

# BRUNEL'S OTHER BRIDGE NEWS

## NOVEMBER 2023

### EXCITING NEXT STEP TOWARDS RESTORATION STARTS



On 15<sup>th</sup> November the Engineering Design Consultancy started with a meeting on site of:

- Kim Rochard, Historic England's Structural Engineer (Left)
- Jon Avent and Iasonas Bakas, Mann Williams, the principal consultants
- Brian Jarvis of Eatec Dynamics, dynamic testing specialist (Right)
- Geoff Wallis, Brunel Swivel Bridge Project Manager

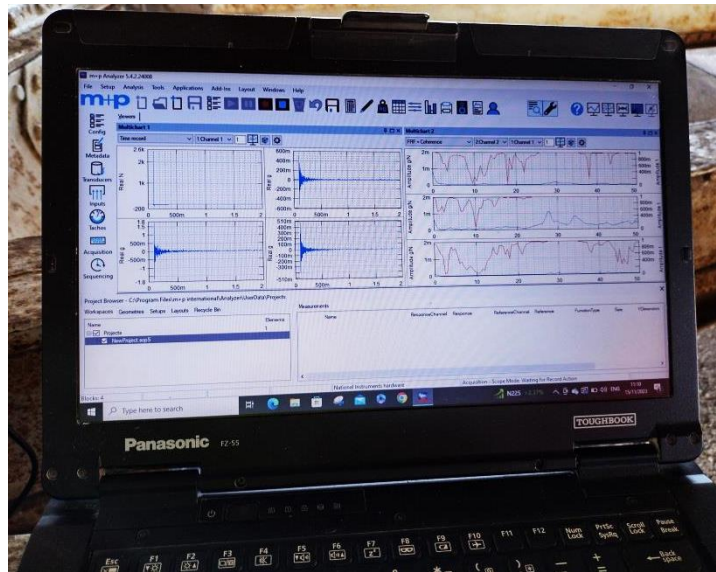
After two years administrative delays by Bristol City, the design of structural repairs to the wrought iron deck is now under way, due to be completed by February next year.

Funding for the consultancy comes from the Communities Partnership Fund (Bristol City Council) secured by the late Maggie Shapland in 2017, and from Historic England, agreed three years ago. Despite being under-staffed, Bristol City's Building Practice Team have kindly overseen the tendering process, inviting applications from engineering specialists whose names were provided by our Group.

We also wrote the Technical Brief, amended in detail by Kim Rochard, Historic England's Structural Engineer. H E's Principal Inspector of Historic Buildings and Areas, Simon Hickman and Historic Buildings Inspector Alessandra Perrone, have also been continuously supportive and we thank them.

This exciting next stage starts just two weeks after the SS Great Britain announced that they no longer plan to relocate the Swivel Bridge to their site. This allows us not to be fully focussed on working with Bristol City Council to get all the heritage assets in Cumberland Basin restored and back into the service of Bristolians and visitors to our historic City.

## HIGH TECH HITS THE SPOT



The Mann Williams team, working with Bridge Engineers Cass Hayward, will utilise our volunteer Bob Watkins's excellent drawings to create a mathematical model of the Bridge which will calculate its strength and vibration modes. The Bridge is a very complex structure, so the model will be verified by ingenious vibration testing, already demonstrated by Eatec. The left photo shows Brian Davies poised with his 'digital hammer' about to strike the Bridge. On the right the lap top shows the result -- vibrations set up in the ironwork in the longitudinal, transverse and vertical directions. Brian describes the Swivel Bridge as 'an ideal structure for this type of testing' so tests will soon be carried out at different points to verify the mathematical model.

Once the modelling is complete repairs will be added and calculations carried out to show which repairs are structurally essential, which can be regarded as less critical, and the structure's ultimate load-bearing capacity on completion.

## BRISTOL CITY E-PETITION

Our petition on Bristol City's website now has 365 signatures and has been the best - supported petition for several months. The petition has two requests:

- Against relocation of the Bridge. This is successful, and we wish the Directors of the SS Great Britain success with their Albion Dockyard scheme as now constituted. We are in meaningful contact with the Directors and have offered our support.
- We ask the Council to restore and display Brunel's Lock and Bridge, and the other historic features in the Western Harbour area, to form the focus of the new development.

The second aim is still to be achieved, so please sign the petition before it times-out at the end of this year. Google Bristol City e-petitions, go to Current Petitions and then to '*Don't move Brunel's Swivel Bridge*', or [Click Here](#)

Many thanks to everyone who has already signed, YOU MADE A DIFFERENCE !

We are in contact with Bristol City's Regeneration Team and have offered our help in developing and delivering their new Master Plan for Western Harbour.

## BOB VOLUNTEERS' ACHIEVEMENTS in 2023

- **Raising Profile of Western Harbour Heritage.** We have successfully raised the profile of the Cumberland Basin in general & the Bridge in particular through publications and presentations to Bristol Civic Society, HCCA, Bristol IA Society, Councillors and others.
- **Peer-Reviewed Papers** The following three papers were published together in the *International Journal of the Newcomen Society for the History of Engineering and Technology*:  
*History and Heritage* by Dr. David Geenfield.  
*Inspection, Survey, & Renovation* by Robert Watkins  
*Preservation Practicalities* by Geoff Wallis
- **Relocation of the Bridge to SS Great Britain.** Our well-supported e-petition raised the profile of this issue and influenced a favourable outcome.
- **Digital Scanning.** Our supporters from Balfour Beatty, Hinckley Point C have generously scanned the Bridge and created an animated video-clip of it rotating.
- **Newsletters.** We have produced 5 newsletters and one 'Newsflash' this year. These are now circulated to over 350 supporters.
- **Relisting.** We assisted Historic England's relisting exercise, and they consulted our comprehensive database '*Heritage Assets in Western Harbour*'. Google this title for more information, or visit <https://bwhha.wordpress.com/>
- **Welcome support.** We have welcomed support from Councillor Patrick McAllister, new Green Party representative for Hotwells & Harbourside, Katy Grant, the Civic Society Bristol IA Society and the Hotwells and Cliftonwood Community Association.
- **Volunteer Workdays.** On our nine well-supported volunteer workdays we have painted E W and most of S faces of the Bridge, carried out conservation work on some masonry structures, vanquished weeds generally, and repeatedly painted out or scrubbed off graffiti. Bristol City's Neighbourhood Services have provided materials and training.
- **Brunel Lock Manual Capstan.** The National Trust Tyntesfield Estate kindly donated Turkey Oak logs for replacement of the severely-decayed strakes on the capstan. They have been drying out over the summer and should be fitted next year.
- **I. Mech.E 'Engineering Heritage Award'.** We applied but were turned down because of '*concerns over the future of the Bridge*'. We had rather expected they might grant recognition to the Bridge TO HELP *resolve uncertainty over its future* !
- **U3A Tour.** On 31<sup>st</sup> October (Halloween Day) Geoff Wallis conducted sixteen visitors from U3A around Cumberland Basin, the first meeting of their new 'Engineering Section'.
- **Structural Engineering Design Consultancy.** Started on 15<sup>th</sup> November.

**A BIG THANK YOU TO OUR VOLUNTEERS FOR YOUR ONGOING SUPPORT**

**WE'LL LET YOU KNOW OUR 2024 VOLUNTEER WORK-DATES SHORTLY.**

Meanwhile we wish each of you a happy, restful Christmas.

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