



THE BRITISH TUNNELLING SOCIETY

**Annual Report and Accounts for
the Year Ended 31st December 2008**

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BRITISH TUNNELLING SOCIETY ANNUAL REPORT 2008

COMMITTEE:

Chairman:

Paul Hoyland
Balfour Beatty

Vice Chairman

Robert Ibell
London Bridge Associates

Immediate Past Chairman

Bill Grose
Arup

Elected Members:

Colin Eddie	Morgan Est.	Retires 2009
Damian McGirr	Donaldson Associates	Retires 2009
Chris Dulake	Crossrail Ltd	Retires 2010
Nathan Wilmot	Arup	Retires 2010
Lawrence Halls	Tam International Consultants Ltd	Retires 2010
Andrew Hindmarch	Mott MacDonald	Retires 2011
Ken Spiby	London Bridge Associates	Retires 2011
Steve Parker	Bechtel Ltd	Retires 2011
Matt Sykes	Arup	Retires 2011

Co-opted Members:

Myles O'Reilly	Consultant	T&T
Helen Natrass	Sir Robert McAlpine	Lobby Group
Donald Lamont	Health and Safety Executive	Safety
John Scholey	Kellogg Brown & Root	Annual Dinner
David Court	BAM Nuttall	Conferences
David Donaldson	Donaldson Associates	Sustainability
Chris Bambridge	Mott MacDonald	Tunnelling Course
Michael Francis	Parsons Brinkerhoff	Technical
Kate Cooksey	Morgan Est.	Young Persons

Members invited to report to the Committee:

Martin Knights	Jacob Babbie	ITA
Rodney Craig	Rodney Craig Associates	Newsletter (retired)
Shani Wallis	Freelance Tunnelling Journalist	International
Alan Flowerday	Pipejacking Association	

Institutional Representatives:

David Donaldson	Institution of Civil Engineers
Alan Bozeat	Institute of Materials, Minerals and Mining

The British Tunnelling Society was formed as an unincorporated association by the Constitution adopted 23 September 1971 as amended 21 January 1993 and 16 May 2002. The Society became a registered charity in March 1993. The Charity number is 1017887.

LEGAL AND ADMINISTRATIVE INFORMATION

The principal and registered office of the charity is:

One Great George Street
Westminster
London SW1P 3AA

Names and addresses of other relevant organisations or persons

Bankers	National Westminster Bank Charing Cross Branch PO Box 113, Cavell House 2a Charing Cross Road London WC2H 0NN	CCLA Investment Management Limited St. Alphage House 2 Fore Street London EC2Y 5AQ
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Solicitors: Solicitors are appointed from time to time as the need arises.

Examiners: Grant Thornton
Grant Thornton House
Melton Street
Euston Square
London NW1 2EP

Investment Advisers: Investment advisers are appointed from time to time as the need arises.

CHAIRMAN'S REPORT 2008

The last year has again been very busy for the Society and its Committee.

The 2008 AGM saw the award of the James Clarke Medal to the late Jack Knight in 2008 with the award being collected by his widow. Jack was an active member of the BTS Committee for many years and was Chairman of the Working Group which published the HAV's Best Practice Guide. Jack had also been a member of the UKSTT Council and was Sub-Panel Convenor for tunnels on the Panel for Historical Engineering Works. He is sadly missed.

This was also the year that the society updated its image by adopting a new modern logo and setting up a Young Persons Committee to attract new blood into the industry and the society.

Our industry remains buoyant, having seen the completion of the Kings Cross Northern Ticket Hall Tunnels, the Glendoe Hydro Scheme, and the Docklands Light Railway connection to Woolwich Arsenal. The A3 Hindhead Tunnel, Belfast Sewers Project and Croydon Cable Tunnels have also made good progress during the year.

These are potentially very exciting times for the British tunnelling industry, with the prospect of in excess of £20bn of work planned over the next 10 years including Crossrail, Thames Tideway, London Underground Station Improvements, and smaller but still significant transport, water and cable tunnels. Even with the current economic downturn the majority of these projects are likely to proceed, resulting in investment in engineering skills and creating more jobs, long term value and sustainable future growth.

However this number of major tunnelling projects will also once again contribute to the boom and bust cyclical nature of the tunnelling industry in the UK and could lead to an unsustainable peak of tunnelling activity putting considerable strain on the industry to find both suitably qualified and experienced engineers and a suitably skilled and trained workforce. The BTS and the recently formed TunnelSkills believe that only with the Tunnelling Industry and Clients working together can this problem be solved.

The UK membership has increased slightly to 569 with a smaller increase in overseas membership to 167. It is hoped that this trend of increasing membership can be maintained as more tunnelling work is undertaken in the UK. Our finances remain in good order, with a healthy operating balance which has been maintained over the last year reflecting the success of income from Conferences and the BTS Course.

The mainstay of the Society's activities is the varied programme of discussions and presentations held at the Institution each month. These cover projects of interest, latest developments in tunnelling, and other issues for our industry. We strive to build upon that programme each year, to fulfill our learned society function of knowledge-sharing, and to provide thought leadership in tunnelling. Attendance at the meetings is extremely high, with typical numbers ranging from 100 to 250 members and guests. I am also pleased to report that corporate or individual sponsorship of the bar following the evening meetings has been particularly strong over the past year.

The Tunnel Design and Construction Course was held at Brunel University and was once again very successful. The course is once again being planned for 2009.

Our engagement with ICE continues fruitfully.

Our Health & Safety and Standards sub-committee continues to be busy, with publication of the NO guidance note, work on a review of BS6164, and a watching brief on compressed air working.

Helen Natrass's Tunnelling Lobby took a group of Parliamentarians on site visits to the Croydon cable Tunnels and the A3 Hindhead Scheme as well as arranging a talk on Underground Gas Storage Caverns.

Our lobby group also supports the Associate Parliamentary Engineering Group, and is making great strides in engaging parliamentarians with tunnelling engineers.

The BTS website has undergone significant improvement which has resulted in an increase in the number of visits to the site. Many more improvements are currently being planned.

Tunnels and Tunnelling continues to be delivered to all members monthly, and although there have been some problems with editions being delivered slightly late its high standard of reporting and editorial continues and is watched over by our Advisory Board which meets with T&T four times a year.

The Society continues to publish the BTS Newsletter, for which we are indebted to the hard work of Rodney Craig who has now stepped down from the role and passed over editorship to Andrew Hindmarch. For Rodney's considerable contribution to the society he was made a life member of the society.

Our Sustainability sub-committee has started work, looking at how the industry itself can be more sustainable and how we can put the arguments for tunnels themselves as a sustainable solution for infrastructure. The society will be publishing its sustainability policy during 2009.

Our Annual Dinner 2008 was held once again at the popular Brewery, our Guest of Honour was Thames Water's Steve Walker. The after-dinner speaker was the well known comedian Barry Cryer.

In closing, I would once again like to thank all the members of the committee for their continued support, commitment and hard work. The fact that this Society is so successful, well-respected, well-attended, and sociable is due in no small measure to the tremendous enthusiasm of the committee, who give their time so generously, and the support of their employers.



Paul Hoyland
BTS Chairman

August 2009

Trustees' Report

The Trustees present their report together with the financial statements of the British Tunnelling Society (the 'Society') for the year ended 31 December 2008. The financial statements have been prepared on the accounting policies set out on page 19 of the financial statements and comply with the current statutory requirements, applicable law and the Statement of Recommended Practice "Accounting and Reporting by Charities" issued in April 2005.

Organisational structure

The Trustees of the British Tunnelling Society are the members of its Committee.

The Committee shall consist of elected members, nominated members, co-opted members and ex-officio members.

Nine members of the Committee shall be elected by postal ballot of the members of the Society. The result of a postal ballot shall be announced at the Annual General Meeting. Members so elected to the Committee shall serve for a term of three years and shall then retire from the Committee unless elected Chairman or Vice-Chairman. A retiring member shall be ineligible for re-election to membership of the Committee for a period of one year after retirement.

Two members, one nominated by each of the Institutions of Civil Engineers and Mining and Metallurgy, shall serve for a three-year term of office and then retire from the Committee unless elected Chairman or Vice-Chairman.

The Committee shall elect from amongst its members a Chairman who shall hold office for two years immediately following the Annual General Meeting of the previous Chairman's term of office. Such election shall be held at the last Committee meeting of the previous Chairman's term of office. On expiration of a Chairman's term of office, he may serve on the Committee in an ex officio capacity for a period of two years as immediate past Chairman.

The Committee shall elect from amongst its members a Vice-Chairman who shall hold office for two years immediately following the Annual General Meeting of the previous Vice-Chairman's term of office. Such election shall be held at the last meeting of the Committee of the previous Vice-Chairman's term of office.

The Committee may co-opt a member of the Society to the Committee at any time and for whatever purpose the Committee so decides. A co-opted member to the Committee shall hold office until the following Annual General Meeting.

Any casual vacancy, whether in the offices of Chairman or Vice-Chairman or amongst the elected or nominated members of the Committee, may be filled by the Committee, with the approval of the appropriate Institution in the case of a nominated member.

A person so appointed to fill a casual vacancy shall hold office until the following Annual General Meeting and shall then retire. The casual vacancy shall then be filled either by an election by postal ballot or by a nominated person from an Institution as appropriate.

A term of office in a co-opted capacity or as the result of an appointment to fill a casual vacancy shall not be counted for purposes of eligibility for subsequent re-election to the Committee.

Any individual member of the Society or nominated representative of a corporate subscriber of the Society or a nominated individual from an Institution shall be eligible, except as otherwise provided, for election or appointment or co-option to the Committee.

Objects and policies

The objects of the Society are to advance knowledge in and encourage the art and science of tunnelling by fostering understanding, experience, interest and research therein. Summary of policies adopted to further the objects of the Society are:

- To provide a forum for the discussion of the problems and techniques of tunnelling
- To encourage tunnelling research and development

- To arrange for the publication of papers and collect and disseminate information on tunnelling
- To hold meetings of members, including where appropriate non-members, of the Society and to co-operate with other associations in holding meetings locally, nationally and internationally
- To maintain liaison with similar associations and individuals in other countries and to co-operate and participate in the formation, continuance and furtherance of an international society devoted to the interests of tunnelling and of other international, national or local associations whose objects are allied to those of the Society
- To offer specialist assistance and advice to HM Government, statutory authorities, boards, institutions and similar bodies and to make representations to such bodies
- To do all such other things as are incidental or conducive to the attainment of any or all of the above aims.

ADMINISTRATION OF THE SOCIETY

The business affairs of the society are administered by a committee consisting of nine elected members, several co-opted and ex officio members together with a representative from the Institution of Civil Engineers, the Institute of Materials, Minerals and Mining and the Pipejacking Association.

Vacancies arise in the Committee, due to retirement of elected members and due to Mr G Bateman standing down from the committee in 2007, as previously advised to the BTS membership. There were a very pleasing 6 nominations, four of which duly elected to serve from the 2008 AGM for 3 years. They are:

- Andrew Hindmarch
- Ken Spiby
- Steve Parker
- Matt Sykes

In addition the Committee has requested Chris Bambridge and Michael Francis to continue as co-opted members of the Committee, which they have agreed to do.

The British Tunnelling Society is one of the largest and most active of the Associated Societies of the Institution of Civil Engineers. The Committee deals with its substantial workload by allocating it to subcommittees as follows:

1. PAPERS AND MEETINGS

Damian McGirr (Chair), Steve Parker, Nathan Wilmot, Lawrence Halls, Shani Wallis, Alan Bozeat.

This year a series of interesting papers on a variety of UK and international tunnelling topics have been presented, highlighting the latest developments in tunnelling and the issues that are affecting our industry.

Offers of suitable presentations are always welcome and the society is grateful for the support of the speakers, especially the international speakers who travel to the UK to give their presentations.

Papers presented since the last AGM were:

Date	Title and Description	Speakers	Company
17-Jan-08	Lower Lea Valley Cable Tunnels Undergrounding of National Grid and EDF Energy overhead lines to facilitate development in Stratford	Michael Francis Alan Winter Kevin McManus	PB Arup Murphy
21-Feb-08	Bristol City Centre Flood Alleviation Phase II Planning for 4 m diameter 800m long tunnel constructed by drill and blast	Richard Soloman Damian McGirr Mark Thomas	Wessex Engineering and Construction Services Donaldson Associates Limited Wessex Engineering and Construction Services
20-Mar-08	The Bosphorus Crossing Project - Istanbul, Turkey An overview of the project with particular emphasis on the Immersed Tube Tunnel, TBM tunnels and the NATM tunnels.	Daniel Horgan Hideki Sakaeda Douglas Madsen	Parsons Brinckerhoff Pacific Consultants International Parsons Brinckerhoff
17-Apr-08	Harding Lecture Risk Management	Arnold Dix	Queensland University ITIG

Date	Title and Description	Speakers	Company
15-May-08	Arrowhead Tunnels Rock tunnelling for water transfer tunnels in challenging conditions with high water inflows	Brian Fulcher Mike Bell	J F Shea Hatch Mott MacDonald
19-Jun-08	Tunnel Operations Fire Life Safety	John Celentano Les Fielding Tim Healey	Mouchel LBA Capita Symonds
18-Sep-08	Kings Cross Station Complex underground network of caverns, tunnels and inclined shafts below a busy railway station.	Martin Brady Brian Coles Colin M Eddie Andy Sindle	Metronet / Balfour Beatty Management Arup Morgan BeMo JV Morgan BeMo JV
16-Oct-08	Dubai Metro Tunnels Design and construction of the red and green lines in challenging ground conditions.	Dr. Abdusamie Junichiro Nakayama Paul Groves	RTA JTMJV Atkins
12-Nov-08	Second Avenue Subway Project Geotechnical Design & Construction Challenges	Peter Chamley	DMJM Harris-Arup JV (New York)
11-Dec-08	Debate Tunnelling contracts are best implemented based on a Detailed Design procured by the client before tendering the construction contract	David Fawcett David Hobson David Gutteridge Sir Alan Muir Wood	Consultant Jacobs Mott Mac Donald Consultant

The February meeting was held jointly with MinSouth. The November meeting was jointly held with the BGA.

All meetings were held at One Great George Street except for the paper on Dubai Metro Tunnels which was held at Earls Court following the Tunnelling 2008 Conference.

2009 should see another good array of papers including:

- Canada line Vancouver;
- Briars Lane Mine Stabilisation;
- Disputes in Construction & Tunnelling Contracts: causes, remedies and lessons learnt;
- A3 Hindhead Tunnel;
- Lessons Learnt from the Pinheiros Station Accident in Sao Paulo, Brazil
- Seismic Response of Segmental Tunnel Linings
- Belfast Sewers Project;
- Repair of Channel Tunnel follow fire in 2008;

The Tunnelling 2008 Conference jointly sponsored by BTS and NCE and organised by NCE was held on 16th October 2008 at Earls Court. The conference was highly successful with some 250 delegates attending the maximum that the theatre could hold. The conference focussed on the exciting prospects for forthcoming tunnelling work in the UK and included presentations from Crossrail, Thames Tideway and NGC Cable Tunnels. During the lunch and coffee breaks delegates were able to view exhibitor stands showing some of the latest products available.

The day was completed with the traditional BTS evening meeting which focussed on the Dubai Metro and the whole day was completed by a sponsored drinks reception. Overall feedback from delegates was very positive and the Conference produced a positive financial result for the society. Following the success it is envisaged that a similar conference will be held in 2009.

2. TRAINING, EDUCATION and YOUNG PERSON'S COMMITTEE

Colin Eddie (Chair), Chris Bambridge, Matt Sykes, Andrew Hindmarch, Bob Ibell (co-opted), Kate Cooksey (Chair of the Young Person's Committee)

BTS Training Course

The 2008 training course was well received with positive feedback from the delegates.

The BTS Training course is planned to take place at Brunel University during the week of 15 - 19 June 2009. The course structure will follow that used successfully on previous years with slight variations to keep the course fresh and to pick up on comments from delegates. The course fee for 2009 will be increased slightly to £1,100, up from £985 in 2008. This increase has been required to reflect increased costs from the hosting venue. We are planning to provide a copy of the BTS Tunnel Lining Design Guide to the planned 60 delegates as part of the course learning material.

The course will be advertised on the BTS web site in early March with course booking forms being published in early April.

British Tunnelling Society Young Members Committee (BTSYM)

The British Tunnelling Society Young Members Committee was established during the year and held its Inaugural Meeting on 9th October 2008. A committee of 25 members, from 13 different companies has been formed and split into four sub-groups:

- Management Group
- Promotion Group
- Education Group
- Support Group

Each of the sub-groups are currently working on the development of the following:

- A BTSYM Website – for information about the tunnelling industry for younger engineers and professionals and those in education
- A BTSYM Mailing List – A mailing list of young tunnelling professionals wishing to participate in BTSYM events
- Talks and Site Visits aimed at young tunnelling professionals
- Social and Networking events for young tunnelling professionals
- Educational events, for those in schools and universities, to promote the tunnelling industry as a career.

TunnelSkills *(For member information only, TunnelSkills is a separate entity to the BTS)*

In April 2008 prompted by the BTS, TunnelSkills was formed. TunnelSkills is a specialist Training Forum for the tunnelling industry with the following aims and objectives;

- To organise and co-ordinate training in the tunnelling industry to meet the government target of a trained and competent construction workforce by the end of 2010
- To co-operate and liaise with ConstructionSkills in order to promote the training needs of the tunnelling industry
- To liaise and consult with Clients and other interested parties in order to meet their training needs for particular projects
- To co-operate with local and national training providers, manufacturers and other organisations, such as Crossrail, regarding the provision of facilities for training - leading to the award of N/SVQ's or other nationally recognised competency awards.
- To create and implement a nationally recognised Tunnelling Safety Passport Scheme based on mandatory specialised training and assessment for all the workforce
- To devise a structured modern apprenticeship scheme to meet the needs of the tunnelling industry now and for the future

TunnelSkills now has 17 industry members and is supported by the BTS, PJA, ConstructionSkills and the Health and Safety Executive. ConstructionSkills and the BTS support it financially.

It now employs a Forum Training Officer Brain Earnshaw who works with the industry employers to establish facilities on site for qualifying the workforce as well as driving the initiatives of the forum.

Masters Degree Course – Tunnelling

Efforts continue to encourage UK Universities to host a Masters Degree Course in Tunnelling. The ICE have confirmed that such a course would meet the requirements for accreditation as a further learning degree and are happy to support the proposal. To date, Warwick University have expressed the most interest in running such a course. Other Universities will also be encouraged to follow if the demand cannot be satisfied by a single University.

A questionnaire regarding the appetite and preferred format for such a course was sent to the BTS Corporate members. The feedback from this questionnaire has been processed and discussed with Warwick University. A proposed format for the course is expected by July 2009.

3. AWARDS

Lawrence Halls (Chair), Chris Dulake, Steve Parker

James Clarke Medal

The James Clarke Medal was awarded to the late Jack Knight in 2008 for his dedication and whole hearted devotion to the tunnelling sector.

Jack began his career in 1966 with Ove Arup & Partners in Edinburgh moving to Edmund Nuttall Ltd in 1970 to start a lengthy career in tunnelling. Jack spent many years working with contracting organizations both in the UK and overseas eventually returning to consulting in 1990 when he joined Donaldson Associates. Jack moved to Haswell in 1995 and finally to Scott Wilson in 2005. Jack was an active member of the BTS Committee for many years and was Chairman of the Working Group which published the HAV's Best Practice Guide. Jack had also been a member of the UKSTT Council and was Sub-Panel Convenor for tunnels on the Panel for Historical Engineering Works.

Life Time Membership for services to the BTS.

Rodney Craig was awarded a life time membership for his services and tireless support to the BTS. Rodney served two three year terms on the BTS Committee as well as being co-opted for many years after during which time he was responsible for the BTS News Letter. Rodney was also responsible for the collection of records for BTS website database and was the worthy recipient of the James Clarke Medal in 2004. On presenting the award, David Court remarked that "Rodney has been tireless in his support of the BTS and been an ambassador for British Tunnelling internationally. He is therefore a very worthy recipient of the James Clark Medal".

4. FINANCE AND MEMBERSHIP

Bob Ibell (Chair), Paul Hoyland

Finance

To meet the financial demands on the society's funds, including inflation, the Committee decided to increase the subscriptions. The rises are in the region of 5%.

The rates for 2009 are as follows:

	<i>UK</i>	Overseas
	£	£
Corporate Member Small (Up to 50 Employees)	375.00	450.00
Corporate Member Medium (50 to 500 Employees)	595.00	790.00
Corporate Member Large (Over 500 Employees)	965.00	1345.00
Individual	74.00	115.00
Retired	29.00	36.00
Student	25.00	36.00

The membership fee for 2009 will include for provision of a digital version of Tunnels and Tunnelling.

The new committee will seek to set a budget for the forthcoming year that returns a modest surplus. The increasing level of activity of the Society means that provision will have to be made for additional funds such as for the Young members Committee Activities

Membership: The detail of the current membership is set out below:

	Member Classification	2008	2007	Change
UK	Corporate members	28	30	-2
	Individual members	513	464	+49
	Students & Retired	28	50	-22
	Total	569	544	+25
Overseas	Corporate members	3	2	+1
	Individual members	158	152	+6
	Students & Retired	6	10	-4
	Total	167	164	+3
	Overall Total	736	708	28

We do seem to have managed to reverse the downturn in membership of previous years, which is probably due to the prospect of Crossrail becoming a reality combined with the formation of the Young Members committee. Further details of membership trends are given on in Appendix 1.

5. HEALTH & SAFETY and STANDARDS

Donald Lamont (Chair), Ken Spiby, Lawrence Halls, Helen Natrass.

CEN Standards – the revision of EN 12110 (Airlocks) and EN 12111 (Roadheaders) continue to be under discussion as is the revision and combination of ENs 12336 (Shield machines) and 815 (Hard Rock TBMs). Progress is steady and the texts for ENs 12110 and 12111 are close to being released for CEN enquiry. All UK delegates are members of the BTS. Efforts continue to be made to secure French participation.

BS 6164 – the revision of BS 6164 is now fully under way with the BTS representatives taking a leading role in the process. Despite the current standard being published as recently as 2001, tunnelling technology and techniques have changed surprisingly much since then.

Compressed Air Working Group – CAWG has had its most important and productive year for a long time. CAWG has been the principal consultee for the revision of the HSE guidance on compressed air working, holding two special meetings to formulate its response. The problems of working at pressures above 3.5 bar were discussed. Two research projects, funded by HSE, were considered – the analysis of statutory medical examination records and the results from Doppler monitoring on a compressed air tunnel currently under construction. The digitisation of the Radiographic Atlas first used to classify dysbaric osteonecrosis in the 1960s has been completed however additional material is being sourced for inclusion.

6. TECHNICAL

Technical (Chair) Chris Dulake, Matt Sykes, Chris Bambridge, Michael Francis

The society is currently working on or planning three 3 main documents and guides- Best Practice Guide for Timbering (planning), Best Practise Guide for Monitoring(document drafted, see separate statement) and an update to the Tunnelling Specification.

Best Practice Guide for Timbering. The BTS hold data supplied from various sources and are currently considering how to take the guide forward.

The Tunnelling Specification is being updated. Previous contributions have been collated with an inaugural meeting to co-ordinate the update in early 2009. There is a need for a thorough review of the Sprayed Concrete Lining section; discussions have been ongoing with the Crossrail project. This work stream will be active in 2009 to accelerate the publication as soon as practicable.

7. TUNNELLING LOBBY

Helen Natrass (Chair), Bill Grose, Steve Parker, Alan Bozeat, Colin Eddie

The Lobby Group has continued its efforts over the season. The Rt. Hon. Nick Raynsford MP continues as Chairman of the All Party Parliamentary Group for Underground Space (APGUS), with Helen Natrass facilitating the assistance of the BTS in arranging events.

APGUS has held the following events since the last report was prepared:

- AGM and talk on Underground Gas Storage Caverns
- Site visit to Croydon Cable Tunnels
- Site Visit to Hindhead Tunnels

The site visits were attended by small groups of Parliamentarians who were able to view the works and hear about the projects from Clients, Designers and Contractors. During the visit to Hindhead the visitors were actually able to get to the tunnel face and observe excavation and shotcreting, which impressed them very much.

The AGM and Underground Gas Storage Caverns talk was the only meeting held in the Houses of Parliament over the last season.

The Lobby Group has supported the meetings of the Associate Parliamentary Engineering Group (APEG) and the All Party Parliamentary Group for Earth Sciences ensuring our presence in the wider engineering and scientific lobby. We have gained closer links with the Institution of Civil Engineers Lobbying Staff. We intend to build on the modest success of this season for next year.

8. WEBSITE

Nathan Wilmot (Chair), Chris Bambridge, Ken Spiby, Shani Wallis

The BTS website (www.britishtunnelling.org.uk) received between 28,390 and 43,360 hits per month throughout 2008, resulting in between 1,093 and 1,981 unique visits per month, with more than 50% of visitors returning to the site within that month for additional visits. Almost 19% of visits were through a direct request, with the remainder of referrals through search engines.

The site has been continuously updated during the last 12 months; this has included: maintaining the latest news items on the homepage, updating the meetings programme as this has developed through the year, uploading newsletters as they are issued and updating the membership pages when requested or as information changes.

Specific updates have included incorporating the new BTS logo on the site, updating the committee page to reflect changes to the committee over the last year, updating the sponsorship and awards page to include lists of the recipients of the James Clark Medal and past winners of the Harding Prize, updating the corporate membership page to have a logo against each company and updating the publication page to reflect the current BTS publications.

A new secure site has also been developed by Invicta IT for use by the BTS committee. The Society have been briefed on this and this is currently being developed for roll-out for use in Spring 2009. Potential additions over the next few months include a Q&A page, hyperlinks for all corporate members from their logos to their individual corporate websites where appropriate and a dedicated page for the Young Members Committee.

9. TUNNELS AND TUNNELLING INTERNATIONAL EDITORIAL ADVISORY BOARD

Myles O'Reilly, Chairman, Keith Bowers, David Court, Robert Ibell, Tom King, Roger Margerison, Barry New, Andrew Smith, Ken Spiby, Ivor Thomas and Nathan Wilmot.

All members of the British Tunnelling Society receive the journal Tunnels and Tunnelling International (T&TI) every month. This magazine contains up to the minute news on the tunnelling industry internationally, a wide range of technical articles and reports of the BTS meetings held at the Institution of Civil Engineers, Great George Street, London. It is also used to transmit the Society's notices of meetings and the like to members.

Four meetings of the Advisory Board were held during 2008. At these meetings the contents of the journal were reviewed with the Editorial Staff and Publisher of T&TI and ideas on topics for inclusion in forthcoming issues were discussed. It is very important that the standard of the technical articles in T&TI is high and that the range of topics covered in each issue is sufficiently wide and comprehensive so that there is always something to interest every BTS member. It is important, too, given T&TI's close relationship with the Society that the journal is well regarded worldwide.

The views of BTS members on any issue relating to T&TI are always welcome and some members of the Advisory Board are invariably available to be nobbled in the bar following Society meetings at the Institution. Members are also reminded that articles and news items are always welcome as are letters

to T&TI, particularly on controversial topics. Lively correspondence columns do greatly increase interest in the journal!

10. INTERNATIONAL TUNNELLING ASSOCIATION (ITA)

Donald Lamont, Member Nation Representative, Martin Knights, President of ITA

The 2008 General Assembly of the ITA was held in Agra, India in September in conjunction with the World Tunnel Congress. Martin Knights presided. The Congress turned out to be very successful despite the organisational confusion which characterised the run up to the event. Even the weather was favourable with the monsoon ending on the day before the General Assembly began. Donald Lamont was the UK Member Nation representative. Given the travelling involved, very few BTS members attended this year.

The ExCo continues to implement the 2007 Strategy and we are hoping to announce new Prime Sponsors, member nations, Supporters during 2009. We are particularly focussed on the Working Group actions and following consultation early in the new year we will be announcing further improvements and changes to raise the effectiveness of the output of the various activities and publications of Guidelines .

In November we published the first **ITA Report**. (These ITA reports now replace those that we used to publish in **TUST**). This report is entitled "Guidelines for good occupational health and safety practice in tunnel construction". It is not intended to replace existing national regulations or guidance but to provide guidance on basic good practice where none exists. As such these guidelines could be incorporated into contract documents where appropriate.

ITA-CET under the leadership of Andre Assis is now preparing for a major shift in momentum in education and training. In December his committee met to co ordinate efforts. The group discussed the various University training actions offered by the members (Master Courses in Austin, Lausanne, Leoben, Stuttgart and Torino); the needs of continuing education in the Industry; the experiences of nozzle-man training and the results of the EC project TUNCONSTRUCT. It is expected to officially launch the "ITA-CET Foundation" in the first half of 2009

In January 2009, Olivier Vion starts work at the newly appointed Executive Director of the ITA and its Secretariat. He and Claude Berenguier will work together to transition the Secretariat duties during January and February. Thereafter Claude will co ordinate and ensure the preparations for the 2009 WTC and GA for Budapest in collaboration with the Hungarian member nation. Claude will remain a member of Exco as Secretary General for the appointed period and oversee the running of the Secretariat and be available for ad hoc /specific tasks as required by the ExCo.

11. ANNUAL DINNER

John Scholey (Chair)

On 9th May 2008, the 20th BTS annual dinner was held at The Brewery banqueting centre, attended by 593 members, partners and guests; this was a record attendance. The event supplemented BTS funds by some £2,000. The champagne reception was again sponsored by Continental Conveyor, to whom very many thanks.

The chairman's guests included Thames Water's Steve Walker. The dinner was followed by an address by Chairman Bill Grose and a string of jokes and anecdotes from the well known comedian Barry Cryer, both of which were well received.

A brief live music set by Beatles tribute band 'Rubber Soul' was followed by disco music to end the evening. This is because the Brewery had recently introduced a live music curfew at 11pm. Unless this changes, it is not practicable to continue with live music at this event.

Please note that the 2009 dinner is on 8th May 2009. This is our usual 'slot', i.e. the one following the early May Bank Holiday. See you there!

12. MONITORING GUIDE

Damian McGirr (Chair), Keith Bowers, David Cook, Frank Mimmagh, Bob Allen, David Terry

Progress on the development of the monitoring guide has been reasonable over the past twelve months. Below is a reminder of the scope/objectives of the guide:

1. The document is intended to provide best practice guidance to assist those who have responsibilities which require the use of monitoring systems to manage risks in underground construction. This includes Clients, Project Managers, Designers and Contractors who all have duties at different stages in the life of a project. The guidance may also be relevant to other parties, such as insurers and adjacent infrastructure owners, who have interests in underground works.
2. The scope of the report is principally geotechnical and structural monitoring relevant to underground construction.
3. In general the report will address monitoring of parameters relevant to structural behaviour (such as displacement, stress, strain, temperature and groundwater pressure). The report does not set out to address specifically environmental monitoring (such as contamination, noise and vibration). Nonetheless, it is recognised that many principles of good practice may be common to both types of monitoring.
4. The report aims to include monitoring undertaken for a range of different objectives and on behalf of various stakeholders. Thus it is intended to include monitoring of new underground works (for construction verification and control) and the monitoring of existing infrastructure affected by underground construction (for infrastructure protection). It will also consider the need to integrate monitoring information with works progress data to facilitate interpretation and construction management.
5. The guidance will focus on the principles which must be adopted to ensure that such systems are safe, effective and efficient. The guidance is not intended to be prescriptive in terms of detail design, which it is recognised changes relatively rapidly with advances in technology. Nor is it intended that this guide will specifically address the technology (both hardware and software) of monitoring equipment.

The final draft of the report is now complete and has been issued for peer review and review by the full committee. Publication of the guide should be in late 2009.

13. NEWSLETTER

There were three editions of the newsletter published in 2008, in April, September, which launched the new BTS logo, and December. The next edition is planned for April 2009.

Following the election of new committee members in 2008, Andrew Hindmarch took over the publication of the BTS newsletter.

The newsletter continues to keep members up to date with latest BTS activities including news on liaisons with other professional institutions, upcoming meetings and conferences, health and safety updates, courses and news on members. The newsletter now also includes reports on the activities of the newly established Young Members' Committee and the Parliamentary Lobby Group.

14. SUSTAINABILITY

David Donaldson (Chair), Bill Grose, Matt Sykes, David Court

The Sustainability sub-committee is presently developing a policy statement which, when agreed, will be posted on the Society website.

The Statement will encompass:

- The promotion of tunnelling as a sustainable option
- The use of sustainable methodology and materials in tunnel construction and operation

The sub-committee, whilst still in its infancy, has met with the ICE senior policy manager for sustainability to ensure compatibility with the considerable work already done by the ICE and to benefit from this. The high profile of sustainability in modern construction processes is recognised by the Society and to promote this the sub-committee will be undertaking the following action in 2009/10.

- Consult with client organisation, i.e. TFL, Crossrail, Water companies etc.
- Consult with contractors and manufacturers of tunnelling materials and equipment

- Develop links at government level initially through APGUS to promote tunnelling as a sustainable construction option
- Encourage BTS Young Members Committee to actively develop the sustainability agenda.

15. RELATIONSHIP WITH ICE AND OTHER BODIES

As an Associated Society of the Institution of Civil Engineers, the Society continues actively to pursue this relationship with its joint meetings with other associated societies and its representation on other committees.

The use of the ICE facilities is invaluable to the Society, and is regularly used by the various subcommittee meetings and for general meetings with industry representatives.

The Society's role is to advance knowledge in and encourage the art and science of tunnelling by fostering understanding, experience, interest and research therein, which is not something that can exist in isolation and there are many important links with other engineering disciplines and sciences. Although totally separate from other organisations', the Society seeks to co-operate in areas of common ground with other bodies.

16. RESERVES POLICY

The reserves as of the 31st December 2008 are £108,181; the trustees consider it important to keep unrestricted reserve levels equivalent to a year's subscription income. It is necessary to ensure that there are sufficient funds to meet the needs of current and future activities and as a result, the reserves policy is renewed annually. The activities of the Society are of a long-term nature and require continuity of funding. Reserves can therefore be relied on to act as contingency in the event of income flows being disrupted. Current reserve levels exceed the budgeted target and the trustees will be monitoring the reserves over the forthcoming year to ensure that they remain at an acceptable level

Trustees responsibilities for the financial statements

The trustees are required to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the charity and the incoming resources and application of resources, including the net income or expenditure, of the charity for the year. In preparing those financial statements, the trustees are required to:

- select suitable accounting policies and then apply them consistently
- make judgements and estimates that are reasonable and prudent
- state whether applicable accounting standards and statements of recommended practice have been followed, subject to any material departures disclosed and explained in the financial statements.
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the charity will continue in business.

The trustees are responsible for keeping proper accounting records which disclose with reasonable accuracy at any time the financial position of the charity and which enable them to ensure that the financial statements comply with the Charities Act 1993. They are also responsible for safeguarding the assets of the charity and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities

17. INDEPENDENT EXAMINERS

Carol Rudge, Partner at Grant Thornton UK LLP, having offered herself for reappointment as examiner shall, subject to the approval of the membership, be reappointed for the next financial year

The Trustees' Report on pages 6 – 16 was approved by the Committee and was signed on its behalf by:



Paul Hoyland
Chairman of the Society

August 2009

REPORT OF THE INDEPENDENT EXAMINER TO THE TRUSTEES OF THE BRITISH TUNNELLING SOCIETY

I report on the accounts for the year ended 31 December 2008, which are set out on pages 19 to 24.

This report is made solely to the trustees, as a body, in accordance with the regulations made under Section 44 of the Charities Act 1993, as amended by the Charities Act 2006, (the Act). My work has been undertaken so that I might state to the charity's trustees those matters I am required to state to them in an independent examiner's report and for no other purpose. To the fullest extent permitted by law, I do not accept or assume responsibility to anyone other than the charity and the charity's trustees, as a body, for my work, for this report, or for the opinions I have formed.

RESPECTIVE RESPONSIBILITIES OF TRUSTEES AND EXAMINER

As described on page 16, the charity's trustees are responsible for the preparation of the accounts. The charity's trustees consider that an audit is not required for this year (under section 43(2) of the Act) and that an independent examination is needed.

It is my responsibility to:

- Examine the accounts under section 43 of the Act;
- To follow the procedures laid down the General Directions given by the Charity Commission under section 43(7)(b) of the Act; and
- To state whether particular matters have come to my attention.

BASIS OF INDEPENDENT EXAMINER'S STATEMENT

My examination was carried out in accordance with the General Directions given by the Charity Commission. An examination includes a review of the accounting records kept by the charity and a comparison of the accounts presented with those records. It also includes consideration of any unusual items or disclosures in the accounts, and seeks explanations from you as trustees concerning any such matters. The procedures undertaken do not provide all the evidence that would be required in an audit, and consequently no opinion is given as to whether the accounts represent a "true and fair" view and the report is limited to those matters set out in the statement below.

INDEPENDENT EXAMINER'S STATEMENT

In connection with my examination, no matter has come to my attention:

- i. which gives me reasonable cause to believe that in any material respect, the requirements:
 - to keep accounting records in accordance with section 41 of the Act; and
 - to prepare accounts which accord with the accounting records and to comply with the accounting requirements of the Act;have not been met; or
- ii. to which, in my opinion, attention should be drawn in order to enable a proper understanding of the accounts to be reached.

Carol Rudge FCA

GRANT THORNTON UK LLP
Chartered Accountants
London

Date

ACCOUNTING POLICIES

BASIS OF PREPERATION

The financial statements have been prepared under the historical cost convention as in accordance with United Kingdom applicable accounting standards and the Statement of Recommended Practice "Accounting and Reporting by Charities" (SORP) issued in April 2005.

The principal accounting policies remain unchanged and are set out below.

TAXATION

The charity is exempt from taxation under current legislation.

INCOMING RESOURCES

Income is included when the conditions for receipt have been met and there is a reasonable assurance of receipt.

Income and Donations and Member subscriptions

Income from member subscriptions is included in incoming resources when these are receivable.

Interest receivable

Interest is included when receivable by the charity.

RESOURCES EXPENDED

Resources expended are included in the SOFA on an accruals basis.

Costs in support of charitable activities

Costs in support of charitable activities are comprised mainly of the costs of organising meetings.

Governance Costs

Comprises the costs of trustees' expenses and independent examiner's fees.

Fund accounting

Restricted funds are to be used for specified purposes laid down by the donor. Expenditure for those purposes is charged to the fund.

CASH FLOW

The Society has used the exemption under Financial Reporting Standard No 1 (Revised) not to prepare a cash flow statement as it qualifies as a small entity.

THE BRITISH TUNNELLING SOCIETY
STATEMENT OF FINANCIAL ACTIVITIES FOR THE YEAR ENDED 31 DECEMBER 2008

	Note	Unrestricted Funds £	Restricted Funds £	Total Funds 2008 £	Total 2007 £
Incoming Resources					
Incoming Resources from Charitable Activities					
Members subscriptions	1	65,489	-	65,489	66,246
Activities for Generating Funds:					
Courses and Annual Dinner	2	97,832	-	97,832	87,924
Agpus Reception	2	1,250	-	1,250	-
Tunnelling 2008	2	8,500	-	8,500	2,000
Publications	2	1,202	-	1,202	1,404
Investment Income	2	3,664	-	3,664	3,552
Total Incoming Resources		177,937	-	177,937	161,126
Resources Expended					
Costs of Generating Funds:					
Activities in furtherance of the charity	3	129,934	-	129,934	101,586
Costs in support of charitable activities	4	32,802	-	32,802	31,854
Governance Costs	5	4,118	-	4,118	3,525
Total charitable expenditure		166,854	-	166,854	136,965
Net Movement in Funds		11,083	-	11,083	24,161
Total Funds at 1 January		96,226	872	97,098	72,937
Total Funds at 31 December		107,309	872	108,181	97,098

All the Charity's activities derived from continuing operations during the above two financial periods.
The notes on pages 21 to 23 form part of these financial statements.

The Charity has no gains or losses other than those shown in the statement of financial activities above.

THE BRITISH TUNNELLING SOCIETY
BALANCE SHEET AT 31 DECEMBER 2008

		2008	2007
	Note	£	£
CURRENT ASSETS			
Debtors	8	9,509	8,441
Short term deposits		143,016	70,544
Cash at bank		16,738	45,763
		169,263	124,748
CURRENT LIABILITIES			
Creditors:			
Amounts falling due within one year	9	61,082	27,650
NET CURRENT ASSETS		108,181	97,098
INCOME FUNDS			
Unrestricted	11	107,309	96,226
Restricted	11	872	872
		108,181	97,098

Approved by the board and signed on its behalf by:

Mr Paul Hoyland - Chairman



Date

The notes on pages 21 to 23 form part of these financial statements.

THE BRITISH TUNNELLING SOCIETY
Notes to the accounts for year ended 31 December 2008

1. Members' subscriptions

The geographical analysis of subscriptions is as follows:

	2008 £	2007 £
United Kingdom	47,089	49,501
Rest of the world	18,400	16,745
	<u>65,489</u>	<u>66,246</u>

2. Activities for generating funds

	2008 £	2007 £
Courses & Annual Dinner	97,832	87,924
Tunnelling Conf 2008	8,500	2,000
Publications	1,202	1,404
Agpus Reception	1,250	-
Investment Income	3,664	3,552
	<u>112,448</u>	<u>94,880</u>

3. Activities in furtherance of the charity

	Unrestricted 2008 £	Restricted 2008 £	Total 2008 £	Total 2007 £
Expenses re course & dinner	82,058	-	82,058	56,225
Tunnels & Tunnelling	47,324	-	47,324	42,471
NO Working Group	-	-	-	870
ITA Fire Protection Conference	-	-	-	2,020
AGPUS Reception	357	-	357	-
Parliamentary working group	195	-	195	-
	<u>129,934</u>	<u>-</u>	<u>129,934</u>	<u>101,586</u>

4. Costs in support of charitable activities

	2008 £	2007 £
Printing, stationery & photocopying	1,490	1,825
Postage	1,839	2,462
Meeting expenses & secretarial	21,071	14,840
Subscription to other bodies	1,455	1,213
Website Costs	3,463	8,971
Other costs	30	43
BTS Lobby Group	-	1,136
Publicity	3,454	564
Awards & Prizes	-	800
	<u>32,802</u>	<u>31,854</u>

THE BRITISH TUNNELLING SOCIETY
Notes to the accounts for year ended 31 December 2008

5. Governance Costs	2008	2007
	£	£
Examiner fees	3,849	3,525
Trustee meeting expenses	269	-
	<u>4,118</u>	<u>3,525</u>

6. Employees and Employment costs

The Society does not employ staff directly.

7. Trustees' remuneration

Trustees do not receive remuneration and there were no other transactions involving Trustees.

8. Debtors	2008	2007
	£	£
Other debtors	250	6,241
Prepayments and accrued income	9,259	2,200
	<u>9,509</u>	<u>8,441</u>

9. Creditors: amounts falling due within one year	2008	2007
	£	£
Creditors	43,913	11,951
Receipts in advance	11,144	15,699
Accruals	6,025	-
	<u>61,082</u>	<u>27,650</u>

10. Restricted Funds

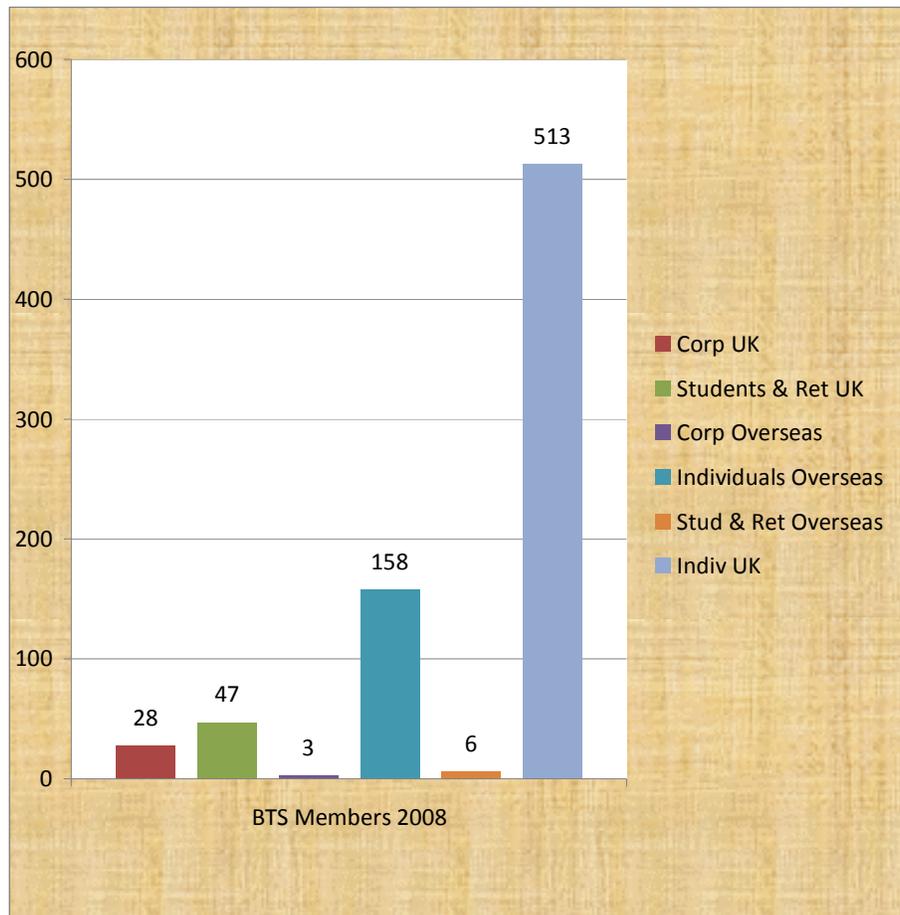
The committee administers the BTS CEN fund which was established in January 1991 to provide financial support to UK members of the CEN TC/151 Working group 4 which is producing European Standards for the safety aspects of tunnelling machines.

The Historical Database fund was established in July 2000. The fund is to provide financial support for a tunnelling database.

THE BRITISH TUNNELLING SOCIETY
Notes to the accounts for year ended 31 December 2008

11. Analysis of net assets between funds	Unrestricted funds	Restricted funds	Total funds
	£	£	£
Fund balances at 31 December 2008 are represented by:			
Current assets	168,391	872	169,263
Current liabilities falling due within one year	(61,082)	-	(61,082)
	<u>107,309</u>	<u>872</u>	<u>108,181</u>

Appendix 1 - Finance & Membership: Membership Figures



Membership Trends

		2002	2003	2004	2005	2006	2007	2008
UK	Corporate	39	28	28	23	23	30	28
	Individual	575	539	518	531	504	464	513
	Student & Retired	61	48	48	47	53	50	28
	Total	675	615	594	601	580	544	569
Overseas	Corporate	1	1	1	1	2	2	3
	Individual	190	159	154	148	142	152	158
	Student & Retired	15	12	10	11	10	10	6
	Total	206	172	165	160	154	164	167
Combined	Corporate	40	29	29	24	25	32	31
	Individual	765	698	672	679	646	616	671
	Student & Retired	76	60	58	58	63	60	34
	Totals	881	787	759	761	734	708	736