

BTS 2018 - DAY 1 Speaker programme, Tuesday 9th October

Session 1

9am – 9.05am

Welcome

9.05am – 9.45am

Gus Klados, Kuala Lumpur MRT Tunnelling Director: 45 years of managing tunnelling risk

In this exclusive Keynote presentation, Klados will demonstrate that risk management in tunnelling has existed and been performed successfully well before it became a “cottage industry”. From Belgrade to Calcutta, The Channel Tunnel to the Athens Metro via The Lesotho Highlands Water Project, Klados has dealt with the risks inherent in mechanised tunnelling, non less than on Singapore’s DTSS, where challenging tunnelling was performed with the added difficulty of two wrongly specified EPBMs! The SMART Tunnel in Kuala Lumpur, saw the risk of tunnelling in karstic limestone mitigated whilst building a large diameter tunnel with 1D cover. After a stint in New Delhi, Klados - after 28 years away - moved back to his native Hungary to manage the mostly contractual risks of the M4 line on the Budapest Metro. Currently he is tunnelling manager on the KVMRT Line 1 in Kuala Lumpur, where the successful use of the Variable Density Slurry TBMs is a prime risk mitigation measure. All this - the challenges, the mishaps and the solutions will be discussed in what Klados says will be his final conference presentation.



Gus Klados

9.45am – 10.20am

Professor Arnold Dix – ITA EXCO Rep: Strategies to manage catastrophic failures in construction and operation as nations scramble to stretch the boundaries of underground solutions

The laws of physics dictate that everything from the variation of forces on a cutter head to dimensioning emergency ventilation varies as a complex function of increasing tunnel size. While the politics of project approval may demand showmanship - the demands of delivering functional underground infrastructure demands attention to detail. In a world with more and more projects - and no quantum change in methodologies - the stage is now set for project failures. This presentation explores the challenges and suggests some pragmatic solutions.



Professor Arnold Dix

10.20am – 10.45am

Sue Kershaw – KPMG Project Representative appointed to act as the Secretary of State’s Representative in HS2

The presenter will share her experiences in large-scale infrastructure delivery to date, and focus on her current activities as the Secretary of State’s Project Representative (P-Rep) on the High Speed 2 Programme - “effectively the eyes and ears of government embedded in the programme to progressively assure it will be delivered on time, will be affordable and provide good value for money and the beginning of the new rail system for the UK.”



Sue Kershaw

10.45am – 11am

Q&A

11am – 11.30am

Coffee

Session 2

11.30am – 11.50am

Miles Ashley: Project 13, Transaction to Enterprise, A New Approach To Infrastructure Delivery

Organisations from all levels of the supply chain agree that the infrastructure sector's current operating model is broken. Too often projects are delivered over budget, past deadline and below par. Project 13, launched by ICE, is an industry-led response to infrastructure delivery models that fail not just clients and their suppliers, but also the operators and users of our infrastructure systems and networks. This presentation will explain how Project 13 seeks to develop a new business model – based on an enterprise, not on traditional transactional arrangements – to boost certainty and productivity in delivery, improve whole life outcomes in operation and support a more sustainable, innovative, highly skilled industry.



Miles Ashley

11.50am – 12.10am

Cedric Wong and Patrick Bravery: ITIG Code of Practice for Risk Management of Tunnel Works – Initial findings of the review and next steps

In February 2018 the International Tunnelling Insurance Group (ITIG) launched a survey with the aim of reviewing the penetration and effectiveness of the Tunnel Code of Practice (Code) around the world. The survey had real validity with over 120 respondents leaving in excess of 500 qualitative comments based on a range of positive and negative experiences of use of the Code, other Risk Management frameworks or indeed the lack of application of such. More than 90% of respondents reported that risk management has had a positive impact on the industry, supported by other initiatives such as Geotechnical Baseline Reports, Health & Safety legislation and the sharing of lessons learned. However, a key finding was that more effort is required to derive the full benefit of risk management at site level - to optimise the management of risk as the required actions arising from the Risk Management process. Patrick and Cedric will elaborate on the findings of the survey and expand on the current status of the project to review and revise the Code.



Cedric Wong

12.10am – 12.30pm

Tim Jones, Project Director, The Lower Thames Crossing: A new road and tunnel connecting Kent, Thurrock & Essex

The presentation will provide an overview of the Lower Thames Crossing scheme, the crucial milestones in the development of the project and look at the opportunities and challenges that lie ahead for the team delivering this once-in-a-generation project.



Tim Jones

12.30pm – 12.50pm

The FIDIC “Emerald Book” – a new contractual standard for the tunnelling industry: Martin Smith and James Maclure

To better accommodate the specifics of the tunnelling sector, FIDIC together with the International Tunnelling and Underground Space Association (ITA) is currently developing a specific Conditions of Contract under the working title “Emerald Book”. The two lead drafters, James Maclure and Martin Smith, will present the guiding principles of the Emerald Book and explain the salient differences between the Emerald Book and other FIDIC Forms of Contract.



Martin Smith



James Maclure

12.50pm – 1pm

Q&A

1pm – 2.15pm:

Lunch Networking and Exhibition

Session 3

2.15 – 3.15pm

International Client Panel Discussion- Sue Kershaw/Gus Klados/Tim Jones/Zurlo Raffaele, hosted by - Bill Grose

How well do tunnelling contractors, designers and suppliers understand their clients and deliver what they need? Do the contracts between them help or hinder? Does the tunnelling industry and its clientele have a shared vision of the future? How differently are projects run in the UK to other countries and are there lessons to be learned? Hear the opinion of senior figures from client organisations for tunnelling projects, both in the UK and internationally, during a free-ranging discussion about these and other topics. The session will be chaired, and the audience will be invited to put questions to the panel either in writing or orally.



Bill Grose

3.15pm – 3.45pm

Coffee

Session 4

3.45pm – 4.05pm:

Thibaut Lockhart and Greg Berger, Bouygues: Doha’s IDRIS - New technology on the Qatar sewage tunnel

The DSSI-MTS1 project in Doha, Qatar, consists of 16.4km of sewer tunnels, 11 shafts, 9 mined galleries and connections. The tunnels have been excavated using 2 EPBMs through soft to medium sedimentary rock. Due to durability requirements, a HDPE membrane has been cast on the intrados of the segments, which brings specific constraints to the tunnel construction. Additionally, the alignment of the tunnels is governed by hydraulics, with stringent tolerances. The shafts have been excavated using a variety of techniques: NATM, D-Walls and an innovative Vertical Shaft Machine. The presentation will describe the Design and Construction of this challenging project, and highlight the innovative solutions that have been developed to meet the requirements as efficiently as possible. From early stages of value engineering, through all steps of design, to the final implementation on site, the major aspects of this comprehensive showcase of underground works will be illustrated.



*Thibaut Lockhart
& Greg Berger*

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Continued...

4.05pm – 4.25pm

Andy Thompson, Mott MacDonald: Undersea transport links – a bored tunnel in a major shipping lane

The 12.8m diameter steel fibre reinforced concrete (SFRC) Parallel Thimble Shoals Tunnel (PTST) is projected to improve transport links across the Chesapeake Bay between the mainland United States and the Delmarva Peninsula. Local space constraints require the construction of the tunnel through berms and submarine sediments and organic material, leading to consolidation settlements of the tunnel bedding after construction. The use of the Thimble Shoals channel as a major shipping lane triggers the necessity to consider ship impacts as well as loading from sunken ships. This presentation will illustrate the safety concept substantiating the design and focus on key challenges in the design of one of the largest segmentally lined tunnels relying solely on steel fibre reinforcement



Andy Thompson

4.25pm – 4.45pm

Andreas Raedle, Arup: Tunnelling in South East Asia Region

The presentation will give an insight into the design and construction aspects of several on going challenging major underground infrastructure projects in Singapore, Malaysia and Thailand. Furthermore in the future, planning and design for more challenging projects in the South East Asia Region will require innovative technologies. Lessons learned from tunnel projects that have employed technical innovations such as large diameter tunnel segment design, accessible cutterhead, high density slurry face support, cutter instrumentation and geophysical exploration technology will be shared and their applicability to upcoming South East Asia tunnel projects will be discussed in detail.

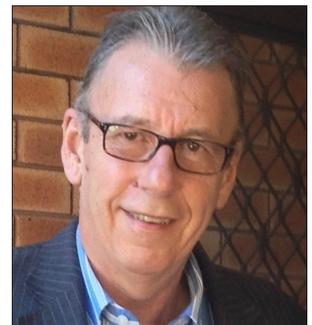


Andreas Raedle

4.45pm – 5.05pm

Charles Allen, OTB Concrete: Biogenic corrosion in sewer tunnels – new approaches and solutions in Singapore

The attack of concrete linings by biogenic corrosion in sewer pipes and tunnels is well documented. As populations grow, new sewer infrastructure is required and many cities are now investing in the construction of large diameter, long, gravity fed sewer tunnels. With sewage becoming more concentrated, retention times in large diameter tunnels becoming longer and global temperatures becoming warmer, the attack of concrete tunnel linings by biogenic corrosion is becoming more prevalent than originally thought. A proactive approach to tackling this problem has been taken by the Public Utilities Board in Singapore in the construction of its Deep Tunnel Sewer System Phase 2. More recently, a similar approach has been taken in New Zealand. This, and more, will be discussed during the presentation.



Charles Allen

5.05pm – 5.15pm

Q&A

6.00pm – 7.30pm

BTS Evening Meeting – The Brenner Base Tunnel: Construction and Risk Management Raffaele Zurlo, the Italian CEO of BBT SE

7.30pm

Drinks Reception for delegates, exhibitors and pre-registered visitors

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