

British Tunnelling Society

at The Institution of Civil Engineers

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INTRODUCTION - CTRL

Six tunnel boring machines are now driving tunnels for Section 2 of the CTRL and the seventh TBM will start driving in the next two months. At the beginning of December 6.2% of the overall length of some 38.9km of tunnel had been completed.

The Hochtief/Murphy JV's first Herrenknecht machine driving westwards from Swanscombe under the River Thames in chalk had completed 1350m and was more than half way through its drive. The TBM completed the first 1km of drive in mid November. (photograph by QA Photos Ltd by courtesy of Rail Link Engineering)

The Nuttall/Wayss & Freytag/Kier JV's two Lovat TBMs have started driving westwards from Ripple Lane. The first TBM had completed some 200m and the second TBM was a few rings into the drive.

The Costain/Skanska/Bachy Soletanche JV's first Wirth TBM had just started its drive eastwards from the Stratford Box. The second TBM will start in the next two months.

The Nishimatsu/Cementation/Skanska JV's two Kawasaki TBMs were well established in their drives westwards from the Stratford Box. The first TBM had completed some 750m, and on the day that the Newsletter went to press had reach 1km, and the second some 100m.



First Thames crossing tunnel



Collecting the Award

British Construction Awards

In October Contract 430, the 14.4km long section of the CTRL which included 1.1km of cut and cover

Tunnels, was awarded the British Construction Industry Major Project Award. The judges described the contract as 'one of the really outstanding projects' with a 'Seamless Team'. The contract was project managed, on behalf of Union Railways South, by Rail Link Engineering, Bechtel, Ove Arup & Partners, Halcrow Group and Systra, with Skanska (Kavaerner) as the contractor. (Photograph by courtesy of Rail Link Engineering)

The International Award was presented to the British led team on the Boston Central Artery jacked tunnels. The triple bore jacked tunnel for a highway under the railway was ten times the size of any jacked tunnel previously constructed in the world. The project was designed by Mott MacDonald.

National Grid – London Connection

The final drive on the 'London Connection', the 20km long cable tunnel for National Grid, has been completed by the Tunnelling Division of J. Murphy & Sons Ltd. The breakthrough by a Lovat TBM took place in late August 2002 after a 8km long drive. Two other Lovat TBMs broke through in June and July 2002, after each machine had completed 6km long drives.



James O'Callaghan Director, on the left, and Eamonn Murphy Deputy Chariman, on the right, of Murphys with Jim Street, the National Grid Project Manager

The completed 3m diameter tunnel between Elstree and St John's Wood will carry 400kV cables. The installation and the commissioning of the cables will begin in mid 2003 and will be completed in early 2005.

Tunnelling on the £43m tunnel contract was started in September 2001 and the 20km of tunnel was completed in one year, a tremendous achievement.

BTS SECRETARY

On 27th November, Gavin Bowyer took over as the British Tunnelling Society Secretary/Co-ordinator at the Institution of Civil Engineers. Gavin who is a geologist, a Fellow of the Institute of Materials, Minerals and Mining, previously worked for some thirty years in the mining industry. (The IMMM was recently formed when the Institution of Mining and Metallurgy, IMM, merged with the Institute of Materials). Gavin has served on several IMM committees and has been a member of the Institution's Council.

Gavin is looking forward to transferring his experience and building on it to serve the BTS at the ICE. The appointment of a professional as the new secretary is welcomed and the Committee look forward to working closely with Gavin.

GOSSIP

It has been known for some weeks that the consultant Haswell has been up for sale by Severn Trent Plc. There was no secret that the potential buyer was Carl Bro, of Denmark. It is understood that the negotiations with Carl Bro have broken down and that Haswell will now be looking forward to growing its business.

Any interesting pieces to rodneycraig@compuserve.com please.

FUTURE MEETINGS

All meetings start at the Institution at 17.30 unless stated. 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.

- 23rd January 2003** **Norwegian Road Tunnels, Planning, design and construction**
- 20th February 2003** **LUL Kings Cross and St Pancras Underground Station redevelopment**
- 20th March 2003** **Joint meeting with Pipe Jacking Association of Pipe Jacking Research**
- 7th April 2003** **The Harding Prize Competition** See below.

HARDING PRIZE COMPETITION - 2003

The Harding Prize Competition – 2003 is open to all aged 33 or under at the end of 2002. Entrants must submit an original paper relating to any aspect of tunnelling which they consider of interest to those in the tunnelling industry. The papers will be reviewed by the BTS Awards Sub-committee and authors of selected papers will be invited to make an oral presentation to the April 2003 BTS meeting.

Copies of the rules for authors have been circulated, but copies may be obtained from the BTS Secretary. The October 2002 Newsletter gave details of the excellent prizes, and details are on the website.

The closing date for the submission of papers is 28th February 2003 so there is just over a month to write the papers. All senior members of the industry are asked to support and encourage their younger staff to write a paper for the Harding Prize.

ANNUAL DINNER

The British Tunnelling Awards Dinner will be held once again at the Brewery in Chiswell Street in the City. The date is 9th May 2003 at 7pm for 7.30pm ending at 1am. After the Dinner the Second Annual Tunnel Industry Awards will be presented.

Details of the event (menus, speaker, ticket price, etc) have still to be finalised, but the application forms will be circulated in February.

TUNNELLING INDUSTRY AWARDS

Following the successful launch of the first Tunnelling Industry Awards last year, the British Tunnelling Society and Tunnels & Tunnelling International are now planning for the second event in 2003.

Entry submissions for all six award categories are now being invited from the tunnelling industry worldwide.

The six categories of award are:

- Major Project of the Year Award (over £5m)
- Minor Project of the Year Award (up to £5m)
- Achievement through Innovation Award
- Excellence in Tunnel Design Award
- Safety Award
- Machinery/Materials Award

To register your interest in one or more of the awards, e-mail yfrost@wilmington.co.uk and request an awards entry form. This will give you full details about each of the awards as well as the criteria for entry.

Alternatively ring Yolanda Frost on 44 (0)1732 470014. You can also go to www.tunnelsonline.info and view the details online.

ALL ENTRIES MUST BE RECEIVED NO LATER THAN 28th MARCH 2003

A panel of judges led by Andre Assis from Brazil, the President of the International Tunnelling Association, will assess the entries and presentations to the winners and finalists will take place in London at the BTS Annual Dinner on 9th May 2003. Full details of the winning submissions will also be published in a special 'Awards Supplement' distributed with the May issue of T&TI affording winners extensive publicity.

More information and details of last year's event can be found on www.tunnelsonline.info

TUNNEL LOBBY GROUP

The Associate Parliamentary Group for Underground Space was formally constituted on 29th October 2002. The Chariman is Lawrie Quinn MP. It seems to have acquired the acronym of APGUS already!

Our evening Reception celebrated the launch of the Group. Many members of the BTS Committee were present together with guests drawn from Corporate Sponsors, representatives of Client and Government organisations and Members of the House of Commons and the House of Lords.

There were small exhibits from CTRL, Crossrail, AMEC, Trevi-Parks and Lovat. Corporate Sponsors of the event were AMEC, Balfour Beatty, Continental Conveyor, Faber Maunsell, Lovat, Morgan Est, Mott MacDonald, J. Murphy & Sons Ltd and Edmund Nuttall.

Spin-offs from the reception include the interest of Lord Jenkin. He views the new Parliamentary Group as a forum for reinforcing his campaign to stop digging up the streets. He has invited Peter South to collaborate in his campaign.

Helen Nattrass has been meeting MPs to discuss the programme of events for the Parliamentary Group. Activities planned so far are a visit to CTRL in February/March 2003, and a presentation on a topical subject in May 2003. Favourite topical themes of the moment seem to be 'Tunnel Fires' and 'Not digging up the streets'. It is anticipated that APGUS will be inviting membership from organisations, companies, academic institutions and individuals in the same way as other parliamentary groups. More details of events and membership will be given in the near future. For further information on APGUS, contact Helen Nattrass h.nattrass@sir-robert-mcalpine.com or on 07803 612556.

HEALTH AND SAFETY

The Dangerous Substances and Explosive Atmospheres Regulations are expected to come into force on 9th December 2002. They will apply to any tunnel in which methane or other potential explosive gas may be present. Further information can be found at the HSE website at www.hse.gov.uk/spd/conent/dsear.htm

The second of the four CEN standards on tunnelling machinery safety BS EN 12110:2002 – 'Tunnel Machines Airlocks – Safety Requirements' has at last been published in the UK. The document sets out requirements for the design and manufacture of airlocks and pressure bulkheads. It includes requirements for testing and specifies the equipment to be provided in the locks. It does not

apply to the operation of the locks once entry into compressed air is undertaken.

INTERNATIONAL TUNNELLING ASSOCIATION

The International Tunnelling Association World Tunnelling Congress 2003 is being held in Amsterdam from 12th to 17th April 2003 and is being organised by the Netherlands Association. The conference theme is 'Reclaiming the Underground Space'.

These dates are during the week leading up to Easter, so those wishing to attend should book their flights and accommodation as soon as possible.

Details of the conference are contained on the conference website www.wtc.2003.nl, or contact Martin Knights, UK ITA Representative, at martin.knights@halliburton.com

All the ITA Working Groups will be meeting during the conference. Details of the Working Groups were given in the April 2002 Newsletter. Anyone wishing to participate in the Working Groups should contact Martin Knights.

UNDERGROUND CONSTRUCTION 2003

The BTS will be co-sponsoring with the IMMM the forthcoming Underground Construction 2003 Conference, to be held at the ExCel in London Docklands, on 24th and 25th September 2003.

Building on the success of the 2001 conference and exhibition, this will be a mecca for tunnelling people to get together and be informed on state of the art practices and equipment.

The first bulletin and call for papers was issued in September 2002. The dates for abstracts was 30th November 2002, but if you send one in immediately, you may be lucky.

CONFERENCES

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