

**Project name:** **Shotover Tunnel Construction****Client:** **Queenstown Trails Trust****Project date:** **2024****Project description**

Queenstown Trails Trust (QTT) engaged Geotech Ltd to refurbish the existing 108 metre long Shotover Tunnel, part of an 18-kilometre cycle trail. This tunnel was originally constructed in 1962, using drill and blast methods and with future opening to public usage there was a need to ensure no fretting or rockfall exposing the public to risk.

Geotech were tasked with removal of some 45m<sup>3</sup> of fretted and fallen material from the tunnel and removal of some 45m<sup>3</sup> of rock to ensure the 2x2 metre tunnel was fully maintained. This volume removed included localized protruding rocks from both of tunnel rib and roof using a combination of localized smoothwall type blasting and mechanical rock breaking. The tunnel also had two areas with localized geologically structural defects requiring rock bolting and meshing.

Due to the removal of material, this project fell under the Health and Safety at Work (Mining and Quarrying Operations) Regulations (2016), known as MOQO. Geotech worked seamlessly alongside QTT and Worksafe in development of principal hazard management plans and mine plans under these regulations.

Along with stabilisation works, this contract included construction of a pedestrian and cycle trail through the tunnel, and associated drainage.

Geotech provided a modest team of skilled operators, who efficiently and safely removed material and stabilised the tunnel. Staff on this project have a wide range of tunnel and underground unit standards (including US7146), and years of tunnel works experience, ensuring safety and quality in these works.

**Resources applied**

Yanmar CR12 rubber tracked buggy (1t capacity)

Yanmar 1t excavator (with mounted rock breaker)

Eimco 911 0.7<sup>3</sup> load haul dump

Heavy machinery was supported by hand tools, grout mixers and pneumatic pumps.

**Project value**

\$337,482.00

**Client Project Manager**

QTT – Mark Williams

027 664 0941

**Project Manager**

Project Engineer – Giulio Chapman-Olla

027 266 8635

**Project Engineer:**

WSP – Rob Bond

027 491 4050