

TBM starts its second tunnel in Auckland's City Rail Link project

April 26, 2022



Traditional prayers marked the beginning of the second City Rail Link (CRL) Tunnel being built by a TBM as part of Auckland's first underground railway.

It is being created thanks to Dame Whina Cooper — a tunnel boring machine (TBM) named in honour of the Maori champion. It began its subterranean drive from CRL's Mt Eden site into the central city. The machine's first destination will be the underground station below Karangahape Road before a planned arrival next spring at the project's Aotea site.

Dr Sean Sweeney, chief executive of City Rail Link Ltd (CRL Ltd), said: "Fantastic teamwork by the TBM crew to get cracking today despite all that omicron could throw at us." He added it was "a great achievement and something Aucklanders should rightly celebrate as we take a huge step towards completing CRL."

The TBM is run by the Link Alliance, which is formed of the six national and international infrastructure companies appointed to create CRL's main tunnels, stations and rail systems. It finished the first of the two CRL tunnels last Christmas Eve. Link Alliance Project Director, Francois Dudouit, predicts the TBM's second

drive will be just as challenging as the first.

He said: “No matter how well you plan, things can always change.”

“We learnt a lot from last year, but constructing a bored tunnel is a unique and complex task bound to bring challenges, particularly when you’re working below a city. Importantly, our TBM crews are experts at successfully confronting obstacles – restricted working conditions because of covid or Auckland’s ground conditions – and getting the job done safely.”

Before power was officially switched on and the TBM’s 7.15-metre-wide revolving cutter head began digging into the earth, Kaumātua from Ngāti Whātua Ōrākei and Father Christopher Denham, Dean of the Cathedral of St Patrick and St Joseph blessed Dame Whina Cooper and its crews.

The 130-metre TBM is designed to carry out three tasks simultaneously: it cuts the spoil, removes it by conveyor that runs to the surface, and installs a series of concrete segments – 14,735 in total – that will line the twin rail tunnels.

A team of 12 people will work each shift on the TBM, with support from another 12 up on the surface.

The naming of the machine follows a mining tradition which honours St Barbara, the patron saint of miners. Dame Whina Cooper is known for her work championing Maori land and social rights. The name was picked with the help of the New Zealand public.

The TBM will complete its work at the southern end of a station being constructed at the project’s Aotea site. Tunnels already built from Britomart link with the northern end of the new station.

The 3.45-kilometre-long railway is designed to make it easier for Aucklanders to get to the centre of the city. The aspiration is for the network to operate more effectively, with more frequent trains, more available seats and faster journeys.