The British Dam Society

EVENING MEETING

Monday 9th January 2023 at 6:00pm

One Great George Street, London (Nearest tube: Westminster)

Innovative underwater isolations for valve and pipework replacement

David Henthorn Brown BSc CEng FICE, Canal and River Trust
Paul Edwards, E.D.S.
James Blackhall, Blackhall Eng. Ltd

For synopsis and brief presenter biography see overleaf | Admission free | Teas available from 5.30pm

This meeting will be streamed live on the internet. For more details, including enjoying the live stream as part of a group at one of our Regional Hubs around the UK, please visit the meetings page on the BDS website: www.britishdams.org
For more information please contact the ICE on 020 7665 2147 or email: bds@ice.org.uk

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Synopsis

Carr Mill Reservoir is located near St. Helens, Merseyside. It was built to supply water to the Sankey Canal and now provides an important recreational amenity. The reservoir was originally built in 1768. The outlet comprises a tunnel, constructed through natural ground in a heading, and the valves are at the base of a deep shaft. One valve had failed and the need to restore the system to good working order was confirmed by an Inspection in 2018. It was decided to replace both the original valves, which were in parallel, with four new valves, a guard and a service valve on each pipe. To achieve this without draining the reservoir or building a cofferdam to provide the isolation, Edwards Diving Services designed and built a remotely operated vehicle (ROV), which was introduced via a submerged shaft and tunnel to seal the pipe intake. Blackhall Engineering Ltd. was then able remove the old valves from the shaft and replace them in safety. Kier Construction was the main contractor.

Presenter Biography

David Brown is a Supervising Engineer with the Canal & River Trust and has over 40 years' civil engineering experience, initially in roads and bridges, and latterly, for most of his career in canals and reservoirs. He is a member of the Institution of Civil Engineers' Panel for Historical Engineering Works and a Fellow of the Institution.

Paul Edwards is the Managing Director of Edwards Diving Services (EDS) which has been established for thirty years. He is still an "in date" diver and very much hands on in his approach to resolving underwater challenges. His experience in adapting mechanical solutions and taking them subsea has proved extremely successful in carrying out a number of isolations to failed valves across a wide sector of industry, including Nuclear, utilities, power generation and steel manufacturing.

James Blackhall is Managing Director of Blackhall Engineering Ltd. and has over 30 years of valve manufacturing experience specifically in Water, Oil and Gas, Energy and Cryogenic sectors. James is an advocate of British manufacturing and self-confessed "Yorkshire-centric" using local supply chain wherever possible. He graduated in Mechanical Engineering from Sheffield Hallam University in 1986 he worked in Germany before joining the family business. Whereupon the business grew rapidly, in 1989 he acquired the IP to manufacture the Blakeborough Larner-Johnson®, and their large bore water valves. Prestigious water projects include; main water valves supplying 60% of water into New York City, Marathon Dam Athens, James Cook fountain outside Houses of Parliament, Australia, and manufacturing the biggest gate valves on the planet for Texas USA measuring over 14m high and weighing in at 117 tonnes.