

Reference Project

Bridge Construction

86m Suspension Bridge: The Centre Piece of the Stunning New Lake Dunstan Trail

Location Specularite Gully, Western shores Lake Dunstan

Date September 2020

Client Hugo Trust, Lake Dunstan Trail

Consultant Southern Lakes & Abseil Access design team

The Lake Dunstan trail is a great addition to the network of cycle trails throughout Central Otago. It links Cromwell to Clyde running along the western shores of Lake Dunstan. Specularite gully is a rocky obstacle named after the remarkable schist rock with specularite inclusions.

The work included:

- Design and engineering of the bridge with a load capacity of 20 persons
- Width of 1500mm and suitable for cyclist passing both directions and meeting the NZ cycle trail code grade 2.
- 300kN cable anchors drilled into rock
- Aesthetic design and integration into the environment.

Abseil Access won the tender to design and build this unique structure working alongside the other trail building teams. Access to the site is limited and all materials and tools had to be flown across lake Dunstan by helicopter. This included the heli-portable pneumatic drill rig, compressor and grout plant.

Main cable anchors are drilled 9m into the hard schist rock to provide a working load capability of over 300kN. The 28mm IWRC main cables support 15 tons of deck as well as 240kN live load or a snow load of 25tons.

To blend into the environment the 11m high timber towers are dark stained and the steel components are Corten weathering steel. The wind cables are catenary and capable of stabilizing the deck in winds up to 230km/hr.

The total turnaround time from concept to handover was 4 months

