



Thursday 7th November at 18:00 hrs

The Institution of Civil Engineers, Telford Theatre,
One Great George Street, Westminster, London SW1P 3AA

BTSYM AGM

New Austrian Tunnelling Method in Hyperbaric Atmosphere



Presenter: Christoph Huber, SCL Agent, BeMo Tunnelling

Christoph's presentation will explore the challenges and innovative solutions associated with the application of New Austrian Tunnelling Method in hyperbaric atmosphere during the construction of Tunnel Karl-Friedrich-Strasse in Karlsruhe (Germany).

The project – Shortlisted for NCE Tunnelling Festival's 'Innovation in Tunnel Excavation' award – posed a unique challenge with its small overburden (approximately 7m), a poor geology consisting of gravel, sand and fine sand and layers of rolling gravel.

Given the tunnel's variable geometry (of up-to 180m² tunnel face; 15 m diameter), NATM was chosen as the preferred excavation method. However, due to the inner-city location and a very high water table, the excavation had to be carried out in a hyperbaric atmosphere, of circa 1.0 bar, which created special challenges for the application of wet mix shotcrete.

Other challenges included: air losses and the corresponding air flow, and the presence of historic buildings along the path of the excavation (including a 125y old brick lined sewer directly above the tunnel alignment).

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