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The Roman Roads Research Association also wishes to acknowledge the contributions of all the other individuals who have volunteered their time and expertise in the preparation, production and distribution of this volume, without whom it would not have been possible:

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ABOUT THE ASSOCIATION

What did the Romans do for us? One thing they certainly did was to lay the foundations for our modern road network, with millions of us driving every day along roads first laid out by Roman surveyors two millenia ago (such as Oxford Street in London, and large parts of the A1, A5 and many others). Unfortunately though, much of the Roman road network is not represented by modern roads, and despite a common assumption that Ivan Margary’s comprehensive gazetteer, Roman Roads in Britain (1973) made our understanding of the Roman road network reasonably complete, less than 40% of the network is actually known with any certainty. That false assumption has also frequently led to a lack of attention from the professional archaeological community (with the notable exception of roads in Wales), and for most of the past hundred years the serious study of Roman roads was left to a handful of disparate individuals and small amateur groups, with little or no co-ordination or cooperation between them.

The RRRA was formed in 2015 as a registered charity to bring those disparate individuals together, and to coordinate a nationwide programme of consistent and high quality research, promoting the study of Roman roads and Roman heritage throughout the former Roman province of Britannia. Over the last couple of decades, it has often been a race against time to discover and record what we can of the 60% of the Roman road network about which we are still uncertain, since modern agricultural methods and urban development have been steadily removing surviving features from the landscape. Fortunately, new technologies such as LiDAR and geophysical survey have helped enormously and enabled researchers to identify the remains of hundreds of miles of previously unknown Roman roads, along with associated Roman sites, and we continue to work to fill the many gaps. Research is only half the story though, we also have to ensure that the results of our work are readily available. We aim to:

1. bring together all known information on Roman roads in Britain, summarised in a freely accessible online interactive gazetteer, expected to be complete by 2026.

2. identify key sites where important questions remain, and organise fieldwork necessary to answer those questions. 100 Ha of geophysical survey have been completed, with a further 500 Ha already planned, and several future excavations are currently at the planning stage.

3. encourage the involvement of as many people as possible in our activities. We care passionately about community archaeology, and will always encourage local people to get involved in our work, without any charge (unlike some organisations, we will never do this!).

4. organise events to keep people up to date with research including online talks & seminars.

5. ensure that all our published work is Open Access, including our quarterly newsletter and Itinera (following a very short initial members only embargo).

Membership is open to everyone, and our three hundred or so members come from a wide variety of backgrounds ranging from those with just a general interest in our Roman heritage to professional archaeologists from both the public and commercial sectors, alongside seasoned Roman roads researchers. Joining the RRRA gives you the knowledge that your modest subscription (just £14 a year for a single adult) is helping to support our important work. You might even get a warm and fuzzy glow.
WHILE IT MAY NO LONGER BE FASHIONABLE FOR ACADEMIC JOURNALS TO CARRY A CHAIRMAN’S MESSAGE OR ANNUAL REVIEW, WE FELT THAT FOR OUR FIRST EVER VOLUME A BRIEF OUTLINE OF OUR ACTIVITIES IN 2020 WAS MORE THAN JUSTIFIED, ESPECIALLY IN THE CURRENT CIRCUMSTANCES OF THE COVID-19 PANDEMIC.

The Roman Roads Research Association is a young organisation and was less than five years old at the beginning of 2020. Of course, at that time we had no idea of the challenges that the COVID-19 pandemic would present. For ourselves, the impacts were felt mainly in our fieldwork and public engagement. Our plans to revisit the site of our hugely successful community excavation on Dere Street (RR8a) and a nearby Romano-British settlement in 2019 had to be shelved, and we currently cannot say with certainty if we will revisit the site this year. The pandemic also prevented us moving forward with our Devil’s Causeway project in Northumberland, examining possible Roman military sites along the route of the Roman road, and it seems unlikely that much fieldwork will take place there until 2022. Similarly, plans to launch a major community based geophysical survey also had to be postponed, as did a planned community project near Doncaster which was to process the finds from a fieldwalking survey conducted just before the first lockdown on a newly identified Roman roadside settlement.

However, the year’s events were far from being entirely negative. Despite the difficulties, or even perhaps because of them, 2020 did bring positive changes as well. It was right at the start of the first lockdown that we took the decision to launch *Itinera*, and just over a year later you are now reading our first ever volume. Our increased social media presence resulted in a doubling of our membership in the year, a trend that has continued since, with membership now standing at 311 at the time of writing (early March 2021). Whilst most of our community projects were postponed, our small but highly dedicated team conducting geophysical survey on parts of the road corridor between Doncaster and Aldborough did achieve some excellent results (when the regulations permitted). Turning out in all weathers, even in a blizzard, they surveyed the fort at Roecliffe, confirmed the route of RR720b as it approaches *Isurium Brigantium* (Aldborough, N. Yorkshire), and discovered an entirely unexpected ‘new’ road near Tadcaster. These are just a few examples of their many achievements, and the reports for all these surveys will be published on our website later this year.

2020 also saw the launch, quietly, of a pilot project in the East Riding. *Living Beyond the Town – Petuaria* is our contribution to the *Petuaria ReVisited* project (shortlisted for the 2020 Marsh Award for Community Archaeology) and will conduct a magnetometer survey of the Roman road corridor out of Brough (Roman *Petuaria*) heading towards York, as far as South Cave. The project aims to give us a clearer idea of how the Roman period landscape developed...
along this road corridor. The survey is being carried out by a group of fourteen local volunteers, who have all received training and support in using our equipment, and it will cover about 300 Ha. It is one of the largest community geophysics projects ever conducted in this country, and if successful it will be replicated elsewhere in Britain.

Without question, the most significant event for us in 2021 is the launch of this first volume of *Itinera*. From the beginning, the Editorial Committee was very conscious of the increasing problems faced by researchers when attempting to access academic papers, even by those with access to university libraries, since so many academic journals these days are held securely behind a publisher’s pay wall. We wanted to ensure that no researcher would ever struggle to obtain a paper published in *Itinera*, and so we took the decision to produce the journal entirely ourselves and without the aid of a publisher. This was far from being a straightforward process, but we have now proved that with a dedicated group of volunteers, inexpensive publishing software and the advice of people with experience in publishing, typesetting and illustration, it can be done. We can only hope that others follow our lead. Crucially, by going down this route we can not only keep the price of the printed version low but are able to make the entire journal open access online, after an initial members-only embargo of one year.

We continue to promote a strong community-based approach, and 2021 will see the launch of two further community geophysics projects examining sites along the course of Roman roads, one in Nottinghamshire and the other in North Yorkshire. Another potential project is being discussed in Cambridgeshire. We are very well aware of an apparent bias towards projects in Yorkshire; this is an unintentional but inevitable consequence of the Association being founded in Yorkshire. However, we are extremely keen to undertake fieldwork elsewhere in Britain, especially geophysical survey, and welcome any suggestions for areas of future research. In time, we hope that we can meet many more of our members face to face, whether that be by our planned zoom series of chats and lectures, or back out in the field when circumstances allow.

Despite the uncertainties of the coming months, thanks to the enthusiasm and participation of our membership, the long-term outlook for the RRRA is extremely bright. In the meantime, we hope all our readers remain safe and well in these challenging times.

Mike Haken
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The first Editorial of a new annual journal is a significant moment. Launching *Itinera* marks a step forward for the RRRA, focusing light on an aspect of Roman archaeology that has not previously enjoyed its own published academic outlet. That such a development is possible, demonstrates the current health and breadth of an area of Roman studies that will always be associated with the expert labour of Ivan Margary in the middle years of the twentieth century.

*Itinera* is, from conception, a journal intended to bridge the gap between academic researchers and that large band of enthusiasts – the backbone of so many local societies and our own RRRA membership – who wish both to stay informed about, and contribute to, developments in the field. Thus *Itinera*s content will include quality work by capable independent researchers alongside significant papers from established academics. To ensure maintenance of standards, all papers are peer assessed.

*Itinera* has been established to offer a point of reference for all those doing work which can develop and broaden understanding of Roman roads and land communications. It is an aspect often touched upon in wider archaeological investigations (see for example Janet Phillips and Pete Wilson’s paper in the current volume) but in the past such isolated findings have not always been treated with due emphasis and made readily available for a better understanding of the road network as a whole. *Itinera* will allow Roman road studies to make their proper contribution to understanding Roman society, technological practice, communications, and military and economic development. The journal will inform academics about the current state of knowledge while also making it available to local individuals and societies, allowing future work to be targeted for maximum efficacy. Thus this journal is published both in digital form for maximum reach (free to RRRA members), and in paper form for permanent academic reference and record.

Our content, as may be judged from this first volume, is wide-ranging. The first paper, from David Ratledge, shows how an experienced and skilled practitioner is able to exploit modern technology (in this case LiDAR) to expose and clarify routes that were previously imprecisely defined. Other papers demonstrate the findings of specific excavations, examine the artefactual and archaeological evidence for Roman transport, explore issues of planning and surveying, and speculate about the extent of local road networks. A major contribution from Bill Trow represents the culmination of many years work in testing some of Selkirk’s conclusions regarding the existence of a ‘Proto Dere Street’. A roundup of the year (interpreted broadly for this first volume) keeps track of investigative work relating to Roman roads around the country.
The starting point of Roman road studies has long been Ivan Margary’s classic study, ‘Roman Roads in Britain’. A major challenge for the present day is how to build constructively upon this work in the 21st century, allowing recent findings, seldom pulled together, to be readily referenced by the archaeological community. Two important papers in this volume, from Mike Haken and Dave Armstrong, examine ways in which the RRRA supports identification, classification and nomenclature of new discoveries, building upon Margary’s work and ensuring that it remains fit for purpose in the twenty-first century.

A new journal is not launched without the labour of a dedicated band. Our editorial committee has met regularly on-line throughout this year of pandemic to resolve the many issues that have arisen. It has established ground rules; invited, gathered, reviewed, and selected material; communicated with authors; edited text and images; created and used templates; entered materials into publishing software; stitched together the journal itself; and finally sent the completed journal for printing and circulation.

Mike Haken, the RRRA Chairman, has been unsparing of his time and expertise, actively involved at every stage. Dave Armstrong, indefatigable as the man at the centre, has pulled together the materials into the form of a journal, always positive and perceptive, no labour too challenging. Mike Bishop has given generously of his archaeological knowledge and crucial publishing experience; Chester Forster has brought his experience from other archaeological journals both to head up our band of local correspondents and to manage the indexing of this volume; and John Poulter has been a valued consultant. Paul Bidwell and Pete Wilson, among several others, have acted as readers and referees, their immense knowledge and expertise allowing us to maintain a solid academic basis to this venture.

Nevertheless, it is the authors to whom a journal is ultimately indebted for its success: we thank all our contributors for making *Itinera*’s first volume possible. We trust that others will be inspired to maintain and develop this journal, taking note of our mid-November deadline for 2022 copy. Similarly we welcome offers of help for our next volume in terms of reading, reviewing, managing images or digital typesetting.

We look forward to receiving ideas for relevant and authoritative papers, whether from inside or outside the UK.

Robert Entwistle
Hon Editor, *Itinera*

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THE ROMAN ROAD FROM BIRDOSWALD TO BEWCASTLE, CUMBRIA, RR865, A LIDAR REAPPRAISAL

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ABSTRACT

Although the Roman road from the Hadrian’s Wall fort of Birdoswald to the outpost fort at Bewcastle was well known over several long sections its first half mile had never been found and doubts existed over its final descent down to Bewcastle. Haverfield in the 1890’s, on behalf of the Cumberland Excavation Committee, had proclaimed that that first half mile had “disappeared”. So it remained until the advent of LiDAR, which has enabled the 120 year old puzzle to be resolved and the road’s course located over its full length. That first half mile was actually where no one had suspected, well off the direct alignment shown on modern mapping. The descent from the high ground of Gillalees Beacon down to Bewcastle fort was also located and here the Roman engineers had skillfully chosen the best practical route down the not inconsiderable slope. The relevance of the signal tower alongside the road was also examined using a virtual reality LiDAR model.

INTRODUCTION

Series 2 LiDAR has recently been released for the full length of this road so the opportunity was taken to examine its route in detail. LiDAR height data for England is freely available from the Department for Environment, Food & Rural Affairs (DEFRA). It is generally collected from an aeroplane scanning the ground with laser beams of light measuring height with high precision, in the order of 100mm. In this country its primary purpose has been for flood defence, meaning its coverage was originally restricted to lower lying ground. It has opened an incredible window of discovery for archaeology and especially for Roman roads. It can show clearly the surviving remains of the road agger, terraces, side ditches and cuttings, often where they cannot be identified easily on the ground through traditional fieldwork.

The data available from DEFRA needs software to turn it into a picture that we can understand. LiDAR software has advanced enormously in recent years and virtual reality models of the area to be studied can be quickly created. It is possible to ‘explore’ this virtual world and find the best viewing point which, in the case of Roman roads, is usually when
FIG. 1. Roman Road map of northern Cumbria with the principal fort sites labelled. For further details of Cumbria’s Roman roads. Road numbers shown are those by Ivan Margary (1973).

FIG. 2. The view from the north gate of Birdoswald Fort across Midgeholme Moss towards Bewcastle. For over 150 years it was believed the Roman road headed straight through the Moss in the direction of the upper finger post.
looking directly along its line. Note the LiDAR images included are for a single illumination angle only but in investigating the course of the road multiple angles have been used to tease out the subtle details.

BACKGROUND

A relatively short (6.25 miles) and direct Roman road, numbered RR865 by Margary 1 (1973, 450), linking the Hadrian’s Wall fort of Birdoswald with the outpost fort at Bewcastle. The Roman name for Bewcastle was Fanum Cocidi (Shrine of Cocidius), indicating a site of religious importance. Note this road should really not be referred to as the Maiden Way as it still is occasionally today. That name applies to Kirkby Thore to Carvoran via Whitley Castle road only and as long ago as 1929, Collingwood (Collingwood, 1930) 2 explained why it should not be applied to this one - basically they are two disconnected roads.

This road was originally traced by the Rev John Maughan in the 1850s and examined by Haverfield in 1896/7. Haverfield’s comments are particularly relevant: “For the first half mile north of Birdoswald the road has vanished in soft ground: it was apparently invisible in Mr. Maughan’s time, and certainly could not be found by us.” (Haverfield, 1897, 420). So the first half mile was lost but there was another slight puzzle with this road and that was its main alignment. Although this was exactly centred on Birdoswald fort at it southern end its northern direction is directed to the west of Bewcastle. Haverfield was also unable to locate the road at King Water and approaching Bewcastle. LiDAR was able to provide solutions to all these outstanding issues.

MODERN EVIDENCE - LiDAR AND FIELDWORK

It has been assumed for over 150 years that the first half mile of this road ran in a straight line from the north gate of Birdoswald fort across Midgeholme Moss - a large boggy area that would have provided good protection to the fort but would have been a huge hindrance to constructing a road (Fig 2). The supposed first half mile has never been found (Biggins & Taylor, 2004 and Historic England, 2018). The explanation with hindsight now seems obvious; the Roman road engineers did not take their road through the bog - they followed a more sensible dry land route around its edge. Once clear of this obstacle they returned to the main setting-out alignment for Bewcastle, a common Roman strategy. LiDAR, backed up by site visits, showed clear and convincing evidence for a dry route around the moss passing Kiln Hill and rejoining the main alignment north of the B6318 (Figs 3 & 4).

Midgeholme Moss shows clear indications of being drained in modern times with several large straight cut main drainage channels together with many smaller ones. It is therefore logical to assume that it is a shadow of its former self and could well have even been open water in Roman times. Today, because of that drainage work, the modern footpath is able to take a direct route across the Moss – an option not available to the Romans. A route utilising the drier ground of Kiln Hill to the east was realistically the only practical solution.
The first clue visible in the LiDAR data is a clear terrace-way leading away from the north gate and heading not towards Bewcastle but to the north-east in the general direction of the modern car park (fig 5a). This was recorded in a geophysical survey of the environs of Birdoswald fort (Biggins and Taylor 2004). However, the authors suggested it was “...almost certainly of post-Roman date” but the evidence now available confirms it was the start of the Roman road to Bewcastle. Across the modern road, beyond the car park, a cutting is evident in the LiDAR data heading down to the stream to the east of the modern bridge. This is also obvious on the ground and indicates where the Roman bridge site would have been (NY61704 66624) - about 90 metres downstream of the modern bridge (fig 5b).

North of the stream there is a very pronounced agger/bank heading north-north-west up towards the dog-leg in the modern road (fig 5b). This is interpreted as a field bank that has adopted the east side of the Roman road as its boundary i.e. the road agger is immediately west of it and there is some faint LiDAR evidence confirming this. When viewed from the
modern road, this feature is very well preserved and substantial. The dog-leg in the modern road to the left (north-west) obviously eases the climb and the LiDAR imagery indicates this section overlies the Roman road. Beyond this a hillock (Kiln Hill?) presents an obstacle for the Roman line but LiDAR shows that it skirted around its southern slopes before a short straight begins angling across the slope towards the B6318 and the alignment proper.

Finally, in the field north of the B6318, again clearly evident on the ground (fig 5c), is the dog-leg of the road agger re-joining the Bewcastle alignment (NY6106 6600). The agger is about 60cm high, making the change of direction obvious. Having visited this site and seeing the clear turn in the agger it is hard to understand how the direct route across the moss was ever envisaged. The main alignment, aiming just to the east of Gillalees Beacon (rather than Bewcastle), now begins.

Having regained the main alignment the route passes over a crest alongside Waterhead Common before descending towards King Water, near Snowden Close farm. The current Hadrian’s Wall Map (Historic England, 2018) 

\[\text{Fig. 4. Oblique 3D LiDAR image looking over Birdoswald fort and Midgeholme Moss. The sensible route the Romans took around the moss is shown in red. LiDAR data © Environment Agency copyright and/or database right 2020. All rights reserved.}\]
FIG. 5a, b, c. The route around Midgeholme Moss is evident on the ground.

5a We are looking northeast down the terraceway which is hard to discern in this summer view but is much more obvious in winter.

5b This view is from just below the dog-leg in the modern. The cutting down to the river crossing point, below the modern car park, shows well and the bank/agger of the Roman line coming up to join the modern road is subtle but certain.

5c This is where the Kiln Hill route joins the main alignment for Bewcastle. The turn in the agger is clear in the LiDAR imagery, on aerial photographs and even on the ground.
is perhaps a water course caused by runoff, initially from the west ditch of the agger, leaving the road and finding its own (sinuous) ways down the slope (Figs 6 & 7).

The new series 2 LiDAR data shows an agger-like feature indicating that the road carried straight on and made just a single shorter dog-leg to the west for the river crossing, adjacent to Slittery Ford (Fig 6). There are two possible indications in the LiDAR for the exact position of the Roman agger just south of the river. The more northerly one is probably the correct one with the southern an old field boundary. The former has the correct length for an intersection with the main alignment from Birdoswald whilst the latter carries on beyond it. The latter is therefore more likely an old field boundary/bank.

The Roman crossing point would appear to have been to the east of the modern concrete bridge at around NY 59907 68643. On the north bank there is a modern track which has disturbed the Roman line. The latter appears to be just to the south of the modern track before they merge together near the bend at the top of the slope (fig 7).

The Roman road from King Water to Gillalees Beacon has survived remarkably well and is a prominent feature in the landscape even today (fig 8). The route passes to the east of
Spadeadam Farm, a familiar name from Britain’s space history. On the southern slopes of Gillelees Beacon, immediately to the west of the road agger, is a Roman Signal Station the significance of which will be covered later.

It was stated above that the main alignment of this road was to the west of Bewcastle. On passing over the crest alongside Gillelees Beacon the reason for this becomes apparent. The point at which the descent to Bewcastle begins is by far the best and probably only practical spot to get a road easily down the not inconsiderable hillside at Collin Bank (fig 9). The land is much disturbed here but there are enough clues to determine the route of the road which does deviate from straight to negotiate the contours. The LiDAR evidence indicates that the Ordnance Survey route down Collin Bank on old and current maps is almost certainly incorrect.

The approach to Bewcastle is directed towards its east gate but the route takes a dog-leg around a temporary marching camp (fig 10). The implication is that the camp predated the road and needed to be avoided when the road was set out. The camp was discovered relatively recently by Bryn Gethin and despite being clear on modern aerial photography it escaped detection until the advent of LiDAR. Several entrances to the camp are visible.

Bewcastle Fort itself comprises a very odd hexagon shape and an east-west road is visible across its centre. This was previously recorded in a geophysical survey in (Taylor & Biggins, 2012) and our road heading for the fort’s east gate clearly must have linked to it.

FIG. 7. Crossing King Water. The line shown differs from that shown on the English Heritage Wall Map (2014) and on the basis of the LiDAR imagery is believed to the more probable route. LiDAR data © Environment Agency copyright and/or database right 2020. All rights reserved.Map (right) is Ordnance Survey c.1954.
FIG. 8. Oblique 3D LiDAR view. From King Water the Roman agger is still a prominent feature in the landscape after nearly 2000 years. LiDAR data © Environment Agency copyright and/or database right 2020. All rights reserved.
site is remote and lies on no major modern routes either north-south or east-west. However, it must have still been an important site long after the Romans departed, witness the famous Bewcastle Cross and the Norman Castle built into the north-east corner of the Roman fort.

Regarding any continuation of this road to the north, this could not be evaluated as the current LiDAR Series 2 release (2020) ends at Bewcastle. It will have to await for DEFRA to complete the full coverage of the country.

**Gillalees Signal Tower**

Having created a LiDAR virtual reality model for the Roman road the opportunity was taken to investigate the significance of the Gillalees Signal Tower located alongside the road (fig 11). The role of the signal stations here were fully investigated by Woolliscroft (1988). It immediately became obvious the tower has a clear site of Birdoswald Fort whereas Bewcastle is hidden from view by the high ground of Gillalees Beacon. However, moving north along the road to a point where Bewcastle becomes visible resulted in Birdoswald being no longer visible. It might be thought that the summit of Gillalees Beacon would be able to see both forts but the LiDAR model reveals this is not so.

Located to the east of Bewcastle is Barron’s Pike Signal Tower. Unfortunately, there is currently a gap in the LiDAR for the Barron’s Pike site but there is sufficient data available.
around it to estimate its height and assess what was visible and what was not. Birdoswald was clearly hidden but Gillalees Signal Tower was easily visible. So the communication between Bewcastle and Birdoswald did require two signal stations. The LiDAR model also showed that Pike Hill Signal Station, incorporated into Hadrian’s Wall, was visible from the Gillalees Signal Tower (fig 11).

**CONCLUSION**

We now have a logical and sensible route for the first half mile of the Birdoswald to Bewcastle Roman road that circumnavigates Midgeholme Moss providing a dry-ground route. This new route fully explains why Haverfield thought this part of the road had
Fig. 11. LiDAR map of the full route of the Roman road from Birdoswald to Bewcastle. Note how the main alignment is to the west of Bewcastle. The location of the Signal Tower alongside the road at Gillalees is indicated as are both Barron’s Pike and Pike Hill Signal Towers. LiDAR data © Environment Agency copyright and/or database right 2020. All rights reserved.
“vanished”. The reason for the main road alignment being to the West of Bewcastle is also explained. It headed for the best practical point to descend Collin Bank to Bewcastle Fort. Both these facts indicate that the Roman surveyors were experts in devising the most practical of routes.

ACKNOWLEDGEMENTS

The LiDAR images are derived from the data provided by the Department for Environment, Food and Rural Affairs (DEFRA) and managed by the Environment Agency. It is made available under the Open Government licence v3.0. © Crown Copyright 2020.

The base mapping is derived from Ordnance Survey 1:25,000 (c.1954) maps from the National Library of Scotland. Reproduced with the permission of the National Library of Scotland under CC-BY-NC-SA licence.

My thanks are due to John Poulter, Dave Armstrong and Mike Haken for their constructive comments on an early version of this paper. Thanks also to Mike Aerts who developed the bespoke LiDAR software including being able to assemble virtual reality 3D models. This has proved invaluable in finding Roman roads.

END NOTES

1. Despite its age, Margary’s book is still the definitive source for Britain’s Roman Roads and his road numbering system is still in use today.

2. Collingwood is quite dismissive of attempts to include the Birdoswald to Bewcastle road as part of the Maiden Way “...is objectionable because it is based on the idea that this road is a continuation of the Kirkby Thore-Carvoran road, which it is not.” Carvoran and Birdoswald are 5km (3miles) apart.

3. Biggins and Taylor’s geophysical survey extended around 100 metres north of the wall and located several buildings but no trace of the road on the previously assumed direct line was found.

4. Historic England’s Hadrian's Wall Map Section D shows the road going straight through Midgeholme Moss and has a deviation off straight approaching King Water. It would now appear that both are incorrect.

5. Taylor and Biggin’s geophysical survey of Bewcastle showed the approach of the road to the east gate as well as a branch off it to the east. The latter appears to have been just a local road.

6. The Gillalees Signal Tower is sometimes referred to as Robin Hood's Butt.

BIBLIOGRAPHY


Gethin, Bryn – personal email.


