

The meeting endorsed the establishment of a "Hindsight to Foresight" Steering group to bring together the three overlapping areas of:

- Collecting Material (led by PHEW)
- Curating Data (led by Archives Panel)
- Publicising and Disseminating Material (led by chair of Education and Outreach)

The meeting reviewed progress on the four active projects, and despite the constraints on travel, it was encouraging to see progress on improving the quality of the HEW Database. Carol Morgan had appealed to PHEW representatives to provide photographic images to fill the gaps in the online database and this had resulted in over 600 new Images being added by Carol to the records. <https://www.ice.org.uk/knowledge-and-resources/historical-engineering-works>

The suggestions that had been made by Roger Davies were warmly welcomed and Roger is now engaged with the ICE's IT support team with high hopes of some significant improvements to the quality of the data and the means of accessing.

The exercise has shown that there is much still to be done, and that even if lockdown extends or is reinstated, there is no shortage of activity required. Roger has done an excellent job in recommending specific and achievable improvements and if we emerge from Covid-19 with a significantly enhanced and improved HEW database, at least our enforced reduced mobility will have had a side benefit. Not that we would have chosen a pandemic to spur us into that particular action.

Ian Weir and Richard Adam have agreed to work together on indexing and cataloguing our PHEW Newsletters, a valuable source of information over many years that needs to be unlocked.

The idea of a future exhibition, either virtual or travelling from a London base, to coincide with the bicentenary of the death on 4 October 1821 of John Rennie, Senior has most promise. 2021 will also be the centenary of Southwark Bridge over the Thames which replaced Rennie's iron bridge on the same site.

I do look forward to this steering group, augmented as necessary from the wider community, it will give additional impetus to demonstrating the relevance and value of understanding the past before designing the future.

As Master of the Worshipful Company of Engineers this year, I have teamed up with five other livery companies with an interest in engineering to launch a City of London Engineering Hall of Fame, with the objective of explaining and promoting the significance of the contribution of engineering to the success and sustainability of the City of London, past and present. The founding members are the Worshipful Companies of Engineers, Ironmongers, Armourers and Brasiers, Shipwrights, Scientific Instrument Makers and Water Conservators. Between us we cover the breadth and depth of

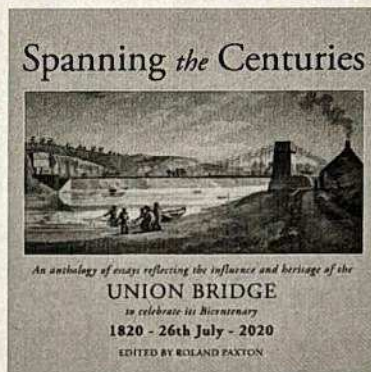
engineering rather well. All suggestions for suitable inductees will be welcomed by the judging panel.

Yet another Covid-19 casualty is the 2020 James Watt Dinner in Glasgow, at which new inductees to the Scottish Engineering Hall of Fame are traditionally announced. We have decided to make announcements of three 2020 inductees without the benefit of the dinner as our platform, so watch out on social media and other channels for that announcement soon!

Book Reviews

Spanning the Centuries: An anthology of essays reflecting the influence and heritage of the Union Bridge to celebrate its Bicentenary 1820-2020. Edited by Roland Paxton. Berwick: Friends of the Union Chain Bridge, 2020.

Gordon Miller, Samuel Brown and Union Chain Bridge. Berwick: Friends of the Union Chain Bridge, 2017.
www.unionbridgefriends.com



Among the many events of interest to engineers and engineering historians that fell victim to the COVID-19 lockdown was an intended international symposium at Horncliffe Memorial Hall to celebrate the bicentenary of the opening of Samuel Brown's Union suspension Bridge over the Tweed, the first traffic bearing suspension bridge in Europe, and the longest span in the world at the time. It is a remarkable survival, the longest serving example of a chain supported level deck suspension bridge in the world. In recognition of the achievement it was due to be inscribed as an international civil engineering landmark by the American Society of Civil Engineers, with the support of the Institution of Civil Engineers, and Japan Society of Civil Engineers. The symposium programme was arranged by Professor Roland Paxton under the auspices of the Friends of the Union Chain Bridge, who have attracted Heritage Lottery funding to enable a full restoration programme to begin, under the Union Chain Bridge Project Board.

Although the symposium could not take place, Roland Paxton was able to ensure the intended papers were published, and thanks to the efforts of local printers Printspot, with illustrations to a very high standard, particularly valuable with the outputs of the radar site investigation by Atomic Dietric Response (ADROK). The essays provide useful background on the bridge, its historic significance, its future including recent investigative work, together with essays

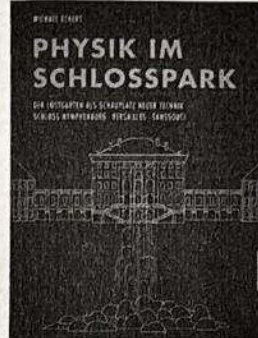
on some well-known record beating international suspension spans.

Roland Paxton discusses the bridge's significance, paying tribute to both Samuel Brown and John Rennie, who provided engineering advice, and also explaining the recent work by Heriot-Watt and Adrok that used radar to investigate the location of the original chain anchorages to aid current restoration work. Colin Stove provides details on the radar investigation, Steve Jones gives details of Brown's chain manufactories, focussing on the Pontypridd works that continued in use until 1998. Simon Rudman gives details of the planned restoration works, while Miles Oglethorpe of Historic Environment Scotland, Rowan Brown and Matt Storey (Museums Northumberland) talk more about the educational and heritage opportunities provided by the restoration of the bridge and promoting it as a heritage site of international importance. Local resident Heather Thompson gives a personal and local perspective on growing up alongside the bridge, and how the local community can benefit from understanding the bridge and its story. While the papers by Raymond Paul Giroux (Brooklyn), and Hiroshi Isohata (Akashi Straits) describe well-known suspension bridges, Hans Seland, a retired civil engineer from the Norwegian Public Roads Board, describes the influence of Samuel Brown's bridges on the Bakke bridge, Norway's first (and surviving) suspension bridge. Brown's Kalemouth Bridge, rather than the Union Bridge, seems to have been the more direct model for the Bakke design, but there is plenty in this volume to make clear the primary significance of the Union Bridge.

The volume makes clear the importance of archives in telling the story of suspension bridges and informing restoration, but also the need for site investigation to make clear uncertainties regarding the current state of older structures. There are many contemporary drawings and illustrations reproduced here, covering two centuries of bridge design, as well as valuable insight into episodes like the impact of an earthquake on the construction of the Akashi crossing. However, unfortunately, there are no bibliographic references. The essays provide a useful starting point for anybody interested in the history of suspension bridges, and community engagement with heritage engineering, but the reader will have to look elsewhere to follow up on the detail.

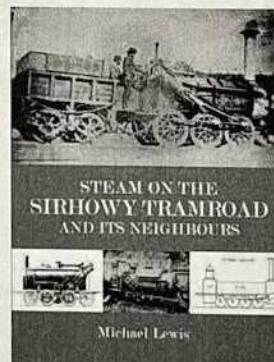
For the Union Bridge story, and relevant earlier sources, one can turn to Gordon Miller's history of the Union Bridge, which includes a chapter by Stephen Jones on the Brown Lenox ironworks referred to above. Miller gives a meticulous account of the Union Bridge story down to 1974, and restoration work to that date. Unfortunately it contains no references to work done on Brown subsequently by Thomas Day and Emory Kemp, or indeed by Roland Paxton. It is an essential monograph on the Union Bridge, but not the last word on Brown more generally.

Michael Eckert, Physik im Schlosspark, Munich: Buch & Media, 2020.



Eckert looks at a little explored aspect of early engineering—the technology of water supply in palace gardens, notably Versailles, Nymphenburg (Munich), and Sanssouci (Potsdam). This is a story of better understanding of hydraulics, the transition from water powered pumping machinery to steam power, and the strength of materials, heavily illustrated from a variety of printed texts, topographic views, and some modern photographs. The bibliography is thorough, including reference to Andreas Kahlow's 2017 monograph on the pumping works at Sanssouci (Das Pumpwerk fuel die Fontaenen von Sanssouci, Berlin: BundesingenieursKammer). It is evident these developments in water features were international in their scope, as ruling dynasties across Europe vied to have the most spectacular gardens. While the engineering work of Capability Brown has attracted some interest, Eckert's work suggests it would be a rewarding research subject for engineering historians.

Steam on the Sirhowy Tramroad and its Neighbours by Michael Lewis <https://rchs.org.uk/product/steam-on-the-sirhowy-tramroad-and-its-neighbours-published-7-september-2020/>



Just published is the story of the 4ft 4in gauge Sirhowy Tramroad in south Wales, which when opened was the longest railway anywhere in the world. Carrying iron and coal from Tredegar to Newport between 1804 and 1860, it was soon joined by several other lines to form the largest connected system of plateways that ever existed with an astonishing number of some eighty locomotives – at the time the largest group of locomotives in the UK. The engineering infrastructure was also in the forefront; the Long Bridge, Risca, was the longest railway viaduct in existence.