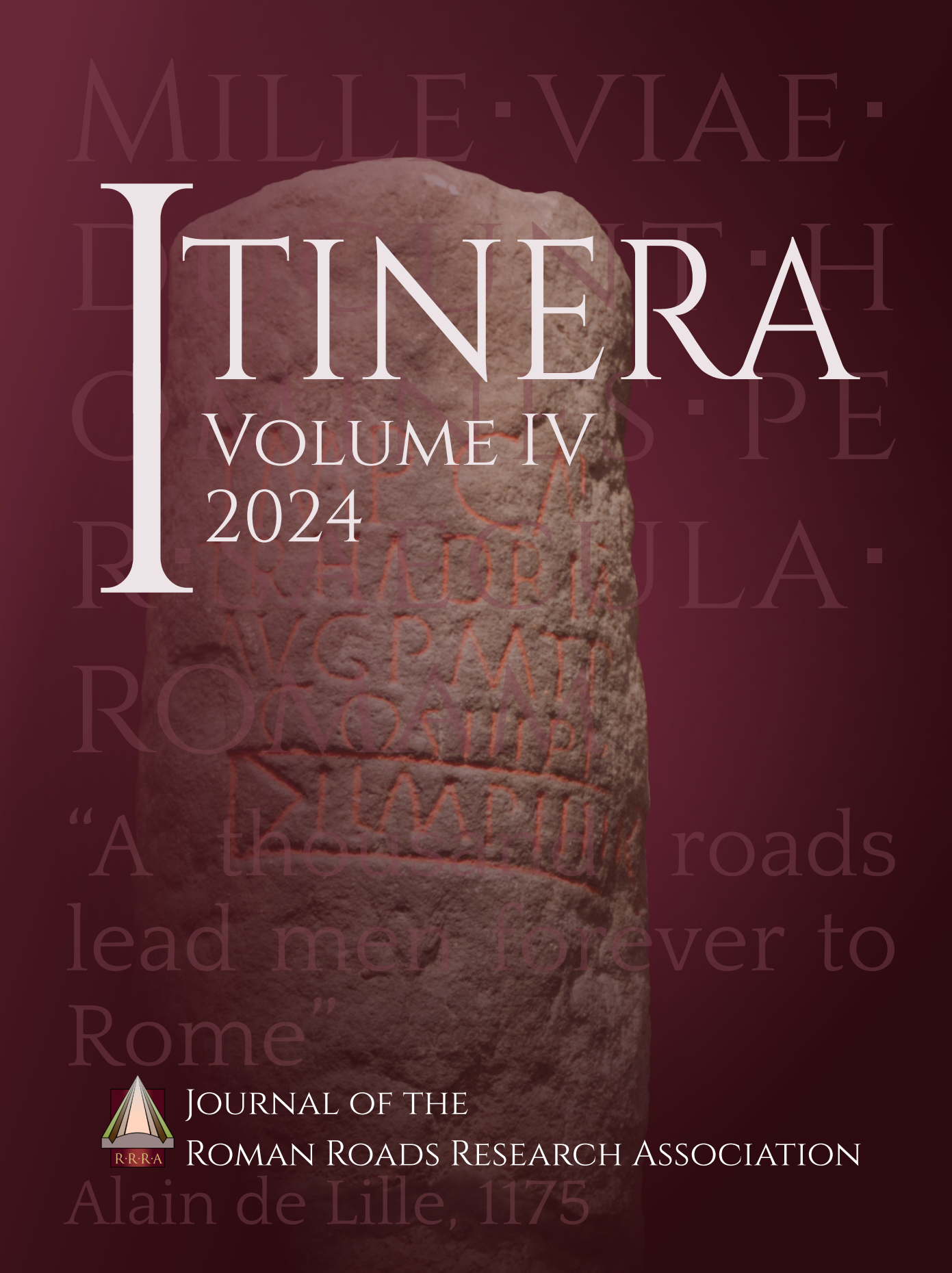


ITINERA

Volume IV
2024

"A thousand roads lead men forever to Rome"

Alain de Lille, 1175

Journal of the
Roman Roads Research Association

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About the Association

by Mike Haken



The late Hugh Toller and I founded the Roman Roads Research Association to provide a focal point for what we thought was a fairly small group of individuals with an interest in the study of Roman roads and connectivity throughout the former Roman province of Britannia. I'm not sure that Hugh, who sadly died in 2016, could have imagined that at the end of April 2024 we would have an international membership totalling 556, a figure that continues to grow. We are a very broad church, ranging from those with just a general interest in the Roman period, through to professional archaeologists from both commercial and academic sectors, not forgetting those those like myself who have had a lifelong passion for the subject (some might say obsession!). The Association welcomes all new members, whatever their background.

The continuing growth in membership may well have been fuelled, at least in part, by some of the things we have achieved. For example, we have just concluded the fourth season of our online lecture series, which we launched in 2021 during the pandemic. As part of our key policy of ensuring that our work is always made as accessible as possible, our talks are open to everyone, are always free of charge, and regularly attract audiences of 200 people or more from across the world. Another excellent programme for our fifth season is being prepared by our Secretary, Dave Armstrong, and details will be released soon. You can catch up with previous seasons on our YouTube channel.

Since 2018, we have conducted over 200 Ha of geophysical survey with our own gradiometer cart, accurately identifying the course of many roads and examining Roman period sites along them. Our most recent survey, assisted by a group of local volunteers from Southwell (SCAG), was near East Stoke (*Ad Pontem*) in Nottinghamshire. This confirmed the location of the junction of RR59(x) from Ancaster with the Fosse Way, making the existence of RR59(x) now beyond dispute. We always welcome suggestions for other potential survey sites, no matter where in the country they might be.

Above all, however, our greatest achievement is *Itinera*, the only journal in the world dedicated to the study of Roman roads and transportation infrastructure. Published entirely in house by our large team of volunteers, we are proud that our standards are as high as most academic publishing houses. Indeed, As Rob Entwistle points out in the following Editorial, it is a measure of our growing credibility that *Britannia*, a journal of the Roman Society, guides authors of reports on Roman roads that would have previously been published in *Britannia* towards *Itinera* instead.

Looking forwards, the wealth of new research and discoveries that have been reported by *Itinera* have, if nothing else, highlighted the urgent need for an accurate map that reflects the true state of knowledge of the Roman road network in Britain, and the sites it served, since the national maps that do exist are either decades out of date or simply inaccurate and misleading. To rectify this situation we will soon be recruiting volunteers to assist with a nationwide project which aims to accurately redraw the map. In line with our Open Access policy, the results will all be made freely available.

Finally, I am sure that our enthusiastic membership will enable us to continue to expand and develop our activities, ensuring that the next decade is even more productive than our first decade has been.

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Editorial

Robert Entwistle



The late Hugh Toller, co-founder of the RRRA with Mike Haken, was sadly lost to Roman road research when the Association was only a year old. Earlier I had become aware of his work through his part in identifying the long-sought line of the Lune valley Roman road out of Lancaster, my native town. Identifying it through Lidar and on foot, he followed its route up and over Lancaster Ridge towards Caton and the southern flank of the Lune valley.

It is therefore a pleasure to see David Ratledge's contribution to this volume of *Itinera*, a memorial to Hugh's work in the Exeter region, developed in the light of further studies. It is appropriate that this same volume contains a significant paper by Mike Haken identifying *viae vicinales* in the north-east Midlands which perhaps should no longer be regarded as somehow 'lesser' or 'minor'.

Itinera has a record of examining different aspects of Roman road studies, not necessarily restricted to our corner of the Roman empire. The 2024 volume sees a new contribution from the Spanish archaeologist and presenter, Isaac Moreno Gallo: the first publication in English of his work analysing road construction methods and transport development. His trenchant views provide a counterbalance to other accounts, reminding us that the evidence of the trowel is always subject to interpretation.

A new departure for this volume is the incorporation of a 'Focus' section with multiple papers exploring a single theme. The subject is the Devil's Causeway – a road which branches off Dere Street just north of Hadrian's Wall to head (via Learchild fort) determinedly towards modern-day Berwick and the mouth of the Tweed – where no Roman site is known. This theme originated in a 2023 conference held in Berwick-upon-Tweed and coordinated by Dr Lindsay Allason-Jones and the Border Archaeology Society with support from the RRRA, exploring the riddle of the road. Expert presentations have been developed into these papers. We would be happy to repeat, in future volumes, similar suites of papers focused upon a single theme or aspect: suggestions for themes and contributors would be welcomed by the Editor.

As always, this volume treats different geographical parts of Britannia, ranging from the south-west (Exeter) to the north-east (Berwick). Paul Booth explores aspects of the Roman road network in the Oxford area, Mike Holmes considers issues around the River Glynde in East Sussex, and Nigel Rothwell examines the possibilities for a Thames crossing linking St Albans and Silchester.

In a full volume, however, we regret the lack of papers on Wales and Scotland, even though these countries are represented in our annual round-up across Britain. Potential contributors suggesting interesting papers on these areas of would find us warmly receptive. *Itinera* continues to welcome every submission from contributors established or new, and if necessary, will endeavour to advise authors where further work is needed for key improvements. A short proposal to the Editor of what is intended, before making a full submission, is often helpful.

Editorial

We take pride in a professional standard of production maintained entirely through the work of volunteers: our editorial board (Mike Haken, Dave Armstrong, Mike Bishop and Paul Booth, all of whom contribute endless hours to the production of each volume); our academic advisor (Pete Wilson); our index compiler (Chester Forster); and postmaster (Chris Webb). Without the dedicated work of the whole team Roman studies would be the poorer.

We are greatly heartened by the respected position that *Itinera* has achieved in the short period of its existence. The long-established journal, Britannia, acknowledges this in specifying that submissions on Roman roads for their annual update section should be limited to brief summaries of the main points of interest if accounts are also published in *Itinera*, with our journal cited for those fuller reports.

An important part of our role, alongside publicising research, is (through the RRRA) the regulation and classification of new discoveries, as Margary's original system of nomenclature strains to adapt to an expanding known road network. This volume therefore contains a list of newly attributed numbers and a proposal from Mike Haken on the classification of non-standard Roman roads.

This year we have taken the decision to slightly reduce the font size to bring *Itinera* more into line with other similar journals and to control printing costs. Even so, readers will find that 2024 marks a bumper issue: the largest volume we have yet produced.

We trust that RRRA members and all readers will enjoy and profit from this 2024 volume of *Itinera*.

Robert Entwistle

(Hon Editor, *Itinera)*

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A Focus on: The North End of the Devil's Causeway

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Questions as to the exact route of the Devil's Causeway at its northern end have been asked for many years. There are also several subsidiary questions to be answered: where is the most northerly confirmed sighting of the road? Does it cross the Tweed between Tweedmouth and Berwick-upon-Tweed and, if so, how? If the road heads purposefully to Tweedmouth, why was this its destination and is there a fort waiting to be discovered there?

In an attempt to answer these questions, the Border Archaeological Society invited members of the Roman Roads Research Association and the Northern Roman Frontiers Seminar to join them for a day conference in Berwick-upon-Tweed in October 2022. Sadly, this event had to be postponed due to 'works on the line' effectively making train journeys to Berwick from Newcastle and Edinburgh impossible on our chosen day. A second attempt was made in May 2023 and this time, despite a rail strike, a very successful conference was held, with lectures followed by a walk along the banks of the Tweed to allow people to familiarise themselves with the terrain.

Much that was new was discussed and it was suggested that the papers should be published so those who could not attend might discover what was discussed and those who did attend could digest the contents at their leisure. The members of the Border Archaeological Society are very grateful to the Roman Roads Research Association for allowing these contributions to be inserted into *Itinera IV*. Sadly, not all the speakers were able to prepare their papers for publication, but it is hoped that the following will provide much food for thought and move on the debate about the purpose of the Devil's Causeway.

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Crossing the River at Berwick-upon-Tweed

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Abstract

Whenever roads of any length are built, eventually they will need to cross a river. The problems encountered in ensuring that a river crossing provided a safe and dry means of access between the banks in all weathers and seasons are common in all periods of history. The building of the 17th century 'Old Bridge' at Berwick-upon-Tweed offers a case study which has relevance for our understanding of how Roman engineers will have approached the problem of getting roads across rivers. It also indicates how building a suitable bridge was not the only challenge; maintaining that bridge in the face of flash floods, storm surges and other natural damage offered another, longer-term series of problems.

Introduction

Today at the mouth of the River Tweed, there are three iconic bridges which span the river and allow people to cross it easily: the 17th century 'Old Bridge', as it is known by locals, which still takes road traffic, the Royal Border Bridge, built between 1847 and 1850 to carry the railway and the Royal Tweed Bridge, which was constructed between 1925 and 1928 as part of the course of the old A1. What happened before these bridges were built, how the river was crossed and why it was particularly important to be able to cross it at this point where it enters the sea, are all questions which are relevant to the course of the Devil's Causeway.

The River Tweed is a strategic river which has been looked upon variously as an obstacle or an asset, depending on which nation it belonged to at a specific date in history. For some of its length, the Tweed is now the boundary between England and Scotland but the border deviates around Berwick, with the town and its bounds being on the north bank of the river yet still part of England. This has been the case since 1482; before that date Berwick changed hands many times, with the border often being well to the south. Whenever possible, the English armies preferred to have a base on the north bank as this meant they did not have to cross the river before confronting the Scots; for the Scots, holding Berwick provided access to a port as far south as possible on the east coast.

When considering how the river might have been crossed by civilians and armies in the past, there are three options available which show a progression from a temporary to a more permanent solution. Fording points are the first option and it is clear that the River Tweed has been crossed this way in the past, near Norham and also at Berwick itself, amongst other places (Hodgson 1828, 194-202;

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see also Allason-Jones and Osler, this volume). According to the local historian, Francis Cowe (pers. comm.), the fording point near Tweedmouth Parish Church on the south bank across to the Shoregate, mentioned by Bowes and Ellerker in 1541 and referred to by Hodgson in 1828, is no longer visible due to the construction of the Tweed Dock in the 1870s and the effect of that work on the river. This position makes perfect sense, as the original route north through the town of Berwick would have been via Hide Hill and Church Street before passing Wallace Green and then onwards to the north. However, fording the River Tweed would have only been possible at certain times as the river is tidal right up to the present Union Chain Bridge (see Allason-Jones and Osler, this volume). The course of the river will have altered several times over the centuries and the time of the year and changeable weather conditions would have made this an unreliable option.

A more dependable method would have been by boat. This would still have been dangerous, but there is evidence that this was the preferred method of crossing the Tweed, particularly before the construction of more permanent solutions. For example, in 1211, a huge "galley", possibly a raft, was used to transport King John across the Tweed when meeting William the Lion of Scotland, a situation brought about by the destruction of the bridge in the massive storm of 1210, which destroyed bridges across the country, including that at Perth (Sheldon 1849, 39; Graham-Campbell 1994, 4). A boat must still have been the best way to cross the river in the 14th and 15th centuries. Moving forward in time, a ferry still operated between Spittal and Berwick in the early 20th century, as can be seen in extant postcards of the Border Maid and the Susan in Berwick Archives.

Ultimately, the best way to guarantee crossing the river over a prolonged period was to build a bridge either of wood or, for a more permanent structure, of stone. As well as providing a more reliable crossing in all weathers and seasons, this would also allow a larger volume of people and goods to be carried over the river at any one time.

Building a Bridge

Since the early medieval period, there has been a series of bridges over the Tweed joining Berwick and Tweedmouth, each progressively more solid in their appearance and construction. The earliest documented bridge was in existence in the period 1153 to 1165. During this time Malcolm IV of Scotland issued a charter to the canons of Jedburgh Abbey in which he refers to a salmon fishery in the River Tweed at Berwick 'above the Bridge' (Cowe undated; see also Johnstone 1817, 121, who places this bridge '70 or 80 yards above where the present stone one stands', ie Berwick Old Bridge). This was probably a totally wooden structure as it was comprehensively swept away by floods in 1199 (Cowe 1980). After the destruction of the bridge in 1210, mentioned above, there is a reference to another bridge in 1216, which is recorded as having stone piers and a wooden deck, implying a more elaborate structure (https://www.scotlandsoldestbridges.co.uk/berwick-bridge.html). However, as was the fate of many bridges on the Tweed, this was also swept away by floods coupled with high tides and debris coming down the river (Johnstone 1817, 121). The next mention of a bridge appears in the *Lanercost Chronicles* and is dated 1296 (Maxwell 1913, 108; Scott 1888, 408). This refers to a tremendous flood breaking down the bridge, demolishing a tower on it (indicating it was fortified) and sweeping the people who were on the deck out to sea. This bridge was only about nine years old at the time of its destruction; according to the *Scalacronica* in the 14th century, it broke because the arches under which the water flowed were not strong enough or high enough to take the strain (Maxwell 1907, 9; Hearne 1774, I, 293). During the 14th and most of the 15th centuries there doesn't appear to have been

a permanent bridge which linked Berwick and Tweedmouth, although Chalmers (1807-24) records that in 1376 Edward III ordered the local fisheries be taxed in order to raise funds for a new bridge, a project which failed due to the Bishop of Durham's refusal to allow the bridge to come onto his land; instead, the river was crossed by ferry or horseback at low tide, which must have been both inconvenient and challenging as well as impeding trade.

In 1482, Berwick was captured by the English, and, at the time, no-one would have been certain how long it would remain in their ownership; despite this uncertainty, Henry VII built a new bridge across the river to help ensure easier communication between the town and the rest of his Kingdom. This bridge existed by 1498 and was constructed of wood, but was based on at least one stone pillar, probably a legacy from an earlier bridge. The construction was mainly sets of wooden posts driven into the riverbed, with a railed deck laid flat on top of them. For defence there was a drawbridge and a strong stone tower on the bridge near the Tweedmouth shore (Scott 1888, 411).

In 1503, Margaret, the daughter of Henry VII, crossed this bridge at Berwick on her way to Edinburgh to marry James IV of Scotland (Scott 1888, 106). However, although it was a more permanent structure which was well used, ice floes and floods on the river constantly damaged it; for example, three piers had to be reconstructed between 1568 and 1574 as well as all the woodwork being replaced, which cost £4004 15s 9½ d (equivalent to about £950,000 in 2017 (National Archives Currency Calculator)). This bridge is the first that can be confidently located on contemporary maps, the earlier efforts having left few traces due to the strength of flood water in the intervening years. According to John Speed's map of Berwick, it reached the north bank of the river just slightly further upstream to Berwick Old Bridge, near the entrance to the New Road and Bankhill (Speed 1610). This will have been the bridge commented on in 1584, as being long and wooden by the German traveller Lupold von Wedel (von Bülow 1894, 223-70). It does not seem to have been well maintained: it was King James VI of Scotland's first encounter with an English Bridge when travelling south to be crowned King of England in 1603 and he seems to have been unimpressed, as he is reputed to have said '*Is there ne'er a man in Berwick whae can boo stanes to mak' a brig over the Tweed?*', although it should be noted that the earliest reference to this remark is by Sheldon: 1849, 39, and it may be apocryphal.

It was clear that there was a need and also a willingness to construct a more substantial permanent structure near the mouth of the River Tweed. As the kingdoms of England and Scotland were now united, there was more traffic going back and forth and it was not cost effective to continually repair wooden structures which were not likely to last and were unable to cope with the weather conditions. The final straw was in 1608 when James Burrell, the Surveyor of the Bridge wrote to Lord Salisbury, Secretary of State, on 15 February that he was very worried because the river was in spate and bringing down ice, which would damage the bridge. His fears were justified, with the consequence that:

> *'Yesternight, between 6 and 7 of the clock, the spate rose here and brought the ice so fast upon the bridge as ten pillars and eleven bays thereof, being in the strength of the river, were then thrust down and carried away.... The rest of the bridge is in many places so shaken as I expect no other but still the falls of some of them. All feasible means I used to have prevented this, but the ice was with the furious and fast current of the spate so forcibly cast against the bridge....'.* (Scott 1888, 411).

No one was hurt in this disaster, but the bridge was now beyond repair and it was clearly time to consider constructing a new one which might better withstand the local conditions. The main person behind this project was the Earl of Dunbar, who had great influence with King James I. He persuaded the king that a new bridge was essential and that it could be viewed as a symbol – a link between

England and Scotland on its major east coast road (Colvin *et al.* 1982, 771). Sadly, Dunbar was unable to see the project through to fruition because he died in early 1611. However, Sir William Bowyer, Captain of Berwick, continued his work (Colvin *et al.* 771). Initially, the plan was to have a stone bridge over the middle of the river and then wooden elements at both ends; however, two more timber arches of the original bridge collapsed and eventually it was agreed to build a wholly stone bridge at the estimated cost of £8,500 (equivalent to £1,139,812 in 2017). This money was to be provided indirectly by the Crown and as proof of the money spent, the town was required to keep weekly accounts of expenditure, including the amounts paid to each workman. These volumes still survive in the Berwick Archives (Ref: BA/G/2/13/258).



The Old Bridge at Berwick-upon-Tweed completed in 1634; the Royal Tweed Bridge, completed in 1928, can just be see in the background. Photograph: Siobhan Bankier.

Work started on the Bridge in June 1611 and was not without its trials and tribulations, as can be seen in the Bridge account books. Timber was transported from Chopwell, a Royal Forest near Gateshead, down the River Tyne and then by ship to Berwick and into the River Tweed. Even then the channel was narrow, and the ship ran aground, which meant her load had to be taken off by horseback. The various trades employed in building the bridge indicate the range of skills required in building such a structure: masons, carpenters, smiths, quarrymen, sawyers, shipwrights, lightermen, labourers and boys as well as a surveyor and clerk of works. All these tradesmen were individually listed with their rates of pay and the number of days or tides worked – some tasks could only be attempted when the

tides were right, which meant that on some days few hours could be worked leading to delays. As ever, the cost of the Bridge kept increasing and more money had to be granted. By May 1617 the original grant of £8000 had been spent and a further grant of £4000 was agreed in July 1618 (Scott 1888, 414). Work progressed and the bridge was taking shape, but there were still delays due to the seasonal problems of the river flooding and debates as to how various aspects of the work were to be carried out. By 1620, the Bishop of Durham had got involved and it was suggested that the work should be let out to contract instead of just paying all the workmen until it was finished (Colvin, *et al.* 1982, 774-775). This was agreed and real progress was being made when disaster struck in October 1621 with the arrival of another storm which washed away more of the older wooden bridge the remains of which when travelling downstream damaged the new bridge and undid the work which had been done in the previous year. More money had to be granted to continue work and by 1624, the bridge was passable but not completed. It was to take until 1634 to complete it all and by then it had cost nearly £15,000 (equal to £1,832,238 in 2017) and was well over budget, but the result was an impressive stone structure which has withstood the test of time (Fig. 1). This bridge was to remain the main pedestrian and vehicular access between Berwick and Tweedmouth and formed part of the Great North Road running between London and Edinburgh until 1928 when the Royal Tweed Bridge was opened.

Conclusion

Today the 'Old Bridge' is the lowest crossing point on the River Tweed and it is a testament to the strength of its construction that it is still used today by both pedestrians and cars. The history of this bridge, its predecessors and the earlier ferries and fords demonstrate that crossing points are usually placed strategically – in this case either to provide access to Berwick from the rest of England or to give the Scottish armies access to the Bishop of Durham's lands in Tweedmouth - and evolve from temporary to more permanent solutions as the need for them and their usefulness is acknowledged.

The building of the 17th century bridge also shows what a major investment building a bridge represents. It took time (in this case 23 years), a very large and varied workforce, a considerable quantity of material which needed to be transported, often from some distance, and the builders had to contend with the vagaries of the weather and tides to the extent that their work might be swept away as it was being done. To go to this much trouble, the authorities had to be very sure that the cost-benefit equation stacked up and that there were guaranteed long-term gains.

The course of the River Tweed at its mouth would not have been exactly the same in the medieval period or, indeed, in modern times, as when encountered by the Romans when they were constructing the Devil's Causeway. However, to cross this river, they will have faced the same questions and had the same dilemma as those who followed them - how and where do you take a large volume of people across a river when there is no bridge and is building a bridge worthwhile? Such an obstacle of nature will have halted many an army or invader in the past and forced them to decide whether the likely benefit of gaining the other bank was worth the effort involved in building and maintaining a major engineering structure.

In conclusion, crossing the Tweed at this juncture, near its mouth, was always a challenge until a permanent stone bridge was built which allowed the safe passage of large amounts of people at any time. Prior to that, armies and others were very much dependent on nature – the time of the year, the weather conditions and most importantly the tides, being crucial factors in safely crossing the river.

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Bibliography

Colvin, H.M., Summerson, J., Biddle, M., Hale, J. R., and Merriman, M. 1982: *The History of the King's Works, 1485-1660, II.* London.

Cowe, F. M. undated: Unpublished lecture notes in Berwick Record Office.

Cowe, F.M. 1980: *Berwick Bridge and its Predecessors in Berwick Bulletin,* Berwick, 30 January 1980.

HMSO. 1982: *The History of the King's Works, Volume IV 1485 – 1660 (Part II)*, London.

Graham-Campbell, D. 1994: *Perth: the Fair City. Edinbugh.*

Hearne, T. 1774: *Joannis Lelandi Antiquarii de Rebus Britannicis Collectanea.* London.

Hodgson, J. 1828: *History of Northumberland,* Part 3, Vol. 2. Newcastle upon Tyne.

Johnstone, T. 1817: *The History of Berwick-upon-Tweed and its Vicinity.* Berwick.

Maxwell, H. (trans.) 1907: *Scalacronica: The reigns of Edward I, Edward II, and Edward III as recorded by Sir Thomas Gray.* Glasgow.

Maxwell, H. (trans.) 1913: *The Chronicle of Lanercost 1272-1346.* Glasgow.

Scott, J. 1888: *Berwick-upon-Tweed, The History of the Town and Guild*. London.

Sheldon, F. 1849: *History of Berwick-upon-Tweed.* Edinburgh.

Speed. J. 1610: *Map of Berwick.* London.

Von Bülow, G. 1894: 'Journey through England and Scotland made by Leopold von Wedel in the Years 1584 and 1585', *Trans. Royal Historical Society* 9, 223-70.