

# British Tunnelling Society

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## NEWSLETTER

### October 2000

#### INTRODUCTION

##### Ramsgate Tunnel

The Ramsgate Royal Harbour access road was officially opened by the Chairman of Kent County Council on Friday 30<sup>th</sup> June 2000. Brenda Trench was joined by the children from the nearby Chilton Primary School for the ceremonial tape cutting. The school had been involved at the ceremony to mark the start of tunnelling in September 1998 and at the breakthrough in June last year.



Photo Chris Davey

The 2.2km long twin lane approach road to the harbour, constructed at a cost of £30 million, includes 850m of bored tunnel. The tunnel was constructed using the prevault method for the first time in the UK. The 200mm wide slots, 5 metres long were cut around the periphery of the arch of the tunnel and then filled with shotcrete. The adjacent prevaults overlapped and the chalk was excavated within the vault. The tunnel has a PVC waterproof

membrane and a 300mm thick unreinforced cast in situ lining.



Photo Taylor Woodrow/Perforex

The client for the project was Kent County Council who developed the project under their Engineering Consultancy, who were later taken over by the Babtie Group. The consultant engineers were Brown & Root. The contractor was the Taylor Woodrow/Perforex JV whose designers were the Halcrow Group.

#### CTRL – Section 2

Tenders for the five tunnelling and major civil engineering underground contracts for Section 2 of the CTRL between North Kent and the St Pancras International Terminal have now been received by Union Railways (North) Ltd and Rail Link Engineering. These contracts are planned to be

awarded in early 2001 with construction commencing in mid 2001.

## GOSSIP COLUMN

John Reilly, President of the American Underground Construction Association, has recently rejoined the BTS after a lapse of 25 years and is glad to be back and communicating with members on key issues for tunnelling and underground construction E-mail [John@JohnReillyAssociates.com](mailto:John@JohnReillyAssociates.com)

Congratulations to John Anderson, past Committee member and retired from the H&SE, on his Doctorate. His thesis was 'Identification and Control of risk in Underground Construction'. e-mail [ja@nosredna.demon.co.uk](mailto:ja@nosredna.demon.co.uk)

## ANNUAL GENERAL MEETING

The Annual General Meeting will take place on 19<sup>th</sup> October 2000 at 17.30. Two members of the Committee retire after completing their three years term: Peter Chapman, Hevenden, and Hadyn Davies, Union Railways. The Chairman, and members, thank them for their support and work over the last three years. Peter has furthered the links with the Hong Kong Institute of Engineers and the Hong Kong Tunnelling Society, while Hadyn has led the Tunnelling Lobby Sub-Committee who published the brochure to further the interest of tunnelling amongst our clients, and recently has been setting up of the website and database of recent UK tunnels.

During the last year Peter Murphy, Mott Connell in Hong Kong, handed over the reins as the BTS representative to the ITA to Martin Knights, Brown & Root. Peter represented the BTS for five years at the Annual meetings and we are very pleased that he will continue to represent the BTS on Working Group No. 3 – Contractual Practices in Underground Construction.

After many years Dick Watts (retired from Balfour Beatty) has decided to stand down as the co-opted member for organising the programme for the BTS informal meetings at the ICE. We hope that he will continue to commute from the west country to attend the BTS meetings and the bar afterwards, before rushing to Paddington to catch his train home.

Two presentations will be made at the AGM; the presentation for the Sir Harold Harding Memorial Lecture, to Dr John King, and the James Clark Medal to a tunneller with a long and distinguished career in tunnelling. A report on the AGM will be given in the January 2001 Newsletter.

## SUBSCRIPTIONS

You will read in the Annual Report that the Committee has recommended an increase in the Subscription from January 2001. The subscriptions have not been increased for 4 years and the society's surplus of funds during that period has been solely due to the success of the courses and conferences.

This last year the courses have not been so well attended, the Society has been actively lobbying the clients in the industry and has been working on the new design guide for tunnels. The financial outturn last year was a loss of £7,213. This year the projected loss is £18,000.

In the current year only one course has been held because of a low level of interest, work on the design guide has continued, the Committee has set up a website, is about to start work on a database of UK tunnels and has set up a new training bursary.

The Society has received grants from ICE R&D Fund of £25,000 towards the cost of the design guide and the database, but there will be a substantial loss in the current financial year. Members will note from the Annual Financial Report that 85% of their subscription goes to T&TI and it is the courses and conferences that have built up the present surplus in the funds.

The subscriptions will rise by about 12.5% for members in the UK and overseas, but the Committee has kept student subscriptions both UK and overseas at the same level.

## FUTURE MEETINGS

All meetings at the ICE at 17.30 unless stated below:

### 19<sup>th</sup> October 2000

**AGM, followed by Tunnelling and associated work at Harrods**  
Rob James and Phil Ball (Kvaerner Construction) Ltd

**2<sup>nd</sup> November 2000 at 18.30 Joint Meeting with The Transport Planning Society Underground Space for Transport Interchanges** Peter Jewell, John Scholey, (Brown & Root), Gordon Ripley (YRM Architects) and Dominic Williams (Dominic Williams Associates)

**16<sup>th</sup> November 2000**

**Recent Tunnelling Projects in North America** Lee Abramson  
(Hatch Mott MacDonald)

**6<sup>th</sup> December 2000 Views from the Sites with Wiltshire Association.**

**Portsmouth Tunnel** John Gulliver

**14<sup>th</sup> December 2000 Film Evening**

**18<sup>th</sup> January 2001 Hong Kong West Rail**

**Tunnels** Jayananda Jesudasan

**18<sup>th</sup> January 2001 Views from the Sites with South Eastern Association. North Downs Tunnel** Time, TBA (Miller Civil Engineering Ltd)

**1<sup>st</sup> February 2001 Views from the Sites with Midlands Association at Birmingham at 6.00pm. Deep Tunnelling at Derby** Steve Feeley  
(Haswell)

**22<sup>nd</sup> February 2001 TBM – Q System** Nick Barton  
(Nick Barton Associates)

**7<sup>th</sup> March 2001 Half day meeting on Lessons to be learnt from Recent Shotcrete Tunnelling in London Clay**  
Speakers to be announced.

**22<sup>nd</sup> March 2001 Debate**  
details to be announced.

## **TUNNELS & TUNNELLING INTERNATIONAL**

Overseas members; thank you for e-mailing to the Secretary when you received your copy of T&TI. Generally overseas members receive their copy 10 to 14 days after those in the UK, which without additional airmail costs is a reasonable time. Surprisingly, New Zealand received copies a few days earlier than Denmark!

## **HARDING PRIZE**

The Rules for the Harding Prize Competition were circulated recently with T&TI. Copies of the Rules may be requested from the Secretary.

The Competition is open to anyone aged 33 or under at the end of 2000. Entrants are required to submit an original paper relating to any aspect of Tunnelling which may be considered of interest to those associated with the industry. The authors of the three or four selected papers will be invited to make oral presentations, of 15 to 20 minutes, at the BTS

Harding Prize Competition meeting on 19<sup>th</sup> April 2001.

The closing date for submission of completed papers to the Secretary is **28<sup>th</sup> February 2001**.

The paper should be between 3000 and 5000 words with suitable illustrations and tables etc. Permission from the Entrant's employer and other interested parties should accompany the submission.

The Harding Prize Sub-Committee will assess the written papers and the presentations under the following headings:

Understanding and validity of assumptions.  
Content and value to the tunnelling profession.  
Presentation and illustrations.  
Quality and elegance of writing, and  
Clarity and fluency of presentation.

Authors of those papers adjudged to an approved standard will receive a cheque for £50 and those who are invited to give an oral presentation, £100. The Winner will receive a cheque for £500, two tickets to the Annual Dinner, at which he will be presented with the cheque and certificate, and a copy Sir Harold Harding's book 'Tunnelling history and my involvement'. All authors of papers to the approved standard will also receive a year's free membership of the Society which includes the subscription to T&TI.

**Senior members of the Tunnelling fraternity, please encourage and support your younger members to submit papers. They will all be winners.**

## **TRAINING and COURSES**

Plans are in hand to run a five day, two module, comprehensive tunnelling course in June 2001. This will cover a broad range of tunnel design and construction topics, and will also incorporate many of the topics addressed in the health and safety courses run in the past several years. With increased tunnelling activity expected next year, it is hoped that this course will appeal to a wide range of tunnelling and other construction professionals, and attract a healthy level of attendance.

You are asked to look out for a questionnaire to be sent out to all members. This will have aim of establishing the current picture of training and education within the tunnelling industry at all levels of operation, engineering and management, as well as seeking information from members as to what should be provided in the future.

## **HEALTH & SAFETY EXECUTIVE**

The HSE is undertaking a trial of routine oxygen decompression at the National Hyperbaric Centre in Aberdeen. The facility, which up to now has been used only for diving-related trials, has a saturation living complex and a 11m long by 4m diameter working chamber. Maximum working pressure is around 60 bar, but for the HSE's purposes the working chamber will only be pressurised to around 2 bar and the saturation complex will not be used.

The project involves 2 groups of 6 miners, each group working 8 shifts in the working chamber, and following the decompressions, some of which will be on air and some on oxygen, the miners will be monitored for bubbles in the blood stream.

HSE has been greatly helped by Tony Cookson of Bysak's Scottish office, in setting up the trial. The results will be made available to the industry in due course.

## **INTERNATIONAL TUNNELLING ASSOCIATION**

Don't forget to visit the ITA website.  
<http://www.ita-aites.org>

### **Working Groups**

We congratulate Donald Lamont on being appointed Animateur of the Working Group 5, Health & Safety in Works

We apologise to Chris Marshall, Vice Animateur of Working Group 11, Immersed and Floating Tunnels, for an error in the July Newsletter in the name of his firm. Of course it should have been The Symonds Group.

## **THIRTY YEARS OF THE SOCIETY**

The Committee has set up a Sub-Committee, with Peter South, as Chairman, together with Myles O'Reilly, and Rodney Craig to publish a book of a 'Celebration of Thirty Years of the British Tunnelling Society'. This will be published by T&TI in Summer

2001. Many well known members of the industry are being asked to write sections of the book and all Corporate Members and others organisations with in the industry are being asked to support the book through funded contributions.

All members will receive a free copy of the book and copies will be sent to all present and potential clients to the industry. It is expected that the book will become a future reference book for UK tunnelling in the recent past and it is an opportunity for companies to present their achievements and expertise. Please support this celebration by contributing to the book. If you wish further details please contact the BTS secretary.

## **LOBBY GROUP**

The Lobby Group have now completed negotiations with the specialist website company and the BTS website 'britishtunnelling.org' will be available for members to access from the beginning of October. In future it is the intention of the Lobby Group to add information to our website and to update it regularly in order that this will become the main information medium for the Society.

In addition to producing the website the webmaster has been asked to produce the framework for a tunnel database which can be accessed via the website. Initial negotiations have been held to employ one of the members to collate and input data onto the website for UK tunnel projects completed over the past 15years.

'Tunnels and Tunnelling' are already setting up a tunnel database which will contain the salient details of every article on tunnel projects ever published in T & T I. This represents a substantial amount of information and is intended that it will be accessed by the use of a series of 'drop down boxes' and keywords.

Although the objectives of the T & T database are different in many ways to the proposed BTS database there is nevertheless similarities and it is the intention of the Lobby Group to investigate a possible link between the two databases.