

Poland



Name: Subcommittee of Underground Construction of Polish Committee on Geotechnics

Type of Structure: Non profit, open association

Number of Members: 58 members, 5 corporate members

ASSOCIATION ACTIVITIES DURING 2021 AND TO DATE

Representatives of Poland were present online at the ITA at special (digital) General Assembly on February 10th, 2021. Monika

Mitew-Czajewska (treasurer) is the member of the WG20, Anna Siemińska-Lewandowska (president) - WG15, Bartłomiej Dziuban and Dymitr Petrow-Ganew – WG14, Maciej Ochmański – WG2

and WG22, Jerzy Lejk - WG3, Bartłomiej Dziuban – ITA YM. Anna Siemińska-Lewandowska gave a lecture during the ITA Tunnelling Week on 22nd of September.

The Association organised two conferences – the 3rd Polish Tunnel Forum (live and digital) on 2nd of February 2021 and the 14th International Conference Underground Infrastructure of Urban Areas, Wrocław, 20-22.10.2021 (live and digital). Members of the ExCo (Olivier Vion, Arnold Dix, Lars Babendererde) took part in both events with special lectures.

CURRENT TUNNELLING ACTIVITIES

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

- In the east-north direction (three stations, 8km) – Gülermak, due date 2023
- In west direction (five + one stations, 12km) – Gülermak, due date 2024

Construction of the 3rd metro line in Warsaw

- Design works have begun, Construction method: EPBM + cut & cover



Road Tunnel in Warsaw – part of the south city ring

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2,700m long tunnel, three lanes in each direction; construction method - cut and cover. In operation from December 2022

Road Tunnel under the Świna river in winoujście – north Poland

The 1.44km long tunnel will connect Uznam and Wolin Islands. Construction method TBM – 13.46m diameter. Due date end of 2022. Design works are complete with the slurry TBM starting on 5th of March 2021, breakthrough scheduled for 19.09.2022

Rail Tunnel in Łódź 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 is TBM + cut & cover. Design works are complete. Two TBMs with a diameter of 13.04m and 8.76m are assembled. The start shaft is completed. The first TBM 8.76m started in July 2021, with the second in November 2021

Road Tunnel under Luboń Mały – south Poland

Over 2 x 2km tunnel on the S7 motorway from Kraków to Zakopane (a polish skiing resort). Construction works in progress, 2200m executed by the ADECO RS method. Due date 2023.

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

A 2.3km tunnel on the S3 motorway from Bolków to the state boarder. Design and build with construction in progress. The method of construction is NATM. The excavation works will be completed end of March 2022. Due date end of 2023.

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

Two road tunnels (830m and 980m) on the S1 motorway from Bolków to the state boarder in a design build contract. Tunnels will be constructed using NATM. Due date 2023/24

Utility (storm water retention) tunnel along the Vistula River in Warasaw

Microtunneling – 3.2m diameter, total length approx. 9km. Due date: end of 2023

Road Tunnels on the S19 motorway, Via Carpatia, Rzeszów - Babica

2,180m twin-tube TBM road tunnels on the S19 from Rzeszów to the state boarder.

The feasibility study is completed and tender awarded. Construction works will start at the end of 2022.(Fig. 7.1, Fig.7.2)

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 to the state boarder. The conceptual design is under progress with the construction period of 2022-2025.

Two Road Tunnels on the S7 motorway in Warsaw

Two road tunnels; two x three lines in each direction, preliminary design

Road Tunnel on the S6 motorway,

Road tunnel on the west city ring of Szczecin, under the Odra river - 5km in preliminary design

Eleven Rail Tunnels

12km length in total on the planned 58km long new rail route Podłęże-Piekietko in the south part of Poland. In addition, two Rail Tunnels – 5.8km length in total on the rail route Chabówka – Nowy-Sącz, will be modernized. The design works are in progress. Preparatory works and the design are to be completed by 2022. The construction and modernization is planned for 2022-2026

2.5 km long railway tunnel in Łódź

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

STATISTICS

1. Length of tunnels excavated during 2021

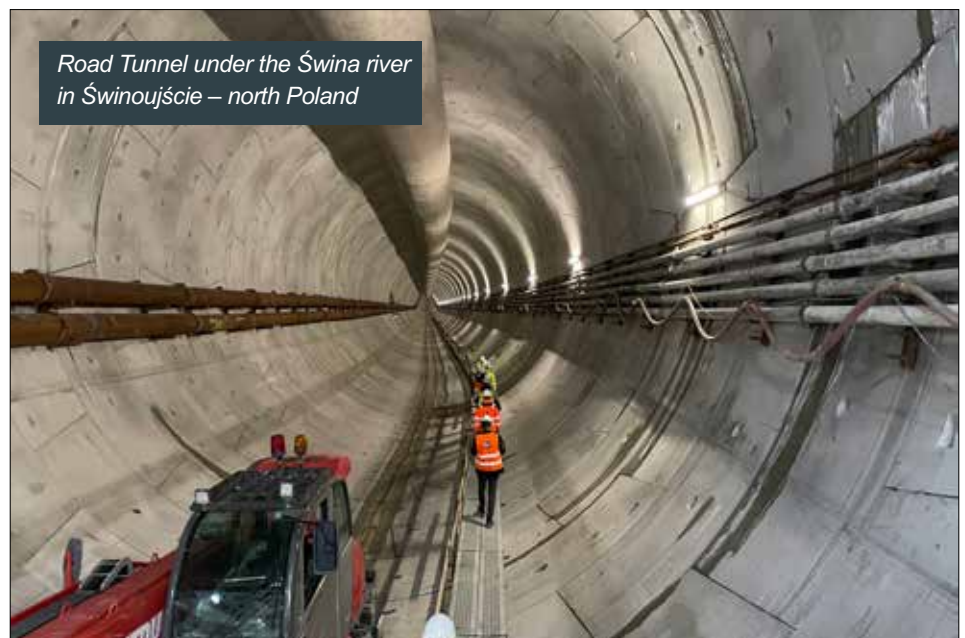
70% mechanized/30% conventional

2. List of tunnels completed in 2021:

(two) road tunnel at South Warsaw Ring, tunnel under Świna (excavation completed)

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 Mining and Geoengineering Underground Structures – 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 Engineering.



Road Tunnel under the Świna river in Świnoujście – north Poland