

| No. | Workshop Title | Technical Lead(s) | Facilitator | Description |
|----------|--|-------------------|-----------------|--|
| Thursday | | | | |
| T1 | Supervising Engineer development site visit - Brookley Lake (JCB Factory) (Double Session) | | David Scopes | Double session aimed at those thinking about, or part way through their development towards Supervising Engineer to visit a nearby reservoir with a number of Supervising Engineers to share thoughts on not just the reservoir itself but the general role of the Supervising Engineer. To summarise at the end opinions on thoughts on recommendations one might provide in an Annual Statement. Also to include a tour of JCB factory. 30 minute each way coach trip |
| T2 | Considerations when using divers on reservoirs | | Paul Edwards | Why you should consider diving as an option, understanding that the perceived risks are high, but as any risk assessor will tell you, providing the risks are managed it is perfectly safe. This workshop will give you an understanding on what is required by law with engaging diving contractors, how early engagement could offer huge savings to the project, knowing what is available from the outset will also help shape the design. The workshop will demonstrate the modern diving companies capabilities, including tools and equipment available to them, it will outline a number of case studies on reservoir isolations that were considered impossible, it will highlight the practical engineering solutions that are available, even underwater. Paul Edwards has run EDS since its formation in 1992 and is still a medically in date diver, he is also a Director on the board of the Association of Diving Contractors. |
| T3 | Escapable silt - identification and quantification | | Neil Harding | The objectives of the proposed workshop will be to achieve the following: - 1. To identify the factors involved with the identification of silt with the potential to mobilise in a catastrophic failure, 2. To provide guidance on how to measure each factor, 3. To produce a methodology that can be applied at any reservoir to quantify the silt that could escape. |
| T4 | RARS Workshop 1 – Introduction to Risk Assessments for Reservoir Safety | | Jon Holland | There is an increasing use within the industry of risk assessments to help understand the risk of failure of reservoirs. The risk assessment process can be complex, daunting, subjective and baffling. This workshop is aimed at 'first-timers' and reservoir owners who would like a better understanding of the risk assessment process. We will look at the purpose of risk assessments, the benefits they can bring, why and when they might be used, or not used. |
| T5 | Flood studies, from rapid to complex assessments | | Jeremy Benn | This Workshop has the following aims and objectives: - • To provide a forum for delegates to discuss areas of uncertainty, disagreement or inconsistency in hydrological methods for reservoir flood studies • To share information on good practice • To feed concerns or questions back to regulators and research funders The workshop is in the form of a discussion forum, covering up to three topics, to be voted for by delegates at the start of the workshop from the following list of options: 1. The future of PMP and PMF estimation methods in the UK 2. Whether and how to allow for the potential impacts of climate change on reservoir flood estimates – what options are available now? 3. Selection of rainfall-runoff models for estimating the 10,000-year return period flood: FEH or ReFH2, and the role of the shortcut method 4. Use of alternative design storm profiles for reservoirs with long critical storm durations 5. Calibration of rainfall-runoff models using reservoir |
| Break | | | | |
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| T6 | Discontinuance of reservoirs | Stephen Barge | Suzie Maas | Workshop to present and discuss dam discontinuance with an environmental theme focusing on: - - Discontinuance vs abandonment - Key legislation with examples at sensitive sites - Ecological and Biodiversity Net Gain opportunities - Sediment and morphological adjustment - Hydrological considerations - Wider socio-environmental factors Contributions from AtkinsRéalis, Natural Resources Wales and United Utilities will use recent examples to illustrate time and cost elements, environmental benefits and lessons learned. |
| T7 | Personal H&S and physical abilities | | Neil Harding | The potential for professionals to encounter hazardous situations and conditions is likely to increase with the introduction of legislative change to cover small raised reservoirs and more frequent significant impoundments during severe flood conditions due to climate change. Many small reservoirs are likely to be in poor state of maintenance requiring investment to bring them to a safe standard, conditions that may prove unsavoury to their owners who may then react in an unpredictable manner. The intention of the proposed workshop is to explore what is relevant and appropriate health and safety training and physical capabilities given the range and diversity of working environments and situations to be encountered by panel engineers at reservoirs. Another objective would be to identify minimum standards to be considered for adoption as a pre-requisite for the application process to panels. |
| T8 | RARS Workshop 2 – Risk Assessments for Reservoir Safety Practitioners | | Jon Holland | This workshop is open to anyone interested in a deeper understanding of the risk assessment process. We will look in more detail at the tiered process, including how to determine the level of assessment that should be considered, and the level of information and investigations that might be required in each case. The workshop will conclude with discussion around the current application of RARS within the industry, lessons learned, improvements that could be considered and the 'what's next?' for RARS. |
| T9 | Retrofitting drawdown improvements | | Alistair Walker | This workshop will review the options for improving drawdown capacity at reservoir, and will identify good and bad practice from the industry. This workshop will be a re-run of the Retrofitting of aging dams – drawdown capacity workshop from 2022 but with new case studies and incorporating lessons learnt over the last 2-years. |
| T10 | Emergency Planning Exercises | Natalie Bennett | Merlin Davis | This interactive workshop will provide you with an opportunity to plan full-scale exercises of reservoir On-Site plans for a set of sample reservoirs. The exercises will provide an insight into planning for an emergency exercise, including identifying the elements for testing, developing failure mode scenarios, and assessing the risks of pump deployment. The expert panel will give insights into how to engage the local resilience forums and the practicalities of emergency measures, including pump deployments. |

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| Friday | | | | |
| F1 | Reservoir surveying methods from simple levelling to point cloud (Double Session) | | Neil Harding | <p>This workshop is to be site-based with live demonstrations of a diverse range of terrestrial, aquatic and aerial surveying techniques. The format of the workshop will include a combination of Powerpoint presentations and practical demonstrations of various techniques in an open-air environment (temporary cover will be provided for the digital presentations).</p> <p>The workshop will be delivered by the same group of presenters from the previous workshop in 2022.</p> <p>The workshop is designed to give an understanding and appreciation of the capabilities and limitations of the different methods and how to identify the most appropriate for different purposes including what to consider when preparing specifications for surveys.</p> |
| F2 | Panel Engineer Development (SE) – experience and application for panel | Craig Goth | Rachel Pether | The Supervising Panel Engineer Development workshop session will include a presentation on the attributes and experience required for Supervising Engineers followed by a brief talk by a recently appointed Supervising Engineer on how to navigate through the process. The session will conclude with an hour long open forum, exploring the common themes relating to the application and interview process. Delegates will have the opportunity to ask questions on the challenges, blockers and opportunities associated with becoming a Supervising Engineer. |
| F3 | Incident reporting | | Maddie Pendergast | <p>Workshop covering incident reporting to assess its usefulness, and what industry would like to see next.</p> <p>This workshop will explore what engineers and other stakeholders want from incident reporting information. We will also explore means to get lessons and technical information from incidents quicker and in a useful way.</p> |
| F4 | Reservoir safety assest management - could we do better ? | Anthea Peters Dave Crook | Abi Morgan | We have reservoir safety legislation to help keep UK reservoirs safe, but can we keep maintaining our aging assets so that they last indefinitely? This interactive workshop will ask whether our industry does enough to help reservoir owners to properly manage their assets over their full lifecycle from concept to discontinuance/abandonment. We will present briefly on topics such as design life, planning for significant interventions, benefits and liabilities of reservoirs, dealing with life expired assets and promotion of new reservoirs. We will facilitate discussion and challenge from the perspectives of different parties. We encourage attendees to bring their ideas and suggestions to help us to identify areas where we can commit to doing more to help owners manage their assets. |
| F5 | Risk assessment techniques for M&E equipment | | Russ Digby | <p>The workshop provides an overview of the specific risk assessment techniques that are employed to risk assess MEICA equipment on Dams.</p> <p>An introduction to the most popular tools used, including: -</p> <ul style="list-style-type: none"> - HAZOP (Hazard and Operability Study) - FMEA (Failure Modes and Effects Analysis) <p>Practical excercises will include the mock assessments using the different approaches of typical equipment such as radial gates, with discussions and feedback on techniques and findings.</p> |
| F6 | Field Monitoring for predictive maintenance of Dams and Reservoirs | Dean Wheatley | Daniele Fornelli | <p>The scope of the workshop will be to provide an introduction to some of the main principles and technologies of Field Monitoring for Dams and Reservoirs, and to discuss current and future applications for predictive maintenance and construction optimisation.</p> <p>The sessions will focus on the general concepts associated with monitoring, the central importance of meaningful and trusted data and how these can be achieved. Practical demonstrations will also be incorporated. Particular attention will be given to some of the parameters of interest relevant to the following assets:</p> <ul style="list-style-type: none"> - Dams - Slopes - Tunnels - Valves - Penstocks - Lone working support & communications |
| Break | | | | |
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| F7 | Computational Fluid Dynamic (CFD) modelling for reservoir and dam safety | Victor Lira | Richard Williams | A workshop to explain the fundamentals of CFD and its capabilities. Stantec will be presenting about the strengths and limitations of both physical modelling and CFD. A study case will be presented with direct comparisons of results from a CFD model against physical modelling and a real-time event. The purpose is to encourage a better understanding of each tool and how to apply them to deliver a robust engineering approach in a cost-effective way. |
| F8 | What might reservoir safety management systems look like ? | | Matt O'Brien | <p>A workshop to gather thoughts and views on the options for the structure of reservoir safety management systems and how this may be applied across a wide variety of reservoirs.</p> <p>The workshop will outline possible themes of safety management systems to provide a framework against which the participants can contribute their views and real-world experience. Examples and thoughts about what good practices are already in place are encouraged and welcomed. Outputs from the workshop will be used to help develop proposals for use by reservoir owners, engineers, regulators and legislators as part of the wider reservoir safety reform programme.</p> |
| F9 | Good practice in preparing a S12 statement | Marco Pardo-Figueroa Matthew Jenkins David Scopes | Mark Chapman | <p>A key activity for Supervising Engineers is the preparation of the Written Statement under Section 12 of the Reservoirs Act 1975 for each reservoir they are appointed to. Following the joint presentation on the Written Statement template by the Environment Agency/Mott MacDonald at the Supervising Engineers' Forum in 2023, the aim of this joint workshop is to consider and discuss good practice in preparing a S12 Written Statement and also give an update on the ongoing national assessment.</p> <p>With reference to the current industry guidance (https://www.gov.uk/guidance/reservoir-supervising-engineers-written-statements-and-site-visit-reports) for the preparation of a Written Statement, we will consider what should be included in each section of the Statement and the resources available to the Supervising Engineer.</p> <p>This workshop is aimed to be both educational and to gather opinion and examples of good practice which might influence future guidance. It is intended for those training towards the Supervising Panel to learn what a constitutes a 'good report', those who are experienced report writers to be able to share their knowledge, and those who are looking to improve the template and practices they adopt in writing their Written Statements. The workshop should also be of interest to dam owners to gain an oversight of what they should expect to find covered in Written Statements.</p> |