. It has also complicated more recent

archaeological investigations carried out in connection with restoration work carried out by the present owners.

A Roman Port at Netherby?

Further evidence is provided by the Scottish antiquary Alexander Gordon who wrote in the 1720s, in the context of arguing that Agricola forded the Solway estuary based on his reading of Tacitus:

> There are some indeed who conjecture, that, in his [Agricola's] Time, in all Probability, that Firth was not fordable even when it was low Water. And because an Anchor was lately found at Netherby on the River Eske, they therefore conjecture that the Sea went further into the Country than it does at present.[6]

Leland, Bainbrigg and Gordon, writing at dates between the 1530s and the 1720s all report finds (mooring rings, anchors, sides of ships) that indicate that Netherby was at some point a port, or at the very least that the Esk was navigable up to Netherby in the past. The presence of extensive Roman remains in the same location also suggest that, if it was a port, it was a Roman one.

Owing to the process known as isostatic rebound, the coastline of the Solway has been rising since the end of the last Ice Age and the most recent modelling by Durham University shows that the sea level around the Solway Firth has been falling at a rate of 0.8mm a year over the last few thousand years. Over 2000 years this would result in a sea level fall of 1.6m[7].

The Solway has also been silting up over time as described by George Neilson in 1899[8] and Roman coastal craft appear to have been of shallow draught. The analysis of the Blackfriars boat 1 excavated in 1962-1963 suggested a draught of around 1.5m[9].

This vessel has been described as a flat-bottomed vessel of the type described by Julius Caesar as typical of Celtic vessels. Its sinking has been dated to c.150 AD[10] and the ship itself has been dated to around the same period.

Based on the above, it appears entirely possible that the Esk was navigable as far as Netherby during the Roman period for the types of vessels then in use. Given the accounts of visitors from the 16th to the early 18th century of various ship-related items being found at Netherby, I believe the balance of evidence points to it having been a port.

Included in the 1695 edition of Britannia (from which the quotation above in the section for additions is taken) is a report of a 'good' gold coin of the Emperor Nero having been found at Netherby. According to Eric Birley, whose 1952 paper *The Roman Fort at Netherby*[11] remains the most comprehensive work of scholarship on Roman Netherby, the source for this report was probably Dr Hugh Todd, Prebendary of the Church of Carlisle, but, as Birley notes, this coin was also reported in an account written in 1671 by Sir Daniel Fleming of Rydal (but not published until 1889) and William Stukeley also reported seeing it during a visit in 1726.

Nero became Emperor in 54AD and committed suicide in 68 AD, so this coin was struck before there is any evidence for a Roman presence in the area. Tree-ring analysis dates the first efort at Carlisle to 72-73 AD[12].

We can't rule out the idea that a gold coin bearing Nero's image was still circulating at the limits of the Empire sometime after his death. Indeed, in 2014, a gold coin bearing Nero's head

and dated to 64-65 AD was discovered at Vindolanda in a layer dating to the late 4th century AD[13]. The reported good condition of the Netherby coin in contrast to that found at Vindolanda suggests that this one was not in circulation for very long.

It is possible that the presence of this coin at Netherby was the result of trade rather than conquest. If so, then Netherby's role as a maritime trading post would predate the Roman Fort. It is also possible, however, that the presence of this coin at Netherby was a result of the construction of the port at around the same time as the original fort at Carlisle, only four years after the end of Nero's reign. It could, however, also have been hoarded and so withdrawn from circulation before being deposited, so its condition is not necessarily a good guide to the date at which it arrived at Netherby.

The dating of the Roman fort at Carlisle to 72-73AD means that it was built during the governorship of Quintus Petillius Cerialis from 71AD to 73/74 AD. During this time Cerialis subdued the Brigantes tribe of Northern England[14] and the establishment of a base at Carlisle was possibly part of a strategy to box in or divide the Brigantes before bringing them to a decisive battle.

Simon Turney speculates that the Roman fleet may have been involved in this campaign to supply the armies advancing on both the East and West sides of the country and writes 'likely Carlisle would have had a local harbour opened for the campaign'[15]. If this is correct, then Netherby would be a prime candidate for the location of this harbour.

Raymond Selkirk carried out an aerial survey and a ground inspection and on the basis of this he suggested that a stream 'passing the fort and joining the Esk at Scaurbank' (which is presumably that shown on Ordnance Survey maps as the Warren Burn), might have been used as a canal by the Romans[16]. Given the extensive landscaping and drainage work that was undertaken in this area in the 18th and 19th centuries, establishing that any alterations to watercourses were Roman is difficult but, if correct, the position of the canal could help to locate the site of the port.

Netherby's place in the Roman Road Network

On the Ordnance Survey's *Map of Roman Britain*, the Roman road running northwards from Carlisle into Scotland crosses the Esk downriver west of Netherby before heading on to Birrens. In this scheme Netherby is connected to the main Roman highway by a branch road rather than lying on the main route.

In what is regarded as the standard work on the subject, Ivan Margary writes of the road leading north from Carlisle:

> Although not proved, the present road north of Blackford seems to be the obvious continuation as far the northward loop of the Lyne, 2 miles south of Longtown. Here the road must have forked, for it is clear from the Antonine Itinerary (see below) that a branch [numbered 868 in Margary's listing of Roman roads] connected the Roman fort of *Castra Exploratorum* ('Camp of the Scouts') at Netherby, just north of Longtown with this road, and we will see in a moment that the main route must have turned north-westward at this point. No trace of either road has been found east of the River Esk, however.[17]

In light of the comment that no trace of either of these roads had actually been found, the statement that the main route *must* have turned north-westwards rather than continuing on to Netherby appears surprisingly strong. The evidence produced to support it, however, appears weak.

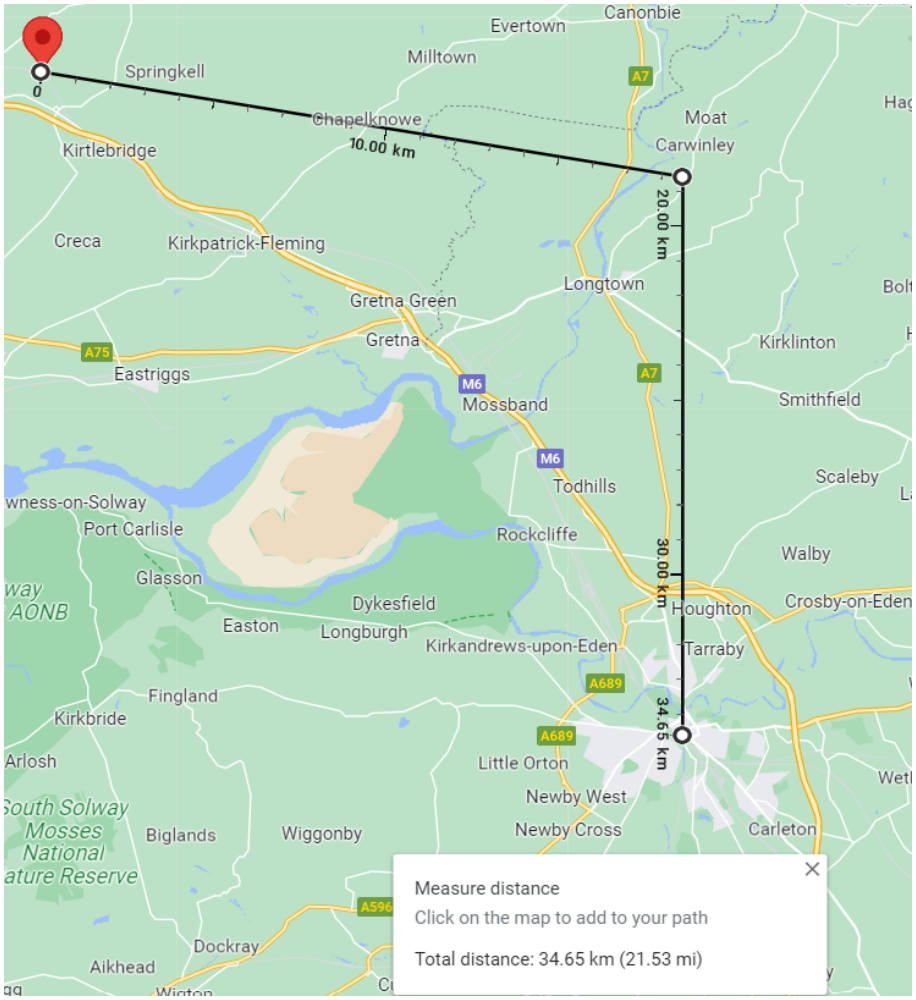
Margary noted that line of the Roman Road had been found on the other side of the Esk on a low ridge running to the south of the modern road between Longtown and Gretna. He then continued the line of this road to reach the Esk by "a lane to the light railway by the old munition works and other buildings which obliterate any former traces" at a ford a mile to the south-west of Arthuret Church (which he calls Longtown Church), and he then continued the line further to meet the road to Carlisle near Westlinton at a bend on the River Lyne.

In the process he made the assumption that the Esk was also fordable at the same point in the Roman period as it is today. Given the observations noted above in relation to the changes in sea-level and silting up of the Solway, this is, at best, questionable, especially if the Esk was navigable as far as Netherby. As all rivers, including the Esk, change their course over time the river may not even have been at the position of the current ford.

Drawing the connecting lines between the sections of road for which there was physical evidence in this way also creates another problem: namely how to square this with the documentary evidence in the form of the work known as the Antonine Itinerary (mentioned in the passage quoted above).

The Antonine Itinerary is a collection of routes between various places within the Roman Empire that list the places along the way with distances in Roman miles to be travelled between them. It is so-called because was traditionally attributed to the time of the Emperor Antoninus Pius who succeeded Hadrian in 138 AD and reigned until 161 AD, but the true date of its composition is unknown. The section dealing with Roman Britain is known as the *Iter Britanniarum* and consists of 15 routes. The placename *Castra Exploratorum* occurs on the second of these (Iter II) which starts at '*Blatobulgio*', which has been identified as Birrens in Dumfries and Galloway, and ends at the port of Richborough in Kent.

The distance from *Blatobulgio* to *Castra Exploratorum* is given as twelve Roman miles and that from *Castra Exploratorum* to the next station on the route, *Luguvalium* (Carlisle) is also given as twelve miles. A Roman mile is slightly shorter than a present-day mile and the equivalent distance to twelve Roman miles is just over eleven miles. Measured in a straight line, the distance from the Roman Fort of Birrens, which lies close to a place called Middlebie, to Netherby is 11.56 miles (18.61 km) and from Netherby to Carlisle the straight-line distance is 9.97 miles (16.04 km)[18].



The distances in the Antonine Itinerary may have been subject to measurement errors when it was compiled, and there is always the possibility that the figures have been corrupted through errors made by copyists, but unless there is a significant error in the text, these distances mean that there was little scope for the actual route to deviate from the shortest distances between these places. If Netherby had been on a branch off the main road, then a traveller following the route from Birrens to Carlisle would have had to make a detour to reach Netherby before retracing their steps back to the main road in order to travel on to Carlisle.

This doubling back would have added to the distance travelled and so there would have been a notable error in the distances in the first stages of Iter II (despite this, for reasons that are not clear, Margary states that the mileage in Iter II makes allowance for this detour and that the actual mileage along his route is in agreement with that in Iter II[19]). Furthermore, as pointed out by Birley, if *Castra Exploratorum* had not lain on the route between *Blatobulgium* and *Luguvalium* it would have been inconsistent with the normal practice of the compiler of the Itineraries to have mentioned it at all.

Comparing Margary's description with that of General Roy written in his *Military Antiquities of the Romans in Britain*[20] suggests that Margary was following Roy very closely: even down to misnaming Arthuret Church as 'Longtown Church'('Langtown' Church in Roy).

Roy was taken in by an 18th century forgery of an alternative account of the Roman road system in Britain known as *De Situ Britanniae or The Description of Britain*. This has resulted

in his Military Antiquities of the Romans in Britain no longer being accepted as an authoritative text (though the maps and plans contained in it are still regarded as extremely valuable). Unfortunately, this hasn't prevented errors made through attempts to fit the facts with the fantasy of *De Situ Britanniae* being perpetuated. It is possible that the branch road to Netherby is one of these, if only because Roy's belief in the veracity of the contents of *De Situ Britanniae* led him to downplay the evidence of the Antonine Itinerary. It should also be noted that the identification of Netherby with *Castra Exploratorum*, first made by John Horsley in the 1730s[21], was not universally accepted in the 18th century. Furthermore, Roy was also rather more equivocal in identifying the main road than Margary, stating:

> In the neighbourhood of this place [where the road from Carlisle reached the Esk] a road has branched off to the right, leading towards Netherby, but the principal one; *or at least that one which is most conspicuous at present* [emphasis added], points towards Gretney.[22]

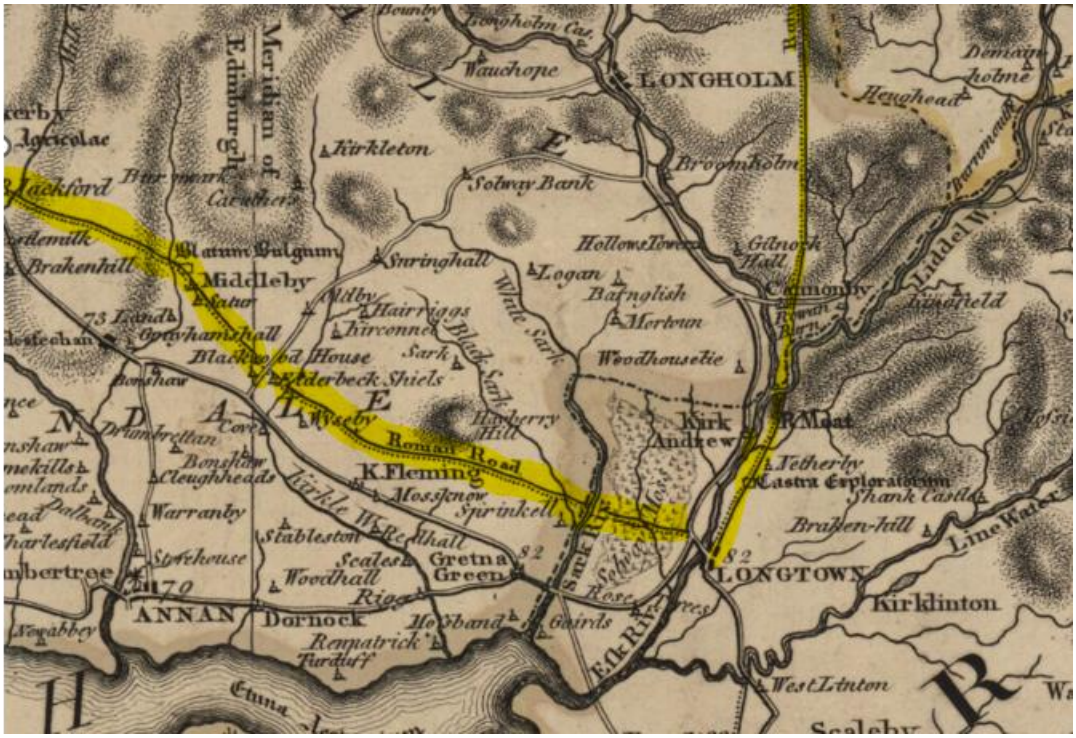
Lidar imagery has been used to identify structure and roads that are difficult to discern in other ways and a number of previously unrecorded local Roman road systems have been discovered as a result. Lidar imagery would appear to support the claim that the road from Carlisle northwards branched before reaching the Esk at a place called Sandysike (a bit further north than posited by Margary), with one branch heading to Netherby and the other towards the Esk in the general direction of a ford called the Roost.[23] It is, however, impossible to tell from this which was the main road and which was the branch.

There is an account recorded by local historian Gordon Routledge that supports the interpretation of the Lidar images as indicating the presence of a Roman road in this location. In a section entitled 'Francis Tinning Remembers' concerning the recollections of the farmer of 'The Fauld' (which is north of Sandysike to the west of the current road to Longtown), he writes:

> Francie also took me to the place his late father and he called the Roman Road. It seemed to run from the direction of the River Esk through the wood and in the general direction of the Arthuret Knowes. They had always found the ground to be extremely stoney and difficult to plough.[24]

The Lidar images also confirm that there was a Roman road heading northwards from Netherby into Scotland as noted by Roy[25], recorded on a map published by John Ainslie[26] and described in the Old Statistical Account of Scotland[27]. From the Lidar images, this northward road then appears to split in two with one heading in the general direction of the Roman fort at Broomholm and the other heading up the valley of the river Liddle.

Ainslie's map shows the Roman road leading to Birrens and beyond on the west of the Esk as well. The route shown differs from that described by Roy and Margary, taking a more northerly route through the middle of the Solway Moss peat bog.[28]



The 18th century-traveller Bishop Pococke writing in 1750 also referred to a Roman road running from Netherby for 50 miles 'by Kirkle, Eagle Fechon, Lauherby, Wanfrey, Lough Cautie and Erechstein'[29]. Unfortunately, he did not describe where this road crossed the Esk or whether it went south-west before heading north again (as stated by Roy and Margary), ran through the middle of the Solway Moss, as shown on Ainslie's map, or took an even more direct route.

Sir John Clerk writing in 1734 also refers to 'the Roman way between Middleby and Netherby'. Alongside this he discovered an ancient ploughshare buried seven feet underground beneath a bog. He described the ground in which it was found as 'very fertile soyl under the mosse, which in former times had been ploughed'.[30] While he does not give us any indication of the line of this road, his observation that what was in the 18th century a peat bog had in former times been ploughed should caution us against overreliance on current landscape features when attempting to identify the location of roads in the Roman period.

The picture that emerges from combining Lidar images with old accounts of Roman roads that were visible before they were obliterated by the building of modern roads and ploughing, is one of a network of Roman roads, with Netherby probably forming one of its nodes, rather than a single main road running north into Scotland from Carlisle with occasional dead-end branches, including one to Netherby.

These roads were probably constructed at different times and their routes are also likely to have been determined by the changing nature of the frontier: from the establishment of Carlisle by the Roman governor Cerialis in the early 70s AD; through the campaigning of his successor, Agricola who temporally extended the Roman presence as far as Perthshire; the building of Hadrian's Wall in the 120s AD; the move of the frontier to the Clyde-Forth isthmus by the Emperor Antoninus Pius in the 140s AD; the withdrawal of the army to Hadrian's Wall in the 160s AD or later; the invasion of Scotland in the 200s AD by the Emperor Septimius Severus;

and the reorganisation of the province by his son and successor, the Emperor Caracalla in the 210s AD.

During this time the Solway will have been steadily silting up and the sea gradually retreating, so it may been the case that by the time of Caracalla, the Esk was fordable at certain times of year at low tide well to the west of Netherby (in the present day it is possible to walk across the Solway between England and Scotland during the lowest tides[31]). Even though this would not have been a reliable crossing point for year-round use, it would have allowed a hostile force coming from the west along the north side of the Solway to bypass the scouts at Netherby and take a more direct route in the direction of Carlisle. A direct road to Birrens would have allowed more rapid transmission of intelligence and movement of forces than one passing first through Netherby during times when this danger was at its greatest, and this may explain why this road was constructed despite the Esk being more easily crossed further upstream during the majority of the year.

This route would not have been a sensible choice at times when the priority was communication with and supply to garrisons or mobile forces further north in Scotland. For this purpose, crossing the Esk at a place where it could be bridged would be preferable, which is likely to have been close to Netherby if this marked the limit of navigation.

The Roman Bath

In 1732 workmen digging for stone discovered the remains of a Roman bath. Richard Goodman was one of the first antiquaries to visit the site of the discovery and a letter he wrote to Roger Gale in November 1732, a month after the initial discovery, has survived. It is of interest not only for the description of the bath but also for the general description of the site which he gives to Gale, who was familiar with it, in order to tell him where the find had been made.

> You may please to remember that there was a gradual descent, from the principall and oblong fort on the north-west angle, towards the river Esk, in which there are severall streets very visible. In one of them, which runs north and south on the west side towards the river, by digging among the ruins for stone, were two rooms discovered parallel to the street; the southernmost of them is plainly a cold bath, from the cement and large thin flags layd at the bottome, and an earthen pipe at the north-west corner, descending from a small watercourse that runs under the other room and the partition wall, and so below the door into the street, where I presume there may have been a common shore. The outward room has an entrance from the street, as above: the door-cheeks are two large flags of about 7 foot high and 20 inches broad, with holes in them for fastening the door which opened into the street. In this room an alter was found…[32]

Goodman ends his letter to Gale by saying that the digging is still going on and that he will visit again next week and report what else has been found. If he did write a follow-up letter it has not survived.

From Goodman's letter we learn that there was evidence of more than one fort on the site with the main one being of the standard oblong 'playing card' shape. This is something that is found at other Roman sites where there were multiple phases of occupation. Substantial alterations including the construction of what appear to be annexes is not uncommon and Goodman's reference to the principal fort may indicate that something of this nature could be seen at

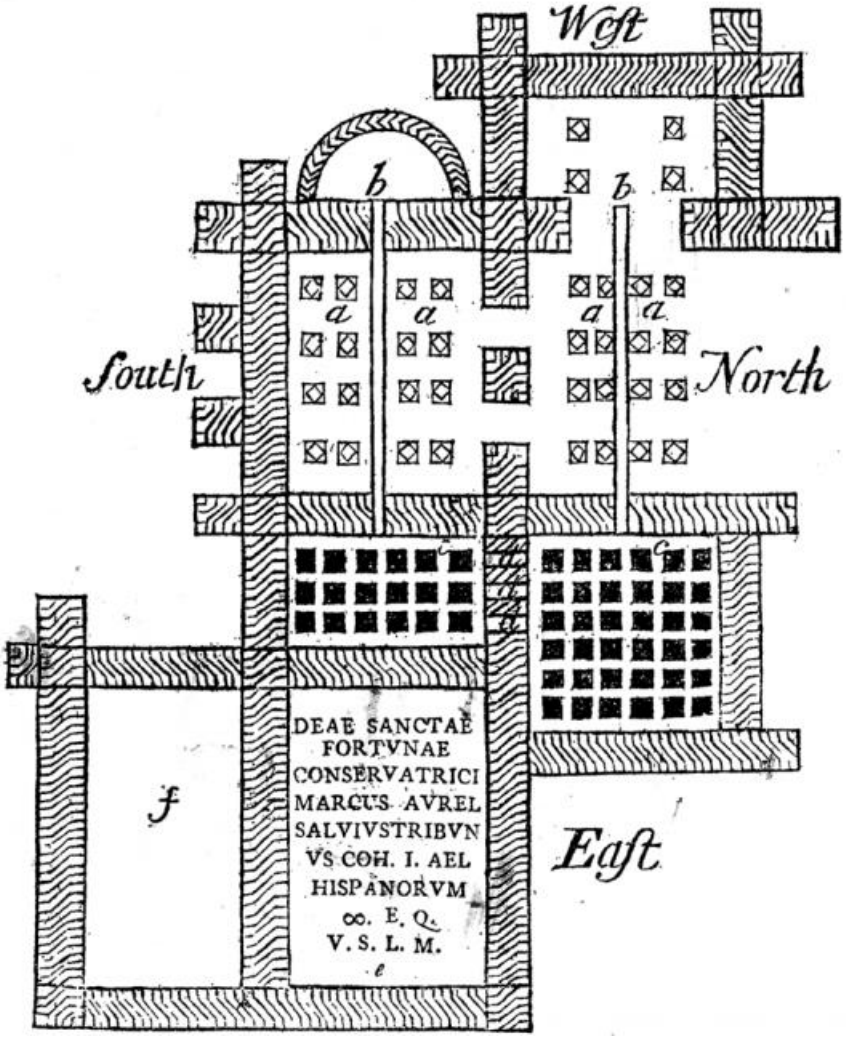
Netherby. He also tells us that there were several streets on the side of fort running down towards the river and that the bath-house was found in one of these running north-south.

Sir John Clerk visited in 1734 and wrote to Roger Gale giving his own description of the bath. While he did not give a general description of the site in this letter, as it was familiar to Gale, he stated that it was very similar to Middleby (Birrens), with the remains of stone buildings to be found at both. In his journal he was slightly more expansive:

> This Roman station has been pretty considerable in the time of the Roman Empire in Britain for there are a good many ruines remaining and the vestiges of 5 or 6 streets.[33]

With regards to the bath, his description is very similar to that given by Goodman. He does, however, furnish us with some additional details. In the room where the altar was found there were also heaps of the skulls of animals, mainly cattle and sheep. He observed that scattered about were fragments of 'fine earthen potts adorned with figures' which he thought might have been vessels for oils or bowls or tall vases used in religious worship. He also identified the source of the water for the baths as a spring '30 ells in a straight line' from the building from which the water was brought by an aqueduct[34]. An ell is a bit more than a metre and 30 ells works out at 34.29m.

By the time Roy (then a civilian) visited in 1752 he found that the stonework had been removed and he found it impossible to draw a plan himself. Fortunately, a local clergyman, believed to be Richard Baty of Kirkandrews Church on the opposite side of the Esk, had made a plan at the time of the excavations in 1732. This was published by the surveyor George Smith in The Gentleman's Magazine and is shown below. Roy reproduced this plan in his *Military Antiquities of the Romans in Britain* and added some levels, the version here is that published by Smith[35].



Roy had, however, clearly had the site of the discovery shown to him and he included it on his 'Great Map' of Scotland. While it seems reasonable to believe that Roy will have correctly marked the spot indicated to him, the accuracy of the recording of its position depends on his unnamed informant pointing to the right place, because by Roy's own admission there wasn't much to be seen.

Detail of Roy's Great Map showing Netherby, Kirk Andrews and location of the Roman bath[36] (North is not at the top of this map but towards the right hand top corner).

The altar has fortunately survived and is now in the collection at Tullie House Museum in Carlisle. It is of red sandstone and is dedicated to the Goddess Fortuna by Marcus Aurelius Salvius, tribune of the first cohort of Spaniards (Cohors I Aelia Hispanorum), one thousand strong, part-mounted.[37]. As the same tribune is named in another inscription, discussed below, which is dated to 222 AD, the altar in the bath must be from around this date too.

The Riding School

Marcus Aurelius Salvius also appears in the inscription on a stone slab measuring 88.9 cm by 81.3 cm found in 1762. The discovery was reported in a paper by the Rev. John Taylor in which he stated that it 'served as a cover for a drain that did not seem to be of any considerable age'[38]. Unfortunately, Taylor does not give an indication where on the site the discovery was made.

Birley speculated that rather than being modern the reuse of the stone as a drain cover might date from a later phase of the Roman occupation of the site[39]. As noted above, this inscription can be dated to 222 AD. It is now in Tullie House Museum in Carlisle but is not on display.

The inscription is shown below:

It has been translated as:

> For the Emperor Caesar Marcus Aurelius Severus Alexander Pius Felix Augustus, pontifex maximus, with tribunician power, consul, father of his country, the First Aelian Cohort of Spaniards, one thousand strong, part-mounted, devoted to his Divinity and majesty, built a cavalry drill-hall, long side begun from the ground, and completed it, under the charge of Marius Valerianus, emperor's propraetorian legate, under the direction of Marcus Aurelius Salvius, tribune of this cohort in the consulship of our Lord the Emperor Severus Alexander Pius Felix Augustus.[40]

The phrase that has been translated above as 'cavalry drill-hall' is '*Baselicam Equestrem Exercitatoriam*'. This has not been found anywhere else in the Empire but it seems reasonably self-explanatory: a building in which horses and riders were trained and which could also be translated as a riding school and, thanks to the inscription at Netherby, we know what the Romans called such a building.

From other inscriptions it is evident that the construction of the riding school was part of a more general programme of works. One records the restoration of a temple and has also been dated to 222 AD[41]. Unidentified works are also recorded to have been completed in the period between 214 AD and 216 AD[42]. Another records the completion of some undecipherable work

involving detachments of Second and Twentieth Legions as well the First Aelian Cohort of Spaniards. The presence of these detachments suggests that specialist work beyond the capacity of the auxiliary troops making up the regular garrison was involved. Birley dated this to 219 AD and the reign of the Emperor Elagabalus[43], but this is not universally accepted[44].

Birley assumed that the *Baselicam Equestrem Exercitatoriam* was a building within the fort "no doubt one of those halls astride the via principalis [main road within the fort] and in front of the principia [headquarters building], as often found in cavalry forts"[45]. This assumption has, however, been questioned, notably by Dixon and Southern in their book on Roman Cavalry[46]. They describe this as 'an unproven theory', and it is possible that the riding school, like the bath, was located outside the fort. Should the riding school at Netherby ever be located, this would therefore be a discovery of great significance.

The only other written evidence for Roman covered riding schools is found in the work of a late fourth-century Roman writer, Vegetius, two of whose works have survived. One is a work on veterinary medicine and the other is one in which he compares the Roman military unfavourably with that of earlier times. In the latter he refers to the army having 'roofed porticoes or riding halls in which the cavalry could be exercised in winter'[47].

While this comment by Vegetius and the Netherby inscription are the only hard evidence for the existence of Roman covered riding schools, we do have sources that describe in some detail the manoeuvres that the Roman cavalry were expected to practise[48]. From these we can form an estimate of the minimum space required for them to be performed and so the likely size of the riding school at Netherby.

Roman cavalry were expected to perform movements in formation at a full gallop and to turn and throw weapons at speed. Large parade grounds have been identified in the vicinity of a number of Roman forts ranging in size from approximately three to ten acres which were probably used for the training of cavalry and for displays of their skills[49]. Effective training for these manoeuvres, even in reduced numbers and at a more restrained pace, would have required a large space as horses cover a lot of ground in a short time even in a medium canter.

A gravestone found in Caesarea in Mauretania appears to show the layout of a Roman riding school and so gives us an indication of the relative length and breadth. This is based on a figure of eight pattern in which horses would practise turning left and right and changing leg in canter. The carving shows this to have been four times as long as it was wide, thus allowing the horses to accelerate in a straight line before turning[50].

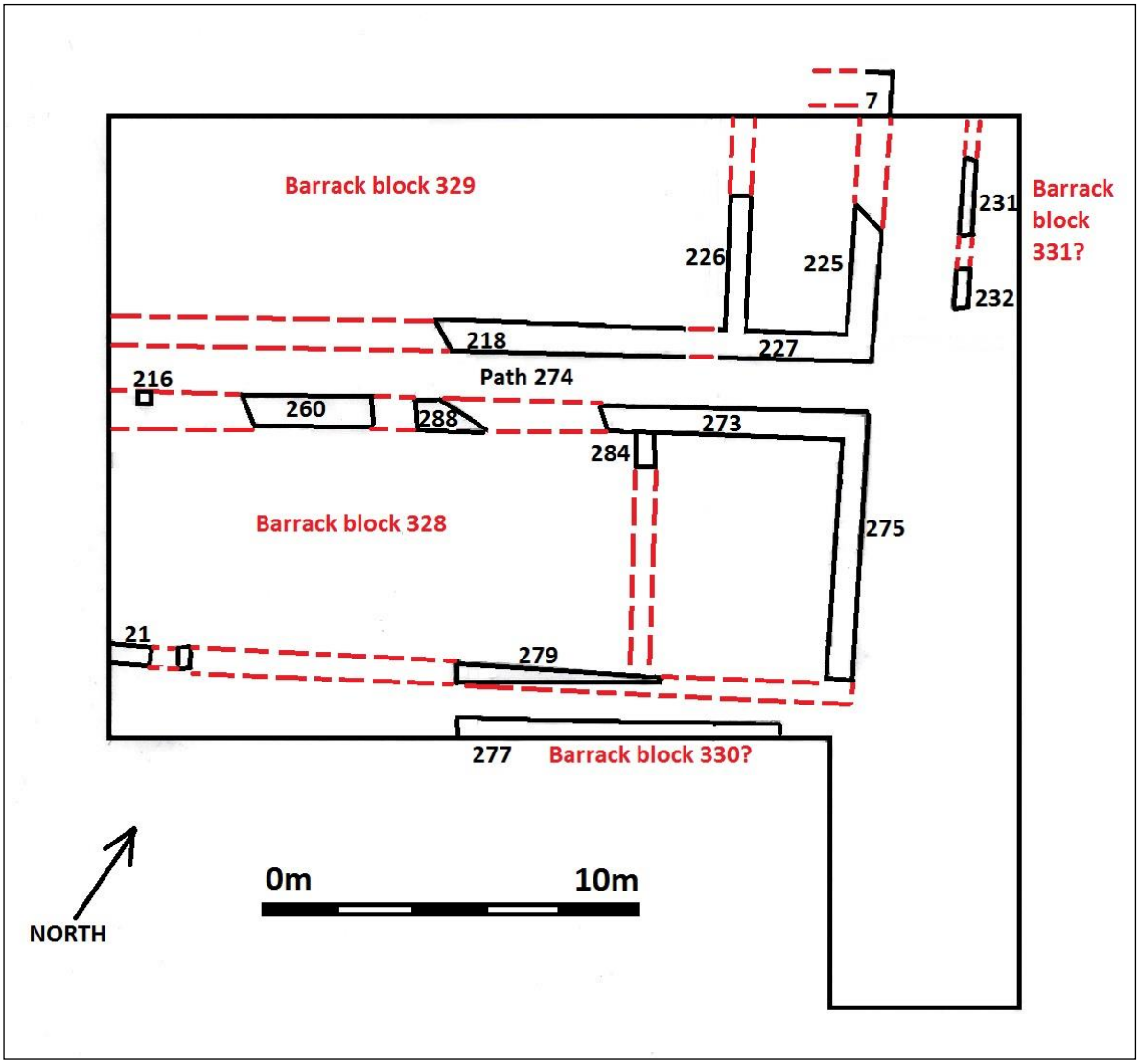
Even allowing for some reduction in space in the case of a covered riding school, it is unlikely that it would have been significantly smaller than a modern grand prix dressage area, 60 m by 20 m, or the Spanish Riding School in Vienna, 55 m by 18 m. If it had been any smaller, cavalrymen and horses would have been regularly colliding with each other and the walls. Based on these dimensions, a plausible candidate for another *Baselicam Equestrem Exercitatoriam* is the large forehall attached to the headquarters building in the cavalry fort at Aalen in Germany.[51] This would have been an impressive structure because as well as covering a large area it has also been estimated as 18 m high[52]. The remains of something like this would almost certainly fit the description of 'ruins of marvellous buildings' in Leland's account of Netherby.

21st-century excavations

A number of archaeological investigations have been carried out in association with the renovation works undertaken since the present owners acquired Netherby Hall in 2014.

A geophysical survey and field walking exercise in 2015 conducted by the University of York produced little useful information[53], but this was undertaken before the extent of the 18th century landscaping work was understood.

Excavations by Gerry Martin of Gerry Martin Associates ahead of and during the course of the building works were more successful and in 2016 the remains of some of the barrack blocks within the fort were discovered underneath the cobbled courtyard in the stables. In 2016 Gerry Martin also carried out an investigation into the base of a wall uncovered in what is now a cellar and this revealed that the ground level had been built up by 2.6m in this area. The original ground level was more or less at the same level as that of the stable courtyard where the barrack blocks were located[54]. Near this location he also found a partial inscription that may be the remains of the missing one recorded by Bainbrigg.



Plan showing location of barrack blocks within the stable courtyard[55].

Southern Barrack Block (328 in plan)[56]

Northern Barrack Block (329 in plan)[57].

Roman wall within present-day cellar.[58]

Inscribed stone in adjacent cellar[59].

It is impossible to tell for sure whether this fragmentary inscription is the remains of that recorded by Bainbrigg in 1601 and subsequently lost but there is a potential match in the last line:

Inscription recorded by Bainbrigg[60]

From its size and position, the Roman wall within the cellar may have been part of the headquarters building, possibly part of the strongroom where important documents and wages were stored.

Having found the barrack block it was possible to determine that the present house is oriented along the same north-south axis as the Roman fort, with the main north-south road through the fort running along the eastern side of the house. Efforts were made to locate the east-west road through the fort by geophysical survey and flying a drone over the area to the east of the house during a period of exceptionally dry weather. No sign of a road was found. Without the location of the east-west road it is impossible to determine where it would have intersected the north-south road and so determine the overall size of the fort.

An alternative approach is comparison with the sizes of other Roman forts known to house similar part-mounted units, one thousand strong. This would appear to imply a total area between 2.3 hectares and 3.2 hectares. It is, however, possible that only a part of the First Cohort of Spaniards was based at Netherby with the rest of the unit located elsewhere. This is Gerry Martin's favoured hypothesis on the basis that Netherby is only a short distance from a large fort at Stanwix (3.96 hectares in size) which housed a thousand-strong cavalry unit. He argues that having two full strength cavalry units in close proximity is very unlikely. Applying this theory he has proposed the following plan for the 3rd century fort based on comparison with the fort at Wallsend and covering an area of 1.56 hectares[61]:

There are a couple of objections to this theory. One is that visitors to Netherby who were familiar with other Roman ruins before the site was largely obliterated by Dr Robert Graham in the mid-18th century, commented on how large it was; though this could be consistent with a small fort and a large civilian settlement. The other is the presence of a covered riding school for cavalry training. Such a large structure seems incongruous with a small outpost rather than a major base.

It should also be noted that the *Cohors I Hispanorum* was previously stationed at Maryport, as attested by numerous inscriptions[62], and this was a fort with an area of approximately 2 hectares[63]. Moving to Netherby would therefore have been a case of downsizing, if Gerry Martin's hypothesis is correct.

The absence of any signs of a road to the east of the house in the geophysical survey, and from the drone survey during a period of exceptionally dry weather when any such features should have been visible, strongly suggests that any east-west road did not bisect the fort. Once the assumption that an east-west road must have passed through the fort is dropped, there is a plausible alternative candidate for a road leading east from Roman Netherby.

Prior to the construction of a turnpike road around 1820 to the east of the house, the main road from Longtown to Penton ran to the west of the house and then turned north-east as it passed beyond the house. The modern road follows the more direct line of the turnpike road and the old road became a driveway for Netherby Hall. The line of the old road continues in an approximately straight line as a minor road once it crosses the new road to the top of Pedderhill, 120m above sea level. Even though it is on a hill with good visibility to the west, Netherby Hall is only 38 m above sea level and the hills to the north and east rise above it. Pedderhill would have been a good location for a signal station and the straight road from Netherby to Pedderhill may follow the line of a Roman road from the port to the signal station that passed close to, but not through, the fort. The direction of this road is also roughly towards Bewcastle, where there was another outpost fort.

The inhabitants of Roman Netherby

The Roman army underwent a number of changes over time. Around the time of the construction of the original fort at Netherby it would have been divided between legionaries and auxiliaries. The legions were the regular army units and mainly consisted of infantry soldiers but also included a number of specialists including experts in masonry and manufacturing. Major construction projects were undertaken by, or at least overseen by, the legions.

The regular army was supplemented by auxiliary units of non-Roman citizens recruited from various regions within the empire who were deliberately stationed well away from their native lands. The commanders of these auxiliary units would have been members of the Roman equestrian order, a social elite ranking just below the most senior senatorial order. The auxiliary units contributed the majority of the cavalry within the Roman army at this time in the form of *alae* (dedicated cavalry units) and part-mounted cohorts. On retirement, auxiliary soldiers would be made Roman citizens.

The inscription dated to between 119 AD and 138 AD recorded the construction of a fort by the Second Legion for the Emperor Hadrian, but it would have been garrisoned thereafter by an auxiliary unit. The First Cohort of Spaniards was based at Maryport at this time and we do not know the name of the garrison at Netherby before the First Cohort of Spaniards moved to Netherby, or the size of the unit.

There were four different types of auxiliary cohorts: *Cohors quingenaria peditata* (500 strong infantry regiment), *Cohors quingenaria equitata* (500 strong part-mounted regiment), *Cohors milliaria peditata* (1000 strong infantry regiment) and *Cohors milliaria equitata* (1000 strong part-mounted regiment)[64]. If it were one of the smaller types of auxiliary regiment, or only part of one of these regiments that garrisoned Netherby prior to the First Cohort of Spaniards, the fort may have been smaller than they required and the building work that was undertaken in the early part of the 3rd century could reflect the need to enlarge it.

Apart from the various inscriptions, a number of other carved stones have been found at Netherby[65]. While these include depictions of Hercules and Pegasus, the majority show Celtic gods and goddesses. Included among these is a stone head of a horned Celtic god and the depiction of groups of figures in threes (one of three mother goddesses and one of three figures in cloaks) is also characteristic of Celtic culture[66]. A particularly interesting fusion of Celtic and Roman religious ideas has been highlighted by Miranda Green[67]. This is found in a

sandstone carving of a partially draped deity in a classical form with an altar and a horn of plenty with a Celtic wheel symbol substituted for the normal offering plate. Green points out that the main symbol is the wheel. The classical elements of the relief being smaller and less well carved have the effect of emphasising the Celtic element of the hybrid iconography. Carvings including Celtic wheels have been found at a number of other sites in Cumbria including at Maryport where one is on the back of an altar dedicated to Jupiter Optimus Maximus by the First Cohort of Spaniards[68]. It is tempting to view this as evidence that the garrison was made up of Romanised Celts, possibly even originally recruited from the Celtic tribes in Spain in the case of the First Cohort of Spaniards, but it may simply reflect the strength of these cults among the military personnel of the area.

Another interesting find is a fine tombstone of a lady from Raetia (an area stretching from present day Bavaria through Switzerland to the Austrian Tyrol)[69]. As the tombstone does not say who erected it, it is impossible to tell whether she was the wife of an officer in the garrison or a merchant in the civilian settlement. Many of the finds made at Netherby are now in Tullie House Museum, but unfortunately only some of them are on display.

'*Exploratores*' or Scouts were specialist reconnaissance units attached to other units for whom they carried out scouting operations. Despite being called the 'Fort of the Scouts' in the Antonine Itinerary, there is no evidence of any scouts at Netherby. Had a unit of scouts been present at the time of the various dedication slabs which were erected, the example of other outpost forts (such as Risingham) suggests that this would have been recorded[70].

While the date of the composition of the Antonine Itinerary is unknown, the current consensus view is that Birrens was abandoned around 180 AD[71]. If this is correct, then the source of this section of the Itinerary must relate to a period between the construction of the Wall and not much later than 180 AD (the presence of scouts suggests that this was either before the construction of the Antonine Wall in 142 AD or after its abandonment in 162 AD or a bit later). This would place the time when scouts were present well before the datable inscriptions, other than possibly a fragmentary one dated to 177 AD that does not record the unit or units responsible for it[72]. If there were no scouts present at a later date, the absence of any mention of scouts in the later inscriptions would then be explained.

The latest datable find from Netherby is a coin of the Emperor Gordian III which has been dated to 243 AD[73], but Birley speculated that the fort may have still been in use in the late 3rd century. The garrison present at this time would have been different in many respects to that or the earlier 3rd century, even though the unit may have had the same name. The Roman army was re-organised into mobile forces with a significant proportion of cavalry and fixed forces that guarded the borders. The soldiers manning the defences of the Wall, including any outpost forts that remained in use, would have been of the second type and would have been recruited locally.

Did Netherby have a Roman name other than *Castra Exploratorum*?

Matching Roman names to places in Britain is surprisingly difficult. There are some exceptions where the modern name is clearly derived from one found in Roman sources. Carlisle for example can be traced back to *Luguvalium*, meaning stronghold of Lugh, a Celtic god[74], the Romano-British name then became Caer Luel with the proto-Welsh word for a fort being placed in front of the proper name Luel (Lugh), from which we get the modern name Carlisle.

Unfortunately, in the majority of cases, it is a matter of trying to match places with names that are found in a medieval copies of a handful of Roman documents or maps. These are in some cases also incomplete as well as subject to errors introduced over time by the scribes copying the documents and then copying the copies. In the case of the forts at the western end of wall, the task is made easier by the existence of three Roman souvenir items depicting the wall and apparently naming some of the forts along its length in sequence.

We have already noted that Camden identified Netherby with *Aesica*, which is now identified as the fort on the Wall at Great Chesters, and that Netherby was subsequently identified with *Castra Exploratorum* from its position in the Antonine Itinerary and location between Birrens and Carlisle. Birley points out that 'Fort of the Scouts' would have been an odd name during the period when the Roman frontier lay further to the north, and he suggests that this functional name replaced an earlier one sometime in the 3rd century when the frontier defence was reorganised[75]. Birley's own suggestion was that Netherby was *Brocara*, a name that occurs in a Roman source known as the Ravenna Cosmology, but this has not been generally accepted, with *Brocara* being identified with other potential sites.

One of the other main sources for Roman placenames is a document known as the *Notitia Dignitatum*, reflecting the situation in the late 4th to early 5th century, of which we have a medieval copy. This lists the civil and military commands throughout the Empire together with the names of the units within each command and their locations. The original is believed to have been compiled after the end of Roman rule in Britain in 410 AD but it includes a section covering Britain which may reflect the disposition of the Roman forces in Britain prior to their withdrawal[76]. The place name *Castra Exploratorum* does not appear in the *Notitia Dignitatum* but the First Cohort of Spaniards appears in the *Notitia Dignitatum* based at a place called *Axelodunum*.

There are only three places in Britain where archaeological evidence for the presence of the First Cohort of Spaniards has been found. They are Maryport, Ardoch and Netherby. The finds include a number of datable inscriptions. Those found at Maryport have been dated to between 123 AD and 137 AD[77], the find at Ardoch was a single tombstone dated to between 80 AD and 100 AD[78] and the latest are those from Netherby dated to between 213 AD and 222 AD[79].

Axelodunum has been said to be the name of a number of different sites including the fort at Bowness-on-Solway and a misspelling of *Uxelodunum*, the cavalry fort at Stanwix, but if we go with the physical evidence of the unit's presence, then the prime candidate is Netherby, as it is their last known location. The name *Axelodunum* may also be a combination of 'Axe' derived from the Celtic word 'isca' for water from which many British rivers take their names (including Axe, Exe, Usk and Esk), and 'dunum' for fortified place[80]. 'Fort by the Water' would be an appropriate name for a fort on the Esk, especially as the modern name of the river by which it stands comes from the same root.

There is precedent for a fort in the defensive system of the wall appearing under two different names, one Latin and one Romano-British in different sources. The cavalry fort at Stanwix does not appear in the Antonine Itinerary (none of the forts on the Wall do) but the three souvenir items, the Rudge Cup, the Amiens Skillet and the Staffordshire Moorlands Pan, all give its name as variations on *Uxelodunum*[81]. Despite this, it appears in the *Notitia Dignitatum* as *Petrianis*, the base of the *Ala Gallorum Petriana*[82]. It is therefore possible that Netherby was

both the *Castra Exploratorum* of the Antonine Itinerary and the *Axelodunum* of the *Notitia Dignitatum.*

This identification was made by Brian Dobson and David Breeze in the first edition of their book on Hadrian's Wall published in 1976 but was rejected by them in later editions[83] following the arguments made against it by A.L.F. Rivet and Colin Smith in what has become regarded as the most authoritative work on the subject, *The Place-Names of Roman Britain*[84].

Rivet and Smith's argument is that a copyist has misplaced the correct place-name for Stanwix, '*Uxeloduno*' by writing it where there should have been an entry for Bowness three places further down the list, misspelled it '*Axeloduno*' and filled in the blank space where '*Uxeloduno*' should have been with a made-up name '*Petrianis*' based on the name of the unit based there, the *ala Petriana*. It is worth noting that Rivet and Smith state "it is impossible to guess how it happened in the copying process"[85].

The main basis for believing that this convoluted combination of errors occurred is that this section of the *Notitia Dignitatum* starts with a statement that there follows a list of the commanders along the Wall and then proceeds to list these starting at Wallsend and working west. The sequence in the *Notitia Dignitatum* corresponds to that established from other sources until it reaches Stanwix where instead of the expected *Uxeloduno* it has *Petrianis*. After that the next two forts named at Burgh-by-Sands and Drumburgh are given as, *Aballaba* and *Congabata* respectively, which is also as expected, but in instead of *Mais* or *Maia* for Bowness as expected for the name of the last fort on the wall, the next entry is for the First Cohort of Spaniards at *Axeloduno*[86].

There is, however, nothing that indicates where the sequence of commands ceases to be those along the Wall, and it continues without a break to list other commands in Cumbria that are not on it. If *Axeloduno* is the first of these, rather than the last entry on the list along the wall, then no complicated copying errors need be invoked to explain its position in the text. This would leave Bowness without a commander of a unit based there, but not necessarily ungarrisoned, as a detachment of a unit based elsewhere could have been stationed there. Alternatively, its omission could be a copying error of a more straightforward type involving a scribe moving down two lines rather than one.

Rivet and Smith raise two further objections to Dobson and Breeze's original identification of *Axeluduno* with Netherby. The first is that it already had a name, *Castra Exploratorum*, and so there has to be an explanation of why this was discarded. The second is that 'Axelo' is not a good Celtic form. These objections are addressed below.

Even if we do not accept that *Petrianis* was a real name, there is the example of *Augusta* for London as well as *Londinium* to show that a place in Roman Britain could go by two names (Augusta is used in the *Notitia Dignitatum*). In addition to the reasons given by Birley noted earlier for thinking that there might have been another name for Netherby, the absence of any mention of scouts in the inscriptions found at Netherby suggests a reason for discarding the descriptive name 'camp or fort of the scouts' in Latin in favour of a Romano-British place-name in accordance with the normal practice for the naming of forts in Britain. There are also plenty of other Roman place-names for which the derivation from proper Celtic forms is problematic, *Verulamium* being an example highlighted by Rivet and Smith themselves[87]. Ruling out place-names on this basis is therefore not warranted.

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Gerald Smith

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