



ISSN 2753-6988



A View from the Bridge

for The Friends of the Union Chain Bridge

September 2023

AN INTERNATIONAL ENGINEERING ACCOLADE!

Brooklyn Bridge, Sydney Harbour Bridge, Washington Monument, Victoria Falls Bridge, Thames Tunnel, Alaska Highway, Forth & Clyde Canal, Forth Railway Bridge, Mormon Tabernacle, the Menai Bridge.....the list goes on.....and on the 6th July our historic Union Chain Bridge joined the illustrious club



Cllr Glen Sanderson (Northumberland County Council) Dr Toru Higuchi (Japanese Society of Civil Engineers) Dr Torja Koob Mæking (American Society of Civil Engineers) Cllr Mark Rowley (Scottish Borders Council) and Paula McMahon (Institution of Civil Engineers(UK)) unveil the International Historic Civil Engineering Landmark plaque by the Scottish tower. Behind Dr Higuchi is Paul Jones of NCC who was in overall charge of the project.

MULTIPLE CELEBRATIONS

Following the festivities of the 17th April - which we reported in our June Newsletter - when the Bridge was re-opened to traffic after some thirty months of restoration and refurbishment, the celebrations



continued in July, with the formal unveiling of the IHCEL plaque, presentations and a talks Symposium on the 6th July, and a further event to mark the 203rd anniversary of its opening, on the 26th July.

This Newsletter concentrates on the events of the 6th and 26th July.

Paxton House hosted a full-day celebration on the 6th July, fully described in Prof Paul Jowitt's article on page 5. The events were organised jointly



by Northumberland County Council (the unveiling of the IHCEL plaque and audio-visual presentations in the morning) and the Friends (Roland Paxton's talks

Symposium in the afternoon) and we are grateful to the County Council for their generosity in hosting the Friends' invitees. Well over 100 guests of Northumberland County Council and Scottish Borders Council, Friends and their guests, and members of the Institution of Structural Engineers attended the event. A photogallery is on page 6.



A wet and blustery July 26th saw the second of the month's celebrations and the third and last to mark the Bridge's re-opening. For the past three years, the Museums Northumberland Union Bridge Project has organised a celebration picnic with music and morris dancing, at the Chain Bridge Honey Farm, on the 26th July, the day of the Bridge's opening in 1820. This year's event was expanded to include science and engineering (STEM)-themed challenges at the Honey Farm, creative activities and traditional games at Paxton House and a Friends' exhibition at Horncliffe Memorial Hall, with Bridge artefacts, a selection of Jim Gibson's extensive photographic archive of the restoration work and a hands-on Lego model of the Bridge for budding engineers. The day ended with a Service of Rededication on the Bridge (see page 8) and the burying of two time capsules sponsored by the Berwick Town Preservation Trust.



The International Historic Civil Engineering Landmark Plaque

The American Society of Civil Engineers' (ASCE) Historic Civil Engineering Landmark Programme, which has been in operation for over 40 years recognises historically significant local, national, and international civil engineering projects, structures, and sites through dedications, a physical plaque on site, and an online historical record open to all.

The landmark programme

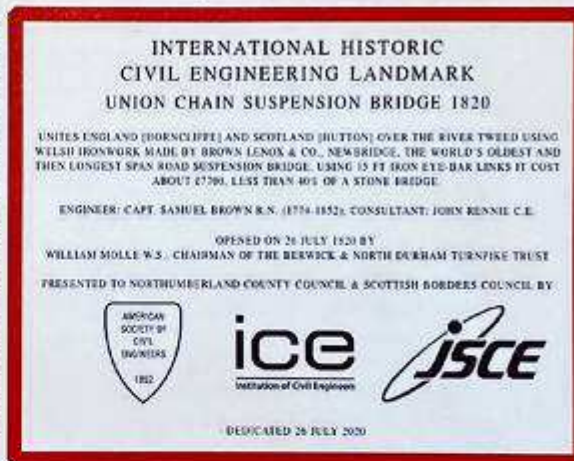
- Increases public appreciation of civil engineering contributions to the progress and development of society;
- Provides civil engineers with an historical awareness of their own profession for both practical insights and pride;
- Encourages, where appropriate and feasible, the preservation of significant historic civil engineering works; which can include documentation of the landmark, maintaining the landmark, etc. and
- Fosters the inclusion of civil engineering landmark information in encyclopaedias, guidebooks and maps.

The ASCE's History and Heritage Committee nominates historically-significant civil engineering projects for recognition as part of an ongoing programme. It reviews nominated projects and makes a recommendation to the ASCE's Board of Direction for which one should be named as a landmark.

Projects that have earned the designation include ICE's HQ, One Great George Street London, the Panama Canal, the Golden Gate Bridge in San Francisco, the Belfast Rail Link in Ireland, the Eiffel Tower in Paris, the Forth Bridge and the Granite Railway, the first commercial railway in the US.

The story of Union Chain Bridge's Plaque

Through his long and distinguished connections with the ASCE's Historic Engineering Panel and its counterparts in the Japanese Society of Civil Engineers and the UK Institution of Civil Engineers, our Patron Professor Roland Paxton undertook to persuade these bodies of the Bridge's engineering heritage merits and credentials at an inaugural meeting of the Friends in 2014. Based on his previous experience in achieving this designation for the Forth, Menai and Craigellachie bridges, Professor Paxton must have rated his chances of a successful outcome fairly highly.



And so it was that, after some five years of advocacy and deliberation, the beautifully-crafted plaque – cast under the direction of ASCE's Ted Green (right), who was with us on the 6th July, crossed the Atlantic and arrived at a lockdown-bound County Hall, Morpeth in July 2020. The restrictions and strictures of the Covid pandemic meant that the Bicentenary celebrations planned for July 26th 2020, when the Plaque would have been formally unveiled in the presence of delegates from its sponsor organisations, were cancelled and it was left to our then Chairman, Robert Hunter, to mark the occasion at a strictly controlled ceremony at the Bridge exactly 200 years to the minute, after the Bridge was opened.



The plaque has spent the past three years on display in the Berwick Visitor Centre awaiting an unveiling ceremony to do it justice; and justice was well and truly done at 11am on Thursday 6th July 2023 when the plaque was unveiled in the presence of invited guests and professionals from around the world by representatives of the two recipient local authorities and of the three awarding professional bodies.

The following article is reproduced from their news website with the permission of the Institution of Civil Engineers

Union Chain Bridge becomes International Historic Engineering Landmark

It is the oldest vehicle-carrying catenary bridge in the world.



A 203-year-old bridge that connects England and Scotland has been recognised as an International Historic Engineering Landmark. When it was built in 1820, it was the longest span bridge in the world, at 133 metres.

To celebrate the structure's reopening on July 6 after a £10.5m refurbishment, a plaque marking its landmark status was unveiled by the American and Japanese Societies of Civil Engineers (ASCE, JSCE), the Institution of Structural Engineers and the ICE.

The refurbishment work was paid for by Northumbrian County Council, Scottish Borders Council, and heritage sources including the National Lottery Heritage Fund and the 'Friends' of the bridge, who raised £300,000.

Former ICE Gold Medallist winner and ICE Fellow Professor Roland Paxton and the Friends of the Union Chain Bridge, of which he is patron, were instrumental in the refurbishment and preservation efforts.

"This achievement fulfils the promises made at the very first meeting of the Friends of the Union Chain Bridge," Professor Paxton said. "The councils are to be congratulated on restoring the bridge for vehicular use with significant retention of its 1820 fabric."

Director, ICE Scotland, Ben Westland said: "Not only was the incredible achievement of Captain Samuel Brown, the designer of the Union Chain Bridge, celebrated, but the efforts of the Friends of the Union Chain Bridge were rewarded with international recognition of this historic civil engineering landmark."

Projects which have also been named as an International Historic Engineering Landmark include the ICE's HQ, One Great George Street, the Panama Canal, the Golden Gate Bridge, the Belfast Rail Link in Dublin, the Eiffel Tower and the Forth Bridge.

Gordon Brown, communications lead at ICE

Enduring Friendship Links with US and Japanese Engineers

The celebrations of the 6th July offered us a welcome opportunity to renew acquaintances with civil engineering friends from both the USA and Japan, representing the American and Japanese Societies of

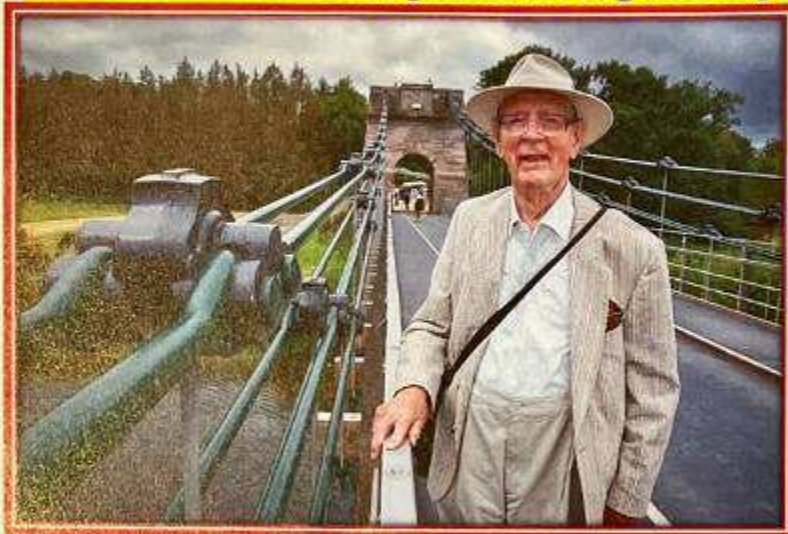


Civil Engineers, who – with the UK's Institution of Civil Engineers – had approved and sponsored the commissioning of the cast plaque which now graces the Scottish side of the Bridge.

From the United States we welcomed Tanja Koob Marking (*right*) representing the ASCE, with Professor Paul Giroux, who gave one of the afternoon talks, Bill Bulloch and Kathlie Jeng-Bulloch and Ted Green. **Representing the JSCE**, and our good friend Dr Hiroshi Isohata, who was unable to be present, Dr Toru Higuchi (*left*), Secretary General of JSCE UK Section, was making his first visit to the Bridge.



"The David Attenborough of Civil Engineering"



Photographer Jim Gibson's splendid portrait of our Patron, Dr Professor Roland A Paxton, on the Bridge on July 6th 2023.

We are pleased to have Professor Paul Jowitt's permission to re-print his report on the symposium at Paxton House organised by our Patron, Professor Roland Paxton. Prof Jowitt is Professor of Energy, Geoscience, Infrastructure and Society at Heriot Watt University.



The Union Chain Bridge, linking England and Scotland across the Tweed, has been re-opened after a multi-million pound refurbishment and a campaign which started in 2014 with the establishment of the Friends of the Union Chain Bridge with former ICE Gold Medallist Professor Roland Paxton as its Patron. Roland is no stranger to helping save historic bridges. The natural world has Sir David Attenborough. Civil engineering has Roland Paxton!

The re-opening ceremony attracted over a 100 people, including representatives of the ICE and IStructE and also guests from the American and Japanese Societies of Civil Engineers, along with many members of the local community from both sides of the Tweed. The ICE was represented by Trustee Paula McMahon and ICE Past Presidents Gordon Masterton and Paul Jowitt,

The bridge stands as the oldest vehicle carrying catenary bridge in the world. It was designed Captain Samuel Brown, and when built in 1820, it was the longest bridge in the world – 133 metres. The record for the world's longest bridge span has been exceeded less than 20 times in the intervening 203 years, with most of them building on the engineering legacy of the Union Chain Bridge, from the Brooklyn Bridge, to the Humber and Akashi bridges.

The re-opening event was hosted by Councillor Glen Sanderson (Leader of Northumbrian County Council) and Councillor Mark Rowley (Scottish Borders Council). The two local authorities had co-funded the bridge restoration alongside funding from the National Lottery. Both Councillors remarked on the power of working together.

A plaque from the ASCE, JSCE and the ICE designating the bridge as an International Historic Engineering Landmark was unveiled on the Scottish (and the most southerly!) side of the Tweed. The event then adjourned to the nearby Paxton House for a series of technical talks.

The first session was chaired by Keith Williams, a Trustee of the IStructE, with speakers Simon Rudman, Technical Services Design Manager with Northumberland County Council, and Joe Dimauro, the Engineering Director of The Spencer Group, and the Contractor for the bridge restoration. They gave a fascinating account of the dismantling and rebuilding of the bridge, covering forensic analysis of the original construction, innovations in its reconstruction and the engagement of the local community and schools.

The second session was chaired by Stephen Jones, an Engineering Historian and a Friends' Trustee and a Member of ICE's Panel for Historical Engineering Works. The first speaker was Professor Paul Groux, a Distinguished Member of the American Society of Civil Engineers and Professor of Engineering Practice at Purdue University, who gave a fascinating account of the design and construction of the Brooklyn Bridge in New York. The session was closed by Peter Cross-Rudkin, a civil engineering historian and author who described John Rennie's engineering activity in and around Berwick, and who was consultant to Captain Samuel Brown on the Union Chain Bridge.

Of Captain Brown it was said that "When he was thinking about how to build a bridge across the River Tweed, Sir Samuel Brown stopped while observing a spider's web. Right at this time he discovered the suspension bridge."

All in all, a very successful project!

Professor Paul Jowitt CBE FREng FRSE PPICE

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A Photogallery Record of a Remarkable Day

Photographs by Jim Gibson, who has amassed a remarkable photo archive of the Restoration for the Friends



Paula McMahon (ICE) Professor Roland Paxton, Dr Toru Higuchi (JSCE) and Dr Tonja Koob Marking (ASCE)



Professor Paul Giroux of Purdue University USA talks about Brooklyn Bridge in the Paxton House marquee



Cllr Catherine Seymour (Civic Head, NCC) with Cllr Colin Hardy (Norham and Islandshires Ward, NCC)



Friends' Trustee Martha Andrews answers a question in a discussion hosted by Rowan Brown (left) of Museums Northumberland



Professor Roland Paxton meets the Friends' new Chair, Martha Andrews; with Dr Toru Higuchi.



Peter Cross-Rudkin, who talked about John Rennie's involvement in engineering projects in and around Berwick-upon-Tweed, with Clive Simpson, Friends' Trustee

The Paxton House Talks



We were pleased to be able to co-ordinate our Talks Symposium organised by our Patron, Professor Roland Paxton, with the two Councils' plaque unveiling and presentation programme which took place on the morning of the 6th July and throughout lunch.



The Talks programme was introduced by Professor Paxton and his Heriot Watt colleague, Prof Paul Jowitt (*left*). The first session of the afternoon was chaired by

Keith Williams (*below, centre*), of the Institution of Structural Engineers' Board of Trustees and their President's representative at the event. He introduced Simon Rudman, NCC's Technical Services Design Manager (*left*) and Joe DiMauro, Engineering Director of The Spencer Group, the Bridge contractors (*right*), who presented a whistle-stop resume of the Restoration works and then took part in an informative Question and Answer session.



The afternoon's second session was chaired by Stephen K Jones (*left*), engineering historian and a Friends' Trustee. The first speaker was Prof Paul Giroux (*below*), whose talk on Brooklyn Bridge, New York, USA, had been scheduled for presentation at our Bicentenary

Symposium on the 26th July 2020, cancelled because of the Covid pandemic. We were very pleased that Paul had been able to accompany the US delegation to give his fascinating talk on the Roebling family and the high price they paid in building that remarkable bridge with which we hope to establish closer links.



The afternoon's final talk was given by Peter Cross-Rudkin, (*left*) author of the recently-published "John



Rennie – Engineer of many splendid and useful works" who spoke of Rennie's engineering in and around Berwick between 1798 and 1821.

The session closed with another question and answer opportunity.

We are most grateful to Roland Paxton for his initiative in organising the Symposium and, by doing so, compensating for the disappointment of the enforced cancellation of his meticulously planned 2020 event.

The Re-dedication of Union Bridge and Blessing of Time Capsules

The many celebrations of the "Bicentenary+3 day" at the Bridge, the Honey farm, Paxton House and Horncliffe Memorial Hall culminated in an unique service of Re-dedication in the centre of the Bridge, conducted by Canon Rob Kelsey, Vicar of Norham and the Very Revd Susan Brown of Greenlaw, representing the Church of England and Church of Scotland parishes on both sides of the Border. The Service was based on an original proposal by Rob Kelsey, developed with Susan Brown and the Friends.

The clergy, who entered the Bridge from their respective English and Scottish riparian parishes, accompanied by the Northumbrian small pipes and Scottish bagpipes, followed a service of blessing especially written for the occasion. The hymn *"In Christ there is no east or west"* had been adapted for the occasion by Canon Kelsey; and while Dick Gaughan's Scots folk song *"Both Sides the Tweed"* (could any song have been more fitting?) was played, Friends' trustee Martha Andrews cast upon the River Tweed a wreath symbolising the English, Scottish and Welsh influences in the design, engineering and construction of the Bridge.

At the close of the Service, Susan Brown blessed two Time Capsules, sponsored by Berwick-upon-Tweed Preservation Trust, before they were lodged for posterity beside the English and Scottish towers.



Scottish piper Andrew Smith, Very Revd Susan Brown; Northumbrian piper Ednie Wilson and Canon Rob Kelsey.



"Both sides the Tweed": Susan Brown and Rob Kelsey conduct the Service on both sides of the newly-installed border line inscribed "Vis Unita Fortior" *"United Strength is Stronger"*



Friends' Trustee, Martha Andrews, casts the symbolic Wreath upon the waters of the River Tweed.



Chris Budzynski of Berwick-upon-Tweed Preservation Trust (right) with the two Time Capsules, blessed by Susan Brown.

The final verse of the Bridge Blessing:
*"God bless this Bridge.
 God bless all who worked on it,
 God bless all who cross it
 And let peace flow, like a river,
 Through hearts and minds and souls.
 Amen"*

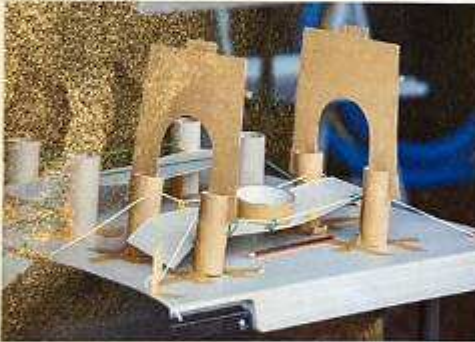
A Photogallery Record of the 200+3 Celebrations

Photographs by Jim Gibson

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The Institution of Civil Engineers' STEM (Science, Technology, Engineering and Maths) stand at Paxton House.....



.... and a budding young engineer's model of the Bridge



Captain Sir Samuel Brown learns about himself from the Union Bridge Project's Becki Cooper's talk at the Bridge



Above and below: The Friends' exhibition in the Horncliffe memorial hall attracted over 200 visitors



Tweed Forum's display at the Honey Farm



Northumbrian Pipers and STEM activities at Paxton House

The Restoration in Verse

Starting in September 2020, when the first trees were felled to start work on the Scottish side of the Bridge, mystery verses appeared on telegraph poles on both sides of the River, commenting on progress, or lack of it, and other aspects of the project. They are, in themselves, a useful, if quirky, commentary on the Restoration. But, while we have some tantalising clues, the author of the verses remains a mystery. For the benefit of posterity, a Friend, J L H Thomas, has brought the verses together into a little anthology.

The Complete Philocatenapontian* Verses

Composed for the Amusement of the
Friends of the Union Chain Bridge, Local
Residents, Passers-by,
and other Readers

by

AN ANONYMOUS VERSIFIER

and now

COPIED, COLLECTED

And CORRECTED

for the benefit of Posterity

By

J.L.H.THOMAS

(*Friend of the Chain Bridge; from Greek *philos*, "friend" and Latin *catena*, "chain", and *pons* "bridge")

WARNING!

When you see the Chain Bridge vanish,
Thoughts of disaster you must banish;
Please do not call the Friends in panic-
They're one and all *gephuramantic*!*
**mad about bridges*, from Greek *gephura*, bridge and
mania, 'madness'.

DISMAY!

What will be the Chain Bridge colour? –
Dark green and black. – What could be duller!
*The colour was decided by officers of the two county
councils; the Bridge had previously been painted in dark
green and black or brown between 1821 and 1872. The
versifier would reportedly have preferred silver and
gold.*

UNMASKED!

Who is this curious versifier,
Who signs himself 'Anon.'?
I now reveal – and risk his ire-
His name is really John!
*This indiscretion appears to be all part of an elaborate
mystification.*

CAPTAIN SAMUEL BROWN'S BRIDGE

The Union Chain Bridge over the Tweed
Was built by Captain Brown:
For such a bridge there was a need,
And it must not fall down!

So Samuel Brown devised some links
To hold the bridge together;
And when another elsewhere sinks,
His bridge withstands all weather!

Then recently she disappeared
Without a sigh or groan;
And so, alas, 'tis to be feared
Sam's ghost came back to claim his own!

But no! the Chain Bridge Friends were wise:
They took her down to mend her;
When all is done, she'll re-arise
In pristine, Brownian splendour!

Rectifications of Anon's 'poetic' licences

*Captain Brown first devised his links for use in ships, not for
the Union Chain Bridge; the Friends promoted, but were not
responsible for, its restoration; it was not the intention to
restore the Bridge exactly as Brown built it; and a visit to the
Bridge by Samuel Brown's ghost remains in the realm of
speculation.*

SURPRISE!

Said Sam Brown's ghost on seeing his statue,
I'm putting my tongue out now right at you!
*Captain Brown was plainly mortified on visiting the Bridge to
discover that his double had got there first.*

SUSPENSE!

Please spare a thought now for Spencer,
As the situation becomes ever tenser:
Will they get the work done
Now that autumn's begun
And the mists round the Chain Bridge grow denser?
*The Spencer Group were the specialist civil engineers from
Hull who restored the Bridge; they were untroubled by the
mists.*

DELAY!

Again postponed!
Old Sam Brown groaned:
When will my bridge be done?
But once the Friends
Attain their ends,
Then I'll be pleased for one!
*The reopening of the Bridge was repeatedly postponed between
the autumn of 2022 and spring 2023*

SUCCESS!

At last the Chain Bridge is restored
Let the news be noised abroad!
Patience brought its due reward;
All who contributed we now applaud!
The Bridge was finally reopened on 17 April 2023

Iron to Iron North The Friends of Bennerley Viaduct



In our June Newsletter we mentioned that The Friends of the Bennerley Viaduct had been in touch concerning a proposed long-distance cycle route – Iron to Iron North – starting at Union Bridge and ending, some 300 or so miles later, at the Bennerley Viaduct in Ilkeston, Derbyshire, to complement a route – Iron to Iron South – from Meldon Viaduct in Devon, to Bennerley, which they had inaugurated two years ago. The Friends of the Viaduct were planning to tackle the northern leg, starting on September 19th and taking five days to return to Bennerley, taking in such iron structures as Cragstone

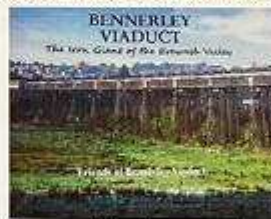


bridge, the High Level Bridge at Newcastle, Gaunless Bridge and the Torksey Viaduct. They invited cycling Friends of the Union Bridge to join them on all or part of the journey, but, sadly, there were no takers when, true to their intention, 14 members of the Bennerley Friends, with a small support team, assembled under the

Scottish tower on a wet Tuesday morning. The team, led by Trustee Ron Yee (non-cycling because of an Achilles injury) and their secretary and

leader, Philip Robinson, were met at the Bridge by Friends' secretary, Edward Cawthorn.

The Bennerley Friends presented us with a beautifully inscribed book (left) on the Viaduct, signed by the participating cyclists, and a superb commemorative poster (far left), designed and drawn by Ron Yee, depicting the Bridges to be visited en route, and in return, we presented them with our two books, Gordon Miller and Stephen K Jones' definitive history and Roland Paxton's *Spanning the Centuries*. (below, l to r, Ron Yee, Philip Robinson and Edward Cawthorn).



We are delighted to have established this link with the Bennerley Friends. They are determined to establish the Iron to Iron North route on the cycling map, so we look forward to promoting the route and to maintaining a close and mutually beneficial relationship. bennerleyviaduct.org.uk

Oral History Collection

Do you have memories or stories about the Union Bridge that you'd like to share with the Union Bridge Project?



As part of their community collaborations around the restoration of the Bridge, the Project team are seeking to

collect stories and memories of the Bridge.

Whether these are memories of everyday lives, significant events or holiday memories, the team would love to know more about the impact and influence the Bridge has had on the people who use it.

What is an oral history?

An oral history is a spoken history. It is not written down, instead audio recordings would be taken and stored in the Project's archives. It is not just facts and dates, but includes memories, thoughts and opinions too.

Snippets of these may be published on the Project's website to share with others seeking to find out more about the Bridge and its influence on our lives.

What would you need to do?

If you would like to take part, please get in touch with the Project team and tell them a little bit about yourself and a short summary of what you might share with them about the Bridge.

They will then match you with one of their volunteers to arrange to record your oral history. They will explain what information they would need from you, what they will do with that information and where and how it will be stored.

If you would like further information, have any questions or wish to take part, please email the Project at ucb@museumsnorthumberland.org.uk with the subject line "Oral History" and they will be in touch!

Oral histories will be collected by Museums Northumberland staff and volunteers and may be shared with partner organisations on the Union Chain Bridge project. You can find out more of the Project by visiting <http://unionchainbridge.org/>

Published by The Trustees of the Friends of the Union Chain Bridge
Registered as a charity
England and Wales (No 1162687) Scotland (No SC046208)
Charitable Incorporated Organisation under the Charities Act 2011.
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Tell us what you think of the Bridge

Following on from the Union Bridge Project's request for participants in an Oral History of the Bridge, we would like to know what Friends, members of the local communities, visitors and others – everyone in fact who has known the

Bridge for years, or has come to it recently, or has just spent a few minutes as a visitor – think of the outcome of the restoration works, not only to the Bridge itself, but also to its surroundings – the landscaping, statues, information boards, street furniture, traffic management, visitor numbers and behaviour etc etc.

We know that the local communities, and especially those who use the Bridge daily to reach work, schools and their friends "on the other side" are delighted to have it back after some two and a half years and we also know that many people – especially those who were not familiar with it before it was dismantled – are delighted with the outcome of the restoration.

But we are also aware that many people have reservations about the design, the 2023 structural "interventions", the nature and quality of the landscaping and hard landscaping, its noise, signage, traffic management and parking, the loss of the old track on the Scottish side, visitor activity and the ambience of the greater site, including its new role as a visitor attraction in this pastoral stretch of the River Tweed.

We'd welcome your views, in writing, by email (our addresses are in the box in the previous column) or verbally to one of our Trustees. While we'd appreciate your adding your name and contact details to any comments you make, we will respect anonymity too. We'd simply like to get a feel of the views of the local community, Bridge users, visitors and the wider Friends group.

Thank you for your input.

FRIENDS VACANCIES

Both our Treasurer, John Hamilton, and our Secretary, Edward Cawthorn, are seeking to retire from the Charity when successors are in place. If you'd like to discuss the possibility of taking on one of the posts, please either ring us on 01289 382541 or email us at unionbridgefriends@gmail.com