

# British Tunnelling Society

at The Institution of Civil Engineers

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## NEWSLETTER April 2006

### INTRODUCTION

There are three more very interesting meetings and other events before the Summer break. The bi-annual Sir Harold Harding Memorial Lecture given by Colin Eddie in April, the Annual Dinner and the AGM, followed by the Delhi Metro, in May, and in June four presentations on Research and the Annual Tunnel Design and Construction Course. We hope to see you at these events.

### AGM – 18<sup>th</sup> MAY 2006

The Annual General Meeting will take place at the beginning of the meeting on 18<sup>th</sup> May. The AGM takes about 15 minutes.

The Agenda, the Chairman's Report and the Accounts will be circulated in advance together with the voting form for the elections of three members to the Committee. David Court will complete his two year term as Chairman at the meeting. The June Newsletter will review the last two years and look forward to the next Chairman's term.

The Society's 2006 James Clark Memorial Medal will be presented at the beginning of the AGM.

### TOM ROBBINS

Tom Robbins, who formed TAM International in 1982 died suddenly in early March at the age of 70. He had been very active to the end, having only just returned from a conference in the USA.

Tom was one of the industry's characters who spent his life working with contractors providing them with

various chemicals for resin injection, waterproofing etc. Having worked for other firms in the industry he formed TAM International and was very successful and had the ability to provide the right materials to meet the contractors needs. Martin Robbins, his son, now runs the business.

Tom will be missed by the many people who knew him throughout the industry.



Tom Robbins

## 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.

20<sup>th</sup> April 2006

**The Sixth Sir Harold Harding Memorial Lecture given by Colin Eddie, Engineering Director Morgan Est.**

Colin will be exploring the nature of the tunnelling industry and potential advances in technologies over the next 25 years. In preparing his lecture Colin has consulted widely with world experts and industry leaders and hopes to present information which will not only be thought provoking but also entertaining.

18<sup>th</sup> May 2006

**AGM and Delhi Metro – Design and Construction of India's first Bored Tunnel Metro Line**

The southern section of the Delhi Metro Line 1 is 6.5km long and has six cut and cover stations. Tunnelling was in both soft ground and in rock with TBMs. The rock TBM was removed and SCL used to meet the tight programme.

22<sup>nd</sup> June 2006

**UK Research Showcase (please note the date not third Thursday)**

There will be four presentations:

Ground movements in clay.

Soil conditioning for pipejacks and EPB machines.

Characterisation and numerical modelling of fractured rock.

HAVS Guidelines

## GOSSIP

Any interesting news about members to [rodneycraig@compuserve.com](mailto:rodneycraig@compuserve.com)

### BTS ANNUAL DINNER – 5<sup>th</sup> MAY 2006

Tickets are going well for the Annual Dinner with 350 already booked and with the likely total exceeding last years' total. As there is a capacity of over 600, there is still plenty of room for members to book tables or individually. Please make your booking soon.

The Dinner will take place on Friday 5<sup>th</sup> May 2006 at the Brewery, Chiswell Street, London EC1 at 7.00 for 7.30pm. This is the tenth year that we have been at this venue. Tickets cost £75.00 per head.

There will be a reception in the King George 11 Room from 7.00pm when there will be a complimentary bar. If you arrive early, there will be a cash bar from 6.30pm. There will be a limited number of "meeting point" tables at the reception. (first come first served).

The dinner will be in the Porter Tun Room. The guest speaker is David Gunson, who was an air traffic controller at Birmingham Airport, who will talk about some of his experiences in the control tower.

After the dinner there will be live music by the Rocking Flames. There will also be provision for corporate tabs in the Porter Tun Room bar by prior arrangement with The Brewery.

To book places please visit the Society's website at [www.britishtunnelling.org](http://www.britishtunnelling.org) where you can book online. Tables are 10 or 12 but individual bookings can also be made. When you book online you will be given a unique booking reference and the Brewery wine list. You may order your wine in advance with The Brewery by quoting your BTS booking reference number.

Those without access to the website should contact the Secretary for a booking form.

### LOBBY GROUP

The re-launch of the All Party Parliamentary Group for Underground Space (APGUS) will take place at Portcullis House on Tuesday 18<sup>th</sup> April 2006 at 6pm at the invitation of The Rt. Hon. Nick Raynsford MP.

If you wish to attend there are a few invitations left, but you must contact Helen Natrass immediately.

A small group of Parliamentarians will be visiting the Abbey Mills pumping station the "The Cathedral of Sewage" in East London in early May. This was the visit

that had to be cancelled when a General Election was called last year.

Further information from Helen Natrass  
[h.natrass@sir-robert-mcalpine.com](mailto:h.natrass@sir-robert-mcalpine.com)  
Tel 07803 612556.

## **TUNNEL DESIGN & CONSTRUCTION COURSE 2006**

The annual BTS Tunnel Design & Construction Course will be held at the University of Surrey, Guildford from Monday 26<sup>th</sup> June to Friday 30<sup>th</sup> June 2006.

The course is divided into two modules – Module 1 Tunnel – Design, Monday to Wednesday and Module 2 – Construction, Wednesday to Friday. The common day to both modules is the very important aspects of Health & Safety, including insurance and risk. Delegates can attend one of the 3 day modules or the full five day course.

Monday and Tuesday will provide a foundation in the many aspects of tunnel design covering feasibility studies and route planning, ground investigation and interpretation, rock mass classification, temporary work design, the formation of junctions and opening, tunnel lining design for hard rock and sprayed concrete linings, segmental lining design, tunnel ventilation and life saving engineering, ground movements and types of tunnel lining.

Wednesday will cover Health & Safety Aspects, the insurance Code of Practice, design for safety and risk assessments.

Thursday and Friday will cover construction and practical aspects of the many construction processes, fire and emergency response, soil conditioning, environmental aspects, ground treatment, repairs and refurbishment of tunnels, project health and safety management, soft and hard ground TBMs, surveying, hard ground temporary works techniques and design, forms of contract and logistics.

Experienced engineers from the industry will give the benefit of their experience to delegates through lectures, course study materials and discussion.

Details of the course are about to be posted on the website or can be obtained from The Institution of Civil Engineers, One George Street, London SW1P 3AA, tel 44 (0) 2076652313, fax 44 (0) 2072331743, [conferences@ice.org.uk](mailto:conferences@ice.org.uk). You can book on line [www.iceconferences.com](http://www.iceconferences.com)

A copy of the brochure is attached to this Newsletter.

## **INTERNATIONAL TUNNELLING ASSOCIATION**

The next ITA General Assembly will be held in Soeul, Korea from 22<sup>nd</sup> to 27<sup>th</sup> April 2006, in conjunction with the Korean Tunnelling Association conference "Safety in the Underground Space". See [www.ita2006.com](http://www.ita2006.com).

If you plan to attend the Conference please let Martin Knights or Donald Lamont know as they would like you to attend one of the Working Group meetings on the Sunday afternoon.

The British Tunnelling Society has nominated Edinburgh for the 2009 ITA Annual General Assembly. Budapest, Hungary, has also been nominated. Each country will be giving a presentation on Sunday 23<sup>rd</sup> April and the voting will take place on Wednesday 26<sup>th</sup> April.

If members wish to know more about the Association and its Working Groups visit the website [www.ita-aites.org](http://www.ita-aites.org).

If you wish to be on one of the Working Groups, please contact Martin Knights [martin.knights@jacobs.com](mailto:martin.knights@jacobs.com), Donald Lamont [donald.lamont@hse.gsi.gov.uk](mailto:donald.lamont@hse.gsi.gov.uk) or the BTS Secretary [bts@ice.org.uk](mailto:bts@ice.org.uk)

**The deadline for abstracts for the ITA World Tunnelling Congress 2007 in Prague has been extended to 15 April . see [www.wtc2007.org](http://www.wtc2007.org)**

## **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](mailto:orders@thomastelford.com) or via the internet [www.thomastelford.com](http://www.thomastelford.com) ) from the ICE bookshop at Great George Street and other outlets.

## **HEALTH & SAFETY STANDARDS and CODES**

### **CEN Standards**

There was a meeting on CEN/TC151/WG4 on 16<sup>th</sup> and 17<sup>th</sup> March 2006 in Schwanau, Germany, to consider amendments to EN 12336 - Shield Machines, EN 12110 - Air Locks and EN 12111 - Roadheaders. The UK delegation met at the Uttoxeter offices of Donaldson Associates, on 9<sup>th</sup> March to consider the UK position on the proposals.

EN 12336 - Shield Machines. There are two amendments, both proposed by the UK. One requires similar standards of fixed fire extinguishing equipment to that already set out in EN 815 – A1 Hard Rock TBMs.

The second requires additional protective measures in small backhoe and cutter boom shields to prevent unintentional operation of the controls when accessing the face.

EN 1211- Air Locks. There are proposals for numerous changes to this standard both from Germany and the UK.

EN 12111 – Roadheaders. There is a proposed amendment to this standard from Austria relating to earth bonding on machine components.

Further details will be given in the June Newsletter.

## **NITROGEN MONOXIDE WORKING GROUP**

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 under the Chairmanship of Paul Hoyland and consisting of representatives from tunnel constructors, designers, operators, maintainers and occupational health experts held their first meeting on 16 March at the Institution of Civil Engineers.

The purpose of the Working Group is to provide guidance to supplement the duties under the COSHH Regulations and to recommend management and operational guidelines to minimise the occupational health risk of exposure to NO within tunnels.

The Working Group is aiming to agree a short practice note within 12 months, which will be refined and developed into a best practice guide over the following 12 months.

## **TUNNELLING INDUSTRY AWARDS**

Following the success of the Awards at the Underground Construction Conference in October 2005, the Committee has decided that in future the Awards will be awarded bi-annually, to coincide with the Underground Construction Conferences. The next Tunnelling Industry Awards will be in 2007.

## **HAV's BEST PRACTICE GUIDE**

The HAV's Best Practice Guide is in the final editing stage and it is hoped that it will be published on the website in May.

The document which has had a significant contribution from the HSE will provide the industry with a Current Best Practice Guide to the management of HAV's and will be essential reading for all.

## **FIRE PROTECTION ENGINEERING FOR UNDERGROUND STRUCTURES**

The Society is presently jointly organising with the ITA a conference in the UK in October 2006 entitled "Fire Protection Engineering for Underground Works".

## **GEODRILLING 2006**

Mining Communications are the organisers of GeoDrilling, incorporating Trenchless Construction, which is being held at Donnington Park, Derby on 21 – 22<sup>nd</sup> June 2006 which will feature over 100 exhibitors, technical seminars and live demonstrations.

Mining Communications have written to the Society offering free visitor tickets to members. From the middle of March the Visitor Tickets will be available from the Mining Communications website [www.minesandmoney.com](http://www.minesandmoney.com) or [www.geodrillingshow.com](http://www.geodrillingshow.com).

## **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](http://www.ita-aites.org)

ITA 2006 World Tunnel Congress, and 32<sup>nd</sup> ITA General Assembly, 22<sup>nd</sup> – 27<sup>th</sup> April 2006, Seoul, Korea, [www.ita2006.com](http://www.ita2006.com)

EUROCK, 9<sup>th</sup> – 12<sup>th</sup> May 2006, Liege, Belgium, [www.eurock06.org](http://www.eurock06.org)

IABSE Copenhagen 2006, 15<sup>th</sup> – 17<sup>th</sup> May 2006, Copenhagen, Denmark. Operation, Maintenance and rehabilitation of large infrastructure projects, bridges and tunnels. [www.iabse2006.dk](http://www.iabse2006.dk)

Risk Reduction and Safety in Tunnelling, 17<sup>th</sup> – 18<sup>th</sup> May 2006, Turin, Italy. [www.tmi-intelligence.com](http://www.tmi-intelligence.com)

NAT 2006, 10<sup>th</sup> – 15<sup>th</sup> June 2006, Chicago, USA. [www.auca.org](http://www.auca.org)