

POLAND



Name of Association: Polish Tunneling Association
(full name: Subcommittee of Underground Construction of Polish Committee on Geotechnics)

Type of Structure: Non-profit, open association

Number of Members: 64 members, 5 corporate members

ASSOCIATION ACTIVITIES DURING 2023 AND TO DATE

The representatives of Poland were present at the ITA General Assembly on May 14th 2023 and May 17th in Athens and at the Extraordinary General Assembly of ITA, virtual meeting on September 26th 2023. Monika Mitew-Czajewska is active as a Member of the Executive Council of ITA for 2022 – 2025. Anna Siemińska-Lewandowska was a Member of Scientific Committee WTC2024 and chaired one of the technical sessions in Athens. Monika Mitew-Czajewska (treasurer) is the member and Tutor of WG20, Anna Siemińska-Lewandowska (president) - WG15, Bartłomiej Dziuban and Dymitr Petrow-Ganew – WG14, Maciej Ochmański – WG2 and WG22, Jerzy Lejk - WG3, Urszula Tomczak – WG23.

The Association organised two conferences – the 5th Polish Tunneling Forum (live and digital) on 6th - 7th February 2023 in Warsaw and, Geotechnics and Underground Structures, Cracow, 19th – 21st September 2023 (live and digital). During the Polish Tunnel Forum President of ITA prof. Arnold Dix presented an invited lecture on the Emerald Fidic Book and Executive Director Olivier Vion on the ITA organisation. For the conference in Cracow prof. Arnold Dix gave a special lecture on 20th September 2024.

CURRENT TUNNELLING ACTIVITIES

Construction of the 2nd metro line in Warsaw, extensions of the existing central part

In a west direction three stations and 6km of tunnels are under construction from September 2023. EPBM + cut & cover.

Warsaw - 5 metro lines in 2050



Construction of the 3rd metro line in Warsaw

Building Permit Design in preparation, construction method: EPBM + cut & cover.

Road Tunnel under the Świna river in Świnoujście – north Poland

The 1.44km long tunnel connecting the islands Uznam and Wolin from July 2023. Construction method slurry TBM – 13.46m diameter.

Rail Tunnel in Łódź – Tunnel connecting Łódź Fabryczna and Łódź Kaliska stations

Length of the tunnel – 3km of double track tunnel, 4.5km of single track/tube tunnels; two underground stations; construction method EPBM + cut&cover. Two TBM's – diameter 13.04m and 8.76m started in 2021. Two stations are under construction, 1000m of double track tunnel and 900m of single track tunnels are completed. Drilling works are in progress. Due date end of 2024.

Road Tunnel on the S3 motorway Bolków-Kamienna Góra – South Poland

2.3km tunnel on the S3 motorway from Bolków to the state boarder. Design and build. Construction in progress. The method of construction – NATM. The excavation works were completed in February 2022. Finishing works are in progress. The due date June 2024.

Two Road Tunnels on the S1 motorway, the ring road of Węgierska Górką – south Poland

Two road tunnels (830m and 980m) on the S1 motorway to the south state boarder, design and build contract. Tunnelling method NATM. Due date 2025.

Utility (storm water retention) tunnel along the Vistula river in Warsaw

Microtunneling – 3.2m diameter, total length approx. 9km. In operation from end of 2023.

Carpatia, Rzeszów - Babica

2.18km twin tube, 15.2m diameter EPBM road tunnel on the S19 from Rzeszów to the state border. Construction works began in 2023, with TBM launch scheduled for September 2023 delayed due to an unexpected occurrence of methane.

Road tunnels on the north city ring of Cracow

12km long north city ring for Cracow S52 with 3 x 3 line road tunnels (496m, 653m, 100m), cut&cover method, one of the tunnels crosses under the river Prądnik, Due date end of 2024.

FUTURE TUNNELLING ACTIVITIES

Three road Tunnels on the S19 motorway, Via Carpatia, section Rzeszów - Barwinek

Three road tunnels (1.75km, 1.6km, 1.2km) on the S19 from Rzeszów - Babica to the state border. The conceptual design is in progress. Construction time scheduled for 2023-2026.

Two Road Tunnels on the S7 motorway in Warsaw

Two road tunnels; 2 x 3 lines in each direction, at building permit design stage.

Road Tunnel on the S6 motorway,

Road tunnel on the west city ring of Szczecin, under Odra river, 5km, construction method 14m Slurry TBM. Tender for the building permit design and construction opened in April 2023.

Podłęże-Piekietko rail route in the south of Poland

Eleven (11) Rail Tunnels – 12km length in total on a planned 58km long new rail route. In addition two Rail Tunnels – 5.8km length in total on the rail route Chabówka – Nowy-Sącz will be modernized. Preparatory works and the design was completed in 2023. The construction and modernization is planned for 2023-2026.

2.5km long railway tunnel in Łódź

On the railway line 85, this high speed train tunnel will connect the Central National Airport (under design) with Warsaw and Wrocław. Building permit design.

2.25km long TBM road tunnel under the Bronistawa Hill and 850m long TBM road tunnel under Vistula river in Cracow

The closing section of the road ring in Cracow, 2024 – in conceptual design and environmental decision permit design.

STATISTICS

1. Length or volume excavated - % mechanized / % conventional during 2023

80% TBM; 20% conventional

2. List of tunnels completed:

Road tunnel under Luboń Mały 2.3km; South of Poland; roads tunnels: S3 under Świna river; utility tunnels: storm water retention tunnel along the Vistula river, Warsaw.

3. List of tunnels under construction:

S3 Bolków-Kamienna Góra, S1 Węgierska Górką, S19 Via Carpathia, S52 North city ring of Cracow; railway tunnels: single track and double track Łódź

EDUCATION ON TUNNELLING IN THE COUNTRY

Basics of Underground Structures (1st degree studies), Underground Structures I and II, Fire safety in tunnels – 2nd degree studies – Warsaw University of Technology, Faculty of Civil Engineering. Underground Construction (1st degree studies), Geotechnology of underground structures and tunnels, The impact of underground construction on surface and surrounding rock mass, Ventilation in selected underground facilities – 2nd degree studies – AGH University of Science and Technology, Faculty of Civil Engineering. Faculty of Civil Engineering, 2nd degree studies – Wrocław University of Science and Technology, Faculty of Civil Engineering; Tunnels and underground passages – 2nd degree studies – Cracow University of Technology, Faculty of Civil Engineering; Underground structures – (1st degree studies) – Silesian University of Technology, Faculty of Civil Engineering; Underground structures (2nd degree studies) – Białystok University of Technology, Faculty of Civil and Environmental.



TBM transport.