

CASE STUDY

MT PLEASANT PIPE INSTALL

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INTRODUCTION

From March to September 2024, Abseil Access assisted with the installation of two watermain pipes and the design and installation of rockfall protection behind the pipes at Mt Pleasant, Christchurch. The project was carried out for the client under the consultancy of WSP, PDP, and Beca, ensuring compliance with Christchurch City Council's requirements. The scope involved complex terrain conditions and the integration of structural and geotechnical design elements to protect critical infrastructure.

PROCESS

Abseil Access worked closely with PDP to confirm the requirement for rockfall mesh protection and refine the design to achieve a 50-year service life. The team carried out de-vegetation, rock scaling, and site assessments before drilling and testing two suitability anchors to a depth of 3 m and 256 kN. Two WB25 duplex-coated production anchors were installed 2 m deep in Ø75 mm holes to retain the pipe support brackets, which were bedded on Sika 212 grout pads. Additional anchor tests were completed to 137 kN, followed by installation of the pipe brackets and HiAb-assisted pipe placement using rope access for support. The design, supply, and installation of Double Twist rockfall protection mesh—4 m wide and 15 m high—were completed using duplex-coated WB25 and RB32 support anchors, stainless steel M16 contouring, and lower mesh retaining anchors to ensure stability and long-term durability.

OUTCOME

By relocating the test anchors from the rock face to the top of the site, Abseil Access obtained more accurate ground condition data while enabling the anchors to also support the rockfall mesh, effectively reducing time and costs. The completed works provided reliable rockfall protection for the newly installed watermain pipes, meeting all safety and design standards.

