

British Tunnelling Society

at the Institution of Civil Engineers

One Great George Street

London SW1P 3AA

Telephone: 0207 222 7722

Direct Line: 0207 665 2316

Direct Fax: 0207 799 1325

Email: bts@britishtunnelling.org.uk

Website: www.britishtunnelling.org.uk



NEWSLETTER September 2009

INTRODUCTION

Welcome to September 2009's edition of the newsletter and also to the 2009/10 BTS season.

The meeting in May 2009 saw the Annual General Meeting where Roger Bridge and Stephen Woodrow were announced as having been elected to the BTS Committee. Congratulations to them both.

Our thanks also go to the departing committee members Damian McGirr and Colin Eddie as well as Chris Bambridge who has left the UK to take up a position in the USA.

The May meeting also saw a presentation on the construction of the A3 Hindhead Road Tunnel by Roger Bridge of Balfour Beatty, Paul Arnold of the Highways Agency and Simon Stephenson of Mott MacDonald (below).



The final meeting of the 2008/2009 season in June saw a presentation by Prof. Andre Assis on the 'Lessons Learnt

from the Pinheiros Station Accident in Sao Paulo, Brazil. Pictured below with Damian McGirr.



INTERNATIONAL TUNNELLING ASSOCIATION

It was with much regret that we were informed about the recent death of our past President Dan Eisenstein. Dan was a very generous character who was energetic and always available. Dan will be missed by colleagues, friends and most of all by his family. Dan gave a lecture to the BTS earlier this year on Metro works in Vancouver.

Since my last message the I have had the opportunity to meet with many members from around the world to measure the pulse of tunnel market.

In Hungary the ITA WTC was held in Budapest in late May 2009 at which about 1200 delegates attended. Our industry has lots of opportunity over the coming decade. Clients are planning underground infrastructure in our cities for transport, water, drainage and storage at an ever increasing rate. There appears to be a realisation that land use in our urban areas needs to use surface space more rationally whilst using the underground space for efficient movement and strategic use such as storage. However, I detect an interim slowing down of the

market as Clients decide how to progress with planned infrastructure spending in the face of the financial downturn over the last 8 months. This downturn is causing clients to delay projects either because funding is difficult to get (tax revenues are falling in some cases or PFI funding is harder to obtain) or projects are being postponed or in the case of some well publicised projects in the USA, cancelled. Obviously bad news is publicised more than good news to fit with trend being reported by media and journalists. BUT... Our industry is doing better than others and in some cases e.g. in China and the USA, there are nationally coordinated efforts to stimulate the local economies by bringing forward infrastructure spending to create jobs; tunnelling will benefit from this stimulus.

The `pipeline `of tunnel projects planned or being built in the next 10 years is astounding in complexity and scale. Infrastructure needs to be built to replace ageing assets and in many cases new infrastructure is required to deal with the growth of population and its needs in transport, health, social and commercial requirements. Planners are either deciding that going underground is the only way to solve these needs or are deciding to do so for enlightened reasons to preserve scarce surface space in our cities and rural areas for more appropriate needs.



In Seattle, USA the State has decided to replace an ageing city centre highway viaduct that has divided the city from the coastal strip with a road tunnel. The recent decision by the Washington State politicians and authorities reversed an earlier decision to replace the existing viaduct with another. This demonstrates that lobbying and constantly promoting the benefits of going underground can affect the decisions of those in authority if a rational and vote winning strategies can be presented. All that is needed are a few well publicised examples like Seattle and other Government and Client organisations will take notice .So communication to the public, and clients is key to ensuring a good future for industry and particularly were Clients show signs of abandoning projects schemes. Our future can be influenced by our proactive actions. There will be more examples of the Seattle `turn around ` in future.

ITA has a role to play in stimulating the promotion of underground space and our two new Committees—

ITACET (Training and Education) and ITACUS (Committee for promoting underground space) were set up to address this.

My visit to the Straits Crossing conference in Norway this week revealed to me the extra- ordinary efforts being made by Norway to ensure efficient transportation links along its Atlantic Coast line. Sea ferries have for a long time served the need to link communities along the difficult and spectacular terrain along Norway West coast. These time honoured links are now being challenged by fixed links—bridges and tunnels. Norway is a rich country and is investing and spending its oil revenues wisely for the benefit of future infrastructure needs. Connecting communities 24 hours a day is an essential social driver .The conference demonstrated that economic arguments are being laid out and won in the decision to use fixed transports links. The market for tunnelling has increased and over 20 sub sea tunnels have been built over the past 20 years or so. Technology has again risen to the challenge and innovative solutions are being used as the market opportunities increase. The market will generally respond if Clients can give the market confidence of an assured infrastructure programme. This partnership is an essential ingredient in stimulating the tunnel market.

Following the recent WTC in Budapest I am happy to report that the accountability of our 13 Working Groups will increase and that we will publish a number of Working Group reports in the next few months as follows:

Guidelines for underground construction contacts (WG3)

Structural fire resistance in rail tunnels (WG6)

Sprayed concrete use State of the art (WG12)

Environmental and sustainable reasons for going underground (WG15)

Long tunnels at great depth (WG17)

Urban problems, underground solutions and key decision factors (WG20)

The Working Group Reports on Safety (WG5) and Conventional Tunnels (WG19) were published shortly before the WTC in Budapest.

Also I am conscious that during my third and final year as President the Exec needs to prepare a strategy for the next President from June 2010. Our current Strategy agreed in 2007 is generally on course, but membership categories need to be addressed to ensure that ITA gives and receives the full value for its role in facilitating the network, training, awareness, knowledge collection and dissemination, safety culture, standards, communication and forums.

Martin.Knights@jacobs.com

Contact: Donald.lamont@hse.gsi.gov.uk

FUTURE MEETINGS and EVENTS

All meetings now start at the Institution at 18.00 unless stated, with tea and coffee on the lower ground floor from 17.30. The bar opens at 17.30 and is open until late. Flysheets on the details of the meetings are circulated in T&TI and details are also posted on the website a month or so in advance of the meeting.

17 th Sep 2009	Seismic Response of Segmental Tunnel Linings
15 th Oct 2009	Channel Tunnel Repairs
19 th Nov 2009	Belfast Sewer Tunnel
10 th Dec 2009	TBC (note second Thursday of month, NOT third Thursday)

The BTS in association with the societies magazine Tunnels and Tunnelling International will be holding a Tunnelling Conference on Tuesday September 29th 2009

The conference will be held in Central London at the Queen Elizabeth II Conference centre.

Delegate prices have been held at the prices charged for last years conference and there will be a generous discount for Young members of the BTS (those under 33 years of age) to try to encourage their attendance.

The conference will address issue relevant to the future tunnelling work in the UK and will be a must for all tunnelling engineers.

There are opportunities for sponsorship and exhibition space with exhibition stand prices inclusive of delegate passes

For more details visit the website at:

<http://www.tunnelsandtunnellingconference.com>

David Court

David.Court@edmund-nuttall.co.uk

BTS WEBSITE

www.britishtunnelling.org.uk.

Any suggestions. Contact Nathan.Wilmot@arup.com

SAFETY, STANDARDS AND CODES UPDATE

Revision to BTS Specification - The BTS Specification is currently being revised and will be published by Thomas Telford later this year or early next. We would be grateful if you could provide any comments on the Specification or proposals for revision to Michael Francis (francism@pbworld.com)

UNDERGROUND HEALTH AND SAFETY COURSE

Following the success of the underground health and safety course in 2008, it has been decided to repeat this and spread it over two days on the 23rd and 24th November 2009.

Cost of the course is £80 for BTS members and £120 for non-BTS members which includes lunch and refreshments.

Enroll now by visiting the events page of the BTS homepage and downloading the Registration Form.

www.britishtunnelling.org.uk/events.php

owen.meredith@ice.org.uk

TUNNELSKILLS LAUNCH SAFETY PASSPORT SCHEME

TunnelSkills, the National Specialist Training Forum for the UK Tunnelling Industry, are to launch the tunnel industry 'Safety Passport' scheme in September 2009. TunnelSkills, which is composed of representatives from British Tunnelling Society (BTS) and the UK's tunnelling contractors, was set up to improve both safety and general competence levels across the tunnel industry. The 'Tunnel Safety Passport' is seen as an important part of achieving these objectives.

Industry leaders identified the need for a standard 'Safety Passport' with the predicted increase in tunnelling projects to be delivered across the UK including Crossrail and the Thames Tideway schemes. It was recognised that to safely deliver these and other UK tunnel projects, inexperienced workers required a better understanding of modern tunnel construction techniques and the specialist hazards these bring. The intention is that all tunneling personnel will need to achieve the national vocational qualification (NVQ) in tunnelling operations. And the TunnelSkills Safety Passport aims to provide a first step along this road by equipping the potential tunneller with basic health and safety knowledge and registering them for their NVQ. At the end of the one day specialist training course the candidate will be assessed to ensure they have adequate

knowledge of underground health and safety and will need to pass this assessment to work underground.

TunnelSkills, following trials across several major tunnel projects, have now finalised this one-day training course. This interactive and practical training session looks at all aspects of tunnel safety including specific legislation, codes of practice, risk assessment and the specialist plant and machinery likely to be encountered. In addition, it covers practical techniques for shaft sinking, and the major mining methods including TBM, SCL, hand mining and small bore tunnels. This understanding and insight into modern tunnel construction techniques, hazards and methods of work has been recognised as vital in the drive for improved safety standards across this potentially high risk construction sector.

There will be a presentation of the passport scheme on the 16th Sept to Industry Clients and other interested parties and the scheme will move forward immediately from that point.

For further information on the work of TunnelSkills, the Safety Passport Scheme or to be approved as trainer contact Brian Earnshaw the TunnelSkills forum Training officer

brian.earnshaw@mat-consult.com

TUNNEL DESIGN AND CONSTRUCTION COURSE 2009

The 2009 course was held on 15 - 19 June 2009 at Brunel University, Middlesex, UB8 3PH UK with about 50 attendees.

Details for the 2010 course will be made available in due course.

YOUNG MEMBERS' COMMITTEE

The BTS Young Members' Committee continues to go from strength to strength and has organized itself into four sub-groups, Management, Promotion, Education and Support. They are also working on their own dedicated website and have already produced their first newsletter.

Join their mailing list – email

Kate.Woolley@mottmac.com

[Facebook](#) under BTSYM

Chair: Kate.Cooksey@morganest.com

ANNUAL DINNER

The 2009 Annual Dinner was held on Friday 8th May at The Brewery with a great time being had by all and Britt Ekland providing the after dinner talk.

The 2010 Annual Dinner will be held on Friday 7th May. Details will be announced nearer the time. Bookings will be invited via the booking website in early 2010.

Planning for this prestigious event is in its early stages. As in previous years, we will open for bookings in February 2010. However, if you would like to become a sponsor of this event, please contact the organiser, John Scholey, who will be delighted to hear from you. He can be contacted in person at most BTS meetings, or via the ICE secretariat.

btsdinner@jacobs.com

LOBBY GROUP

In June 2009 the All Party Parliamentary Group for Underground Space (APGUS) visited the Brunel Museum and Brunel's Thames Tunnel. The temporary closure of the East London Line for upgrade works gave an unprecedented opportunity to visit the Thames Tunnel during the normal working day. Chairman the Rt Hon Nick Raynsford MP led a group of Parliamentarians from both Houses and across the political spectrum. We were received at the Brunel Museum by Director, Robert Hulse. He spoke about the construction of the tunnel by Brunel and the subsequent uses of the tunnel until it became the conduit under the River Thames for the East London Line. Fortified by wonderful home-made cakes from the museum's café, the party made their way to the Balfour Beatty-Carillion JV worksite and led by Construction Manager, Adam Stuart, descended via Rotherhithe Station to the tunnel itself. It was very exciting to see this historic monument of engineering; even more so considering it is still in use today. The tour included new underground structures which had been built for the upgrade work. Walking through the tunnel twice, the Parliamentarians had a good chance to view and appreciate the scale and endeavour of Brunel's work. It was also a useful forum to discuss repair and maintenance of historic structures, the contribution of tunnels to infrastructure design and the true meaning of sustainability. All those who attended expressed how impressed they had been with Brunel's Tunnel.

Helen Natrass
BTS Lobby Group

Helen Natrass

Further information from Helen Natrass –

h.natrass@sir-robert-mcalpine.com

0207 220 2440

GOSSIP

Please send any interesting news about members to Andrew Hindmarch:

Andrew.Hindmarch@mottmac.com

OBITUARIES

There will be a 1-day symposium celebrating the life and work of the late Sir Alan Muir Wood on Thursday 21st October 2010 at the ICE, this followed by a dinner in the Great Hall. More details to follow. A number of learned societies and institutions are likely to be involved. At present, BTS organisers are Bill Grose, Helen Natrass and Rodney Craig.

h.natrass@sir-robert-mcalpine.com

RodneyCraig@compuserve.com

Bill.Grose@arup.com

BTS CLOSED FACE WORKING GROUP

Copies of the Report continue to sell well. The Report which costs £65.00 is available from Thomas Telford, (Tel 44 (0) 1892 832299, Fax 44 (0)1892 837272, orders@thomastelford.com or via the internet www.thomastelford.com) from the ICE bookshop at Great George Street and other outlets.

HAVS BEST PRACTICE GUIDE

The HAVS document which has had a significant contribution from the HSE provides the industry with a Current Best Practice Guide to the management of HAVS and is essential reading for all and is available on the website www.britishtunnelling.org.uk go into Working Groups and then safety.

CONFERENCES

Don't forget to look at the back pages of Tunnels & Tunnelling International and Tunnelling and Trenchless Construction for the conferences coming up over the next two years. Also the International Tunnelling Association website www.ita-aites.org

“EURO:TUN 2009”, 9-11 Sept 2009, Bochum, Germany

“9th International Symposium on Tunnel Construction and Underground Structures”, 16-18 Sept 2009, Ljubljana, Slovenia

“China's 4th International Symposium on Tunnelling” 28-30 October 2009, Shanghai, China

“Hong Kong Tunnelling Conference 2009 IOM3 Hong Kong Branch – Nov 2009. Hong Kong

“Nordic Symposium of Rock Grouting – Geotechnical Seminar Rock Mechanics/Engineering Seminar – Underground Space Seminar” 4-5 November 2009, Helsinki, Finland.

“Shock Impact Load on Structures 2009” 2-4 December 2009, Adelaide, Australia

“World Tunnel Congress '10 “Tunnel Vision towards 2020” and 36th ITA General Assembly” 14-20 May 2010, Vancouver, Canada.

NAT 2010, June 19-23, 2010, Marriott Downtown Waterfront Hotel, Portland, Oregon

2011 RETC, June 19 - 22, 2011
San Francisco, California