

CASE STUDY

MT VICTORIA TUNNEL ROCKFALL PROTECTION

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INTRODUCTION

From April to August 2015, Abseil Access carried out slope stabilisation works at both portals of the Mt Victoria Tunnel in Wellington, as part of a major upgrade and seismic strengthening project overseen by the Memorial Park Alliance (MPA) for Wellington City Council and NZTA. The \$680k contract aimed to extend the tunnel's operational life while maintaining traffic flow for the 45,000 vehicles using it daily.

PROCESS

To minimise disruption, most works were undertaken at night, with drilling restricted to daylight hours due to urban noise limits. Excavation above the tunnel apex was completed to install a new drainage system, alongside electrical conduit for future traffic signals. Loose concrete and vegetation were removed from the existing shotcrete surface, followed by waterblasting to prepare for re-application. Over 200 rock bolts were installed in critical areas, and 3000sqm of synthetic fibre and steel fibre-reinforced shotcrete—up to 250mm thick and dark-tinted—was applied. Additional drainage holes were drilled to improve water management. The MPA team closely monitored each stage to ensure compliance with high-quality standards.

OUTCOME

The project was completed on time and under budget, with minimal disruption to traffic and nearby residents. The upgrades delivered improved slope stability, enhanced drainage, and a reinforced shotcrete surface designed to withstand both environmental and seismic demands, securing the tunnel's continued safe operation.

