

British Tunnelling Society

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NEWSLETTER

February 2007

INTRODUCTION

In December 2006 we had a very interesting meeting when Oliver Bevan and Douglas Parkes discussed tunnelling 50 years ago, with particularly reference to the Potters Bar Rail tunnels and the Clyde Road tunnels.



Oliver Bevan and Douglas Parkes

The first meeting this year, in January, discussed the Limerick Main Drainage Project and, despite the major disruption to road and rail services because of the very high winds in the south east, the meeting was very well attended.

DO YOU RECEIVE YOUR MONTHLY COPY OF TUNNELS & TUNNELLING INTERNATIONAL

The Committee is aware that recently some members have not been receiving their monthly copy of T&TI. In

order that we can find out the extent and the reason for the problem, we should be grateful if any member who is

not receiving copies of T&TI, would contact Jade Donovan, the Society's Secretary, at the above address.

OBITUARY

Bob Reed

We regret that there were a number of errors and omissions in Bob Reed's Obituary in the December 2006 Newsletter and we apologise to Sheila and the family.

Bob Reed died on the 27th September 2006 at the age of 74. Bob was born in India and attended school at the Bishop Cotton School at Simla. The family returned to the UK when Bob was 15 and he completed his education at Taunton School, Somerset.

Bob joined Kinnear Moodie & Co Ltd. as an apprentice engineer in 1949 and was employed on various tunnelling projects for the Metropolitan Water Board, the Post Office and on a number of sewer tunnels. In 1957 Bob started his National Service and was with the Royal Engineers in North Malaya.

When he returned to Kinnear Moodie in 1959 he was appointed Sub Agent on their LUL Contract for one of the two Experimental Lengths for the planned Victoria Line, at Finsbury Park, using a TBM with a new expanded concrete lining. He then became Agent on a number of Post Office cable tunnels.

In 1963 Bob was appointed Agent for the construction of Oxford Circus Station on the Victoria Line, the largest, most difficult, challenging and complicated contract on the project.

Between 1969 and 1972 Bob became Contracts Manager for the Sherbourne Valley Foul Water Sewer Contract in

Coventry and supervised sewer contracts in Brighton, Portsmouth, Essex, the Medway and in Belfast.

In 1972 Bob joined Lilley Construction (Midlands) as their Contracts Manager and was appointed Director in 1974. He was responsible for Post Office tunnels in Birmingham and Nottingham and main drainage tunnels in Warwick, Newcastle-under-Lyme and Birmingham.

Bob moved to Hong Kong in 1976, and was appointed Project Manager for the tunnelling works for the Gammon Kier Lilley JV for their MTRC contract which included 2.6km of 5m internal diameter running tunnels, with compressed air up to 3 bar, and three large oval shaped crossover tunnels, up to 11m across.



Bob Reed

When Bob returned to the UK in 1980 he was appointed Lilley's Director for procurement of work overseas and supervised a number of international tenders for projects in Hong Kong, Thailand, Singapore and Sri Lanka, and later in Lisbon and Cairo. In 1982 he was appointed Fairclough/Lilley JV Project Director for Contract 1 of the Sheffield Don Valley project.

After the successful £90m tender for Contract 4 of the Greater Cairo Wastewater Project he moved to Cairo in 1984 as Project Director for the construction of 5km of 5m and 6m internal diameter sewer tunnels using 3

Bentonite Slurry Machines, with associated shafts and ancillary tunnels, many in compressed air. The project achieved a tunnelling world record. Later in 1994 Bob

was awarded the Institution of Civil Engineers Crampton Prize for his paper on the Cairo project. This Prize is awarded for a paper on "The Construction, Ventilation and Working of a Major Tunnelling Project".

When Bob returned to the UK in 1989 he became Lilley's Marketing Director – Special Projects, before being appointed Resident Project Director on Stage 2 of the MEPAS Project in Liverpool.

In 1992 Bob joined Costain Building Products as General Manager of Charcon Tunnels, and two years later was appointed Business Development Manager of the of Costain BP.

Bob retired in 1995. He and his great friend Rupert McBean, who was his predecessor at Charcon Tunnels, with their wives, visited their old school at Simla in India and climbed to the roof of the school to check that their initials were still carved into the roof timbers – they were!

Bob spent all his working life in the tunnelling industry. He was part time Tunnel Consultant to the Ministry of Defence and with his great knowledge of compressed air working was a member of the Medical Research Council Decompression Sickness Panel.

Bob was a gentleman to the end and will be missed by his many friends. He is mourned by his wife Sheila, their two daughters and two grand children.

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.

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| 15 th February 2007 | Joint Meeting Min South IMMM. Stabilisation of Caverns at Combe Down, Bath |
| 15 th March 2007 | Glendoe Hydro Scheme |
| 19 th April 2007 | Harding Prize |
| 17 th May 2007 | AGM, followed by LUL – Cooling the Tube |

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

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 with the BTS Tunnelling Awards later in the Great Hall in the evening.

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.

INTERNATIONAL TUNNELLING ASSOCIATION

2007 General Assembly – Prague May 2007

The ITA General Assemblies comes round on a very regular basis with the 2007 Assembly being held in Prague from 5th – 10th May 2007. However, you will have to wait until September 2008 for the next one in Dehli, but then we will be back on the usual programme for the 2009 meeting in Budapest in May.

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

GOSSIP

Professor John Hudson, a member of the Society, is the President-elect of the International Society for Rock Mechanics. His term of office begins following the 11th ISRM Congress to be held in Lisbon, Portugal, in July 2007 and ends after the 12th Congress in Beijing, China, in October 2011. John has been the ISRM UK National representative for the last 20 years and has been heavily involved in their activities.

John is a Fellow of the Royal Academy of Engineering, UK, a part-time Professor at the Department of Earth Sciences and Engineering, Imperial Collage, University of London and has been an Adjunt, Visiting or Honorary Professor at many universities across the world from China to the USA. He is Editor of the International Journal of Rock Mechanics and Mining Sciences, and Elsevier's Geo-Engineering Book Series. He has authored or co-authored four books and over 150 articles.



Professor John Hudson

We wish John all success as President of IRSM and furthering the aims of that Society.

Any interesting news about members to rodneycraig@compuserve.com

LOBBY GROUP

Further information from Helen Nattrass
h.nattrass@sir-robert-mcalpine.com
Tel 07803 612556.

HARDING PRIZE COMPETITION

Every two years we hold the Harding Prize Competition which is held for our younger engineers. The Competition is open to all aged 33 or under on 31st December 2006.

At the time of going to press 3 papers have been received. These will be assessed by a small sub-committee and the short listed papers will be presented at the meeting on 19th April 2007 and after a short pause the winner of the Harding Prize will be announced.

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 will be open on 16th February 2007.

TUNNEL DESIGN & CONSTRUCTION COURSE

The date of the next course is 24th to 29th June 2007. Details will be published in the next month, together with full details in the next Newsletter.

DUBLIN PORT TUNNEL

Thousands of athletes ran through the Dublin Port Tunnel before the twin bore tunnels were officially opened to HGV traffic on 20th December 2006. The Port Tunnel is now open to all traffic.

NITROGEN MONOXIDE WORKING GROUP

As mentioned in the April 2006 Newsletter, a British Tunnelling Society led Working Group has been set up to address the issues raised by the Chemical Hazard Alert Notice (CHAN) 28 on Nitrogen Monoxide (NO) issued by the Health and Safety Executive in April 2003, revised July 2004.

The Notice withdrew the Nitrogen Monoxide (NO) Occupational Exposure Standards (OES) from EH40 and stated, "...long term (8-hour TWA) exposures to nitrogen monoxide should not exceed 1ppm". The Notice also advised "... employers should determine their own working practice and in house standards for control so that repeated exposure does not cause ill health".

The Working Group has issued an Interim Advice Note which is now 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 GAWG sometime in 2007 to discuss the results.

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 wtc2007@metroprojekt.cz

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