

CASE STUDY

PIPE BRIDGE ABUTMENT STRENGTHENING, KAITOKE REGIONAL PARK

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INTRODUCTION

From February 2022 to March 2024, Abseil Access carried out specialised works at Kaitoke Regional Park, Wellington, under the consultancy of Stantec NZ for the client. The project, led by Brian Perry Civil on behalf of Wellington Water, involved replacing the existing flume bridge with a new pipe bridge over the Hutt River. Abseil Access was engaged to install 240 tensioned rock bolts beneath the new bridge abutments. Prior to drilling, over 1,000m³ of soil, rock, and vegetation were removed to expose the bedrock and prepare the area for anchoring operations.

PROCESS

The works included bedrock clearing, drilling and installation of double corrosion-protected 32mm rock bolts using suspended A-frame and excavator-mounted rigs, and anchor testing to 240kN followed by tensioning to 100kN lock-off load. Additional activities involved the installation of HR30 rockfall protection mesh, application of 330m² of coloured shotcrete, and construction of a river protection fence. Given the pristine location, strict environmental controls were maintained throughout. Abseil Access also contributed to the design and construction of a 25m pedestrian access bridge on the north side, supporting safe access for all site personnel.

OUTCOME

Using cranes for vegetation and dirt removal, as well as for positioning drill rigs, the team achieved efficient progress while maintaining high safety standards. Anchors were installed from a crane-supported cradle to ensure precision and minimise environmental impact. Temporary rockfall mesh provided additional protection for the work site and the client's crew. The project was completed successfully, demonstrating Abseil Access's technical expertise, adaptability, and strong collaboration with the main contractor and consultants.

