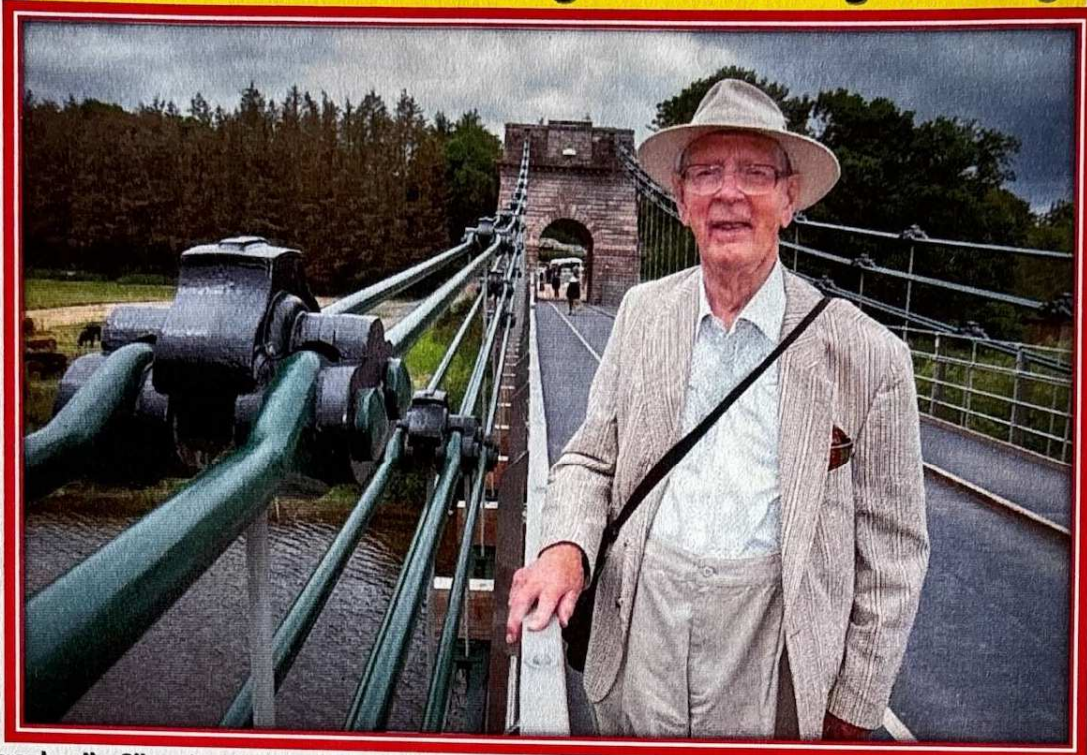


"The David Attenborough of Civil Engineering"



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 or 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 Giroux, 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