



AVALON SUCCESSFULLY AND SAFELY DELIVERS HIGH PROFILE GEOTECHNICAL AND CONSTRUCTION BLASTING PROJECTS.

AVALON'S New Zealand certified construction blaster has over 30 years experience and our engineering geologist graduated in 1987. We have a range of drilling equipment, explosive types, detonation systems and blasting techniques at our disposal.

// MAUAO, MT MAUNGANUI

Following extensive fires in 2002 a large unstable rock mass was revealed high on the bluff above the campground. Fresh spalling indicated imminent failure of 250 tonnes of rock in 5 large boulders, each with the potential to run far into the campground.

Geotechnical assessment led Tauranga District Council to make an immediate decision; there was only one option; scale the loose rock. The camp was evacuated and fifty shipping containers were brought in as temporary barriers.

AVALON devised a deck loaded drill and blast plan, to split the rock into small pieces which would roll with minimal energy. Plant was quickly mobilised and two rigs drilled hundreds of metres of shot holes in three days.

Amid intense media coverage, high security and OSH scrutiny, AVALON'S spectacular blast safely eliminated the hazard only three weeks after it was first identified.

AVALON received an unsolicited letter of thanks from TDC's CEO, congratulating us on our professional operation.

// MANAWATU GORGE

Following major flooding in 2004 there remained many slip faces with unstable rock masses and trees hung up high above the State Highway.

AVALON was called in by Transit NZ's consultant engineers and efficiently carried out drilling and blasting at five sites, successfully removing the tree and rockfall hazards.



ABOVE LEFT. Setting charges to demolish old dam.

ABOVE RIGHT. Blasting rockfall hazards for Gas Corp, Whitecliffs.

// RUAKURI CAVE, WAITOMO

AVALON excavated hundreds of tonnes of rock to create a 30m tunnel connecting two areas of showcave and also constructed 250m of suspended walkway high above the underground river. A limestone passage floor had to be lowered to achieve levels for wheelchair access.

Ruakuri cave abounds with sensitive glow-worms and beautiful but delicate stalactites and calcite formations. Work had to be carried out under very strict resource consents with vibration and air quality monitoring. AVALON was consulted for a blasting proposal.

A compressor on the surface powered our drilling plant via a 70m vertical borehole. AVALON'S crew had to access site by 'tubing' down the streamway in wetsuits before changing into dry gear for the long and muddy shift underground.

Very lightly charged holes with frequent intermediate relief holes and a 'Nonel' detonation system were planned to minimise air-blast. The blast was successfully fired late one night.

The seismograph recorded a maximum 16mm/s vibration; 4mm/s below the resource consent's allowable limit. Air quality remained acceptable and no formations were damaged.

LEFT. Drill and blast, Te Aroha.