

# United Kingdom

**Name:** British Tunnelling Society

**Type of Structure:** Non profit, professional membership body, learned society and Associated Society of Institution of Civil Engineers (ICE)

**Number of Members:** 800+ members, 90+ corporate members at end 2020



## ASSOCIATION ACTIVITIES DURING 2021 AND TO DATE

In 2021 the British Tunnelling Society continued to offer its membership technical lectures; training and development and engage and inform on the development and use of underground space despite the Covid 19 pandemic.

The BTS continues to work closely with University of Warwick in the delivery of an MSc in Tunnelling & Underground Space

We are a focal part of the industry working group – Transforming Tunnel Safety comprising BTS, Clients, Consultants and Contractors with the initiative to drive improvement in the health and safety performance of the tunnelling industry.

- 10 informal evening discussions – monthly apart from July and August.
- Various technical and social meetings and events arranged by the BTS Young Members
- Award of James Clark Medal to Mike King for his tireless work in the tunnelling industry and for the BTS for its lifetime contribution to tunnelling.
- Lunch for James Clark Medal recipients
- Harding Prize competition for under 35's

- Annual dinner held each year in May.
- Co-badged events with numerous other organisations including ICE, IOM3, BGA, Concrete Society
- The BTS Conference & Exhibition 2022, Oct 11th – 12th at the QEII Centre in Westminster, London

The BTS jointly with the Institution of Civil Engineers supports an All Party Parliamentary Group to engage with parliamentarians and promote tunnelling and the use of underground space as a sustainable form of infrastructure development.

The BTS continues to work with and support Tunnel Skills. TunnelSkills (the industry training development forum) has developed a number of tunnelling specific courses in conjunction with City & Guilds and CITB. Tunnel Entry, Loco Operators, Concrete Pump Operation and Tunnel Safety Training Scheme are some of the courses developed.

The BTS also continues to work with industry clients, contractors and consultants in an industry forum to review and improve health and safety cross the tunnelling industry. Transforming

Tunnelling Safety aims to transform the health and safety performance of UK tunnelling works and has embarked on a major project to increase openness, and to share best practice. This information is available to all through the BTS website <https://www.britishtunnelling.org.uk>

The BTS has begun a process for undertaking a further update of the Specification for tunnelling and this work continues.

2021 was the 50th anniversary of the BTS. This was a hugely significant milestone for the society. The BTS intends to publish a book celebrating 50 years of the BTS which will be available soon.

The BTS Young Members continues to deliver evening meetings, technical seminars, and social events for the development of young tunnellers. They recently held their young members conference for the first time since the beginning of the pandemic and this was a huge success.

## BTS Young Members

The young members continued to offer a wide range of activities including lectures, workshops, and socials. The BTSYM has close links with other ITA young member organisations and continue to develop relationships and co-host lectures and events.

A key part of their work in 2020 was actively working on encouraging the younger generations to consider tunnelling as a career.

The BTSYM continue with monthly workshops on specific tunnel issues for the development of young engineers in the tunnelling industry.



**CURRENT TUNNELLING ACTIVITIES**

**Thames Tideway Tunnel**

During 2021 and early 2022 tunnelling on the Thames Tideway contracts, comprising 25km of 7.2m diameter tunnel at depths up to 66m under the River Thames connecting the previously constructed Lee Tunnel continued and has mostly completed.

**High Speed Two**

2021 has seen the continuation of the design and construction phase for the main works civils contracts for the proposed high speed rail line between London and Birmingham and the commencement of

construction. These contracts comprise 35km of twin bored tunnel. Tunnelling has now commenced on the project with further TBMs due to be launched later this year.

**Phase 2 for HS2 is currently under**

development and this currently comprises a further 21km of twin running tunnels giving a total of 56km which is approximately 10% of the total 561km length.

Hinkley Point Nuclear Power Station Work continues on the first new nuclear power station in the UK for many years. Main tunnelling works were completed earlier this year comprising around 9km in total. The first TBM commenced its journey in September 2019.

**Bank Station Capacity Upgrade**

Construction work has continued on the upgrade to Bank station of the largest underground railway complexes in the world. The works comprise new entrance, three ticket halls, six lifts, 10 platforms, two 94m travellers, 570m tunnel and platform for Northern Line. The recent closure of the Northern Line allowed the completion of the tunnelling works in early 2022.

**Silvertown Tunnel**

Late 2019 saw the contract award for the Silvertown project comprising twin bored tunnels under River Thames approximately

1.4km long and 12m diameter. The project is a PPP delivery model. This project will create another road crossing in East London adjacent to the exciting Blackwall tunnel. Tunnelling is due to commence in 2022.

**FUTURE TUNNELLING ACTIVITIES**

**Lower Thames Crossing**

A proposed new motorway on the M25 to include 14.5 miles of road. This will also comprise 4km of tunnel beneath the River Thames East of London with a tunnel diameter of around 15m. The project is currently in the planning and development phase with the procurement process now underway and the tenders have been issued. The road is due to be operational in 2027

**A303 Stonehenge Tunnel**

This is a proposed 11km dualling of the A303 in the vicinity of the ancient monument at Stonehenge. The works will comprise 2.9km of twin tunnels. The project has recently been awarded by National Highways however the DCO has still to be granted therefore construction will not commence until 2023.

**Coire Glas hydroelectric scheme**

Scottish and Southern Energy continue with plans to develop a new hydroelectric scheme in Scotland. Planning has been approved for the scheme and the procurement for the projects commenced in 2021. The project will include extensive tunnelling and large span caverns.

**Haweswater Aqueduct Replacement Project**

United Utilities is planning to replace an existing aqueduct in the North West of England that provides drinking water for the city of Manchester. This replacement will comprise approximately 50km of 3m diameter tunnelling at depths of up to 300m. Procurement is due to commence in June 2022.