

Hungary



Name: Hungarian Tunnelling Association

Type of Structure: non-profit, open association

Number of Members: Total number: 73, number of corporate members: 18

ASSOCIATION ACTIVITIES DURING 2021 AND TO DATE

2021 saw some events missed such as the Széchy Memorial Day, because of the pandemic. The Association held one big event only: Tunnelling and Civil Engineering Day Conference 2021. The invited keynote lecturer was Prof. Robert Galler from the Leoben University – Austria.

The Association Presidency held on-line meetings, only.

Saint Barbara Day was held in Sopron (Tunnel M85)

CURRENT TUNNELLING ACTIVITIES

The Expressway M85 Sopron Bypass tunnel is under construction

The development of the Hungarian expressway network continues, with its length increasing by an average of 100km of new road per year. With the completion of the 60km Csorna - Sopron section of M85 expressway at the end of 2020, the City of Sopron is now included in the national expressway network. Due to the location of the city, the M85 and the Austrian A3 motorway can only be connected via the Bécsi Hill requiring this section to be in tunnel. The current contract includes the construction drawings and realization of the 4km long 2x2 lane M85 expressway section from the Fertőrákos junction to Sopron including a 780m long twin-tunnel with a maximum ground cover of 40m under Bécsi hill. The contract started on 14th June 2019, with a contract duration of 60 months, taking into account the interpretative provisions of the contract, the contract runs to 30th June 2024. Bécsi hill faces NW-SE on the northern outskirts of Sopron, next to the N0 84 main road. Excavation work commenced from the work site set up at the eastern side, with parallel tunnelling. Based on core samples taken from geotechnical drilling, a geological model was constructed along the length of the tunnel. Based on the location and geological stratification conventional tunnelling methods were chosen for the soft ground environment, and in the more resistant, but relatively



soft rock environment. However, the progress of construction has been greatly hindered and is still affected by unexpected geological conditions. Nevertheless, the project is still on time when applying the built in reserves of the schedule. Based on anticipated progress, the excavation works in the left tunnel should be completed by summer this year and in the right tunnel by the end of autumn, with the final reinforced concrete structure commencing at the end of spring.

The M3 metro-reconstruction also continued in 2021

FUTURE TUNNELLING ACTIVITIES

Tunnel-chain on the M100 expressway

In addition to optimising the economic potential of the Esztergom region, the goal of the M100 expressway is to relieve the Zsámbéki basin residents from high levels

of truck traffic by developing new roads in surrounding hilly environment. Currently, the journey between the Esztergom area and the M1 motorway takes at least 50 minutes, but with the construction of M100 this time will be halved. The M100 expressway is a 32.3km long 2x2 lane expressway. Due to the complexity of the project and the topography of the site, bespoke technical solutions are required along the entire expressway. The hilly nature of the area ensures the complexity of the route, which includes three pairs of tunnels with a total length of 2 x 1km and five huge valley bridges with a total length of 2 x 2.3km and a new engineering plant for operating the expressway, all of which have contracts already signed. Starting with the design works, the project will be implemented under two separate contracts, the first phase with a lead time of 44 months, and the second phase with a lead time of 84 months, considering the time needed to prepare the construction design.

Tunnel-chain on expressway M0

Under the Danube railway tunnelling will be in preliminary planning in 2022

M0 motorway Buda section tunnels planning from 2022

A public procurement procedure for the design works has recently started. The tender for the design works of the 8km long section of the northern M0 ring road between No 10 and No 11 Main Roads, which will include a 5.2km long 2 x 3 lane twin tunnel in addition to several complex intersections and structures. Construction of this section of the M0 ring road could start in 2026 at the earliest.

Metro Line 5, 1st Stage Kalvin square underpass

STATISTICS

1. Length or volume excavated

775m (ca. 93.000m³) 0 % mechanized/100% conventional during 2021

2. List of tunnels under construction:

M85 tunnel, M3 metro-tunnel

EDUCATION ON TUNNELLING IN THE COUNTRY

Budapest University of Technology and Economics