



BRITISH TUNNELLING SOCIETY

Course on Tunnel Design & Construction



30 June to 4 July 2003
at Royal Holloway
University of London
Egham
Surrey

www.britishtunnelling.org

Course on Tunnel Design & Construction



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Monday 30 June 2003

MODULE 1, TUNNEL DESIGN - DAY 1

- 0900 – 0930 *Coffee and Registration*
 0930 – 0945 Introduction to Module 1
 0945 – 1045 Tunnel Scheme Requirements –
 The Client's Perspective
Ian Fugeman BAA
 1045 – 1100 Delegates' Questions
 1100 – 1145 Ground Investigation Techniques
Bob Allen London Bridge Associates
 1145 – 1230 Geotechnical Interpretation
 for Tunnel Schemes
Peter Jewell KBR
 1230 – 1245 Delegates' Questions
 1245 – 1345 *Lunch*
 1345 – 1445 Rock Mass and Other Geotechnical
 Classifications
Jim Beveridge Mott MacDonald
 1445 – 1500 Delegates' Questions
 1500 – 1530 *Tea*
 1530 – 1630 Soft Ground Temporary Works
 Techniques and Design
Colin Eddie Morgan=est
 1630 – 1730 The Formation of Shafts,
 Openings and Portals
Colin Eddie Morgan=est
 1730 – 1745 Delegates' Questions

Tuesday 1 July 2003

MODULE 1, TUNNEL DESIGN – DAY 2

- 0830 – 0930 Tunnel Lining Design – Hard Ground
Nigel Legge Mott MacDonald
 0930 – 1030 Tunnel Lining Design – Sprayed Concrete
Johannes Jaeger Beton und Monierbau
 1030 – 1045 Delegates' Questions
 1045 – 1115 *Coffee*
 1115 – 1230 Tunnel Lining Design – Soft Ground
Tony Deane Mott MacDonald
 1230 – 1245 Delegates' Questions
 1245 – 1345 *Lunch*
 1345 – 1445 Tunnel Ventilation and
 Life Safety Engineering
Keith Meeks Maunsell
 1445 – 1500 Delegates' Questions
 1500 – 1530 *Tea*
 1530 – 1630 Tunnel Induced Ground Movements and
 Control Instrumentation
Steve Macklin Arup
 1630 – 1730 Tunnel Lining Types and Where Used
Chris Smith CJS Associates
 1730 – 1745 Delegates' Questions

Wednesday 2 July 2003

MODULE 1 - DAY 3, MODULE 2 – DAY 1
 HEALTH & SAFETY ASPECTS

- 0900 – 0915 Introduction to Module 2
 and Final Day of Module 1
 0915 – 1015 Health & Safety – A Strategic Overview
John Anderson Consultant
 1015 – 1100 The Management Approach to Safety
Peter South Amec
 1100 – 1115 Delegates' Questions
 1115 – 1145 *Coffee*
 1145 – 1245 Hazard Appreciation and
 Health & Safety Legislation
Donald Lamont HSE
 1245 – 1300 Delegates' Questions
 1300 – 1400 *Lunch*
 1400 – 1445 Design for Safety in
 Underground Construction
John Scholley KBR
 1445 – 1530 Risk Assessments and
 Method Statements
Barry Couchman Balfour Beatty
 1530 – 1730 *Tea and Team Task*
 1730 Completion of Module 1

Thursday 3 July 2003

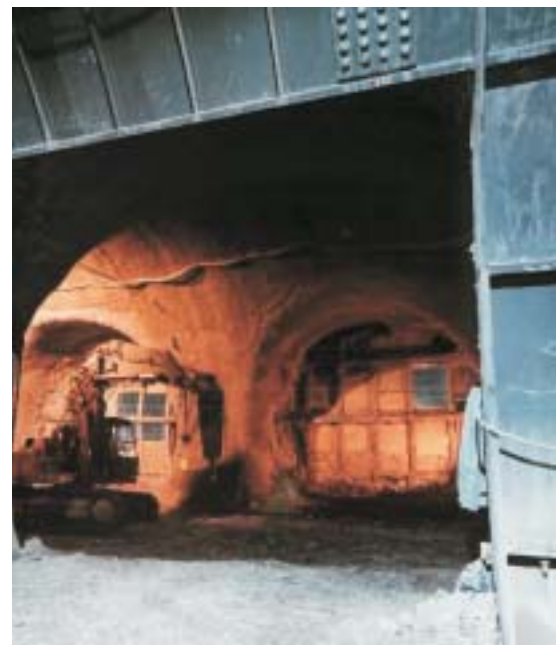
MODULE 2, TUNNEL CONSTRUCTION – DAY 2

- 0830 – 0945 Occupational Health in
 Tunnelling Operations
Dr. Andrew Colvin
 Institute of Occupational Medicine
 0945 – 1045 Fire and Emergency
 Response Management
Speaker to be confirmed
 1045 – 1100 Delegates' Questions
 1100 – 1130 *Coffee*
 1130 - 1230 Soil Conditioning
Ian Morrison Morrison Mud Co.
 1230 – 1245 Delegates' Questions
 1245 - 1345 *Lunch*
 1345 – 1445 Environmental Aspects of Tunnelling
David Hiller CTRL
 1445 – 1500 Delegates' Questions
 1500 – 1530 *Tea*
 1530 – 1630 Use of Ground Treatment
Abed Haimoni Amec
 1630 – 1730 Management of HAVS in Handwork
Jack Knight Haswell
 1730 - 1745 Delegates' Questions

Friday 4 July 2003

MODULE 2, TUNNEL CONSTRUCTION – DAY 3

- 0830 - 0930 Logistics
Frank Ellis London Bridge Associates
 0930 - 1030 Excavation of Hard Ground Using Machines
Brian Cotton Wirth Tunnelling
 1030 – 1045 Delegates' Questions
 1045 – 1115 *Coffee*
 1115 – 1230 Hard Ground Temporary
 Works Techniques and Design
Dave Hindle
 London Mining and Mineral Consultants Ltd
 1230 – 1245 Delegates' Questions
 1245 – 1345 *Lunch*
 1345 – 1430 Surveying for Tunnelling
Harry Glennie London Bridge Associates
 1430 – 1515 Soft Ground Tunnel Boring Machines
David Court Nuttall
 1515 – 1530 Delegates' Questions
 1530 – 1600 *Tea*
 1600 – 1715 Forms of Contract
Alan Finch Mott Macdonald
 1715 – 1730 Delegates' Questions
 1730 Completion of Module 2



30 June to 4 July 2003

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University of London
Egham
Surrey



THE TUNNEL DESIGN & CONSTRUCTION COURSE

This year the British Tunnelling Society will be holding one course of five days total duration. Entitled "Tunnel Design & Construction" the course will provide a foundation in the many aspects of tunnelling, from client requirements, through planning and ground investigation, design, the letting of contracts and practical aspects of the construction process. Experienced engineers and practitioners from the tunnelling and associated industries will give the benefit of their experience to delegates through lectures and course study materials on their subjects.

The course will also incorporate a number of Health & Safety presentations based on much of the content of the Society's Health & Safety course, which will not be run as a separate course this year. Delegates will be offered the opportunity to attend for the whole five days, or alternatively to attend Module 1 - Design, from Monday to Wednesday, or Module 2 - Construction, from Wednesday to Friday. All delegates will be present for the core Health & Safety topics on the Wednesday.

Delegates will be given the opportunity to question lecturers on their subjects, which include:

- Survey, site investigation, geotechnical aspects and its relation to design Tunnel design
- Temporary works and their purpose
- Linings and ground support including NATM
- Mechanised tunnelling
- Tunnel plant and equipment
- Settlement associated with tunnelling and the effect of compensation grouting
- The use of compressed air, ground treatment and grouting
- Contractual and commercial matters including risk
- Safety relating to design and construction
- Legislation

WHO SHOULD ATTEND

The course is designed for those engineers wishing to widen their knowledge of soft and hard ground tunnelling in construction and design. The course is designed so that days 1, 2 and 3 are suitable for site engineers wishing to broaden their knowledge with some design input while days 3, 4 and 5 are directed at broadening the knowledge of engineers whose main experience is in detailed design. Delegates are offered Module 1 (comprising days 1-3), Module 2 (comprising days 3-5) or Modules 1 and 2 (encompassing the whole week) for the more adventurous.

ADMINISTRATION DETAILS

VENUE

The course is residential or non-residential and will be held at Royal Holloway University of London, Egham, Surrey. Residential delegates will be accommodated in en-suite rooms.

REGISTRATION FEES

Module 1 30 June – 2 July 2003

Non-residential delegates

The fee will be **£415 + VAT @ 17.5% = £487.63** to include coffees, lunches and teas on all days, the Course Dinner on 1 July and Course Notes.

Residential delegates

The fee will be **£510 + VAT @ 17.5% = £599.25** to include coffees, lunches and teas on all days, the Course Dinner on 1 July, Course Notes, dinner on 29 & 30 June and bed and breakfast for the nights of 29 June to 1 July in en-suite accommodation.

Module 2 2 - 4 July 2003

Non-residential delegates

The fee will be **£415 + VAT @ 17.5% = £487.63** to include coffees, lunches and teas on all days, the Course Dinner on 3 July and Course Notes.

Residential delegates

The fee will be **£510 + VAT @ 17.5% = £599.25** to include coffees, lunches and teas on all days, the Course Dinner on 3 July, Course Notes, dinner on 1 & 2 July and bed and breakfast for the nights of 1 to 3 July in en-suite accommodation.

Modules 1 & 2 30 June – 4 July 2003

Non-residential delegates

The fee will be **£635 + VAT @ 17.5% = £746.13** to include coffees, lunches and teas on all days, Course Dinners on 1 & 3 July and Course Notes.

Residential delegates

The fee will be **£810 + VAT @ 17.5% = £951.75** to include coffees, lunches and teas on all days, the Course Dinners on 1 & 3 July, Course Notes, dinner on 29, 30 June & 2 July and bed and breakfast for the nights of 29 June to 3 July in en-suite accommodation.

BOOKING AND ENQUIRIES

All course enquiries should be made to Hannah Wilson. Booking forms should be returned no later than 9 June 2003, together with a cheque, credit card details or an invoice request to:

Postal ICE Conferences,
Institution of Civil Engineers,
One Great George Street, London SW1P 3AA, UK

Fax +44 (0)20 7233 1743

Telephone +44 (0)20 7665 2313

E-mail hannah.wilson@ice.org.uk

NOTES

- We are unable to accept provisional bookings.
- Registered delegates will receive joining instructions approximately two weeks before the course. If you have not received an acknowledgement one week before the event, please call +44 (0)20 7665 2313 to confirm your booking form has been received.
- Attendance for part of a module is not possible.

CANCELLATIONS AND REFUNDS

Cancellations will incur an administration charge of £100 if written notification is received by 9 June 2003. No refunds will be given after this date, but substitute delegates will be welcome.

CONTINUING PROFESSIONAL DEVELOPMENT

All ICE members are required to undertake a minimum of 5 days of CPD every year. You may wish to include the subject of this event in your Development Action Plan as part of your CPD and you may record the outcome in your Personal Development Record which is found in the ICE 2008.

