

British Tunnelling Society

at The Institution of Civil Engineers

1-7 Great George Street

London SW1P 3AA

Telephone: 0207 222 7722

Direct Line 0207 665 2233

Direct Fax: 0207 799 1325

Email bts@ice.org.uk

Website www.britishtunnelling.org



NEWSLETTER

April 2007

INTRODUCTION

The February meeting was a joint meeting with the IMMM Min South and was given by Ashley Poulter, of Scott Wilson Mining on the Stabilisation of the Caverns at Coombe Down, Bath.



Ashley Poulter with Bill Grose and Maurice Jones (Min South)

The April meeting is the Harding Prize Competition, so come along and support our younger tunnel engineers. The titles of the three papers are given below.

The AGM will be in May. The nomination forms for three new members of the Committee have been sent out. Members wishing to be nominated should return them as soon as possible. Voting forms will be sent out with the Annual Report later in the month.

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 advance in T&TI and details are also posted on the website a month or so in advance of the meeting.

19th April 2007

Harding Prize

Hannes Lager – Arup
Ian Whitehead – Mott
MacDonald
Nathan Wilmot – Arup

17th May 2007

**AGM, followed by LUL –
Cooling the Tube**

David Waboso – LUL
Mark Gilbey – Parsons
Brinckerhoff

21st June 2007

**Durban Harbour Tunnel,
South Africa**

Andrew Hindmarch – Mott
MacDonald

20th September 2007

DLR Woolwich Extension

Daljit Dhanda – Amec with
Speakers from Lovat and
Halcrow

ADVANCE NOTICE OF ONE DAY CONFERENCE AND BTS TUNNELLING AWARDS – 18th October 2007

The Next BTS Tunnelling Conference will be a one day conference to be held at the Institution on 18th October 2007. The Conference will be followed by the monthly October BTS meeting, which will be on Crossrail and given by Doug Oakervee. The BTS Tunnelling Awards will follow later in the evening in the Great Hall.

The theme of the Conference will be "The Future of Underground Space", and will focus on the range of projects that are scheduled to commence in the next few years.

Further information will be provided in the next few months.

HARDING PRIZE COMPETITION

Every two years we hold the Harding Prize Competition which is held for our younger tunnel engineers. The Competition was open to all aged 33 or under on 31st December 2006. Three papers were received which will be presented on Thursday 19th April at 6pm.

The titles are:

Shallow Cavern Stations – A major undertaking for New York's City's first subway in 60 years by Hannes Lager, Arup,

Datchet Tunnel Repairs by Ian Whitehead, Mott MacDonald, and

Recent Modelling of Challenging Tunnel Soil-Structure Interaction Problems in Asia by Nathan Wilmot, Arup.

Following the three presentations and questions, the Sub-Committee will adjourn for a few minutes, before announcing the winner of the Competition.

INTERNATIONAL TUNNELLING ASSOCIATION

2007 General Assembly – Prague May 2007

The ITA 2007 General Assembly will be held in Prague from 5th – 10th May 2007. The first session of the Assembly will take place on Sunday morning 6th May and the second session on Wednesday morning 9th May.

The Working Groups will be meeting on Sunday afternoon 6th May and again on Monday afternoon 7th May. Members wishing to attend the Working Groups should contact the Secretary or Donald Lamont.

Election of ITA President

Every three years there are major elections at the ITA General Assembly. This year in Prague there will be the election of the new President, four Vice Presidents and a number of Executive Committee members.

Martin Knights, who has been a Vice President of the ITA for the last three years, has put forward his name as a Candidate for the Presidency. The Society has officially nominated Martin and he has their full support.

You can see Martin's manifesto on the Society's website, by going into the website www.britishtunnelling.org, clicking on Working Groups and then on to ITA activities. If you click on the box below his name you will be able to download his manifesto, where he talks about

- A little about himself
- His reasons for running for the Presidency
- The challenge for our profession

We hope that Member Nations will give their full support to Martin's nomination at the Prague meeting.

GOSSIP

Donald Lamont, HSE and BTS Committee member, has been awarded a PhD by Aston University for a study of data in HSE's compressed air database, entitled "Decompression illness and its regulations in contemporary UK tunnelling – an engineering perspective". The database was established in 1994 and contains information on 32 contracts involving around 2,300 men with around 120,000 exposures giving rise to over 400 cases of DCI since 1984.

Donald's study, which was funded by HSE, looked at the incidence of DCI using a number of measures; work patterns and the human response to DCI – acclimatisation, tolerance of DCI, tolerance of DCI and susceptibility to DCI; means of reducing DCI incidence with and without oxygen decompression and potential changes to the 1996 Work in Compressed Air Regulations.

Ralph Parkin, BTS member for 18 years, has recently joined Halcrow's Swindon office in the Dams and Hydraulic Structures Group.

Ralph started his tunnelling with TML on the Channel Tunnel. He then joined Knight Piesold and worked on the Pergau HEP, in Malaysia, the Kapichira HEP, in Malawi, and the CERN project, Switzerland. Before joining Halcrow, Ralph worked for Stucky Consulting Engineers initially on the Deriner HEP and later he managed their Libyan office.

Malcolm Chappell, has left AMEC and has recently joined Halcrow as principal of their Australian tunnelling team.

Any interesting news about members to rodneycraig@compuserve.com

LOBBY GROUP

In February, a group of Parliamentarians visited the DLR site in North Woolwic. Peter South of AMEC hosted the visit and gave our guests a good tour of the TBM which was preparing to re-launch on the second tunnel. They were also able to view the completed tunnel. The Parliamentarians were all very pleased with the visit and said they had learnt a lot about tunnelling.



Site visit to DLR

The AGM of the All Party Parliamentary Group for Underground Space took place on 27th March, followed by a talk on Sustainable Aspects of Underground Structures and Tunnels.

Various members of the Society have also attended recent meetings of the Associate Parliamentary Engineering Group.

The Lobby Group has written to the Mayor of London supporting proposals for the Brunel Museum in Rotherhithe. We are also writing to Ministers to encourage 'joined-up-thinking' on Government wishes to use more water transport for construction in London.

Further information from Helen Natrass h.natrass@sir-robert-mcalpine.com
Tel 0207 8427500.

ANNUAL DINNER – 18th MAY 2007 at 7.00pm for 7.30pm, THE BREWERY, CHISWELL St LONDON EC1 (Carriages at 1am)

The Society's 2007 Annual Dinner is a week later than usual this year, because even a year ago, someone else had piped us to the post for the "usual" Friday.

So again check your diary with the new date.

Last year we gave the champagne reception a break. We have had some requests for it to be reinstated, together with one extremely generous offer to sponsor the reception.

We are delighted to announce that there will be a champagne reception in the Brewery's King George 111 Room, sponsored by **Continental Conveyors Ltd.**

The dinner, and after dinner entertainment, will once again be held in the Brewery's Porter 'Tun Room Banqueting Centre. We have invited David Kendall, an ex Yorkshire Bank Manager, as our guest speaker to address and entertain the diners.

There will again be live music by "Rocking Flames" to end the evening, and to try and distract you from networking with their danceable mainstream pop.

The Society welcomes members, their partners and guests to attend the dinner.

Tickets cost £75.00 per head.

Bookings, via the British Tunnelling Society's website www.britishtunnelling.org, are now being received.

TUNNEL DESIGN & CONSTRUCTION COURSE

The date of the next course is 24th to 29th June 2007. Details will be published in the next month.

NITROGEN MONOXIDE WORKING GROUP

The Working Group has issued an Interim Advice Note which is on the website. Go to the website www.britishtunnellings.org, click on Working Group, and then on safety and download the Advice Note.

Work is nearing completion on its main Best Practice Guidance document, which will be available later in the summer.

INTERNATIONAL TUNNEL INSURANCE GROUP CODE

The Code was published on the IMIA website www.imia.com at the end of January 2006. It should be noted that the BTS is not party to the publication of the Code.

HEALTH & SAFETY

Designer Guidance on Minimum Diameter and Length of Drive – Reminder

There has been a long debate about the acceptable minimum diameter and maximum length for small tunnels. In mid 2006 the HSE and the PJA agreed a set of minimum diameters for tunnels or pipejacks against drive length and number of drives. This was later endorsed by the Society. The method of excavation was also factored in.

The resulting table was published as guidance for designers. Some flexibility has been built into the recommendations by allowing designers to seek advice from the H&S Coordinator (previously the Planning Supervisor) and obtain their agreement to deviate from the figures in the table. The table and its explanatory notes can be found at www.hse.gov.uk/construction/pdf/pjaguidance.pdf

Doppler Monitoring

CAWG is being consulted on a research report prepared by a team of practitioners and researchers led by the Institute of Occupational Medicine which is looking into the use of Doppler as a real time monitoring tool for assessing the effectiveness of decompression regimes in tunnelling.

Traditionally that effectiveness has been assessed through a retrospective study of decompression illness incidence, the most recent of which has just been published in the November 2006 edition of Civil Engineering – the general part of the ICE Proceedings.

Retrospective studies have varied in scope from being contract specific or covering a period of up to three decades. The IOM research is a world first in the application of Doppler monitoring to compressed air tunnelling and it is hoped to hold an open meeting off CAWG sometime in 2007 to discuss the results.

BS 6164

The BSI hope to have a draft revision of BS6164 ready for scrutiny by the BSI Committee shortly.

BTS CLOSED FACE WORKING GROUP

Copies of the Report are selling 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, 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

1st International Tunnel Safety Forum for Road and Rail, 23rd – 25th April 2007, Lisbon Portugal. www.tmi-intelligence.com

4th Conference on Traffic and Safety in Road Tunnels, 25th – 27th April 2007, Hamburg, Germany www.tunnelcongress.com

World Tunnelling Congress and 33rd ITA Congress, 5th – 10th May 2007, Prague, Czech Republic www.wtc2007@metroprojekt.cz

RETC Conference & Exhibition, 10th – 13th June 2007, Toronto, Canada www.retc.org

4th EFEE World Conference, 9th – 11th September 2007, Vienna, Austria www.efee.eu

STUVA Conference, 27th – 29th November 2007, Cologne, Germany www.stuva.de