



The British Dam Society

EVENING MEETING

Monday 24th April 2023 at 6:00pm

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

Annual General Meeting followed by

New UK Dams - A New Episode

Portsmouth Water / Anglian Water / Thames Water / Stantec



Havant Thicket Reservoir (Courtesy of www.havant-thicket-reservoir.uk)

For synopsis and brief presenter biography see overleaf | Admission free | Teas available from 5.30pm | Cash bar in the Westminster Arms after the event

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

The UK reservoir industry is currently going through significant changes with a call for increased resilience within water supplies and greater demand for renewable energy.

This was highlighted in a recent presentation at the 21st BDS Biennial Conference paper 'Best value planning of strategic water supply reservoirs in England' by Julian Welbank and outlined the number of reservoirs included in regional plans. It concluded that at least 10 reservoirs or water storage projects are under investigation, some of which such are now underway.

In addition, the first large scale pumped storage project for 30 years, Coire Glas, was approved by the Scottish Government in 2020.

This presentation will provide an update on some of these major projects underway/planned by those directly involved across the industry.

Portsmouth Water Havant Thicket Reservoir



Havant Thicket Reservoir is described as an, 'Environmentally Led' project. The 8,700ML reservoir has received planning permission, awarded the main contracts for construction and is due to be operational in 2029.

It will supply water to about 160,000 people during an average year. The reservoir includes a three-kilometre-long zoned embankment dam which will be up to 20 metres high together and

will include a concrete outlet culvert and valve tower.

The presentation will include the scope of the project, the principals of design, the programme and how the project will deliver quality assurance, complying with both the Reservoir Act 1975 and the recommendations of the Coxon Report 1986. Also, some of the lessons already learned and how Portsmouth Water is working to deliver a learning legacy that will serve the reservoir projects that are scheduled to be delivered in England over the coming decades

Anglian Water New Large Raw Water Reservoirs

Two new large raw water reservoirs, each covering 5km² and holding 50 million m³ of water, are being planned for the East of England in Lincolnshire and the Fens. These projects are currently under development with the aim to be construction-ready in the late-2020s and providing water into supply from the mid-2030s to address the challenges of climate change, environmental restoration and population growth.

Thames Water South East Strategic Reservoir Option (SESRO)

SESRO is a proposed storage reservoir that will supply water for Affinity Water, Southern Water and Thames Water customers. Currently in development, the minimum size will hold 100 million m³ of water and would be built in the Upper Thames catchment in Oxfordshire. The aim is to ensure water would be available from 2040 to help protect supplies and manage future water quality issues created by a changing climate.

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Coire Glas Pumped Storage Project



Coire Glas is a proposed hydro pumped storage scheme in the Scottish Highlands with a potential generation capacity of up to 1,500 MW. The project will be located in the Great Glen and would use Loch Lochy as the lower reservoir with a new upper reservoir built in the Coire Glas creating more than 550 m of head for hydropower generation.

Planning approval for the project was granted by Scottish Government in 2020 and SSE are progressing with procurement under an EPC model with a final investment decision planned for late 2024.

The project would be the first large scale pumped storage scheme to be developed in the UK since Dinorwig was commissioned in the early 1980s and will play an essential role in decarbonising the UK's electricity supply by integrating more renewable energy.

The presentation will provide an introduction to the project, including a new 92 m high upper dam, the exploratory works currently underway and some interesting features of the EPC procurement strategy.

Presenters Biographies

Portsmouth Water

Ruari Maybank, Project Director - Havant Thicket Reservoir

Ruari is a project director with over 20 years of experience in leading and delivering major infrastructure projects. Previous projects include the expansion of London Luton Airport, planning transport infrastructure for the FIFA World Cup Qatar, providing utilities infrastructure for the London 2012 Olympic and Paralympic Games, the Millennium Dome and a number of Private Finance Initiatives. While his experience covers a broad range of industries, common factors have been projects which are high profile, have complex stakeholder environments and require innovation to meet challenging objectives.

Anglian Water

Mark Malcolm, Programme Director-Major Infrastructure

Having joined the company in 2020, Mark was appointed to develop and lead a portfolio of Anglian Water's future capital investment projects. These include two multi-billion pound raw water reservoirs planned for the East of England – Fens and Lincolnshire Reservoirs – both currently in the development phase and scheduled to commence construction in the late 2020s. Another project is the relocation of Cambridge's waste water treatment plant, scheduled to commence construction in 2024, which when moved will enable a new north-east city district to be created. These schemes are all Nationally Significant Infrastructure Projects (NSIPs) which follow the Development Consent Order (DCO) planning process.

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Prior to Anglian Water, Mark led Black & Veatch's contracting business in the UK & Europe Region focusing on design/build delivery water and energy clients. From 2005 to 2016 he worked across Australia and New Zealand, primarily leading the water industry activities for the contracting and engineering business Downer in the municipal water and resources/mining sectors. This followed almost a decade with Thames Water in project management, construction and engineering roles.

Thames Water

Georgina Seely, Head of Strategic Resources Engineering

Georgina is responsible for the next stage of scheme development of the Strategic Resource Options (SROs) for Thames Water; the portfolio includes the proposed South East Strategic Resource Option, a new storage reservoir to support the region. Georgina is a Fellow of the ICE and member of the ICE Water and Sanitation Community Advisory Board.

Stantec

Matthew Hill, Technical Director and All Reservoirs Panel Engineer at Stantec

Matthew has more than 25 years' experience in dam engineering and hydropower projects. Matthew has been responsible for the design of many new dams both in the UK and internationally and has worked on water supply and hydropower projects in more than 15 countries.

Matthew has been involved with the Coire Glas project since 2010, when the initial feasibility studies and an initial planning application was submitted and now leads Stantec's technical inputs as Owner's Engineer for SSE's 1,500 MW project.