



British Tunnelling Society Annual Report and Accounts 2022

James Clark Medal Winners lunch



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Executive Summary



Ring Building on Thames Tideway West

Executive Summary

2022 was the year of bringing a period of normality back to the BTS and the industry, which was grabbed with great delight.

Many projects made significant milestone progress in 2022, including the preparation and launch, break through and turnaround of a number of TBMs for major projects such as HS2 and Silvertown, as well as key procurement announcements.

Our membership has seen a turnaround in some areas from 2021, Individual membership has not changed, the fall in young members has been reversed to a healthy increase, the same with students/retired members, but corporate membership fell. Also, overseas memberships were constant.

The year saw a full program of BTS and BTSYM evening lectures being held both in person at the ICE and online via our You-tube channel, although attendance numbers did not return to pre covid, we feel this was for several reasons: continuation of the covid working methods, the ICE Bar & the famous “BTS Sausage & Chips” being not available through 2022 due to staffing shortages and then the refurb. We have had a good range of topics at the evening events and sustained a high level of online viewing.

The full BTS program of events meant we were able to hold the Annual Dinner, demand for places was such that we had 807 diners at 78 tables. Crowded but everybody enjoyed the return to normality. The evening followed the established format, champagne reception, fine dinner, then the address from our Chair Ms Kate Cooksey. Our speaker, the television host Steph McGovern, focused

more on her recent career activities. Thanks were given to John Scholey for his years of organising the dinner, also to Divik Bandopadhyaya for the work he did to get the BTS through the virtual world of Covid.

Like other events, the Underground Design and Construction Course was once again held at Warwick University, and the Underground Health & Safety Course at the ICE, were able to take place, although numbers were lower than pre covid. Thanks to all the industry experts that prepared and presented.

Autumn 2022 brought the BTS Conference at the QEII Centre in Westminster, only a year from the 2021 event, or the 2020+1 as we called it. It will now return to its bi yearly slot. It was a great privilege for me to present the "David Wallis Lecture" - A Past to Be Proud Of, A Future That Looks Green.

The 2022 James Clark Medal was awarded to Ken Spiby and we presented his award at our November evening lecture. We held the Harding Prize, with the winner being Christopher Barrett for his paper "The planning and construction of mainline tunnel B connection tunnel".

The Doug Allenby Award was established in 2020 and the funds are to be used to award a medal to a young tunneller (BTSYM) annually in Doug's Memory. The 1st award was made at the James Clark Medal Winner's Lunch on 20 October 2022 to Ignacio Tognaccini-Sainz.

The 4th edition of the Specification for Tunnelling was completed, the progress of the update was presented at the BTS conference in October 2022, scheduled for publication in late 2023. The Health & Safety and Standards committee have worked on the British Standards, CEN Standards, Compressed Air Working and ITA Guidance, the documents are at various point of completion.

Plans for the 50th Anniversary Book continue, the number of photos, memories, stories, projects put forward has exceeded expectation, the book size has grown, the result being the publication will now be in 2023.

I would like to thank all the committee for all their support and effort during my year as Chair. I am incredibly grateful for the passion and enthusiasm of our individual, corporate and committee members and what has been achieved by their voluntary efforts.

As I used in my "David Wallis Lecture" – the UK Tunnelling Industry has A Past to Be Proud Of, A Future That Looks Green, which will give our Society opportunities to significantly contribution to that workload.

Rod Young
BTS Chair

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1. BTS Committee

Chair: Rod Young, Barhale Construction

Vice Chair: John Corcoran, BMB JV (Thames Tideway)

Immediate Past Chair: Kate Cooksey, Morgan Sindall

Elected Members and Trustees

Name	Company	Term	Responsibility
Sarah Langley	Sika Ltd	Retired 2022	Papers & Meetings
Chris Pressdee	Construction Industry Research and Information Association	Retired 2022	Education
Ignacio Castillo	Skanska	Retired 2022	Awards & Courses
Alastair Smith	Jacobs	Retires 2023	Communications
Christoph Eberle	Mott MacDonald	Retires 2023	Technical
Jérôme Furge	Bouygues Travaux Publics	Retires 2023	Conference
Mehdi Hosseini	London Bridge Associates	Retires 2023	Tunnelling Database
Richard Sutherden	J Murphy & Sons Limited	Retires 2024	Papers & Meetings
Mike King	MKTunnelling Limited	Retires 2024	Awards & Courses
Tim Smart	HS2 Ltd	Retires 2024	Education
Daniel Garbutt	Nuclear Decommissioning Authority	Retires 2025	
Divik Bandopadhyaya	London Bridge Associates	Retires 2025	Digital Delivery & Logistics, Website from February 2022.
John Greenhalgh	Nv Bekaert Sa	Retires 2025	

Co-opted Members:

Name	Company	Responsibility
Sarah Langley	Sika Ltd	50 th anniversary celebrations
John Corcoran	BMB JV (Thames Tideway)	Annual Dinner
Ken Spiby	London Bridge Associates	50 th anniversary celebrations
Eddie Woods	Consultant	T&T Editorial Advisory Board – stepped down during 2022
John Scholey	Retired	Annual Dinner
Paul Perry	Hewson Consulting Engineers Ltd	BGA, PHEW Liaison
Alasdair Fraser	Atkins	Young Members Chair (From 4 November 2021), Website from April 2022
Shani Wallis	Journalist	Media Relations and Publishing
George Doulikas	Strabag UK Ltd	Young Members Chair (from 3 November 2022)
Damian McGirr	COWI UK Ltd	ITA Affairs

George Demetri	Compelo	Tunnels and Tunnelling magazine (until 19 May 2022)
Patrick Reynolds	Compelo	Tunnels and Tunnelling magazine (from 20 May 2022)
Roger Bridge	Balfour Beatty	Education, Think Deep
Anita Wu (til April 2022)	London Bridge Associates	Website

Institutional Representatives:

Name	Company	Responsibility
Andy Flowerday (til 17 November 2022)	Barhale	Pipe Jacking Association
Sean Martin (from 17 November 2022)	Murphy Group	Pipe Jacking Association
Bill Grose	Bill Grose Consulting	Institution of Civil Engineers, APPGI, ITIG
Andrew Hindmarch	Mott MacDonald Ltd	Institute of Materials, Minerals, and Mining
Donald Lamont	Hyperbaric & Tunnel Safety Ltd	Health and Safety, Technical

2. Chair's Report

2022 was a full year of normality after covid. For the tunnelling industry it saw the ramping up of delivery of major projects such as HS2, Silvertown and Lower Thames Crossing and the opening of Crossrail – “The Elizabeth Line”.

The BTS in person events saw a full year's program completed, with the addition of the events continuing to go out on the BTS YouTube channel, a future permanent fixture.

We had the BTS Conference back at its correct year, myself presenting with great privilege the “David Wallis Lecture” which I titled - A Past to Be Proud Of, A Future That Looks Green.

It was great to see so many friends and colleagues coming together and catching up at such a fantastic event. It was also great to be joined by so many of our international colleagues including the new ITA President Arnold Dix of Australia who also presented at the event. The BTS are very grateful to Tunnelling Journal for managing such a fantastic event with the BTS.

I am incredibly thankful to all our speakers who continued to embrace the online experience as well as those that have given evening lectures in person. They have all given their time to come and present to us and share their knowledge and experience, with many having made an exceptional additional level of preparation to help make each of our events a success. The wide and varied selection of evening presentations not only showcases what our industry can do but it also continues to be a leading light in the knowledge sharing activities of the ICE and its Associated Societies.

It is fantastic to see people back at our in-person events but also that our online presence and lecture views is remaining high, this I feel is allowing the society to engage with a wider community.

The ICE bar and catering remaining closed we continued to walk around the corner to Westminster Arms as an alternative.

The BTYM have continued fostering links to other tunnelling groups around the world, these of course being done virtually, even taking account of the time zones.

Our membership has seen a turnaround in some areas from 2021, Individual membership has not changed, the fall in young member has reversed to a healthy increase, the same with students/retired members, but corporate membership fell. Also, overseas memberships was constant. The challenge ahead is to further grow our membership which we hope will be easier to achieve with combination of in person events and the new virtual arrangements that everybody is now more comfortable with. We have also continued with our aim to provide information and guidance with our publications, evening meetings and training courses. The work on BTS Specification 4th Edition continues which should be ready for publication in early 2023. Our SCL Best Practice Guide will now be worked on now the 4th Edition is completed.

It gave me great delight this year to be able to host the Harding Prize after receiving a substantial number of entries. The prize was awarded to Christopher Barrett for his paper "The planning and construction of mainline tunnel B connection tunnel".

Plans for the 50th Anniversary Book continue at pace and a sample book chapter and example size book were made available to be viewed at the BTS Conference; it is rather overwhelming to see the amount of stories there are to be shared, this has resulted in its publication being delayed into 2023 to incorporate all the stories we have to share. The monthly pie chart updates have shown the amount of tasks that are need for its completion. Please ensure that you have a space ready on your coffee table. The BTS Young Members' group continues to grow and continued to embrace delivery of online lectures. They celebrated National Tunnelling Day/ World Tunnel Day, further developing our international links. Holding evening meeting and workshops through the year. They have focused on social media campaigns and events to continue to support the younger members of the tunnelling industry.

The James Clark Medal 2022 was awarded to Ken Spiiby, the award was made in recognition of his services to the tunnelling industry through recording the past 50 years of activity of the BTS and the wider tunnelling industry in the "BTS at 50" book.

We had two James Clark Medal Winners luncheons 2022, (February and October) to make up for the cancellations in 2020 and 2021. It was great to see the return of some winners we had missed catching up with at past luncheons.

The Doug Allenby Award was established in 2020 and the funds are to be used to award a medal to a young tunneller (BTSYM) annually in Doug's Memory. The 1st award was made at the James Clark Medal Winner's Lunch on 20 October 2022 to Ignacio Tognaccini-Sainz.

The Thames Tideway Project has its last machine in the ground and is progressing with secondary lining and civils structures. York Potash has been busy tunnelling and shaft sinking and several of the machines have successfully launched on the HS2 London to Birmingham route. The launch of the TBM for the Silvertown Tunnels occurred.

Work on numerous smaller tunnels also occurred, these both on the major projects like HS2, in the form of 1200m & 1500mm Micro Tunnelling to facilitate utility diversions, also for the UK Water, Gas and Electric organisations for the installation of new assets. Part of the industry that we should not forget about, a sector of the industry that needs bringing to the fore.

I would like to thank all the committee for all their support and effort during my year as Chair, the committee has remained active at all times in progressing the ambitions of the society and I am incredibly grateful for the positivity in approach, as well as all the spare time the committee

members provide to make our society what it is. I am also incredibly grateful to our secretary, Katherine Coldwell, for all her support and work to keep the BTS running smoothly.

3. BTS Objectives and Communications

Alastair Smith (Chair), Kate Cooksey, Jerome Furge, Mehdi Hosseini, Tim Smart, George Doulikas, Ken Spiby, Shani Wallis, Patrick Reynolds, Aya Hassan.

Communication in 2022 saw the January and February meetings continue online only with the lectures streamed live on YouTube. From March 2022 the lectures returned to hybrid in person with live streaming. The live streaming remained popular and preferred by many members partly due to concerns over Covid and the fact that the ICE bar and catering facilities remained closed for the duration of 2022.

Emails, both to individual and corporate members are the primary method of communication and the efforts by Katherine Coldwell are recognised and greatly appreciated by the society. For the social media the BTS operated on the Twitter, Facebook, LinkedIn and Wikipedia platforms with the BTYSM running accounts on Facebook, Twitter, LinkedIn and Instagram.

Adverts published monthly in Tunnels and Tunnelling International have continued to be part of the Communications strategy and have been focused each month on publicising upcoming events. The subcommittee appreciates the work by Divik Bandopadhyaya in preparing the adverts each month.

YouTube continues as the platform for delivery of the online evening lectures both for online only and hybrid, with the committee meetings both online only and hybrid facilitated using Microsoft Teams.

The number of followers/ subscribers on the different platforms are given below:

Platform	Year Created	Followers/ Subscribers *	Annual Increase in Followers ^δ
BTS Facebook	November 2020 ⁱ	350	65
BTS Twitter	January 2014	1604	20
BTS LinkedIn	December 2021	865	789
BTS YouTube [†]	January 2018	2084	554
* Total till 31 December 2022			
^δ Total followers gained between 1 January and 31 December 2022			
ⁱ Created in 2009 but remained unused till 2020			
[†] includes BTYSM lectures and associated subscribers			

The Communications Sub Committee has established a storage platform for the countless images and photographs that have been collected for the 50th Anniversary Book.

Following a personal visit by Kate Cooksey to the National Railway Museum (NRM) in York an opportunity for enhancing some of the Tunnel related exhibits was tabled at the committee meeting in November 2021. The Communications Sub Committee subsequently reached out to the NRM to see if the BTS could provide any assistance. This proved opportune and positive and aligned with the NRM plan for a major redevelopment of the museum site as part of their Vision 2025 strategy. An initial meeting with the Museum Curator, Andrew McLean and BTS Committee members Rod Young and Alastair Smith was held at the museum on 2nd September 2022. Following this meeting a BTS / NRM working group was established to follow up on the collaboration opportunities both for the museum

and the option of holding regional events at the NRM in the future. The Working group is Alastair Smith, Rod Young, Kate Cooksey, Tim Smart and Aya Hasan.

Thank you again to the Communications Sub-Committee members for efforts in 2022.

4. Finance and Membership

This year it was agreed to retain the current individual membership fee for a further year, in reflection of the current economic climate and the cost-of-living challenges. A modest increase of 5% has been added for the corporate membership fees.

The membership fee for 2022 again included the provision of a hard copy and digital version of Tunnels and Tunnelling magazine. An agreement had been signed between BTS and T&TI for 5 years in 2020 (with a 3-year break clause) and a reduced contribution from BTS to the magazine. This provides stability and value for money for a significant period.

Grade	UK	Overseas
Corporate Member Small (Up to 50 employees)	£451.50	£568.05
Corporate Member Medium (50 to 500 employees)	£719.25	£981.75
Corporate Member Large (More than 500 employees)	£1165.50	£1684.20
Individual	£85	£138
Retired	£32	£44
UK Student/Apprentice	£20	n/a
Young Member	£42	£53

Membership: The detail of the current membership (at the end of December 2022) is set out below:

	Member Classification	2022	2021	2020	2019	2018	2017	Change 2021/22
UK	Corporate members	78	84	88	82	75	71	-6
	Individual members (standard grade)	432	433	414	457	461	446	-1
	Students and Retired	84	68	69	67	76	72	+16
	Young Members	166	150	192	193	199	191	+16
	Total	760	735	763	799	811	780	+25
Overseas	Corporate members	7	7	8	8	8	6	-
	Individual members	102	103	101	103	113	133	-1
	Students and Retired	7	7	5	6	7	8	-
	Total	116	117	114	117	128	147	-1

There has been an overall increase in UK membership of 3% (735 to 760), with overseas membership remaining almost stable.

Overall cash reserves have remained relatively stable at £460,083 (2021 - £465,584). It is expected that the majority of the BTS at 50 book costs will be spent in 2023 with a worst-case overall cost loss of £50,000. It is felt that the legacy of the book, even with this potential loss, remains an extremely worthwhile outlay for the members. Most of the sponsorship for the book has now been received and is included in the above figures. Net current assets increased from £318,410 to £364,491 at the end of 2022.

5. Evening Meetings

Richard Sutherland (Chair), Sarah Langley (Chair up to May 2022), John Greenhalgh, George Doulikas, Christoph Eberle

The year again has seen an almost full calendar of high-quality presentations covering a wide range of topics. The Committee's and members' thanks go to all the presenters. We postponed our planned September 2022 meeting out of respect to Queen Elizabeth II.

The start of the year saw us reverting to online meetings, but we soon managed to switch to in person meetings back in the Telford Theatre from March onwards with good in person numbers being achieved later in the year, particularly for the Harding Memorial Lecture. With the ICE bar remaining closed, post lecture refreshments were held at the Westminster Arms. Meetings have continued to be streamed live online via our YouTube channel with good viewing statistics.

The programme of monthly BTS meetings through 2022 was as follows:

Date	Lecture Title & Presenter (s)	Venue/Platform	Attendance In person/online
20/01	Small Steps Forward in Sustainable SCL, <i>Ross Dimmock</i>	Online only	0/200
10/02	Joint BTS/MinSouth lecture: Mining Opportunities in Afghanistan, <i>Ismail Amin</i>	Online only	0/unknown
17/03	Design & Construction of a cavern in downtown Los Angeles, <i>Carlos Herranz</i>	Telford & online	40/283
21/04	Harding Prize, <i>Christopher Barret (winner), Oliver Dzur, Zhengyao Mark AN</i>	Telford & online	70/158
19/05	AGM + HS2 Chiltern Tunnels A Brief Project Introduction & Progress Update from Align JV after 1 year of tunnelling, <i>James Reilly, Shannon O'Keefe</i>	Telford & online	90/270
16/06	Small diameter tunnel excavations & secondary lining construction methodologies at Thames Tideway Central, <i>Nuria Vazquez</i>	Telford & online	75/200
11/10	BTS/ICE Specification for Tunnelling 4th Edition, <i>Christoph Eberle</i>	QEII & recorded	unknown
17/11	Harding Memorial Lecture 2022, Why did that happen? Failures below ground, <i>Mike King</i>	Telford & online	120/220
08/12	Thames Tideway Update 2022, <i>Jim Avant</i>	Telford & online	100/157

6. BTS Young Members

Alasdair Fraser (Chair), Divik Bandopadhyaya (Past Chair), David Ashworth (Secretary), George Doulikas (Professional Development Sub-Chair), Ala Hammad (Schools & Universities Sub-Chair), Christy Lee (Media & Socials Sub Chair)

The BTSYM Committee year 2021/22 (spanning November 2021 to November 2022) continued to suffer the impact of the pandemic with reduced but increasing turnout of attendees to in person events throughout the year.

During the course of the year, the BTSYM held a series of webinars and online workshops – as listed in Table 6-1.

Table 6-1 - List of BTSYM Lectures & Workshop held between November 2021 and 2022

Date	Lecture Title & Presenter(s)	Venue/ Platform	Attendees
04 Nov 2021	BTSYM AGM & Lecture: Explaining Quality Engineering <i>Tiago Geraldles-Rodrigues (Balfour Beatty)</i>	Telford Theatre and YouTube	528 ¹
17 Feb 2022	Validation of Probabilistic and Artificially Intelligent Ground Models in Predicting Soil Transitions <i>Rajat Gangrade (Arup)</i>	YouTube	466 ¹
10 Mar 2022	BTSYM-BGAECG Ground Movement Assessment Workshop <i>Oasys</i>	MS Teams and YouTube	~60 attendees
17 Mar 2022	Blasting and Drilling Workshop <i>Mehdi Hosseini (London Bridge Associates)</i>	ICE ²	6 attendees
07 Apr 2022	Flat or Domed? The selection of shaft base slab geometry and a medley of design considerations <i>Si Shen (TYPASA)</i>	Telford Theatre and YouTube	10 in person Attendees
29 Apr 2022	BTSYM/TAlym Webinar Tunnelling in Himalayas at 5000m altitude <i>Sandeep Nirmal & Ahmed Shaz (RITES Ltd.)</i>	MS Teams and Youtube	40 Attendees
19 May 2022	Underground Construction Chemicals used in Tunnelling and Mining Workshop <i>Robin Swift (Normet)</i>	ICE ²	8 Attendees
31 May 2022	Introducing CSM2020 – Discrete Event Simulation model for Predicting TBM Utilization <i>Dr Anuradha Ketwal (WSP USA)</i>	MS Teams ²	50 Attendees
09 Jun 2022	Mumbai Metro, Sahar Road Crossover <i>Thomas Macgowan (Bedi Consulting) & Robin Swift (Normet)</i>	Telford Theatre and YouTube	25 Attendees
28 Jul 2022	University Presentation on Soft Ground Tunnelling <i>Martin knights (Martin Knights Consulting)</i>	MS Teams ²	~100 Attendees
01 Sep 2022	Belgian Tunnelling Method and its Use in the Madrid Metro <i>David Sizer (AYESA) Claudio Diaz (AYESA)</i>	Godfrey Mitchell and YouTube	37 Attendees

1 Views on Youtube – Live attendee information on available

2 Recording Unavailable/Not Livestreamed

In addition to the workshops, lectures and presentations listed above, the BTSYM organised a number of social and networking events throughout the year which also saw the return of the BTSYM Conference for the first time since the start of the pandemic. On the 20th May 60+ Young Tunnellers attended a day of lectures, discussions and Networking at the ICE with the Keynote Speech given by Ivor Thomas. Here it was also announced that Ignacio Tognaccini-Sainz was to be awarded the inaugural Doug Allenby Memorial Medal.



Figure 6-1 : BTSYM Conference 2023 Attendees

On 8th March the BTSYM organised a very popular site visit to HS2 at the West Ruislip Portal Site. Here our Young Members were escorted around the TBM launch site and treated to a presentation by the contractor team. This was also followed by a social.



Figure 6-2: BTSYM Site visit to HS2 West Ruislip

In addition to the above events, the BTSYM continued to provide general IT support to the BTS committee by aiding online streaming and managing the BTS' YouTube channel as well as the management of content on the BTS Website. On the online front, the BTSYM's social media channels continued to witness reasonable growth over the year as depicted in Table 6-2.

Table 6-2 : BTSYM Social Media Followers Statistics

Platform	Year Created	Followers*	Increase in Followers ^δ
BTSYM Facebook	September 2014	948	139
BTSYM Twitter	December 2011	1535	25
BTSYM LinkedIn	January 2019	5365	1180
BTSYM Instagram	January 2016	471	50
* Total till 01 Feb 2023			
δ Total followers gained between 1 January 2022 and 01 Feb 2023			

Continuing with previous years, the BTSYM continued to support the International Tunnelling Society Young Members (ITaym), in the delivery of a 24-hour global Zoom Marathon on National Tunnelling Day/ World Tunnel Day (3rd December 2020) – see Figure 6-2. As

described by ITAym, the marathon “was an incredibly successful global event with 30 countries involved and more than 3000 participants from all over the globe”.

The BTSYM’s 30-minute-long session at the marathon provided an update of its activities along with a general update of projects both in their delivery and planning stages within the UK. The recording of the UK slot is available to view on YouTube. Additionally, 2022 saw the BTSYM Past Chair successfully run for the ITAYM Committee at WTC 2022 which also was well attended by BTSYM members.

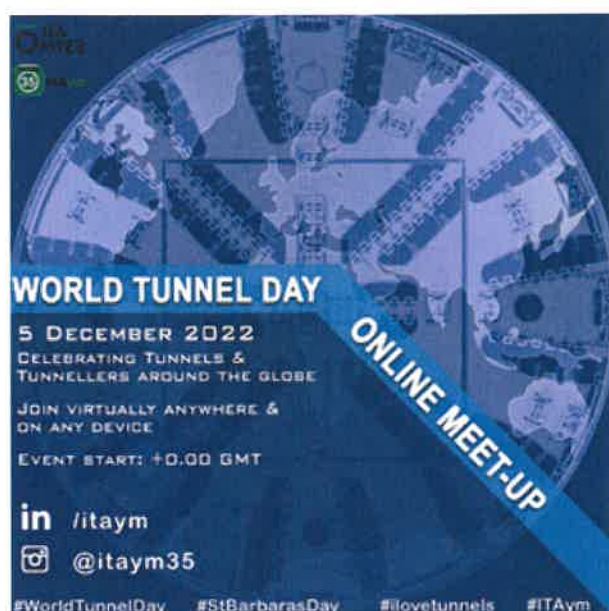


Figure 6-3 : BTSYM Social Media Followers Statistics

7. Awards

Mike King (Chair), Alastair Smith, John Corcoran

Harding Prize 2022

The Harding Prize for 2022 was awarded to Christopher Barrett for his paper “The planning and construction of mainline tunnel B connection tunnel”

James Clark Medal 2022

The James Clark Medal winner for 2022 was Ken Spiby. The award was made in recognition of his services to the tunnelling industry through recording the past 50 years of activity of the BTS and the wider tunnelling industry in the “BTS at 50” book.

James Clark Medal Winners Luncheon 2022

Two Luncheons were held in 2022 (February and October) to make up for the cancellations in 2020 and 2021.

Doug Allenby Award

The Doug Allenby Award was established in 2020 and the funds are to be used to award a medal to a young tunneller (BTSYM) annually in Doug's Memory. The 1st award was made at the James Clark Medal Winner's Lunch on 20 October 2022 to Ignacio Tognaccini-Sainz.

8. Education

Tim Smart (Chair), Chris Pressdee (Past Chair), Mehdi Hosseini, Mike King, Tim Smart, Divik Bandopadhyaya, Mark Leggett, Roger Bridge, Kate Cooksey, Ivor Thomas, Christoph Eberle.

MSc Course

The MSc Tunnelling and Underground space course was not run for the academic year 2021/2022 due to the impacts of COVID and the departure of Dr Alan Bloodworth from The University of Warwick.

MSc Course – BTS Bursary

The BTS did not award a bursary in 2022 due to the pause in the MSc Tunnelling and Underground Space at Warwick University.

9. Training and Courses

Rod Young (Chair), Alastair Smith, Jerome Furge, Mehdi Hosseini, Richard Sutherden, Tim Smart, Divik Bandopadhyaya, John Greenhalgh; Alasdair Fraser.

BTS Tunnel Design and Construction Course

After the cancellation of the past 2 planned courses of 2020 & 2021, the twelfth Tunnel Design and Construction course was held at Warwick University in July 2022.

The 2022 course was held from 4th July to 8th July, and was once again a successful event, a total of 73 delegates, 5 of which were sponsored students attended the course. A great thanks to all the presenters from industry that gave their time to help make the course a success.

The 2023 Course will be held at Warwick University on 3rd - 7th July 2023.

BTS Underground Health and Safety Course

The annual BTS Underground Health and Safety Course was held at the ICE on 21st & 22nd Nov @ the ICE London, with 41 delegates attending. A great thanks to all the presenters from industry that gave their time to help make the course a success.

The 2023 Course will be held at the ICE in London on 20th and 21st November 2023. A review of the course content / structure is planned for during 2023 ready for the next course.

Online CPD Courses

No online courses were held during 2022, after being developed in the covid of 2021, but it will be looked at to be repeated in the future for continued members' development :- Introduction to Tunnelling, Health & Safety, Tunnel Design, Finite Element Analysis in Tunnelling.

Tunnel Survey Course

No Tunnel Survey Courses were arranged during 2022, a suitable location to hold the course is being sought.

10. TunnelSkills

(Rod Young reporting)

ACHIEVEMENTS for 2022:

Tunnelling NVQs, Assessor Training and Qualification

Ongoing priority to increase assessor capacity. The founding objective of TunnelSkills was to secure a fully qualified tunnelling workforce to a minimum of a level 2 vocational qualification.

Benefits include upskilling of workforce, flexibility of in-house assessors, ability to offer to clients.

Challenges include: the issue of freeing up the time – requires a commitment from the employer.
Access to the candidates to be assessed is also an issue.
TunnelSkills has supported the qualification of 9 Assessors to date.
3 new trainee assessors starting Spring 2023.

Level 2 Tunnelling Operative Apprenticeship

Successful qualification of the Align / TG Tunnelling apprentices in February 2023.
The training provider of the programme – worked well due to client, contractor and subcontractor working together to ensure apprentices supported within teams and ‘rotated’ to gain full experience.
Two new cohorts planned for 2023 – one to start April in London, and one later in West Midlands.
Support from main contractors is key to success of these programmes.
TunnelSkills has a key role to play in supporting identified champions in major projects.
Neil Jones of Institute for Apprenticeships and Technical Education (IfATE) has advised a review of the Apprenticeship Standard will take place in 2023, including funding rates for formal training, and has requested the support of TunnelSkills in this review.

TunnelSkills Immersive Learning Project

Project successfully completed in January 2023. GTO thanked TunnelSkills members who had supported with the evaluation. The VR resources will continue to be used. Any members who wish to borrow a VR headset please contact fto@tunnelskills.org

Tunnelling Safety Training Scheme (TSTS)

TunnelSkills Working Group surveyed members and developed recommendations and outline plan to Site Safety Plus. SSP and CITB will present to the Management Committee, the process will take up to 18 months.

Multi Service Vehicle (MSV) CPC category A51 qualification

The new qualification, developed by TunnelSkills members and approved for CITB grant claims from February 2022, has been a big success - 76 MSV qualifications delivered to date. Around 12% did not pass the theory test.

National Occupational Standards (NOS) in Tunnelling Operations

These standards require a formal and highly regulated review – TunnelSkills offered to support. A Working Group led by TunnelSkills is working on the reviews.

11. Health and Safety and Standards

Donald Lamont

2022 has seen considerable activity on standards, guidance etc. The increased use of virtual meetings has led to an increased frequency in European meetings due to the lack of travel involved.

British Standards

BS 6164:2019 – towards the end of 2022 two major fire incidents on UK tunnels led to criticism that in both cases, BS 6164:2019 did not provide sufficiently firm recommendations on the specific circumstance of the incidents.

CEN Standards

CEN/TC151/WG4 - UK delegation comprised Donald Lamont, Steve Parker, Sean Martin.

prEN 16191:2023 – the technical revision of the text of EN 16191:2014 was completed in 2022 and following formal editing and translation, the prEN should be released for CEN enquiry early in 2023.

prEN 12110:2023 – the technical revision of the text of EN 12110:2014 along with the drafting of a new Part 2 to the standard was completed in 2022 and following formal editing and translation, the prEN should be released for CEN enquiry early in 2023.

MSV standard – work continued on drafting a CEN standard for MSVs.

CEN/TC196/WG2 – UK delegation comprised Donald Lamont, Clive Hannaford.

EN 1889-2 – “Machines for underground mines - Mobile machines working underground - Safety - Part 2: Rail locomotives”. A revision of this standard began in 2022. Its scope has been extended to specifically include “tunnelling” applications hence the BTS involvement representing BSI.

Compressed Air Working Group

Chairman – Roy Slocombe

CAWG met twice during 2022. It discussed the physiological problems – potential for isobaric counterdiffusion - around switching between breathing a helium rich mixture when immersed in air e.g. in the excavation chamber, and breathing the same mixture when immersed in the mixture e.g. in the TUP shuttle or habitat. It was agreed there were no concerns over this activity. It also discussed harmonising European requirements over medical examinations between the tunnelling sector and diving. CAWG has begun active participation in the periodic revision of the ITA/BTS CAWG Reports 10 and 20 relating to high pressure compressed air work.

ITA Guidance

Donald Lamont - Animateur and BTS representative to WG5

ITA WG5 “H&S in Works” agreed at its meeting in September 2022 in Copenhagen to revise its Reports 10 and 20 on HPCA work, to revise its Report 14 on refuge chambers and to continue drafting its guidance on human factors.

12. Technical Sub-Committee

Christoph Eberle, Mike King, Mehdi Hosseini, Jerome Furge, Richard Sutherden, Daniel Garbutt, George Doulikas, Donald Lamont, Shani Wallis, Paul Perry, Sean Martin, Andrew Hindmarch

The Technical Sub committee is working on the following principal tasks which are summarised below:

a. BTS Specification for Tunnelling 4th edition

The drafting of the 4th edition of the Specification for Tunnelling was completed in July 2022. Over the summer, the specification was peer reviewed by key stakeholders of the UK tunnelling community. The progress of the update was presented at the BTS conference in October 2022, where the second round of peer reviews was announced. At the time of writing this final round has been completed and the results are now incorporated into a final draft, scheduled for publication in late 2023.

The BTS Committee has confirmed a strong preference for free public access to the 4th edition. Commercial negotiations with ICE publishing are now being held to establish the terms under which this can be facilitated.

b. BTS SCL Best Practice guideline

This document has now been reviewed and is awaiting final drafting and final proof reading. The TSC has prioritised finalisation of the 4th edition over progressing this document which is now also scheduled to be issued in 2023.

13. APPGI

Bill Grose (Chair); Kate Cooksey; Mark Leggett; Ivor Thomas, Tim Smart, Jerome Furge.

The All-Party Parliamentary Group for Infrastructure (APPGI) is run jointly by the ICE and the BTS, having merged the BTS's APPG on Underground Space (APGUS) several years ago in order to focus Parliamentarians on fewer overlapping All-Party groups.

This enables BTS to concentrate on site visits and projects and initiatives of interest to its members and parliamentarians whilst leaving the administration of the Group and broader ICE policy aims to the institution's Public Affairs department to manage.

The stated aim of the group is to "highlight the importance of infrastructure, engineering and the use of underground space to the economy and society, and to hear from experts and discuss matters arising."

Moving the meetings from late afternoon to 8:30am in 2019 increased attendance from Parliamentarians and the meetings were held frequently enough to have gained some momentum.

Several meetings were held during the 2021/22 session, but no site visits. A site visit to HS2 is planned for the next year.

14. Website

Divik Bandopadhyaya and Alasdair Fraser (Joint Chair), Anita Wu (Past Chair), Ken Spiby, Alastair Smith, Shani Wallis.

BTS Website

The updated BTS website (www.britishtunnelling.com) was launched in February 2021, with the domain switching from .org.uk to .com. Likewise the BTS email addresses changed to the domain, with Zoho Corporation as the mail exchange provider.

In the last year, the website domain also transferred into direct ownership of the BTS, as opposed to being held by the website developer.

Please visit the website for further details.

Evening meetings, conferences, training courses and news are regularly updated with archive meetings available to watch online <https://britishtunnelling.com/events/evening-meetings-archive>.

Information on BTS publications and a suggested reading list are under the knowledge section of the website. The content for sustainability has also been expanded <https://britishtunnelling.com/knowledge/sustainability>.

The website content has continued to expand for Transforming Tunnel Safety (TTS) <https://britishtunnelling.com/tts/transforming-tunnel-safety> to encourage knowledge sharing of lessons learnt, best practice guidance and safety videos on tunnelling projects.

Tunnels Database

Mehdi Hosseini (Chair), Ken Spiby

The tunnels database is still not available to Members or to the public. It has not been possible to get the necessary controlled access to work reliably with the current database structure.

Further work on the database was stopped pending the completion of the new BTS website. Three meetings were held in 2021 and further testing carried out. Following further testing, it is intended that a recommendation be made either to modify or re-build.

This has effectively been put on hold whilst the team concentrates on completing the 50th Anniversary book. However, as a part of research carried out for the book, the database has been substantially extended with both earlier and later projects. A substantial photo library has also been built up.

Proposals for how best to use these for the benefit of our Members will be sought after the publication of the book.

15. 50th Anniversary

Book Working Group: Ken Spiby (Chair), Sarah Langley, John Corcoran, Anita Wu (maternity leave); Ben Shiels.



The BTS celebrated its 50th Anniversary in March 2021, but the Covid pandemic meant that this was a much more muted celebration than had been hoped.

A book: "Tunnelling Tales: Fifty years of the British Tunnelling Society" is under production, but we were unable to complete this in time to publish in 2021 for the actual anniversary, or even in 2022. It is very much hoped that we can publish in 2023. This will mean that the book will be 2 to 2.5 years late. The main reasons for this are:

- The book has proven to be much more popular than anticipated and will be around 4 times the size of the original proposal
- The volunteers in the main, have full-time day jobs and can only commit a limited amount of time to the book
- None of the volunteers has published a book before, and all severely underestimated both the number of steps required, and the time required to complete each task.

The table below compares progress at the end of 2022 with progress at the end of 2020 and 2021:

	Progress end 2020	Progress end 2021	Progress end 2022
No of stories written (of total no anticipated)	173 (of 330)	381 (of 542)	502 (of 585)
% of stories written	53%	70%	86%
Total no of authors		Almost 200	260
No of pages set (of total pages anticipated)	50 (of 776)	100 (of 866)	407 (of 866)
% of pages set (ie laid out in final format)	6%	12%	47%
Chapters page set (of total chapters)	0 (of 17)	0 (of 18)	7 (of 16)

- We are in negotiations with ICE Publishing and others to agree costs for printing and distribution. This will then fix the timetable, but we hope that we can print in time for an October 2023 launch. We will fix the price and open for pre-orders as soon as we have concluded a contract with a printer. Strong pre-orders will give confidence for a larger print run, resulting in savings per copy.

16. T&T Editorial Advisory Board (EAB)

Eddie Woods (Chair), Ken Spiby, Kate Cooksey, Charles Allen, Divik Bhandopadhyaya, Roger Bridge, Rosa Diez, Mehdi Hosseini, Benoit Jones, Donald Lamont, Andrew Smith, David Terry, Ivor Thomas.

2022 continued where 2021 left off. All the editorial meetings have been virtual.

George Demetri has stepped down as Editor and has now been replaced by Patrick Reynolds.

Eddie Woods stepped down during 2022 as the chair of the EAB and there was a hiatus in the latter part of 2022 whilst a replacement for Eddie was sought. Mark Leggett (past chair BTS) has taken on the Chair of the EAB from January 2023. The BTS is very grateful to Eddie Woods for his work as Chair, particularly during the COVID pandemic.

The focus for 2023 will be to re-invigorate the EAB and strengthen the relationship between the BTS and T&TI.

17. International Tunnelling Association

Damian McGirr

The WTC was hosted in Copenhagen in September 2022.

Damian McGirr was elected to the Executive Council at the General Assembly in 2022 along with 5 other ExCo members Klaus Rieker (Germany), Andrea Pigorini (Italy), Sanya Zlatanovic (USA), Monika Mitew-Czajewska (Poland); Sindre Log (Norway).

Arnold Dix of Australia was elected as the new President taking over from Jenny Yan.

Jamal Rostami (Iran), Andres Marulanda Escobar (Columbia) and Hangseok Choi (Korea) were elected to Vice Presidents. 1 place remained unfilled following the elections.

All of the above will serve a 3 year term.

At the General Assembly in Copenhagen the output from the organisational review undertaken by an external consultant was presented to the Member Nations and the new ExCo has now been tasked with the implementation of the recommendations from this report.

ITA publications can be viewed at <https://about.ita-aites.org/publications>

Working Groups

- Working Group 2: Research
- Working Group 3: Contractual Practices
- Working Group 5: Health and Safety in Works
- Working Group 6: Maintenance and Repair
- Working Group 9: Seismic Effects
- Working Group 11: Immersed and Floating Tunnels
- Working Group 12: Sprayed Concrete Use
- Working Group 14: Mechanized Tunnelling
- Working Group 15: Underground and Environment
- Working Group 17: Long Tunnels at Great Depth
- Working Group 19: Conventional Tunnelling
- Working Group 20: Urban Problems, Underground Solutions
- Working Group 21: Life Cycle Asset Management
- Working Group 22 : Information Modelling in Tunnelling
- The ITAtech Low Carbon Linings Activity Group
- ITA Young Member Group
- ITA Sustainability Index SME Group

COMMITTEES

- ITACUS (Underground Space)
- ITA Tech (technical documentation)
- ITACET (Education and Training)

- ITACOSUF (Operational Safety of Underground Facilities)

18. Annual Dinner

John Scholey (Chair), John Corcoran, Divik Bandopadhyaya

The Society's 32nd annual dinner was held at The Brewery banqueting centre in London on Friday 6th May 2022. This was the first dinner after a two year break owing to the Covid pandemic. As Lockdown hit after a considerable number of bookings had been taken for the 2020 dinner, we offered a free bottle of wine to every table that stood by their 2020 booking. A total of 35 bottles of 'farewell to lockdown' wine was provided to reward those members that retained their 2019 bookings to thank those members.

Demand for places was such that we were unable to keep to our target of 75 tables, accommodating 807 diners at 78 tables, of which 26 were tables of 11 people. This did make the room feel a little crowded in places. For the 2023 dinner, we will not exceed 75 tables of 10 people.

The evening followed the established format and was thus preceded by a champagne reception. After the usual fine dinner, we were treated to a rousing address from the Chair Ms Kate Cooksey; this was her second year as BTS Chair, but due to the hiatus of the pandemic, her first dinner in that role. The theme of women in engineering was maintained by our speaker, the television host Steph McGovern, although her address focused more on her recent career activities. On conclusion she acceded to a request from MC John Scholey to a brief display of Irish step dancing to the reel 'Mountain Road' to some great acclaim.

Profits from the dinner go to support the BTS learned society activities. We are particularly grateful to Jacobs, our prime sponsor, whose support has enabled us to increase this contribution. There was again a roving photographer; this year, those attending were given free access to download the resulting images.

19. Institution of Civil Engineers

Bill Grose

The BTS continues to have a close relationship with ICE. As one of the largest and most active of the ICE's Associated Societies the BTS is a significant user and beneficiary of ICE facilities including meeting rooms, lecture theatres, bar and restaurant, and secretariat support. The arrangement is via a Service Level Agreement which continues to be reviewed annually.

A change in the financing arrangements in 2018 encouraged us to focus more on technical projects and to seek funding assistance from the ICE Enabling Fund, and this is still the case.

The ICE regularly refers tunnel-related media queries to BTS committee members and relies on our advice and expertise in such matters. These referrals have resulted in senior BTS members appearing on TV, on radio and reported in the national, local and technical press.

The BTS and the ICE continue to jointly run the All-Party Parliamentary Group for Infrastructure.

20. BGA Liaison

Paul Perry

This past year has involved much liaison between BTS and the British Geotechnical Association picking up on Evening Meetings, content and attendance, as well as input to the Tunnel Asset Management Report being progressed by CIRIA. Paul Perry, member of the BTS Committee, attends the BGA committee meetings with regard to communication between the two committees and discussions on future evening meetings, to ensure a varied range and good coordination on any over-lapping projects, making for interesting presentations for attendees. This year, the BGA introduced a BGA

Dinner at the ICE in October, which was introduced to assist with “networking”, with the intention of making this an annual event, growing in popularity and numbers, year by year, in a similar style as to the annual BTS Dinner. This year also saw Kate Beardsley, Specialist Knowledge Societies Executive take over from Shelagh Fleming (following her retirement) in managing ICE’s support to the BGA Committee activity.

21. Reserves Policy

The Trustees policy for reserves is for there to be at least the equivalent of 12 months expenditure, this will ensure sufficient funds will be available to meet the needs of the Society. BTS reserves at the end of 2022 are £364,491 (2021 - £318,410).

Independent Examiners

The audit requirement for a Charity such as the BTS is for an ‘independent examination’ of our accounts. This independent examination is undertaken by Lindeyer Francis Ferguson Ltd. We have been satisfied with the service provided to date and we propose that this relationship continues for the forthcoming year.

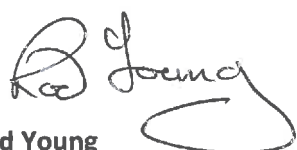
Trustees’ responsibilities for the financial statements

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; and
- Prepare the financial statements on an on-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 2011. 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.

The Trustees’ Report overleaf was approved by the Committee and was signed on its behalf by:



Mr Rod Young
Chair of the British Tunnelling Society

19th Sept 2024.

Date of Approval:

22. Legal and Administrative Information

The British Tunnelling Society was formed as an unincorporated association by the Constitution adopted on 23 September 1971 and as amended on 21 January 1993, 16 May 2002, and 17 May 2012. The Society became a registered charity in March 1993. The Charity number is 1017887.

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	CCLA Investment Management Limited
Strand Branch	St. Alphage House
PO Box 414	2 Fore Street
38 Strand	London
London WC2H 5JB	EC2Y 5AQ

Solicitors

Solicitors are appointed from time to time as the need arises.

Examiner

Jonathan Healey FCA
Lindeyer Francis Ferguson Ltd
North House
198 High Street
Tonbridge
Kent
TN9 1BE

Investment Advisers

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

23. Trustees Report

The Trustees present their report together with the financial statements of the British Tunnelling Society (the 'Society') for the year ending 31st December 2022. The financial statements have been prepared on the accounting policies set out in 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 January 2019.

Organisational structure

The Trustees of the British Tunnelling Society are the ex officio and elected members of its Committee, with the Committee consisting of elected members, nominated members, co-opted members, and ex-officio members. Ten members of the Committee are elected by electronic/postal ballot, the result of which is announced at the Annual General Meeting. Members elected to the Committee serve for a term of three years and then retire from the Committee unless they are elected Chairman or Vice-Chairman. A retiring member is ineligible for re-election to membership of the Committee for a period of one year after they retire.

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

The Committee elects from amongst its members a Chair to hold office for two years immediately following the Annual General Meeting. Such election is held at the last Committee meeting of the previous Chairman's term of office. On expiration of a Chair's term of office, they may serve on the Committee in an ex officio capacity for a period of two years as immediate past Chairman. The Committee elects from amongst its members a Vice-Chairman to hold office for two years immediately following the Annual General Meeting. Such elections are 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 will 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 appointed to fill a casual vacancy will hold office until the following Annual General Meeting, they will then retire. The casual vacancy will 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 will 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 will be eligible, except as otherwise provided, for election or appointment or co-option to the Committee.

Objects and policies and public benefit

The Society's objective is summarised as the advancement of the education of the public in and the promotion of the art and science of tunnelling, including the creation and use of underground space, by fostering learning, understanding, experience, interest, and research therein.

In furtherance of this the Society:

- Provides a forum for the discussion of the problems and techniques of tunnelling by holding monthly meetings which are free and open to all interested parties in addition to Society members;
- Encourages tunnelling research and development to improve health and safety of the workforce, reducing both risk to the public and the cost of provision of infrastructure;
- Provides training courses on a non-profit-making basis to train young tunnellers in tunnelling best practice;
- Supports a Young Members division that embraces the objectives of the Society but focuses towards graduates, school leavers, and students still at school;
- Supports the development of skills through support to courses such as the MSc in Tunnelling and Underground Space at Warwick University;
- Supports the development of apprenticeships and QCF NVQ qualifications via its work with the National Working Group, TunnelSkills and the Tunnelling and Underground Construction Academy (TUCA);
- Produces and arranges for the publication of papers and reports to disseminate information on tunnelling and to provide points of reference;
- Co-operates with other associations in holding meetings and conferences locally, nationally, and internationally;
- Is the national representative body to the General Assembly of the International Tunnelling and Underground Space Association (ITA) for the UK;
- Pays its annual membership fees to the ITA for the maintenance and on-going management of the Association;
- Maintains liaison with similar associations and individuals in other countries and co-operates and participates 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;
- Offers specialist assistance and advice to H.M. Government, statutory authorities, boards, institutions, and similar bodies and to make representations to such bodies; and
- Does all such other things as are incidental or conducive to the attainment of any or all the above aims.

Administration of the Society

The business affairs of the Society are administered by a committee consisting of ten elected members, several co-opted and ex officio members together with a representative from the Institution of Civil Engineers, the British Geotechnical Association, the International Tunnelling and Underground Space Association, the Institute of Materials, Minerals and Mining and the Pipe Jacking Association.

The 2022 AGM saw vacancies arise in the Committee, due to the retirement of elected members. This year there were 3 elected member vacancies and 3 BTS members were appointed to serve from the 2022 AGM for a period of three years. They were: Daniel Garbutt, John Greenhalgh and Divik Bandopadhyaya.

In addition, the Committee requested that Eddie Woods, Donald Lamont, Shani Wallis, Ken Spiby, Roger Bridge, Patrick Reynolds and John Scholey continue their roles as co-opted members of the Committee, which they agreed to do and welcomed Sarah Langley remaining on the Committee this time as a co-opted rather than elected member. Alasdair Fraser took on the responsibility of the Young Members' Chair in 2021, followed by George Doulikas in 2022. 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 sub-committees as detailed in their individual reports.

24. Report of the independent examiner

I report to the trustees on my examination of the accounts of the British Tunnelling Society ('the association') for the year ended 31 December 2022.

Responsibilities and basis of report

As the Trustees of the Association (and also its directors for the purposes of company law) you are responsible for the preparation of the accounts in accordance with the requirements of the Charities Act 2011.

I report in respect of my examination of the charity's accounts carried out under section 145 of the Charities Act 2011 and in carrying out my examination I have followed the Directions given by the Charity Commission under section 145(5)(b) of the Charities Act 2011.

Independent examiner's statement

I have completed my examination. I confirm that no material matters have come to my attention in connection with the examination giving me cause to believe:

1. accounting records were not kept in respect of the Association as required by section 130 of the Act; or
2. the accounts do not accord with those records; or
3. the accounts do not comply with the applicable requirements concerning the form and content of accounts set out in the Charities (Accounts and Reports) Regulations 2008 other than any requirement that the accounts give a 'true and fair view which is not a matter considered as part of an independent examination.

I have no concerns and have come across no other matters in connection with the examination to which attention should be drawn in this report in order to enable a proper understanding of the accounts to be reached.



Jonathan Healey FCA

Lindeyer Francis Ferguson Limited
Chartered Accountants
North House
198 High Street,
Tonbridge, Kent
TN9 1BE

Date 7 October 2023

BRITISH TUNNELLING SOCIETY
STATEMENT OF FINANCIAL ACTIVITIES
(INCLUDING INCOME AND EXPENDITURE ACCOUNT)
FOR THE YEAR ENDED 31 DECEMBER 2022

	2022 Unrestricted funds £	2022 Restricted funds £	2022 Total funds £	2021 Total funds £
INCOME FROM				
Donations:				
Doug Allenby	-	1,800	1,800	
Charitable activities:				
Subscriptions	110,932	-	110,932	110,122
Income from other trading activities:				
BTS CPD Courses	-	-	-	24,800
Royalties & Sales	92	-	92	275
BTSYM Conference	4,902	-	4,902	
Underground Health & Safety Course	6,855	-	6,855	10,810
BTS Course	119,310	-	119,310	-
Annual Dinner	106,395	-	106,395	-
Sponsorship	250	-	250	-
Investments:				
Interest	601	-	601	7
Total income	349,337	1,800	349,337	146,014
EXPENDITURE ON				
Charitable activities				
Postage	25	-	25	5
Meeting Expenses and secretarial	21,936	-	21,936	15,170
Subscriptions to other bodies	1,087	-	1,087	1,155
Other costs	1,730	-	1,730	1,296
Publications	-	-	-	6,000
Website	138	-	138	854
Award & Prizes	1,205	-	1,205	6,285
Grant	9,000	-	9,000	6,000
Sundry Expenses	-	-	-	500
Professional fees	2,940	-	2,940	4,202
	38,061	-	38,061	41,467
Expenditure on raising funds				
Expenses re course and dinner	171,218	-	171,218	29
Publications	40,212	-	40,212	41,904
Underground Health & Safety Course	6,590	-	6,590	9,219
BTSYM Conference	4,176	-	4,176	-
Young Members Committee	746	-	746	309
BTS CPD Courses	-	-	-	1,744
BTS Conference	133	-	133	3,600
Bad Debt	43,920	-	43,920	20,960
	266,995	-	266,995	77,765
Total expenditure	305,056	-	305,056	119,232
Net income and net movement in funds	44,281	1,800	44,281	26,782
RECONCILIATION OF FUNDS				
Fund balances brought forward 1 January 2022	312,914	5,496	318,410	291,628
Fund balances carried forward at 31 December 2022	357,195	7,296	364,491	318,410

The statement of financial activity includes all gains and losses in the period.

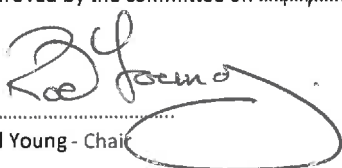
All income and expenditure derives from continuing activities.

BRITISH TUNNELLING SOCIETY
BALANCE SHEET
AS AT 31 DECEMBER 2022

	Notes	2022 £	2021 £
CURRENT ASSETS			
Debtors	2	120,821	146,306
Short term deposits		62,585	62,583
Cash at bank		397,498	403,001
		<u>580,904</u>	<u>611,890</u>
CURRENT LIABILITIES			
Creditors: Amounts falling due within one year	3	216,413	293,480
		<u>216,413</u>	<u>293,480</u>
NET CURRENT ASSETS		<u>364,491</u>	<u>318,410</u>
INCOME FUNDS			
Unrestricted	6	357,195	312,914
Restricted	6	7,296	5,496
		<u>364,491</u>	<u>318,410</u>

The notes on page 29 to 31 form part of these financial statements.

Approved by the committee on 19/9/24 and signed on its behalf by:


 Rod Young - Chair

**BRITISH TUNNELLING SOCIETY
NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2022**

Accounting Policies

Accounting Convention

The financial statements have been prepared in accordance with the Financial Reporting Standard 102 (effective January 2015) (FRS 102) and the requirements of the Statement of Recommended Practice (SORP) applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) (effective 1 January 2015) (Charities SORP FRS 102).

The British Tunnelling Society meets the definition of a public benefit entity under FRS 102. Assets and liabilities are initially recognised at historical cost or transaction value unless otherwise stated in the relevant accounting policy note(s).

There are no material uncertainties about the charity's ability to continue, and so the going concern basis of accounting has been adopted.

Income

All subscriptions and investment income is accounted for when received, except in the case of subscriptions which are specifically stated to be in respect of an ensuing accounting period. No credit is taken for subscriptions unpaid at the balance sheet date.

Expenditure

Expenditure is recognised when there is a legal or constructive obligation to transfer resources to a third party, settlement is probable and the amount can be measured reliably. Expenditure is included within the Statement of Financial Activities on an accruals basis.

Fund Accounting

Unrestricted funds can be used in accordance with the charitable objectives of the Society, at the discretion of the Trustees. Restricted funds can only be used for the particular restricted purposes within the objectives of the Society.

Taxation

The charity is exempt from corporation tax on its charitable activity.

BRITISH TUNNELLING SOCIETY
NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2022

1 Member's subscriptions

The geographical analysis of subscriptions is as follows:

	2022	2021
	£	£
United Kingdom	92,236	91,604
Rest of the World	18,696	18,518
	<u>110,932</u>	<u>110,122</u>

2 Debtors

	2022	2021
	£	£
Debtors	-	5,240
Prepayments	112,083	121,178
ICE Intercompany	8,738	19,888
	<u>120,821</u>	<u>146,306</u>

3 Creditors

	2022	2021
	£	£
Purchase Ledger Control Account	10,480	6,614
Subscriptions in advance	27,313	32,166
Accruals	5,160	3,980
Other Creditors	7,160	9,818
Receipts in Advance	166,300	240,902
	<u>216,413</u>	<u>293,480</u>

Within the amount for other creditors BTS are holding £6,832 on behalf of Think Deep UK

4 Employees and Employment costs

The society does not employ staff directly.

5 Analysis of net assets between funds

	Unrestricted funds	Restricted funds	Total Funds
	£	£	£
Fund balances at 31 December 2022 are represented by:			
Current assets	573,608	7,296	580,904
Current liabilities falling due within one year	(216,413)	-	(216,413)
	<u>357,195</u>	<u>7,296</u>	<u>364,491</u>

6 Statement of movement in funds

	Unrestricted funds	Restricted funds	Total Funds
	£	£	£
Balance brought forward at 1 January 2022	312,914	5,496	318,410
Net movement in funds	44,281	1,800	46,081
Fund balances carried forward at 31 December 2022	357,195	7,296	364,491

7 Restricted Funds

The Doug Allenby Award was established in 2020, the funds are to be used to award a medal to a young tunneller (BTSYM) annually in Doug's Memory.

8 Committee Members

Committee Members do not and never have received any remuneration.

	2022	2021
	£	£
Travel and subsistence expenses reimbursed to committee members (n.b.3 trustees reimbursed in 2022, 1 in 2021)	1,507	766
	1,507	766