

New Zealand

Name: New Zealand Tunnelling Society

Type of Structure: Incorporated non-profit

Number of Members: 130 individuals and Corporate Sponsors Two Platinum Three Gold and Two Silver Corporate Sponsors



ASSOCIATION ACTIVITIES DURING 2021 AND TO DATE

Despite COVID disruption the NZTS held several technical in person and virtual presentations from industry across 2021.

The NZTS is participating in an industry steering group for a five year programme of research at Auckland University sponsored by the NZ government that is studying the effects of dust and air quality, and in particular the mineral erionite that has

been identified in specific formations in the Auckland region.

The NZTS provided a virtual HUB to support the Australasian Tunnelling Conference in Melbourne. The Event was generally regarding as successful in switching between the two venues and providing broadcast quality links to enable live interaction between the two venues. The next Australasian conference will be held in Auckland in November 2023.

CURRENT TUNNELLING ACTIVITIES

Most tunnelling activities of note are located in the largest population centre, Auckland. In Auckland the two major tunnelling projects, the City Rail Link (metro) <https://www.cityraillink.co.nz/> and the Central Interceptor Project (wastewater) <https://www.watercare.co.nz/About-us/Central-interceptor> are progressing well despite disruption to the supply chain and resourcing from COVID.

In 2021 the City Rail Link TBM achieved two breakthroughs without major incident and is now being re-assembled for the second and final drive with major SEM works complete.

Central Interceptor is also progressing well with nine shaft sites active of 17 and has been launched and fully commissioned and is advancing well.

Watercare and Auckland Council continues with the smaller scale upgrades in water supply and water supply tunnels to suit Auckland's growth.

FUTURE TUNNELLING ACTIVITIES

In January 2022, the New Zealand Cabinet confirmed the recommendation by the Establishment Unit of an alignment for the Auckland Light Rail involve several kilometres of tunnel beneath the City Rail Link and across the Auckland Isthmus to Auckland Airport. The Establishment Unit was set up in March 2021 with an inclusive and collaborative governance structure with representatives from central government, (Ministry of Transport, Ministry of Housing



and Urban Development, Treasury, Waka Kotahi NZ Transport Agency and Kinga Ora), Auckland local government (Auckland Councillors, Auckland Local Boards, Auckland Council and Auckland Transport) and mana whenua. An ALR Board will drive the current detailed planning phase and transition the project through to a formal legal entity by the end of 2022. The Establishment Unit established a cost estimate of NZ\$14.6bn with advance works expected in 2023. <https://www.transport.govt.nz/assets/Uploads/OC210779-Auckland-Light-Rail-decision-to-progress-Cabinet-Paper.pdf>

Planning for the Auckland Additional Waitemata Harbour Crossing, a rail-based rapid transit connection for the North Shore (including across the Waitemata Harbour to the city centre), that would supplement and integrate an upgraded Northern Busway and the wider public transport



*CRL TBM Dame Whina
Copper Breakthrough
December 2021*

network to provide more public transport travel options is being considered in light of the ALR decision above. Construction is not anticipated to start until at least the 2030s.

Watercare has entered into a 10 year programme of work under an enterprise agreement an inherently collaborative procurement model [https://www.watercare.co.nz/About-us/News-media/Our-\\$2-4-billion-construction-partnership-with-Ful](https://www.watercare.co.nz/About-us/News-media/Our-$2-4-billion-construction-partnership-with-Ful)

With a renewed interest in the South Island hydro capability the NZ government is considering a Lake Onslow pumped storage scheme, anticipated to provide at least 5TWh of annual generation/storage. Estimated to have a construction and commissioning and lake-filling timeframe of 6-7 years, initial construction costs estimates are around NZ\$4B. The Lake Onslow option is located north-east of the Clutha River in Central Otago, South Island. To investigate the engineering, environmental planning and geotechnical feasibility investigations at Lake Onslow has been awarded These geotechnical, engineering and environmental studies will lead to a full feasibility-level decision by Ministers, currently planned for December 2022. <https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/low-emissions-economy/nz-battery/>